DATA EXPORT INTERFACE
PROGRAMMING GUIDE

IntelliVue Patient Monitor & Avalon Fetal Monitor

X2, MP Series, MX Series, FM Series

Patient Monitoring

PHILIPS

6   Definition of the Association Control Protocol

7 Attribute Data Types and Constants Used

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About this Guide

This Programming Guide is for use with the Philips IntelliVue X2, MP Series and MX Series patient monitors and the Avalon FM Series fetal monitors, hereafter referred to as the monitor. It describes the functionality in the IntelliVue monitor software version ≤L.xx.xx and the Avalon monitor software version >=J.3.

The information in this Programming Guide describes the capability of the Data Export Interface. It is the responsibility of the user to create applications using the capability provided.

The IntelliVue and Avalon monitors are not intended for home use.

In this guide

• A warning alerts you to a potential serious outcome, adverse event or safety hazard. Failure to observe a warning may result in death or serious injury to the user or patient.

• A caution alerts you where special care is necessary for the safe and effective use of the product. Failure to observe a caution may result in minor or moderate personal injury or damage to the product or other property, and possibly in a remote risk of more serious injury.

Who Should Use this Guide?

This programming guide is intended to be used by software professionals and biomedical engineers at medical research clinics or industrial institutions.

To successfully create an application, users should have a **good** working knowledge of:

• Advanced software application design.

• C and/or C++ Programming Language.

• General digital communications theory.

• Local Area Network configuration guidelines.and communication protocols.

• RS232 communication protocols and the IrDA protocol.

Given this background knowledge, this Programming Guide provides the information necessary to create your own applications.

Philips cannot provide any technical assistance for individual programming efforts.

About the Data Export Interface

This document describes the Data Export Interface. Using a communication interface protocol, data from the Philips IntelliVue Patient Monitor or Avalon Fetal Monitor can be transferred via the Local Area Network (LAN) Interface or Medical Information Bus (MIB/RS232) Interface to an external Computer.

By creating basic applications using the Data Export Interface, the following data can be accessed from the monitor:

- All measurement numerics (**excluding** second level numerics such as those obtained in the Calculations windows (Hemodynamic Calculations, Oxy Calculations, Ventilation Calculations) or those exclusively shown in the VueLink/IntelliBridge device data windows).

- Alarm data (real-time update rates up to 1024 ms).

- Wave data (see "Interpreting Wave Data" on page 322 for details)

- Monitor system data.

- Patient demographic data entered by the user in the monitor.

The Data Export Interface of IntelliVue patient monitors cannot be accessed via the Local Area Network when the monitor is connected to the Philips LAN, e.g. to an Information Center (central station). Communication via the MIB/RS232 Interface is always possible (except with MP2/X2).

CAUTION	• Although alarm data can be accessed using the protocol, it must not be used as a real-time alarming system due to the delays in message transfer and the possibility of data loss.
	• The computer client (the interfacing system) and/or the user of the communication system must comply with applicable data privacy regulations.

Data Export Interface Features

- The Data Export Interface uses the Local Area Network (LAN) and MIB/RS232 interfaces.

- The LAN interface uses the standard UDP/IP transport protocol.

- The MIB/RS232 interface can be configured to use either a fixed or a variable baudrate protocol.

- The Data Export Protocol is a connection-oriented, message-based request/ response protocol on top of the transport protocol. The UDP and fixed baudrate transport protocols are connection-less, whereas the variable baudrate protocol is connection-oriented.

- The LAN interface supports automatic configuration of the network IP address with the standard BootP protocol or DHCP.

Note About Changes in Rev. G.0

IntelliVue Rev. G.0 and higher differs from Rev F.0 and lower in the nomenclature of some numeric and wave labels. The labels that previously resided in the namespace NOM_EMFC are now merged into the NOM_SCADA namespace and the new defined NOM_SETTING namespace.

For details on identifying the software revision of the client interface protocol, please refer to "Building a Computer Client" on page 315

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Connecting to the Network

The Philips IntelliVue and Avalon Series monitors use a standard IEEE802.3 Local Area Network interface for the Data Export Capability.

The Data Export Interface via LAN is not available when an IntelliVue monitor is connected to the Philips LAN (e.g. to the Philips Information Center central station). Only devices approved for use with the Philips network may be connected to the Philips LAN.

Connecting to the Network via a LAN Interface

The monitor connects to the network using a standard unshielded LAN cable with an RJ45 connector. The network cable must be plugged into the orange-framed LAN connector of the IntelliVue monitor or the LAN port of the System Interface of the Avalon Fetal/Maternal monitor. Note that for IntelliVue MP2/X2 the LAN connector is located on the external power supply.

WARNING   In order to maintain the galvanic isolation of the monitor, it is essential that UTP (Unshielded Twisted Pair) LAN cables must be used to connect the monitor to other devices.

The following LAN cables supplied by Philips can be used to connect the monitor:

- M3199AI #J10 - 3ft (0.91m), Part No. M3199-60103 (12NC: 453563337391)

- M3199AI #J11 - 7ft (2.1m), Part No. M3199-60104 (12NC: 453563337401)

- M3199AI #J12 - 12ft (3.6m), Part No. M3199-60105 (12NC: 453563337411)

The maximum cable length between the monitor and the Computer Client should never exceed 330ft (100m) in total.

Connection via Hub/Switch

The monitor and the Computer Client are connected to a standard Ethernet switch or hub using UTP LAN cables.

NOTE   In order to avoid high latency and data loss and to ensure data privacy, a dedicated network that is exclusively used for patient data collection by monitor devices and Computer Clients must be used.

Connection with Cross-over Cable

You can connect the monitor directly to the Computer Client, without a network hub or network switch, by using a UTP network crossover cable. In this case, the connection is a point-to-point connection only (one monitor connects to one Computer Client).
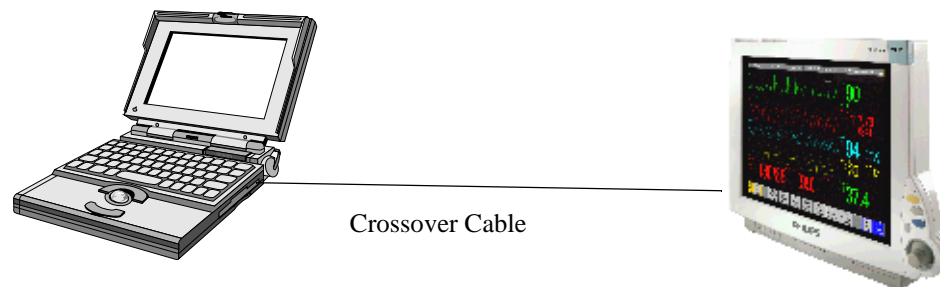
Crossover Cable

The following cross-over LAN cables supplied by Philips can be used to connect the monitor:

- M3199-60101 (453563337371)   3Ft UTP Crossover cbl Orange, 0,9m

- M3199-60102 (453563337381)   12Ft UTP Crossover cbl Orange, 3,6m

Avoiding Current Leakage

You must use Unshielded Twisted Pair (UTP) LAN cables to connect the monitor to other devices.

The Computer Client and network infrastructure devices typically are not classified as medical devices and must be located outside the patient vicinity. The patient vicinity is defined as an area within 6ft (1.85m) of the perimeter of the patient's bed or within 7.5ft (2.3m) of the floor.

- If the Computer Client is installed in the patient vicinity and connected to the monitoring device, it must be correctly isolated from the mains power supply by an isolation transformer.

- If the Computer Client is installed in the patient vicinity and a network switch or hub is used to connect it to a monitoring device, it must be correctly isolated from the mains power supply by an isolation transformer.

WARNING All external devices in the patient vincinity must comply with IEC 60601-1:1988/A1:1991A2:1995 or EN 60601-1:1990/A1:1993/A2:1995. This applies also to all signal connections, entering the patient vincinity. Additional safety equipment, e.g. isolation transformers might be used.

The installation procedures e.g. for electrical connections as documented in the Instructions for Use must be strictly followed.

Using the Monitor with an Installed, Wired Network

The following diagram shows an overview of a possible LAN installation which provides galvanic isolation of the monitor:
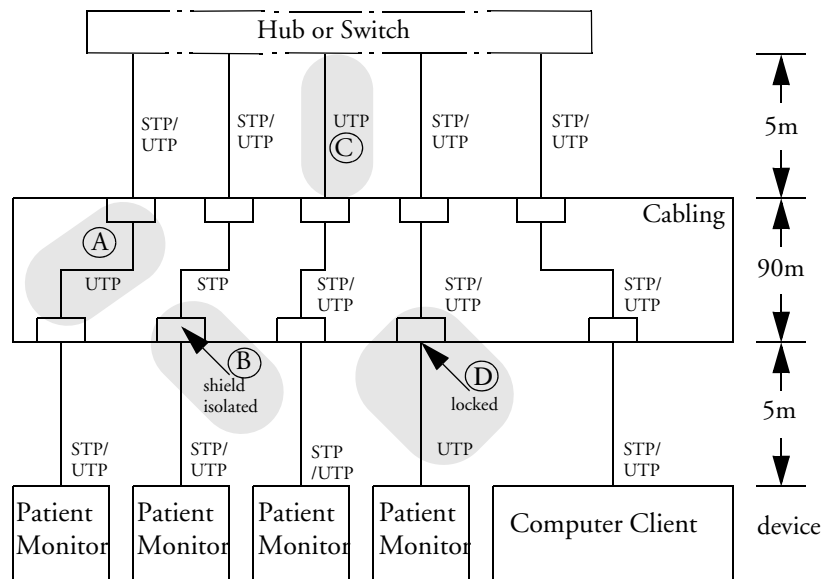
If required by regulations valid in your hospital, the installation must comply to EN60601-1-1:1993/A1:1996 or IEC 60601-1-1:1992/A1:1995.

The maximum cable length between the monitor and the Computer Client should never exceed 330ft (100m) in total.

Note regarding MP2 and X2:

The MP2 and X2 allow Data Export via the LAN interface only because they do not have an RS232 port. The LAN interface is only available if the MP2 or X2 is used in combination with the M8023A External Power Supply. If the X2 is connected to a host monitor, the data export can be performed via the host monitor.

IntelliVue Rev. G.0 or higher allows the combination of a LAN interface and one MIB/RS232 port for Data Export. Only one connection is able to request wave data at a time, the other connection responds with a notification that wave polling is not possible. The first connection to request a successful wave poll receives the wave data.

WARNING In order to maintain the galvanic isolation of the monitor, it is essential that the shield is not connected from the monitor through to the hub or switch. At least one of the following precautions must be taken:

- UTP (Unshielded Twisted Pair) LAN cables are used in the wall.

- If STP (Shielded Twisted Pair) LAN cables are used in the wall, do not connect the shield of the cable from the IntelliVue monitor to the wall socket. Ensure that the shield of the STP cable in the wall is isolated from the other contacts. For a reference voltage of 250V, a clearance of at least 2.5 mm and a creepage distance of at least 4.0 mm is required. Cutting the shield back and covering it with a nonconducting shroud will fulfill this requirement.

- Ensure that only UTP cables are used in the wiring closet for connections to the hub or switch.

- Use only UTP cables such as M3199AI #J10/J11/J12 to connect the monitor to the wall socket. To avoid these cables being replaced by non-UTP cables, the connector which goes into the wall socket must be modified so that it cannot be removed without using tools. This can be done by cutting off the part of the plug lock which normally extends beyond the socket.

Configuring the LAN Interface

Configuring the Network Address

No explicit configuration of the network addresses (IP addresses etc.) is required. The monitor uses the standard BootP or DHCP protocol to acquire an IP address and subnet mask from a BootP/DHCP server in the network.

Without a working BootP/DHCP server in the network, the monitor will show a technical alarm (INOP) "Unsupported LAN", indicating that no (valid) IP address has been received.

NOTE - For IntelliVue Software Revision E and later it is possible to manually enter the IP address used by the patient monitor by entering service mode and accessing the bed information window from the main setup menu.

- With IntelliVue Software Revision H and later, use of the DHCP protocol is also supported. This requires configuration of the network interface. See the IntelliVue Configuration Guide for details.

Configuring the LAN Data Export Setting

The data that can be exported via the LAN interface is configurable. You can choose between the following options: all, anonymous data, off. In case of anonymous data the patient name and given

name are not included in the data stream.

To change the CentralMon configuration switch, first switch to configuration mode

To configure the LAN Data Export Setting, in Configuration Mode,

Select **Main Setup** to enter the Main Setup menu.

Select **Global Settings**

Select **LAN Data Export** and toggle the appropriate setting.

Configuring the Network Setting

IntelliVue Monitors only The Central Monitoring setting on the monitor determines whether the monitor requires a connection to the Philips Information Center (central station). If **Central Monitoring** is set to **Mandatory**, the monitor issues a technical alarm (INOP) if a network is detected without an Information Center (central station). If you are connecting the monitor to a Computer Client, **Central Monitoring** should be set to **Optional**.

To do this, in Configuration Mode,

1   Select **Main Setup** to enter the Main Setup menu.

2   Select **Network**

3   Select **Central Monitoring** and toggle to the appropriate setting:

Mandatory	The monitor should be connected to an Information Center. An INOP is displayed if no connection is available.
Optional	The monitor can be connected to an Information Center. An INOP is only displayed if the connection to the Information Center is lost. No INOP is displayed if no connection is found at power on.

4   After the configuration, make sure you have stored all the active settings and leave Configuration Mode. You do not need a password to return to Monitoring Mode.

For further details on configuration, please refer to the IntelliVue configuration guide (M8000-9306X).

Connecting to the IntelliVue MP20-90 or MX Series or the Avalon FM Series MIB/RS232 Interface

NOTE This section only applies to MX400-550 Monitors if the Dual MIB/RS232 I/O board is used. For connection to the Advanced Interface Board of the MX400-550 monitors, please refer to "Connecting to the Intellivue MP5 Monitor MIB/RS232 Interface or the MX400-550 Advanced Interface Board" on page 21

The MIB/RS232 interface provides an eight-pin RJ-45 modular jack.
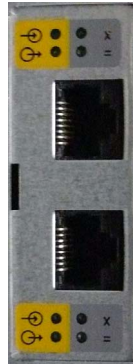
IntelliVue MP20-90 Avalon FM 20-50   **IntelliVue MX 600-800**   **IntelliVue MX MX400-550**

For the cable connection an eight conductor #24 American Wire Gauge (AWG) unshielded twisted-pair (UTP) cable must be used. The cable must follow ANSI/TIA/EIA-568-A-1995 Category 5 (CAT-5). The cable length must not exceed 65ft (20m). Straight-through pinning must be used.

The physical specification of the MIB/RS232 Interface follows the standard IEEE 1073.3.2. Refer to the standard for more information on cables and pin assignment.

The MIB/RS232 interface provides a RS232 port with the following pin assignment. This table is valid when the MIB/RS232 Interface is in DCC (Device Communication Controller) mode (DCC LED on the MIB/RS232 board is on - see below for details).

Computer Client	Pin and Signal Direction	IntelliVue monitor
	1<=	dDPWR
GND	4 <=>	GND
RxD	5 <=	TxD
TxD	7 =>	RxD

The pins of the RJ45 are counted from 1 for the lowest pin to 8 for the highest pin when looking at the RS232/MIB interface board.
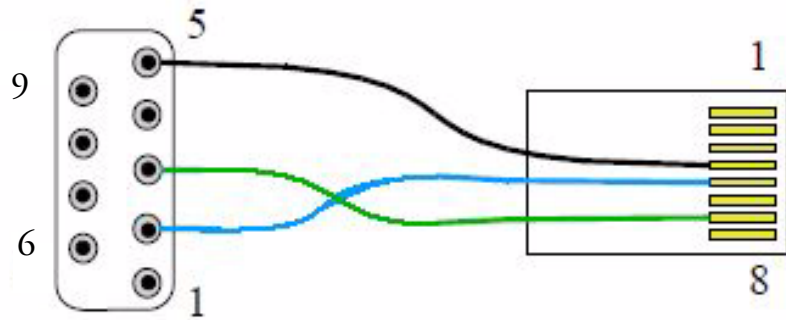
LEDs on the MIB/RS232 Board (MP20-90 and Avalon FM Series only)

There are four LEDs per port on the MIB/RS232 board which provide information on the configuration of the respective board. The MIB functionality is indicated by the LEDs in the yellow fields, other functionality (e.g. use for AGM or touch) is indicated by the LEDs in the grey fields. Only one LED is lit at a time.

LED	Meaning
yellow, arrow in	MIB BCC (Bedside Communication Controller) Mode
yellow, arrow out	MIB DCC (Device Communication Controller) Mode
grey, =	RS232 Mode, RX/TX lines straight
grey, X	RS232 Mode, RX/TX lines crossed

NOTE   The drawings and descriptions of the RS232/MIB board above apply to the IntelliVue MP60/70 monitors. Location and orientation of the board may vary, depending on the monitor purchased.

Please note that Data Export will only function with the MIB/RS232 interface in DCC mode.

The TxD and RxD lines are the RS232 receive and transmit lines. The signals are referenced to the round (GND). The dDPWR can be used to power an external device with low power consumption. Refer to the Power Output specification in the table below.

Other applications in the IntelliVue monitor may be configured to use the MIB/RS232 Interface. These applications may use pins which are not used by the Data Export interface. Unused pins should not be connected. The IntelliVue monitor provides multiple RJ-45 connectors. Make sure, to use the correct connector with a port configured for Data Export.

The configuration of a specific MIB/RS232 port can be viewed in config mode and altered in **service mode**. To alter the configuration of an MIB port select **Main Setup** then **Hardware** then **Interfaces.** This brings up the MIB/RS232 card configuration. The port that you are using must be set to **DtOut1** for the "Data Out" function. If the MIB/RS232 port is configured for data export the yellow arrow out LED will be lit.

IntelliVue Rev. G.0 or higher allows the configuration of either a second MIB/RS232 port or the combination LAN interface and MIB/RS232 port for Data Export. The **DtOut2** driver is used to connect a second port to Data Export. Only one connection is able to request wave data at a time, the other connection responds with a notification that wave polling is not possible. The first connection to request a successful wave poll receives the wave data.

Parameter	Limit
`Driver (TxD)`	
`Driver load output voltage (3 kOhm to 7 kOhm load)`	$5\ V <= |Vout| <= 15\ V$
`Driver open-circuit voltage`	$|Vout| <= 25\ V$
`Driver short-circuit current (to +/- 15 V)`	$|Iosv| <= 100$ mA
`Receiver (RxD)`	
`Receiver input resistance`	3 kOhm to 7 kOhm
`Maximum receiver input voltage`	+/- 25 V
`Receiver threshold`	+/- 3V
`Power output (dDPWR)`	
`Minimum output voltage`	4.75 V
`Maximum output voltage`	5.25 V
`Minimum guaranteed output current`	100 mA
`Maximum typical output current`	150 mA

REPEATED INFORMATION: If the Computer Client is not classified as a medical device, it must be located outside the patient vicinity. The patient vicinity is defined as an area within 6ft (1.85m) of the perimeter of the patient's bed or within 7.5ft (2.3m) of the floor.

WARNING All external devices in the patient vincinity must comply with IEC 60601-1:1988/A1:1991A2:1995 or EN 60601-1:1990/A1:1993/A2:1995. This applies also to all signal connections, entering the patient vincinity. Additional safety equipment, e.g. isolation transformers might be used.

The installation procedures e.g. for electrical connections as documented in the User's Guide must be strictly followed.

If it is installed in patient vicinity, the Computer Client, connected to the instrument, must be correctly isolated from the mains power supply by an isolation transformer. The MIB/RS232 interface provides galvanic isolation of the monitor from a connected device.

Connecting to the Intellivue MP5 Monitor MIB/RS232 Interface or the MX400-550 Advanced Interface Board

The physical specification of the MP5 RS232 Interface follows the standard IEEE 1073.3.2. Refer to the standard for more information on cables and pin assignment. Note that the MP5 monitor's RS232 interface is always configured as a BCC device.

IntelliVue MP5 MIB/RS232 Interface

IntelliVue MX 400-550 Advanced System Interface Board old design and new design (from left to right)

The MP5 RS232 interface and the MX400-550 Asvanced Interface Board provide an RS232 port with the following pin assignment.

Computer Client	Pin and Signal Direction	IntelliVue monitor
GND	4 <=>	GND
TxD	5 =>	RxD
RxD	7 <=	TxD

The TxD and RxD lines are the RS232 receive and transmit lines. The signals are referenced to the round (GND).

To connect a PC via RS232 to the MP5 monitor or via RS232 on the Advanced Interface Board to the MX400-550 monitor, use a cable configured as shown below.

The pins of the RJ45 connector are counted from 1 for the highest pin to 8 for the lowest pin looking directly at the pins with the cable leaving the connector to the left.
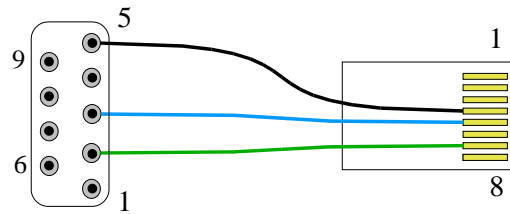
The MIB/RS232 port must be set to **DtOut1** for the "Data Out" function. See page 19 for details on how to change the configuration of the MIB/RS232 port.

REPEATED INFORMATION: If the Computer Client is not classified as a medical device, it must be located outside the patient vicinity. The patient vicinity is defined as an area within 6ft (1.85m) of the perimeter of the patient's bed or within 7.5ft (2.3m) of the floor.

WARNING   All external devices in the patient vincinity must comply with IEC 60601-1:1988/A1:1991A2:1995 or EN 60601-1:1990/A1:1993/A2:1995. This applies also to all signal connections, entering the patient vincinity. Additional safety equipment, e.g. isolation transformers might be used.

The installation procedures e.g. for electrical connections as documented in the User's Guide must be strictly followed.

If it is installed in patient vicinity, the Computer Client, connected to the instrument, must be correctly isolated from the mains power supply by an isolation transformer. The MIB/RS232 interface provides galvanic isolation of the monitor from a connected device.

Configuring the MIB/RS232 Interface

The MIB/RS232 interface supports different transport protocols.To change the MIB/RS232 interface configuration, in Configuration Mode,

1   Select **Main Setup**

2   Select **Hardware**

3   Select **Data Export** and select the required setting:

AutoSpeed	Transport protocol with baudrate negotiation, based on the IrDA protocol.
Fix 19200	Transport protocol with a fixed baudrate of 19200 baud.
Fix 115200	Transport protocol with a fixed baudrate of 115200 baud.

4   Exit Configuration Mode. You do not need a password to return to Monitoring Mode.

IntelliVue Rev. G.0 and higher devices that allow two MIB/RS232 interfaces have two "Data Export" options. You can select **DtOut1** and/or **DtOut2**. These can be configured in service mode only. Please refer to the respective service guide for information on how to access service mode and teh required password.

For further details on configuration, please refer to the IntelliVue configuration guide (M8000-9306X).

Protocol Concept

The Protocol is based on a Client/Server Model. The Personal Computer *(Client)* maintains a logical connection with the Philips IntelliVue or Avalon Monitor (*Server*). Communication occurs by sending and receiving Command messages.

Supported Transport Protocols

The Data Export functionality in the monitor can be accessed via the LAN interface or via the MIB/RS232 interface. While the Association Control and Data Export Protocol is the same for both interfaces, the underlying transport protocol varies.

- For the LAN interface the transport protocol is the standard UDP/IP protocol.

- For the MIB/RS232 interface, two transport protocols are supported:
  - a fixed baudrate protocol at 19200 or 115200 baud and
  - a protocol with baudrate negotiation (Auto Speed) based on the IrDA protocol with a baudrate from 9600 baud to 115200 baud.

Association Control and Data Export Protocol		
UDP/IP	RS232 Fixed Baudrate	RS232 Auto Speed
LAN Interface	MIB/RS232 Interface	

UDP/IP Protocol

The transport protocol uses the Universal Datagram Protocol/ Internet Protocol (UDP/IP).The protocol is based on the Request For Comment (RFC) internet standard. UDP is defined in RFC 768; IP is defined in RFC 760.

The UDP/IP transport protocol is part of the internet protocol suite. Drivers and necessary hardware are available for all relevant computing platforms. It provides for a simple exchange of messages (Datagrams) across a Local Area Network. The maximum size of user data in a protocol message can be negotiated at connection time between the monitor and the Computer Client.

Fixed Baudrate Protocol

The Fixed Baudrate Protocol provides a transport protocol with minimal overhead and complexity. It is intended for Computer Clients which cannot use the Auto Speed Protocol. The protocol operates at a fixed baudrate and can be used with standard RS232 concentrators. It provides packet-oriented data exchange and checksum protection on top of the RS232 protocol. For the specification of the Fixed Baudrate Protocol see "Transport Protocols for the MIB/RS232 Interface" on page 30.

Auto Speed Protocol

The Auto Speed Protocol is based on the IrDA protocol. It offers a reliable transport layer with checksum protection and a retry mechanism in the case of transmission problems. The baudrate can be negotiated in a range from 9600 baud to 115200 baud. For the specification of the AutoSpeed Protocol see "Transport Protocols for the MIB/RS232 Interface" on page 30.

Protocol Model

The protocol is based on an object-oriented modelling concept. All information available through the Data Export Protocol is modelled as attribute values of information objects.

The following information object classes are supported by the monitor:

- Medical Device System (MDS)

  The MDS object contains attributes representing dynamic state information (e.g. current operating mode) and static device specific identification information (e.g. Serial Numbers).

- Alert Monitor

  The Alert Monitor object contains attributes representing the current technical and patient alarms, as e.g. displayed on the monitor.

- Numeric

  Numeric objects contain attributes representing the state and value of numerical measurements (e.g. Heart Rate).

- Enumeration

  Enumeration objects contain attributes representing the state and value of enumerated measurement data (e.g. ECG Rhythm Status)

- Waves

  Realtime sample array objects contain attributes representing the state and value of wave data (e.g. ECG).

- Patient Demographics

  The Patient Demographics object contains attributes representing patient information stored in the monitor (e.g. Patient Name).

The object attributes can be accessed by a poll of the MDS object, which allows a query of the sets of attribute values from all objects of a specified class.

The method can be called by sending a command message from a Computer Client to the monitor.

Protocol Dialog

The following diagram shows the protocol dialog between the monitor Data Export server and a Computer Client:
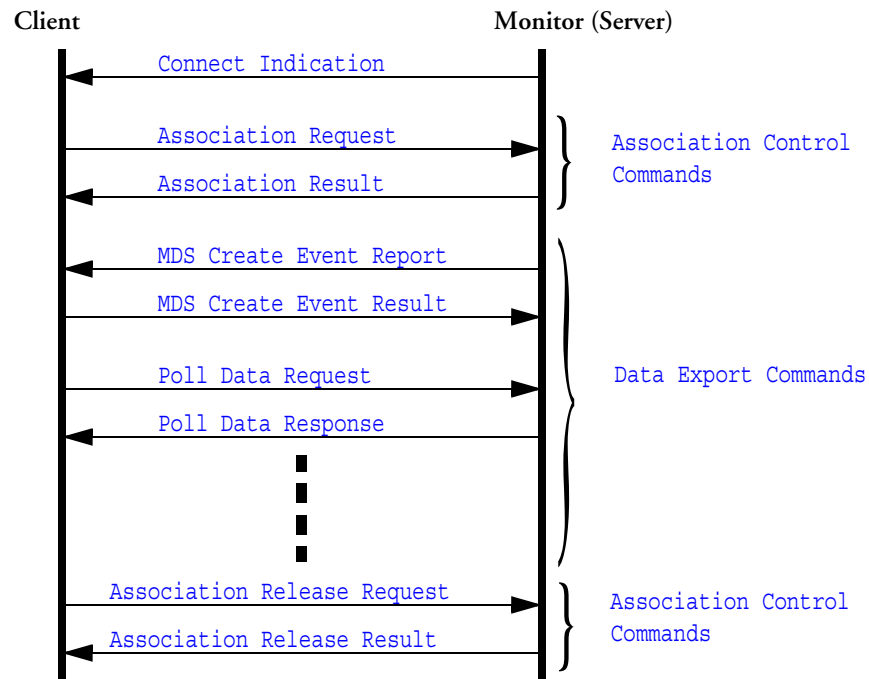
Figure 1   Protocol Dialog

Transport protocol-specific messages are not shown in the diagram. The Connect Indication message is only available on the LAN interface.

The Philips IntelliVue and Avalon Monitors process global commands and send response messages to the requests made by the client of the personal computer.

The messages shown in the diagram are explained in the following sections.

Connect Indication

The Connect Indication message is only sent on the LAN interface.

As soon as the monitor has received a valid IP address from the BootP/DHCP server in the network, it sends out the Connect Indication message on its LAN interface. The message is a periodic multicast ort broadcast message (as configured in the monitor network settings) that allows Computer Clients to find the monitor on the network. The message contains a set of device-related information, e.g., serial numbers, network addresses, internal states.

The monitor resends the Connect Indication message until a logical connection to a central station has been established. The monitor uses the retransmit strategy described in RFC 951. The resend period starts with 4 seconds and is doubled with each resend. The maximum resend period is about 64 seconds. The actual resend period contains a random component to avoid network congestion e.g. after a power failure.

Association Request

To establish a logical connection, the Computer Client sends the Association Request message to the monitor.

The Association Request can be used to set optional features of the logical connection between Computer Client and monitor.

Association Result

The monitor processes the Association Request and sends an Association Result. The result can be either a refuse message or an accept message.

The Computer Client must parse the Association Result to find out which protocol features can be used for this association.

MDS Create Event Report

If the monitor accepts the association, it sends a MDS Create Event Report after the positive Association Result message.

The MDS Create Event Report contains information about the system and its configuration.

MDS Create Event Result

The Computer Client must confirm the reception of the MDS Create Event Report. If the monitor does not receive a MDS Create Event Result message, the association is aborted.

Poll Data Request

After establishing an association, the Computer Client can send Poll Data Requests to access the data within the monitor.

The Poll Data Request contains a data-type parameter, which defines the specific type of requested data. The following data types are supported:

- Numeric/Enumeration Measurements
- Wave data
- Alerts (patient alarms and technical alarms)
- Patient Demographics
- System Attributes (e.g. dynamic state information, serial numbers, versions, etc.)

Only one type of data can be accessed per Poll Data Request.

Poll Result

Depending on the status of the monitor and the options set during the establishment of the logical connection (association phase), a Poll Data Request message can return:

- a single Poll Data Reply
- multiple, linked Poll Data Replies, if the size of the requested data exceeds the maximum size of a transport layer message
- a continuous number of periodic Poll Data Replies for a time period defined by the Computer Client (supported for Numeric Measurements, Waves and Alerts only).

Association Release Request

When the Computer Client wants to close an association, it can send a Release Request.

Association Release Result

The monitor parses the Release Request. If the Release Request is syntactically correct, the monitor sends an Association Release Result, indicating that the Association has been released.

Association Abort

In the case of communication problems, such as time-out, the monitor can send an Association Abort message. This message indicates that the association has been closed. A Computer Client should use the Association Release Request which provides a confirmation.

More Information

- For more details on the association control commands, such as Association Request, Association Result, Association Abort etc., please refer to the section "Definition of the Association Control Protocol" on page 65.

- For more detail on the data export commands, such as Poll Data Request, MDS Create Event Report, MDS Create Event Result, etc., please refer to the section "Protocol Commands" on page 52.

Connection Time-out Mechanism

The monitor automatically closes the connection if it detects a connection time-out condition. The connection time-out value is derived from the minimum poll period that is negotiated during the connection establishment phase.

A connection time-out period is 3 times the negotiated minimum poll period time. However, the minimum connection time-out is 10s, the maximum connection time-out period is 130s.

If the monitor does not receive a protocol message within the connection time-out period, the device closes the connection to the Computer Client by sending an Association Abort message. After that, a new connection can be established from the Computer Client to the monitor.

Network Load Consideration

Input Data

The monitor accepts a specific amount of input data per association. If the Computer Client sends more than the specified number of messages, the monitor will discard messages to avoid an unreasonably high system load. A Computer Client should be able to handle the loss of messages.

Message Type	Messages per Second
Association Control	1
Poll Request - Numerics (observed values)	1
Poll Request - Numerics (other attributes)	1
Poll Request - Enumerations	1
Poll Request - Waves	1
Poll Request - Alert Monitor	1
Poll Request - Patient Demographics	1
Poll Request - Medical Device System	1

The monitor will send a Remote Operation Error message if it receives a poll request for an object while it is still processing another poll request for the same object.

Output Data

The monitor processes the received message and sends the corresponding results. In rare cases, it can take up to several seconds until the response message is returned, and Poll Requests may be lost.

To avoid poll requests or poll responses getting lost, it is strongly recommended that the Computer Client uses the extended poll method to poll real-time numerics.

Definition of the Transport Protocols

Transport Protocols for the LAN Interface

UDP/IP

The Protocol uses the Universal Datagram Protocol/ Internet Protocol (UDP/IP) as the transport protocol. The protocol is based on the following internet standards (Request For Comment, RFC):

UDP is defined in RFC 768.

IP is defined in RFC 760.

The UDP/IP transport protocol is part of the internet protocol suite. Drivers and necessary hardware are available for all relevant computing platforms.

It provides for a simple exchange of messages (Datagrams) across a Local Area Network.

The maximum size of user data in a protocol message can be negotiated at connection time between the monitor and the Computer Client.

The upper limit for the negotiated user data size (MTU, Maximum Transport Unit) is 1364 bytes, the lower limit for the negotiated MTU is 500 Bytes. The maximum size of a UDP message sent by the monitor is 1380 bytes.

IP Address

In order to communicate with the Philips IntelliVue or Avalon Monitor, a BootP or DHCP server must exist in the network or the IP address must be configured manually. The BootP or DHCP server must be configured so that it answers BootP/DHCP Request messages from the monitor.

UDP Port Number

The UDP Port Number used by the monitor for the Protocol can be extracted from the Connect Indication broadcast message used for Device Discovery (see "CONNECT INDICATION EVENT" on page 53). The current Protocol version uses the fixed UDP port 24105.

All messages sent from the Computer Client to the monitor must use this port number as the destination port number.

The Computer Client can chose any available source port for the communication. Once the Computer Client has chosen a source port, it must not use any other port. Protocol messages from another source port will be regarded as messages from a different Computer Client).

Any messages sent from the monitor back to the Computer Client use the source port number set by the Computer Client in first message (the Association Request message, see "Association Request Message" on page 67).

Transport Protocols for the MIB/RS232 Interface

The Fixed Baudrate Protocol, RS232 Port Settings

Each transmitted byte consists of one start bit, 8 data bits (no parity) and one stop bit. The baudrate can be set to 115kBit/s or 19.2kBit/s.

Flow control is not supported (same behavior as UDP). The monitor limits the number of Frames which will be processed in a given time. The monitor will process up to 4 frames within 128ms. If a client sends more frames, additional frames are ignored. (Implementation Note: the monitor allows 5 frames within 128ms, the additional frame is required because of possible jitter.)

A client system must be able to handle the loss of messages, because the Fixed Baudrate Protocol does not guarantee the reliable transmission of messages.

Framing

BOF	Hdr	User Data	FCS	EOF

The framing structure is the same as for AutoSpeed protocol. A frame starts with a single BOF.

BOF	Beginning Of Frame (0xC0)
Hdr	Header Information
User Data	Association Control or Data Export Command message
FCS	16 bit Frame Check Sequence using CRC-CCITT algorithm
EOF	End Of Frame (0xC1)

Header Information

The *Hdr* field is defined as follows:

```
typedef struct
{
    u_8             protocol_id;
    u_8             msg_type;
    u_16            length;
} FrameHdr;
```

The *protocol_id* field contains ID and version information. It can be used to define different service access points. Data Export uses the ID 0x11.

The *msg_type* field defines the type of message which is being sent. The value 0x01 indicates an Association Control or Data Export Command message, future message types could be used for flow control, lifetick, message confirmation etc.

The *length* field contains the length of the appended user data in bytes (without transparency characters).

If a client receives messages with an unknown *protocol_id* or *msg_type*, it should ignore the message.

Frame Check Sequence Field

The Frame Check Sequence Field can be used to detect transmission errors. The field contains a 16 bit CRC-CCITT cyclic redundancy check (not the popular XMODEM variation of CRC-CCITT). The CRC is computed from the *Hdr* and *User Data* field. Refer to "Serial Infrared Link Access Protocol (IrLAP)" Version 1.1 for the actual computation method of the CRC. A code snippet for the FCS algorithm can be found in the Network Working Group Request for Comment: 1171 (PPP protocol). The one's complement of the CRC is transmitted, rather than the CRC itself. The CRC is transmitted LSB first.

If the CRC is not correct, a client system should ignore the message.

Transparency

The contents of the *Hdr* and *User Data* fields is unrestricted. This can lead to problems if a BOF or EOF character appear in the *Hdr*, User Data, or FCS field. A Control Escape byte is defined as 0x7D. The sender must examine each byte in the User Data and FCS fields; for each byte with the value 0xC0, 0xC1, 0x7D it does the following:

- insert a 0x7D byte proceeding the byte

- complement bit 5 of the byte (XOR with 0x20).

Frame Abort

The sending station may abort the transmission of a frame by sending a control escape character followed by a EOF character (0x7D 0xC1) without sending the FCS field.

Examples The examples below do not include the *Hdr* field. For a correct message, the framing algorithm must be applied to the *Hdr* and *UserData* field of the message.

1   If a Computer Client wants to send the data:

"0x3a 0x71"

The CRC for this data would be:

"0xd9 0x64"

after building the one's-complement and byte-swapping, this results in:

"0x9b 0x26"

The whole frame would be:

"0xc0 0x3a 0x71 0x9b 0x26 0xc1"

2   If a Computer Client wants to send the data:

"0x3a 0x91"

The CRC for this data would be:

"0x3e 0x6a"

after building the one's-complement and byte-swapping, this results in:

"0x95 0xc1"

The whole frame would be:

"0xc0 0x3a 0x91 0x95 0x7d 0xe1 0xc1"

Note that byte "0xc1" in the CRC is a reserved character and must be escape. This results in "0x7d 0xe1".

The AutoSpeed Protocol

The AutoSpeed Protocol follows the definition of the Transport Protocol defined in the standard IEEE 1073.3.2: IEEE Standard for Medical Device Communications - Transport Profile - IrDA Based Cable Connection.

For a description of the IrDA Protocol refer to the specifications of the Infrared Data Association (www.irda.org):

• IrDA, Serial Infrared Link Access Protocol (IrLAP), Version 1.1, June 16, 1996

• IrDA, Link Management Protocol (IrLMP), Version 1.1, Oct. 20, 1996

• IrDA, Tiny TP: A Flow-Control Mechanism for use with IrLMP, Version 1.1, Oct. 20, 1996

Commercial IrDA stacks are available for most operating systems.

The Data Export protocol resides as a packet oriented client on top of the IrDA TinyTP layer.

Establishing a Connection

A connection is created using the following steps:

• Discovery

The Computer Client sends an IrLAP discovery request to find out if a device is physically connected. The IntelliVue monitor answers with an discovery response message. The discovery procedure is done at a fixed baudrate of 9600 baud.

• Open an IrLAP connection

When the Computer Client finds a connected system, it can send an IrLAP Set Normal Response Mode message to establish a logical IrLAP connection. The IntelliVue monitor sends an response message. During this procedure parameters of the IrLAP connection, like baudrate, data size, etc. are negotiated.

• Open an IAS port

The Information Access Service (IAS) is provided by the IrLMP layer. It provides a database with device information which can be queried by the client. Before accessing the service, the client must connect to the special IrLMP service access point (SAP) 0.

• Perform an IAS query

The IrLMP layer does not specify a well-known SAP for the Data Export Protocol, hence the client should query the IAS database to find the SAP for the Data Export Protocol. The database contains the attribute "IrDA:TinyTP:LsapSel" under the object class "IEEE:1073:3:2:MDDL". The attribute specifies the SAP for the Data Export Protocol on the IrDA TinyTP layer as an integer value.

• Close the IAS port

After performing the IAS query, the Computer Client should close the IAS port again with an IrLMP disconnect message.

• Open a Tiny TP connection

After retrieving the number for the TinyTP SAP, the client system can open a connection on this SAP. This is done with an IrLMP connect request message which contains a TinyTP connect in its user data.

• Send an Association Request

After the transport layer connection has been established, the Computer Client can send an Association Request message to start a Data Export session.

• Send a Release Request

When the client has no need for further communication, it can send a Release Request message to terminate the Data Export session.

• Close the IrLAP connection

After the Data Export session has been closed, theComputer Client should also close the TinyTP SAP. This can be done by sending an IrLMP disconnect message or by closing the whole IrLAP connection.

Definition of the Data Export Protocol

Definitions Shared by Protocols

Byte Order

The protocol data structures use the Network Byte Order. This means that bytes of a multi-byte data structure are transmitted on the network with the most significant byte first (as in big-endian data storage). This may or may not match the order in which numbers are normally stored in memory for a particular processor.

If the Computer Client is not using big-endian storage internally (many common Personal Computer Platforms use little-endian storage), protocol data structures (message structures) must be transformed before they are sent to an monitor or after they have been received from an monitor.

Byte Alignment

The Association Control and Data Export protocols assume no data alignment. However, most data types used in this guide have an even length for performance reasons. Many compilers use different alignment modes by default. Make sure that the compiler uses the right alignment when parsing and formatting protocol messages.

Bit Order

The index for bits starts with zero for the most significant bit.

MSB															LSB
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Common Data Types

Basic Data Types

The C data types defined here make use of the following basic types:

```
u_8     unsigned 8  bit wide integer
u_16    unsigned 16 bit wide integer
u_32    unsigned 32 bit wide integer
i_8     signed 8  bit wide integer
i_16    signed 16 bit wide integer
i_32    signed 32 bit wide integer
```

The mapping of these types to data types used in a Computer Client application is machine specific and compiler dependent.

Absolute Time

The Absolute Time data type is used whenever data is time stamped and a resolution of 1s is sufficient.

```
typedef struct {
        u_8             century;
        u_8             year;
        u_8             month;
        u_8             day;
        u_8             hour;
        u_8             minute;
        u_8             second;
        u_8             sec_fractions;
} AbsoluteTime;
```

The individual u_8 fields are BCD encoded, they are not encoded as regular integer values. E.g. the year 99 (decimal) is coded as 0x99. An invalid time is marked with 0xff in all positions.

Note that the time resolution in monitor with this format is 1 second. The *sec_fractions* element in the structure is not used.

Relative Time

The Relative Time is a high resolution time marker which defines a time relative to an event (e.g. power-on). It is used to position events (a particular event message) relative to each other with a higher resolution. It is defined as follows:

```
typedef u_32    RelativeTime;
```

The resolution of the *RelativeTime* is 1/8ms (125us). The monitor sets the Relative Time with a precision of 2 ms. The Computer Client can calculate the absolute time (wall clock) from a known relation between Absolute Time and Relative Time with a precision of about 1s. For more information on the time mapping refer to "MDS CREATE EVENT" on page 54.

OID Type

For the identification of all protocol elements (e.g. physiological meaning, alert codes, units of measure), the *OIDType* (Object Identifier Type) is used.

```
typedef u_16          OIDType;
```

Values for the *OIDType* (the nomenclature) are listed at the end of the section "Attribute Data Types and Constants Used" on page 75. Independent value ranges (partitions) exist, e.g. for physiological identifiers, alert condition identifiers, units of measurement etc.

Private OID

For the identification of private or manufacturer specific elements, a special type is used.

```
typedef u_16          PrivateOID;
```

Values for the *PrivateOIDs* are listed whenever a *PrivateOID* is used. Refer to the section "Attribute Data Types and Constants Used" on page 75 for a complete list of identifiers.

TYPE

Whenever it is not clear from the context, from which nomenclature value range the *OIDType* comes, the TYPE data type is used. Here, the nomenclature value range (the partition) is explicitly identified.

```
typedef u_16          NomPartition;
#define NOM_PART_OBJ        1
#define NOM_PART_SCADA      2
#define NOM_PART_EVT        3
#define NOM_PART_DIM        4
#define NOM_PART_PGRP       6
#define NOM_PART_INFRASTRUCT  8

typedef struct {
        NomPartition    partition;
        OIDType         code;
} TYPE;
```

The *code* values are grouped in the following partitions:

NOM_PART_OBJ: Object oriented element, device nomenclature

NOM_PART_SCADA: Types of measurement and place of the measurement

NOM_PART_EVT: Codes for alerts

NOM_PART_DIM: Units of measurement

NOM_PART_PGRP: Identification of parameter groups

NOM_PART_INFRASTRUCT: Infrastructure for Data Export applications

The *code* is only unique in a given partition. The values for the *OIDType* are defined in the section "Attribute Data Types and Constants Used" on page 75.

Handle

Object instances, e.g. Numeric object instances, are identified with a 16bit wide ID, the object Handle:

```
typedef u_16            Handle;
```

Global Handle

Handles are unique within the context of a particular system. The Protocol supports multiple measurement servers, where each measurement server assigns object handles independently. To assure handle uniqueness across system boundaries, the Global Handle contains an additional identifier for the source system, e.g., each measurement server has a distinct context id. The context id is assigned dynamically when a measurement server is connected.

```
typedef u_16            MdsContext;

typedef struct {
        MdsContext      context_id;
        Handle          handle;
} GlbHandle;
```

Managed Object Identifier

The Managed Object Identifier is a fully qualified object identifier which contains an identifier for the object class (e.g. Numeric object) together with a Global Handle.

```
typedef struct {
        OIDType         m_obj_class;
        GlbHandle       m_obj_inst;
} ManagedObjectId;
```

Attribute Value Assertion

Object attributes are represented in the form of data record structures which contain an identifier for the attribute, a length field for parsing and the actual value of the attribute.

The structure of such an attribute record is the Attribute Value Assertion, which is defined as follows:

```
typedef struct {
        OIDType         attribute_id;
        u_16            length;
        u_16            attribute_val;
} AVAType;
```

The *attribute_id* identifies the type of the attribute. The length field contains the size of the *attribute_val* field in bytes. The *attribute_val* field itself is only a placeholder in this structure. The parsing algorithm must assign the attribute value to the correct data structure based on the value of the *attribute_id*.

Attribute List

Typically, object instances have multiple attributes which are captured in a list with the following data type:

```
typedef struct{
        u_16            count;
        u_16            length;
        AVAType         value[1];
} AttributeList;
```

The count field contains the number of Attribute Value Assertion elements in the list.

The length field contains the size of the list (the value array) in bytes.

The value field itself again is only a placeholder data structure. A parser must be used to interpret the data structure. Refer to "Protocol Examples" on page 325 for an example of an *AttributeList*.

String

The text string is preceded by a length field, followed by the value. The *length* field denotes the number of octets in *value*. If the length is zero, no octets are appended. The *String* data type is used for UNICODE encoded texts.

```
typedef struct {
    u_16            length;
    u_16             value[1];
} String;
```

Where possible, the real string lengths have been included in this document. However, these string lengths may change in future releases, producing discrepancies between the actual string lengths and this document.

The *String* uses the same language as the monitor. The monitor uses UNICODE for the *String* data type (see "Connect Indication Attributes" on page 107). The *String* may contain code values from the UNICODE private use area (0xE000 to 0xF8FF). The Computer Client most likely will not support these characters. The following codes are frequently used:

```
#define SUBSCRIPT_CAPITAL_E_CHAR      0xE145
        /* SUBSCRIPT CAPITAL E                        */
#define SUBSCRIPT_CAPITAL_L_CHAR      0xE14C
        /* SUBSCRIPT CAPITAL L                        */
#define LITER_PER_CHAR                0xE400
        /* LITER PER - used in 4 char unit "l/min"    */
#define HYDROGEN_CHAR                 0xE401
        /* HYDROGEN - Used in 4 char unit "cmH2O"     */
#define ALARM_STAR_CHAR               0xE40D
        /* ALARM STAR "*"                             */
#define CAPITAL_V_WITH_DOT_ABOVE_CHAR 0xE425
        /* CAPITAL_V_WITH_DOT_ABOVE (V with dot)      */
#define ZERO_WIDTH_NO_BREAK_SPACE_CHAR0xFEFF
        /* The character 0xFFEF is used as FILL character.
        For each wide asian character, a FILL character is
        appended for size calculations. */
```

Variable Label

The string is preceded by a length field, followed by the value. If the length is zero, no octets are appended. The *VariableLabel* data type uses 8 bit ASCII encoding for the text. The *length* of a *VariableLabel* is always even.

```
typedef struct {
        u_16    length;
        u_8     value[1];
} VariableLabel
```

Where possible, the real string lengths have been included in this document. However, these string lengths may change in future releases, producing discrepancies between the actual string lengths and this document.

TextId

The *TextId* type is a 32bit wide private ID.

```
typedef u_32    TextId;
```

FLOAT-Type

For floating point numbers, a special 32bit wide format is used. For message parsing and for the definition of the message structures a 32bit wide placeholder structure is defined here.

```
typedef u_32    FLOATType;
```

The FLOAT-Type must be interpreted as follows:

```
MSB
┌──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┐
│0 │1 │2 │3 │4 │5 │6 │7 │8 │9 │10│11│12│13│14│15│
└──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┘
```

mantissa 24 bits, signed (upper part)

exponent 8 bits, signed

```
                                              LSB
┌──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┐
│16│17│18│19│20│21│22│23│24│25│26│27│28│29│30│31│
└──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┘
```

mantissa 24 bits, signed (lower part)
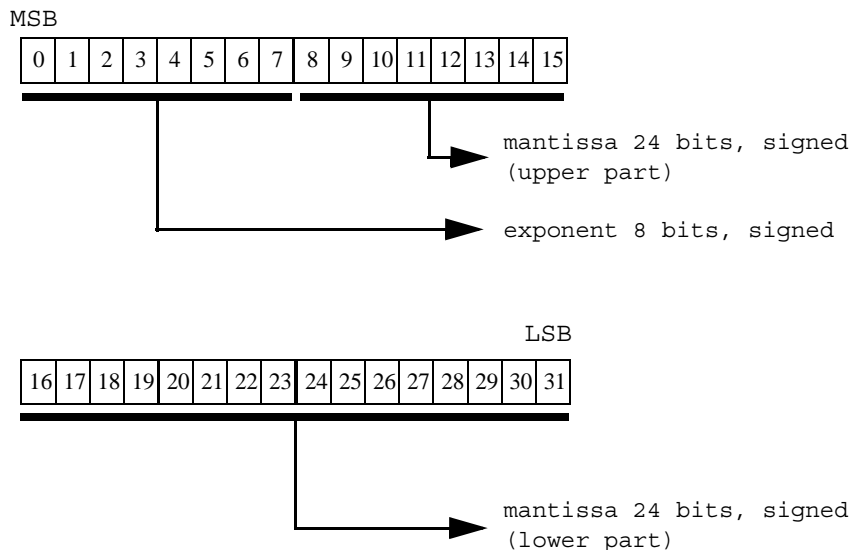
The number represented is $(mantissa)*(10^{exponent})$. Both the exponent and mantissa are in 2's complement form. The mantissa is not necessarily normalized.

There are four special values of the mantissa that can be represented:

NaN (Not a Number), which has a mantissa of $+(2^{23}-1)$ (0x7fffff)

NRes (Not at this resolution), which has a mantissa of $-(2^{23})$ (0x800000)

+/- INFINITY, which have mantissa of $+/- (2^{23}-2)$ (0x7ffffe, 0x800002).

The exponent is not important in these cases. This leaves the following ranges for normal number representation:

-128 <= exponent <= 127

$-(2^{23}-3)$ <= mantissa <= $+(2^{23}-3)$

Definition on the number of the valid digits for the presentation on the monitor's display:

1.) If the exponent < 0, then the integer value of the exponent shows the number of valid digits after the point:

Examples:

value = 0xfd007d00:	exponent = -3,	mantissa = 32000	32.000
value = 0xff000140:	exponent = -1,	mantissa = 320	32.0

2.) If the exponent >= 0, then the number of valid digits after the point is zero.

Examples:

value = 0x01000140:	exponent = 1,	mantissa = 320	3200
value = 0x02000020:	exponent = 2,	mantissa = 32	3200

Protocol Command Structure

Protocol Command messages, as defined in this section, are the data structures that are transported within the transport layer message (UDP datagram, IrDA message or Fixed Baudrate Protocol message). The generic structure is common for messages sent from the Computer Client to the monitor (e.g. Poll Request messages) and messages sent from the monitor to the Computer Client (e.g. Poll Result messages).

The Protocol Command messages represent the ISO/ OSI layers 5 - 7 (session layer, presentation layer, application layer). The message that transports a Protocol Command contains a checksum. Computer Clients should validate this checksum to detect corrupted messages.

The Protocol command messages used to establish the logical connection (association) between the monitor and a Computer Client follow the definitions of the ACSE Standard (ISO/IEC 8649 and ISO/IEC 8650).

For the Protocol Commands during the logical connection, the message structure is layered and has the following basic format:

Session/Presentation Header
Remote Operation Header
Command Header
Command- Specific Parameter Data

The Session Header and Presentation Header are small fields only which contain fixed values for the life time of the logical connection between the monitor and the Computer Client.

The Remote Operation Header allows to distinguish between the different types of command messages, command response messages and error messages.

The Command Header contains the common part of the Command data structure identified in the Remote Operation Header.

Command-specific parameters or data are appended to the generic message structure.

Session/Presentation Header

Each protocol message starts with a common data structure representing the session and presentation protocol, defined as follows:

```
typedef struct {
    u_16    session_id;    /* contains a fixed value 0xE100 */
    u_16    p_context_id;  /* negotiated in association phase */
} SPpdu;
```

- session_id

  This field identifies a Protocol message. The field contains a fixed value 0xE100. Conceptually, this field represents the session header.

- p_context_id

  The presentation context identifier is negotiated during the exchange of the association messages.

The Computer Client can use the first byte of the *session_id* to distinguish between Data Export protocol commands and Association Control protocol commands.

If a Computer Client encodes the Association Control protocol commands as suggested in "Definition of the Association Control Protocol" on page 65, the *context_id* for the Data Export protocol commands is 2.

Remote Operation Header

A protocol message is considered a remote operation. There are different types of operations as defined below. The different operations are described by a common operation header data structure:

```
typedef struct {
    u_16            ro_type;            /* ID for operation */
#       define      ROIV_APDU 1
#       define      RORS_APDU 2
#       define      ROER_APDU 3
#       define      ROLRS_APDU 5
    u_16            length;             /* bytes to follow */
} ROapdus;
```

- ro_type

  This field defines which type of remote operation is appended.

  The following remote operation types exist:

  Remote Operation Invoke (ROIV_APDU) invokes (calls) a remote operation.

  Remote Operation Result (RORS_APDU) returns the result of a remote operation

  Remote Operation Error (ROER_APDU) returns an error for a remote operation.

  Remote Operation Linked Result (ROLRS_APDU) returns parts of the result of a remote operation. It is used when the size of the complete result exceeds the maximum size of one message.

- length

  This field defines the remaining number of bytes in the message.

Remote Operation Invoke

A Remote Operation Invoke message is defined as follows:

```
typedef struct {
    u_16    invoke_id;      /* identifies the transaction */
    CMDType command_type;   /* identifies type of command */
    u_16    length;         /* no. of bytes in rest of message */
} ROIVapdu;
```

- invoke_id

  The invoke identifier is used to reference the specific operation while it is being processed. Result messages or error messages will use this identifier as a reference. Therefore, the invoke identifier should be unique while the operation transaction is in process.

- command_type

  The command type identifier defines what command data type is appended to this structure.

- length

  This field defines the remaining number of bytes in the message.

Remote Operation Result

A Remote Operation Result message is a response to an Operation Invoke message requiring confirmation.

The message is defined as follows:

```
typedef struct {
    u_16    invoke_id;      /* mirrored back from op. invoke */
    CMDType command_type;   /* identifies type of command */
    u_16    length;         /* no of bytes in rest of message */
} RORSapdu;
```

- invoke_id

  The invoke identifier is mirrored back from the related Remote Operation Invoke message that triggered this result. This field allows to relate the response message to the original request.

- command_type

  The command type identifier defines what command data type is appended to this structure.

- length

  This field defines the remaining number of bytes in the message. This length is not larger than the negotiated Maximum Transport Unit (MTU). For larger messages, the Remote Operation Linked Result mechanism will be used.

Remote Operation Linked Result

In some cases, the total data that must be returned as a result of a command may exceed the maximum message size. In these cases, multiple Remote Operation Linked Result messages are used.

These messages are defined as follows:

```
typedef struct {
    RorlsId  linked_id;    /* see below */
    u_16     invoke_id;    /* see below */
    CMDType  command_type; /* identifies type of command */
    u_16     length;       /* no of bytes in rest of message */
} ROLRSapdu;
```

- linked_id

  The linked identifier identifies each Remote Operation Linked Result message in a sequence of linked messages (see below).

- invoke_id

  The invoke identifier is mirrored back from the related Remote Operation Invoke message that triggered this result. This field allows to relate the response message to the original request.

- command_type

  The command type identifier defines what command data type is appended to this structure.

- length

  This field defines the remaining number of bytes in the message.

If the size of the result data exceeds the maximum message size, a combination of Remote Operation Linked Result Messages and Remote Operation Result messages is used, with the following rules:

- For all response messages except the very last one:
  - the ROLRS_APDU message type is used
  - the linked identifier is set by the responder to the *RorlsId* data type
  - the invoke identifier is the value of the invoke identifier of the associated Operation Invoke

- For the very last message:
  - The RORS_APDU message type is used

The invoke identifier in this response is the value of the invoke identifier of the associated Operation Invoke.

The following data type is used for the linked identifier:

```
typedef struct {
    u_8      state;
#    define RORLS_FIRST 1   /* set in the first message */
#    define RORLS_NOT_FIRST_NOT_LAST 2
#    define RORLS_LAST 3    /* last RORLSapdu, one RORSapdu
                               to follow */
    u_8      count;             /* counter starts with 1 */
} RorlsId;
```

The first Remote Operation Linked Result message sets the state RORLS_FIRST.

The last Remote Operation Linked Result message sets the state RORLS_LAST. Note that there is one more Remote Operation Result message to follow.

All other Remote Operation Linked Result messages set the state RORLS_NOT_FIRST_NOT_LAST.

Examples:

- If a total of 3 messages are needed, the first message is a Remote Operation Linked Result with state RORLS_FIRST and count field 1.The second message is a Remote Operation Linked Result with state RORLS_LAST and count field 2.The third message is a Remote Operation Result message.

- If a total of 2 messages are needed, the first message is a Remote Operation Linked Result with state RORLS_LAST and count field 1. The second message is a Remote Operation Result message.

The *count* field starts with 1 for the first of the linked messages and is increased with each following message.

When a message is split, each message contains a full command data structure (see "Command Header" on page 47).

If the messages contain data from several objects, the Computer Client can not assume that all data belonging to one object is sent within one message. In some cases it can happen that the data belonging to one attribute of a given object must be sent in multiple messages (see the description of the available data in the section "Attribute Data Types and Constants Used" on page 75). This may only occur for attributes which are encoded in the form of a list (e.g Device T-Alarm List).

Object data which did not fit in one message is guaranteed to continue in the next linked message.

Remote Operation Error

If an error is detected at the Remote Operation level, an error message is returned:

```
typedef struct {
    u_16    invoke_id;
    u_16    error_value;
#     define      NO_SUCH_OBJECT_CLASS        0
#     define      NO_SUCH_OBJECT_INSTANCE     1
#     define      ACCESS_DENIED               2
#     define      GET_LIST_ERROR              7
#     define      SET_LIST_ERROR              8
#     define      NO_SUCH_ACTION              9
#     define      PROCESSING_FAILURE          10
#     define      INVALID_ARGUMENT_VALUE      15
#     define      INVALID_SCOPE               16
#     define      INVALID_OBJECT_INSTANCE     17
    u_16    length;
} ROERapdu;
```

- invoke_id

   The invoke identifier is mirrored back from the related Remote Operation Invoke message that triggered this result. This field allows to relate the response message to the original request.

- error_value

  The error values have the following meaning:

  GET_LIST_ERROR: Get operation failed. A *GetListError* is appended to the message.

  SET_LIST_ERROR: Set operation failed. A *SetListError* is appended to the message.

  NO_SUCH_ACTION: Unknown action type. The object class ID and action type are appended to the message.

  NO_SUCH_OBJECT_CLASS: There is no such object class in the system. An OIDType with the class ID is appended to the message.

  NO_SUCH_OBJECT_INSTANCE: The object instance does not exist. The *ManagedObjectId* of the instance is appended.

  ACCESS_DENIED: Computer Client has not required privileges to perform the operation. No data is appended.

  PROCESSING_FAILURE: Generic error indicating an invalid request. A *ProcessingFailure* is appended to the message.

  INVALID_ARGUMENT_VALUE: The argument of the ROSE message was not valid. An Action result is appended.

  INVALID_SCOPE: The scope is not valid for the operation. The value of the scope is appended.

  INVALID_OBJECT_INSTANCE: Wrong object instance. The *ManagedObjectId* of the instance is appended.

- length

  This field defines the remaining number of bytes in the message.

  The *GetListError* and *SetListError* structures are defined as follows:

```
typedef struct {
        ManagedObjectId        managed_object;
        struct {
                u_16                   count;
                u_16                   length;
                GetError               value[1];
        } getInfoList;
} GetListError;

typedef struct {
        ErrorStatus            errorStatus;
        OIDType                attributeId;
} GetError;

typedef struct {
        ManagedObjectId        managed_object;
        struct {
                u_16                   count;
                u_16                   length;
                SetError               value[1];
        } setInfoList;
} SetListError;
typedef struct {
        ErrorStatus            errorStatus;
        ModifyOperator         modifyOperator;
        OIDType                attributeId;
} SetError;

typedef u_16           ErrorStatus;
#define ATTR_ACCESS_DENIED          2
#define ATTR_NO_SUCH_ATTRIBUTE      5
#define ATTR_INVALID_ATTRIBUTE_VALUE 6
```

```
#define ATTR_INVALID_OPERATION        24
#define ATTR_INVALID_OPERATOR         25
```

The *ProcessingFailure* is defined as follows:

```
typedef struct {
    OIDType         error_id;
    u_16            length;
} ProcessingFailure;
```

Additional data with error information can be appended to the *ProcessingFailure*. The default *error_id* is 0 with no appended data.

Command Header

In each protocol message, a Command data structure is appended. The specific Command is identified by the value of the *CMDType* field in the Remote Operation Invoke/ Result/ Linked Result data structures.

The following Command types are used in the Protocol:

```
typedef u_16            CMDType;
#define                 CMD_EVENT_REPORT 0
#define                 CMD_CONFIRMED_EVENT_REPORT 1
#define                 CMD_GET 3
#define                 CMD_SET 4
#define                 CMD_CONFIRMED_SET 5
#define                 CMD_CONFIRMED_ACTION 7
```

The following command types are used:

CMD_EVENT_REPORT: An Event Report is used for an unsolicited event message.

CMD_CONFIRMED_EVENT_REPORT: The Confirmed Event Report is an unsolicited event message for which the receiver must send an Event Report Result message.

CMD_GET: The Get operation is used to request attribute values of managed objects. The receiver responds with a Get Result message.

CMD_SET: The Set operation is used to set values of managed objects.

CMD_CONFIRMED_SET: The Confirmed Set operation is used to set attribute values of managed objects. The receiver responds with a Set Result message.

CMD_CONFIRMED_ACTION: The Confirmed Action is a message to invoke an activity on the receiver side. The receiver must send an Action Result message.

For confirmed messages, the receiver must send the appropriate result message. For both the confirmed and unconfirmed Event Report, an *EventReportArgument* is appended.

If the result message is not received within 3 seconds, the monitor resends the message. If the message has not been confirmed after sending it 3 times (2 resend tries), the association is aborted by the monitor.

Event Report

The Event Report command (CMD_EVENT_REPORT) is used for unsolicited messages from the sending device to the receiving device. It is appended to the Remote Operation Invoke message. In the Protocol the Event Report may require a response from the receiver (if a response is required, the CMD_CONFIRMED_EVENT_REPORT Command identifier is used).

The Event Report message uses the following data structure:

```
typedef struct {
    ManagedObjectId managed_object; /* ident. of sender */
    RelativeTime   event_time;    /* event time stamp */
    OIDType        event_type;    /* identification of event */
    u_16           length;        /* size of appended data */
} EventReportArgument;
```

- managed_object

  Identifies the object that generates the unsolicited Event Report command.

- event_time

  The relative time (in 1/8ms time ticks) of the event.

- event_type

  Identifies the event type and thus the data structure that is appended.

- length

  This field defines the remaining number of bytes in the message (which is the size of the event specific data appended to this data structure).

Event-specific data is appended to the data type.

Event Report Result

The Event Report Result command is used as a response message to the Event Report message. It is appended to the Operation Result message with the *command_type* CMD_CONFIRMED_EVENT_REPORT.

The Event Report Result uses the following data structure:

```
typedef struct {
    ManagedObjectId managed_object; /* mirrored from EvRep */
    RelativeTime   current_time;  /* result time stamp */
    OIDType        event_type;    /* identification of event */
    u_16           length;        /* size of appended data */
} EventReportResult;
```

- managed_object

  Identifies the object to which the response is sent back. This field must be mirrored back from the Event Report message.

- event_time

  The relative time (in 1/8ms time ticks) of the event result.

- event_type

  Identifies the event type and thus the data structure that is appended. This field must contain the same value as the Event Report.

- length

  This field defines the remaining number of bytes in the message (which is the size of the event specific result data appended to this data structure).

Event-specific data is appended to the data type.

Action

The ACTION command (CMD_CONFIRMED_ACTION) is used to call a Protocol specific method in the receiver. The Protocol uses this command to call the *Data Poll* method which returns device data. The ACTION command is appended to the Operation Invoke message.

The Action command uses the following data structure:

```
typedef struct {
    ManagedObjectIdmanaged_object;/* addressed object */
    u_32            scope;          /* fixed value 0 */
    OIDType         action_type;    /* identification of method */
#define NOM_ACT_POLL_MDIB_DATA          3094
#define NOM_ACT_POLL_MDIB_DATA_EXT      61755
    u_16            length;         /* size of appended data */
} ActionArgument;
```

- managed_object

  Identifies the object to which the ACTION command is sent.

- scope

  Contains a fixed value 0 in this version of the protocol.

- action_type

  Identifies the specific method that should be called (and thus the data type that is appended to this data structure).

  NOM_ACT_POLL_MDIB_DATA is used for a Single Poll Data Request.

  NOM_ACT_POLL_MDIB_DATA_EXT is used for an Extended Poll Data Request

- length

  This field defines the remaining number of bytes in the message (which is the size of the method specific data appended to this data structure).

Method-specific data is appended to the data type.

Action Result

The Action Result command is used as a response message to the Action message. It is appended to the Operation Result message or an Operation Linked Result message (if the size of the returned data exceeds a maximum message size). The *command_type* is set to CMD_CONFIRMED_ACTION.

The Action Result uses the following data structure:

```
typedef struct {
    ManagedObjectId managed_object;
    OIDType         action_type;    /* identification of method */
    u_16            length;         /* size of appended data */
} ActionResult;
```

- managed_object

  Identifies the object that responds to the ACTION command (usually mirrored from ACTION command).

- action_type

  Identifies the specific method that was called (and thus the data type that is appended to this data structure).

- length

  This field defines the remaining number of bytes in the message (which is the size of the method specific result data appended to this data structure).

Method-specific data is appended to the data type.

Get

The Get command (CMD_GET) specifies attributes that should be returned. It is appended to an Operation Invoke message.

The Get command uses the following data structure:

```
typedef struct {
        ManagedObjectId        managed_object;
        u_32                   scope;
        AttributeIdList        attributeIdList;
} GetArgument;
```

- managed_object

  Identifies the object to which the Get command is sent.

- scope

  Contains a fixed value 0 in this version of the protocol.

- attributeIdList

  Contains the list of attribute identifiers.

```
typedef struct {
        u_16                   count;
        u_16                   length;
        OIDType                value[1];
} AttributeIdList;
```

Get Result

The Get Result is returned in response to the Get command. It is appended to an Operation Result or Operation Linked Result message.

The Get Result uses the following data structure:

```
typedef struct {
        ManagedObjectId        managed_object;
        AttributeList          attributeList;
} GetResult;
```

- managed_object

  Identifies the object that responds to the Get command.

- attributeList

  Contains the requested attributes.

Set

The Set command (CMD_SET) or Confirmed Set command (CMD_CONFIRMED_SET) specifies attributes that should be added, replaced, or removed. It is appended to an Operation Invoke message.

The Set command uses the following data structures:

```
typedef struct {
        ManagedObjectId        managed_object;
        u_32                   scope;
```

```
              ModificationList      modificationList;
        } SetArgument;
```

- managed_object

  Identifies the object to which the Get command is sent.

- scope

  Contains a fixed value 0 in this version of the protocol.

- modificationList

  Contains the attribute ids and values to be modified.

```
        typedef struct {
              u_16                   count;
              u_16                   length;
              AttributeModEntry value[1];
        } ModificationList;

        typedef struct {
              ModifyOperator        modifyOperator;
              AVAType               attribute;
        } AttributeModEntry;

        typedef u_16           ModifyOperator;
        #define REPLACE                      0
        #define ADD_VALUES                   1
        #define REMOVE_VALUES                2
        #define SET_TO_DEFAULT               3
```

Set Result

The Set Result is returned in response to the Confirmed Set command. It is appended to an Operation Result or Operation Linked Result message.

The Set Result uses the following data structure:

```
        typedef struct {
              ManagedObjectId       managed_object;
              AttributeList         attributeList;
        } SetResult;
```

- managed_object

  Identifies the object that responds to the Set command.

- attributeList

  Contains all modified attributes.

Command Structure Summary

The following diagram shows how the different generic Protocol Command command structures are built from the different data type definitions that were introduced in this section.

SPpdu						
ROapdus						
ROIVapdu			RORSapdu ROLRSapdu			ROERapdu
Event Report Argument	Action Argument	Get Argument Set Argument	Event Report Result	Action Result	Get Result Set Result	Error Data
Event Data	Action Data		Event Result Data	Action Result Data		

From this generic message structure the specific Protocol Command messages introduced in "Protocol Dialog" on page 25 are derived by:

- Defining identifier codes for the supported specific Event Report and Action types. These identifier codes are the values of the *event_type* and *action_type* fields.

- Defining the specific Event Data and Action Data data types for these Event Report and Action types.

Protocol Commands

This section describes the actual commands as constructed from the building blocks. Consult the "Command Structure Summary" on page 51 as a reference.

Notation

The Protocol Commands are constructed from the data types previously defined. A generic protocol machine must parse the individual elements of a command message separately, so in this chapter a special notation is used to define how the command messages are constructed (rather than defining composite C data type definitions).

Example:

```
MDSCreateEventReport ::=
 <SPpdu>
 <ROapdus (ro_type := ROIV_APDU)>
 <ROIVapdu (command_type := CMD_CONFIRMED_EVENT_REPORT) >
 <EventReportArgument (event_type := NOM_NOTI_MDS_CREAT)>
 <MDSCreateInfo>
```

This notation means that an MDS Create Event Report Command message is constructed from the individual data types listed in the < > brackets, which are C data types. Some elements of these data types have specific values. E.g. the *ro_type* field in the *ROapdus* data type has the value *ROIV_APDU*.

Additional data structures for appended event specific or method specific data are defined in the usual C type definition notation.

Most of the elements of the command messages contain length fields. You must take care to correctly set and parse these fields so that the message can be correctly parsed.

Device Discovery Messages

The Device Discovery messages lets the client locate new monitor devices in the network without prior knowledge of their IP address. The IntelliVue monitor only *sends* a Device Discovery on the LAN interface. This message is not available on the MIB/RS232 interface.

CONNECT INDICATION EVENT

The Connect Indication Event message is a sub-net-wide broadcast message in the normal Event Report format. It is sent to the port 24005.

The monitor resends the Connect Indication message as long as no logical connection to a central station has been established. The connection of a Data Export Computer Client does not stop the transmission of Connect Indication messages.

The monitor uses the retransmit strategy described in RFC 951. The initial resend period is 4 seconds, and this is doubled with each resend. The maximum resend period is approximately 64 seconds. The actual resend period contains a random component to avoid network congestion, e.g., after a power failure.

The UDP checksum in the Connect Indication message may be set to 0, indicating that no checksum has been calculated.

The Connect Indication message has the following structure:

```
ConnectIndication ::=
    <Nomenclature>
    <ROapdus (ro_type := ROIVapdu)>
    <ROIVapdu (command_type := CMD_EVENT_REPORT)>
    <EventReportArgument
            (managed_object:={NOM_MOC_MDS_COMPOS_SINGLE_BED,0,0},
            event_type := NOM_NOTI_MDS_CONNECT_INDIC)>
    <ConnectIndInfo>

typedef u_32 Nomenclature;
```

The nomenclature starts with two bytes 0x0, followed by one byte major and one byte minor version.

```
typedef AttributeList ConnectIndInfo;
```

See the section "Connect Indication Attributes" on page 107 for a list of attributes contained in the appended attribute list.

The Computer Client should parse the *ConnectIndInfo* to find out about the port for the Data Export protocol. The Computer Client must send requests to the port that is specified for the Data Export protocol.

The Computer Client application can run on any free local port, but must not change the port during the association (refer to "Definition of the Association Control Protocol" on page 65 for more information).

Connection Startup

After the logical connection has been established between the monitor and the Computer Client, the monitor sends the MDS Create Event message to announce version and status information.

MDS CREATE EVENT

The MDS Create Event describes the software and hardware configuration of the monitor. The Computer Client should parse this message to learn about the system configuration.

The MDS Create Event message has the following structure:

```
MDSCreateEventReport ::=
 <SPpdu>
 <ROapdus (ro_type := ROIV_APDU)>
 <ROIVapdu (command_type := CMD_CONFIRMED_EVENT_REPORT)>
 <EventReportArgument
    (managed_object := {NOM_MOC_VMS_MDS, 0, 0},
     event_type := NOM_NOTI_MDS_CREAT)>
 <MDSCreateInfo>
```

The MDS Create Information uses the following C type definition:

```
typedef struct {
    ManagedObjectId       managed_object;
    AttributeList         attribute_list;
} MdsCreateInfo;
```

- managed_object

  Identifies the MDS object. Contents is the same as in the *managed_object* field in the Event Report structure.

- attribute_list

  The attached *attribute_list* contains the monitor MDS attributes from the System Identification and from the System Application Attribute Group. See "Wave Objects" on page 82 for a list of all attributes.

Depending on the protocol and the protocol options which were negotiated when the association was established, the monitor may map its internal data representation to a representation which is supported by the negotiated protocol. Hence, the Connect Indication message may describe the system differently from the MDS Create Event message. In the case of differences, the MDS Create Event is the relevant message.

The MDS Create Event message contains both the "Date and Time" and the "Relative Time" attributes. The Computer Client can use this data to make a mapping from the relative time to the absolute time of the monitor. The Computer Client should regularly check if the mapping is still valid by sending a Single Poll Data Request for the MDS attributes ("SINGLE POLL DATA REQUEST" on page 55).

If the size of the Event Report (Event Report Result + Event Result Data) exceeds the size of a maximum message (MTU - Maximum Transmit Unit), multiple messages are sent. Each of these messages is sent as a single Event Report.

The Computer Client must confirm the MDS CREATE EVENT with a MDS CREATE EVENT RESULT message, otherwise the association will be aborted by the monitor. The MDS CREATE EVENT message is resent with a period of about 3 seconds. The association is aborted if the Event message has been sent 3 times without receiving a confirmation.

When the MDS Create Event message is resent, it has the same invoke ID as the original message.

MDS CREATE EVENT RESULT

As the MDS Create Event Report is a confirmed operation, the Computer Client must send a MDS Create Event Result message to confirm it.

The reply message has the following structure:

```
MDSCreateEventResult ::=
 <SPpdu>
 <ROapdus (ro_type := RORS_APDU)>
 <RORSapdu
    (invoke_id := mirrored from event report,
     command_type := CMD_CONFIRMED_EVENT_REPORT)>
 <EventReportResult
    (managed_object := mirrored from event report,
     event_type := NOM_NOTI_MDS_CREAT)
     length := 0 >
```

As the MDS Create Event Result message does not contain any appended additional information, the length of the appended information is set to 0.

The result message must have the same *invoke_id* as the event message.

Specific Data Access Commands

The following protocol commands are used to access the different types of data in the monitor.

SINGLE POLL DATA REQUEST

This message can be sent as soon as the logical connection is established and the MDS Create Event/ Reply message sequence is finished. The message calls a method that returns monitor device data in a single response message.

The message has the following structure:

```
MDSPollAction ::=
 <SPpdu>
 <ROapdus (ro_type := ROIV_APDU)>
 <ROIVapdu (command_type := CMD_CONFIRMED_ACTION)>
 <ActionArgument
    (managed_object := {NOM_MOC_VMS_MDS, 0, 0},
     action_type := NOM_ACT_POLL_MDIB_DATA)>
 <PollMdibDataReq>
```

The *managed_object* must be the same as the *managed_object* in the MDS Create Event message. This is the top level object which actually implements the Data Export protocol.

The appended *PollMdibDataRequest* has the following data type:

```
typedef struct{
    u_16            poll_number;
    TYPE            polled_obj_type;
    OIDType         polled_attr_grp;
} PollMdibDataReq;
```

• poll_number

This field will be sent back in the response message. It is recommended to use this field as a counter.

• polled_obj_type

Defines which objects (Numerics or Alarms or MDS or Patient Demographics) is polled.

The following is a list of supported objects and their corresponding TYPE values:

```
NUMERICS:       partition:      0x0001
                code:           NOM_MOC_VMO_METRIC_NU
WAVES:          partition:      0x0001
                code:           NOM_MOC_VMO_METRIC_SA_RT
ALERTS:         partition:      0x0001
                code:           NOM_MOC_VMO_AL_MON
Pat.Demog:      partition:      0x0001
                code:           NOM_MOC_PT_DEMOG
MDS:            patition:       0x0001
                code:           NOM_MOC_VMS_MDS
```

The codes are taken from the Object Oriented Elements partition of the nomenclature (see "Object Classes" on page 111).

• polled_attr_grp

Defines which set of attributes is polled. For more information on the supported attribute groups and their contents, please refer to the section "Attribute Data Types and Constants Used" on page 75.

The monitor specifies limits on the maximum frequency for incoming SINGLE POLL DATA REQUEST messages. If the Computer Client sends messages with a frequency above the limit, some of the messages will be ignored (no response is sent). Separate limits are calculated for each object.

The IntelliVue monitor will process a maximum of one POLL DATA REQUEST messages for each object type per second. An additional POLL DATA REQUEST for Numeric Observed Values is allowed.

SINGLE POLL DATA RESULT

This message is sent by the monitor in response to the Single Poll Data Request.

The message has the following structure:

```
MDSPollActionResult ::=
 <SPpdu>
 <ROapdus (ro_type := RORS_APDU)>
 <RORSapdu (invoke_id := "mirrored from request message"
            command_type := CMD_CONFIRMED_ACTION)>
 <ActionResult
    (managed_object := {NOM_MOC_VMS_MDS, 0, 0},
     action_type := NOM_ACT_POLL_MDIB_DATA)>
 <PollMdibDataReply>
```

The appended *PollMdibDataReply* is constructed from the following data types:

• The *PollMdibDataReply* structure is the top level data structure returned in the Single Poll Data Result message. It contains the following fields:

```
typedef struct {
    u_16                poll_number;
    RelativeTime        rel_time_stamp;
    AbsoluteTime        abs_time_stamp;
    TYPE                polled_obj_type;
    OIDType             polled_attr_grp;
    PollInfoList        poll_info_list;
} PollMdibDataReply;
```

- poll_number

  The poll number field contains the value of the same field in the Poll Request message.

- rel_time_stamp

  The Relative Time Stamp is a high resolution time stamp that represents the system time when the event message is sent by the monitor.

  For Numerics, the Relative Time Stamp denotes the time, when the Numeric measurement was generated. It may contain 0 if no measurement has been made yet.

- abs_time_stamp

  The monitor does not support Absolute Time Stamps in the Poll Data Result. All fields contain 0xff. If the Computer Client needs Absolute Time Stamps, it should use the corresponding MDS attributes ("Relative Time" and "Date and Time" to map the rel_time_stamp to an *abs_time_stamp*.

- polled_obj_type

  Defines for which objects (Numerics or Alarms or MDS or Patient Demographics) data is returned in the Poll Result message.

- polled_attr_grp

  Defines which set of attributes is returned in the Poll Result message.

- poll_info_list

  This structure contains the attribute values of the objects included in the poll.

  The Poll Info List is an array structure where each *SingleContextPoll* element contains the poll result data of one naming context.

```
typedef struct {
    u_16                count;
    u_16                length;
    SingleContextPoll   value[1];
} PollInfoList;
```

- count

  Number of Single Context Poll structures that are appended.

- length

  Size in bytes of the appended Single Context Poll structures.

- value

  This field is a placeholder field only. It represents the specified number of appended Single Context Poll structures.

The Single Context Poll structure contains polled data of all object instances within one unique naming context (IntelliVue monitor supports multiple naming contexts). It contains the following fields:

```
typedef struct {
    MdsContext              context_id;
    struct {
        u_16                count;
        u_16                length;
        ObservationPoll     value[1];
    } poll_info;
} SingleContextPoll;
```

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- context_id

  The *context_id* field is used when the sourcing device represents multiple physical devices, so that the Handle attribute would not allow a unique identification of the object instance.

- poll_info.count

  This field contains number of appended Observation Poll structures.

- poll_info.length

  This field contains the length in bytes of the appended list of Observation Poll structures.

- poll_info.value

  This field is a placeholder field only. It represents the specified number of appended Observation Poll structures.

The *ObservationPoll* represents the polled data of one object instance. It contains the following fields:

```
typedef struct {
    Handle              obj_handle;
    AttributeList       attributes;
} ObservationPoll;
```

- obj_handle

  The handle identifies the object instance. It is used to identify the object in different Poll Reply Messages.

- attributes

  The attributes field is a list structured field containing the values of the polled object attributes. For a list of supported object attributes, see the chapter on "Attribute Data Types and Constants Used" on page 75.

If the size of data returned for a Poll Result (Action Result + Action Result Data) exceeds the size of a maximum message (MTU - Maximum Transmit Unit), multiple messages are returned. These messages use the Remote Operation Linked Result mechanism ("Remote Operation Linked Result" on page 44). This means that in all result messages except the last result message the *ROLRSapdu* is used instead of the *RORSapdu*).

When the Linked Result mechanism is used, the monitor may send the terminating Remote Operation Result message with an empty *PollInfoList* (count and length fields of the *PollInfoList* set to 0). It also may send Linked Result messages with one empty SingleContextPoll (count and length field of the *SingleContxtPoll* set to 0).

EXTENDED POLL DATA REQUEST

The Extended Poll Data Request allows the following extensions of the Single Poll Data Request:

- Access 12 second, 1 minute and 5 minute averaged Numerics.

- Access wave data

- Request periodic Poll Replies without sending a Poll Request every time.

- Request that only a limited number of objects is encoded within a Poll Result

The Extended Poll Data Request message is only allowed, if the Poll Profile Extensions optional package has been negotiated during the association phase. For more information on the negotiation of optional packages see the sections "Association Request Message" on page 67 and "Association Response Message" on page 73.

The message has the following structure:

```
MDSPollAction ::=
 <SPpdu>
 <ROapdus (ro_type := ROIV_APDU)>
 <ROIVapdu (command_type := CMD_CONFIRMED_ACTION)>
 <ActionArgument
    (managed_object := {NOM_MOC_VMS_MDS, 0, 0},
     action_type := NOM_ACT_POLL_MDIB_DATA_EXT)>
 <PollMdibDataReqExt>
```

The appended *PollMdibDataRequestExt* has the following data type:

```
typedef struct{
    u_16          poll_number;
    TYPE          polled_obj_type;
    OIDType       polled_attr_grp;
    AttributeList poll_ext_attr;
} PollMdibDataReqExt;
```

- poll_number

  This field will be sent back in the response message. It is recommended to use this field as a counter. See also the section "EXTENDED POLL DATA RESULT" on page 61 for more information about the handling of *poll_number*.

- polled_obj_type

  Defines for which objects data is returned in the Poll Result message. The Extended Poll Data Request message only allows the polling of Numerics, Waves and the Alert Monitor.

- polled_attr_grp

  Defines which set of attributes is returned in the Poll Result message.

- poll_ext_attr

  The appended *AttributeList* allows to define additional options.

Accessing 12 second, 1 minute and 5 minute averaged Numerics

Within the Poll Profile Extensions optional package, the Computer Client and the monitor have negotiated which data source (real-time or averaged) is used to obtain the Numeric data (refer to the chapter "Definition of the Association Control Protocol" on page 65 for more information on how to negotiate optional packages). Currently, the monitor allows the specification of one data source for Numeric data.

The monitor responds to an Extended Poll Data Request message with an Extended Poll Data Result message, which contains the Numeric data from the source specified in the Poll Profile Extensions optional package.

The normal Poll Data Request message always returns data from real-time measurements. If another data source has been negotiated in the Poll Profile Extensions optional package, the Poll Data Request message will fail, if no data from real-time measurements is available.

The *poll_ext_attr AttributeList* in the Extended Poll Data Request message allows to specify additional options. Currently, the following attributes are supported:

Attribute: Time Periodic Data Poll

The Time Periodic Data Poll attribute allows to request periodic Poll Replies for a given time.

```
Attribute ID:      NOM_ATTR_TIME_PD_POLL
Attribute Type:    PollDataReqPeriod
Attribute Groups:  -
Availability:      Optional
```

The PollDataReqPeriod is defined as follows:

```
typedef struct {
    RelativeTime    active_period;
} PollDataReqPeriod;
```

The *active_period* specifies the time for which the monitor will send periodic Poll Replies.

The *AttributeList* Structure may contain additional attributes, e.g. in future releases.

If the Computer Client adds the Time Periodic Data Poll attribute to the Extended Poll Data Request message, the monitor sends periodic Extended Poll Data Result messages for the time specified in the attribute.

Data Source	Result Period
real-time waves	256ms
real-time measurements	1s
12 secound averaged data	6s
1 minute averaged data	30s
5 minute averaged data	150s
alert data	1s

When the monitor receives an Extended Poll Data Request message, the first result message is sent immediately as a confirmation. It has the sequence number zero (see below). This allows the Computer Client to detect that its request was successful. The following messages are sent with the period specified in the table above.
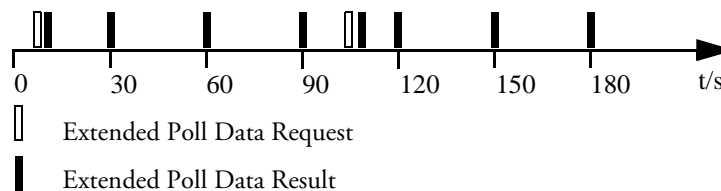
Figure 2   Period of Extended Poll Replies

The Computer Client should send a new Extended Poll Request before the time specified in the Time Periodic Data Poll attribute has expired. Each new Extended Poll Request is confirmed with an immediate Extended Poll Result message. However, the basic period of the replies is continued as illustrated in Figure 2 for 1 minute averaged data.

If the Computer Client uses the Extended Poll Request to access Realtime Numerics, it may happen that the monitor needs more than 1 second to encode all the data for the numerics (e.g. systems with a huge number of measurement modules). In this case the Poll Results will be sent at the highest possible frequency.

Limiting the Number of Objects in the Poll Result

In some cases, a Computer Client may want to limit the number of objects which are contained in a Poll Result. If the IntelliVue monitor is connected to a large number of measurement modules, a Poll Request for numerics will result in a large amount of data being sent from the IntelliVue monitor to the Computer Client.

Attribute: Number of Prioritized Objects

The attribute Number of Prioritized Objects specifies the maximum number of objects which will be encoded in the Poll Result.

```
Attribute ID:       NOM_ATTR_POLL_OBJ_PRIO_NUM
Attribute Type:     u_16
Attribute Groups:   -
Availability:       Optional
```

Based on an internal priority table, the IntelliVue monitor determines which objects will be added to the Poll Result. The priority table is constructed in the background, if the system configuration changes, it may take up to two minutes until the table has been updated. During this transition phase, the Poll Results sent by the monitor may contain less than the requested number of objects.

EXTENDED POLL DATA RESULT

When the monitor receives an Extended Poll Data Request message, it responds with a single or periodic Extended Poll Data Result messages.

The message has the following structure:

```
MDSPollActionResultExt ::=
 <SPpdu>
 <ROapdus (ro_type := RORS_APDU)>
 <RORSapdu (invoke_id := "mirrored from request message"
            command_type := CMD_CONFIRMED_ACTION)>
 <ActionResult
    (managed_object := {NOM_MOC_VMS_MDS, 0, 0},
     action_type := NOM_ACT_POLL_MDIB_DATA_EXT)>
 <PollMdibDataReplyExt>
```

The *PollMdibDataReplyExt* is defined as follows:

```
typedef struct PollMdibDataReplyExt {
    u_16                poll_number;
    u_16                sequence_no;
    RelativeTime        rel_time_stamp;
    AbsoluteTime        abs_time_stamp;
    TYPE                polled_obj_type;
    OIDType             polled_attr_grp;
    PollInfoList        poll_info_list;
} PollMdibDataReplyExt;
```

The *PollMdibDataReplyExt* structure is the top level data structure returned in the Extended Poll Data Result message. The appended data has the same structure as for the Single Poll Data Result.

The *PollMdibDataReplyExt* structure contains the following fields:

- poll_number

  The poll number field contains the value of the same field in the Extended Poll Request message.

- sequence_number

    The *sequence_number* is set to 0 when a new Extended Poll Data Request message is received. The monitor increases it with each periodic result message. This field allows the Computer Client to verify the sequence of the received result messages.

- rel_time_stamp

    The Relative Time Stamp is a high resolution time stamp that represents the system time when the event message is sent by the monitor.

    For Numerics, the Relative Time Stamp denotes the time when the Numeric measurement was generated. It may contain 0 if no measurement has been made yet.

    For Waves, the Relative Time Stamp denotes the beginning of the 256ms result period for real-time waves.

- abs_time_stamp

    The monitor does not support Absolute Time Stamps in the Poll Data Result. All fields contain 0xff. If the Computer Client needs Absolute Time Stamps, it should use the corresponding MDS attributes ("Relative Time" and "Date and Time" to map the rel_time_stamp to an abs_time_stamp).

- polled_obj_type

    Defines for which objects (Numerics or Alarms or MDS or Patient Demographic) data is returned in the Poll Result message.

- polled_attr_grp

    For more information on the supported attribute groups and their contents, please refer to the section "Attribute Data Types and Constants Used" on page 75.

- poll_info_list

    This structure contains the attribute values of the objects included in the poll.

Keep Alive Message

The monitor closes an association if it does not receive any protocol commands within a specified time (see "Definition of the Association Control Protocol" on page 65 to learn how the limit for a timeout is negotiated). If the Computer Client sends messages with a very low frequency (e.g. when using the extended poll mechanism) it must send a keep alive message to prevent the monitor from closing the association.

It is suggested that the Computer Client sends a Poll Data Request message for this purpose. This has the advantage that the message is confirmed and the Computer Client can detect a possible loss of the message. The Computer Client should chose a Poll Request which results in as little processing overhead as possible.

A suitable keep alive message would be a Poll Request for the Alert Monitor object, requesting the VMO Static Context Attribute group. The associated Poll Result sent by the monitor is a short message.

Specify Objects in the Poll Result

The Get and Set operations can be used to specify wave objects or numeric objects to be reported within the Poll Results.

There is a default priority list which depends on an internal priority table and the current system configuration. For wave objects and numeric objects, the default list can be replaced by a user defined priority list.

Due to the high amount of data it is always recommended to specify the required wave objects before requesting wave data.

NOTE   Software versions < E.0 may have limited support of this command.

GET PRIORITY LIST REQUEST

The message has the following structure:

```
MDSGetPriorityList ::=
        <SPpdu>
        <ROapdus (ro_type := ROIV_APDU)>
        <ROIVapdu (command_type := CMD_GET)>
        <GetArgument
                (managed_object := {NOM_MOC_VMS_MDS, 0, 0})>
```

The Get argument's *AttributeIdList* specifies the attribute identifiers:

- NOM_ATTR_POLL_RTSA_PRIO_LIST

  Wave object priority list.

- NOM_ATTR_POLL_NU_PRIO_LIST

  Numeric object priority list.

GET PRIORITY LIST RESULT

This message is sent in response to the Get Priority List Request.

The message has the following structure:

```
MDSGetPriorityListResult ::=
        <SPpdu>
        <ROapdus (ro_type := RORS_APDU)>
        <RORSapdu
                (invoke_id := "mirrored from request message",
                command_type := CMD_GET)>
        <GetResult
                (managed_object := {NOM_MOC_VMS_MDS, 0, 0})>
```

The Get result's *AttributeList* contains the requested attribute identifiers and values. The *TextIdList* structure is used to define the wave object priority list:

```
typedef struct {
        u_16                    count;
        u_16                    length;
        TextId                  value[1];
} TextIdList;
```

The array of *TextId*s specifies the objects by their label, as returned in the dynamic context.

SET PRIORITY LIST REQUEST

The message has the following structure:

```
MDSSetPriorityList ::=
        <SPpdu>
        <ROapdus (ro_type := ROIV_APDU)>
        <ROIVapdu (command_type := CMD_CONFIRMED_SET)>
        <SetArgument
                (managed_object := {NOM_MOC_VMS_MDS, 0, 0})>
```

The Set argument's *ModificationList* specifies the modify operations, attribute identifiers, and new values (if needed).

For the REPLACE operation, a wave object priority list attribute with modified *TextIdList* structure is attached.

For the SET_TO_DEFAULT operation, there is an empty attribute (*length* is 0)attached.

The ADD_VALUES and REMOVE_VALUES operations are not supported.

SET PRIORITY LIST RESULT

This message is sent in response to the Set Priority List Request.

The message has the following structure:

```
MDSSetPriorityListResult ::=
      <SPpdu>
      <ROapdus (ro_type := RORS_APDU)>
      <RORSapdu
              (invoke_id := "mirrored from request message",
              command_type := CMD_CONFIRMED_SET)>
      <SetResult
              (managed_object := {NOM_MOC_VMS_MDS, 0, 0})>
```

The Set result returns the modified *AttributeList*, as defined above.

Definition of the Association Control Protocol

Protocol Command Structure

The Protocol messages to establish the logical connection (association) between the monitor and a Computer Client follow the definitions of the ACSE Standard (ISO/IEC 8649 and ISO/IEC 8650), with some proprietary extensions.

All Association Control Commands share a common structure as shown here:

Session Header
Session Data
Presentation Header
User Data
Presentation Trailer

Figure 3   Protocol Commands for Association Control

For some messages, the Session Data and the User Data block may be empty.

A Computer Client can use the pre-defined building blocks for the Session Data, Presentation Header, and Presentation Trailer listed in the appendix to conveniently build valid messages ("Association Control Protocol Examples" on page 332 for a list of building blocks). Only the User Data block of the Association Request must be filled with Computer Client-specific data.

Protocol Commands

Protocol Command messages as defined in this section are the data structures that are transported within the transport layer messages.

The following commands are used to manage a logical connection between a Computer Client and a monitor:

- Association Request Message
- Association Response Message
- Refuse Message
- Release Request Message

- Release Response Message

- Abort Message

The Association Request message is sent from the Computer Client to the monitor when it wants to establish a new association. The *AssocReqUserData* contains information about the requested protocol and protocol options.

```
AssociationRequestMessage ::=
    <AssocReqSessionHeader>
    <AssocReqSessionData>
    <AssocReqPresentationHeader>
    <AssocReqUserData>
    <AssorReqPresentationTrailer>
```

The Association Response message is sent by the monitor if an Association Request message was parsed successfully and the association is accepted.

```
AssociationResponseMessage ::=
    <AssocRespSessionHeader>
    <AssocRespSessionData>
    <AssocRespPresentationHeader>
    <AssocRespUserData>
    <AssorRespPresentationTrailer>
```

If the Association Request message is corrupt, or if the association cannot be accepted (e.g. there is already another association), the monitor sends a Refuse message.

```
RefuseMessage ::=
    <RefuseSessionHeader>
    <RefuseSessionData>
    <RefusePresentationData>
    <RefuseUserData>
    <RefusePresentationTrailer>
```

When the Computer Client wants to terminate an association, it can send a Release Request message.

```
ReleaseRequestMessage ::=
    <ReleaseReqSessionHeader>
    <ReleaseReqSessionData>
    <ReleaseReqPresentationHeader>
    <ReleaseReqUserData>
    <ReleaseReqPresentationTrailer>
```

When the monitor receives a Release Request message, it sends a Release Response message as confirmation. The Release Response message indicates that the association has been terminated.

```
ReleaseRespMessage ::=
    <ReleaseRespSessionHeader>
    <ReleaseRespSessionData>
    <ReleaseRespPresentationHeader>
    <ReleaseRespUserData>
    <ReleaseRespPresentationTrailer>
```

The Abort message terminates an association without further confirmation. For example, the monitor sends an Abort message if an association is timed out (no communication from the Computer Client).

```
AbortMessage ::=
    <AbortSessionHeader>
    <AbortSessionData>
    <AbortPresentationHeader>
    <AbortUserData>
    <AbortPresentationTrailer>
```

Session Headers

The Session Headers can be used to identify the protocol commands. Each Session Header type maps to one protocol command.

The Session Header occupies the first bytes of the message. It is defined as follows:

```
typedef struct {
    u_8     type;
#   define CN_SPDU_SI            0x0D
#   define AC_SPDU_SI            0x0E
#   define RF_SPDU_SI            0x0C
#   define FN_SPDU_SI            0x09
#   define DN_SPDU_SI            0x0A
#   define AB_SPDU_SI            0x19
    LI      length;
} SessionHeader;
```

The *type* has the following meaning:

CN_SPDU_SI: A Session Connect header. The message contains an Association Request.

AC_SPDU_SI: A Session Accept header. The message contains an Association Response, indicating that the association has been established.

RF_SPDU_SI: A Session Refuse header. An association could not be established.

FN_SPDU_SI: A Session Finish header. The message contains a Release Request, indicating that the association should be terminated.

DN_SPDU_SI: A Session Disconnect header. The message contains a Release Response, indicating that the association has been terminated.

AB_SPDU_SI: A Session Abort header. The message contains an Abort message, indicating the immediate termination of the association.

If the first byte is 0xE1, the message is a Data Export Protocol command message (see "Definition of the Data Export Protocol" on page 35).

The *LI* field contains the length of the appended data (including all presentation data). The length encoding uses the following rules:

- If the length is smaller or equal 254 bytes, LI is one byte containing the actual length.

- If the length is greater than 254 bytes, LI is three bytes, the first being 0xff, the following two bytes containing the actual length.

Examples:

L = 15 is encoded as 0x0f

L = 256 is encoded as {0xff,0x01,0x00}

Message Encoding

The following section describes how a Computer Client can use the building blocks in the section "Association Control Protocol Examples" on page 332 to format correct Association Control messages.

Association Request Message

For the Association Request message, only the Session Header and the User Data must be filled out individually, as they contain variable data.

When using the building blocks, the presentation context ID for the Data Export Protocol is set to 2. This ID is sent in the SPpdu of all Data Export Protocol Commands.

The Session Header of the Association Request Message is defined as follows:

```
AssocReqSessionHeader ::=
    <SessionHead (type := CN_SPDU_SI)>
```

The length field in the Session Header must be set to the total length of the all appended data (including the presentation trailer).

Also the length field of the Presentation Header must be set to the total length of the appended message after this field. The field starts at the 2nd byte of the Presentation Header. It has the same format as the length field in the Session Header.

The User Data contains a specification of the requested protocol and protocol options. It is defined as follows:

```
AssocReqUserData ::=
    <ASNLength>
    <MDSEUserInfoStd>
```

The *ASNLength* contains the length of the *MDSEUserInfoStd*. It uses the following encoding rules:

- if the length is less or equal to 127, *ASNLength* is one byte, containing the actual length.

- if the length is greater than 127, *ASNLength* is several bytes long. The most significant bit (bit 0) of the first byte is set to 1, the bits 1 to 7 indicate the number of bytes which are appended to encode the actual length.

Examples:

L = 15 is encoded as 0x0f

L = 256 is encoded as {0x82,0x01,0x00}

The *MDSEUserInfoStd* is defined as follows:

```
typedef struct MDSEUserInfoStd {
    ProtocolVersion     protocol_version;
    NomenclatureVersion nomenclature_version;
    FunctionalUnits     functional_units;
    SystemType          system_type;
    StartupMode         startup_mode;
    AttributeList       option_list;
    AttributeList       supported_aprofiles;
} MDSEUserInfoStd;
```

The Computer Client must fill out the *MDSEUserInfoStd* data structure. It specifies the protocol versions and options the Computer Client supports. The monitor parses the *MDSEUserInfoStd* and constructs an Association Response message, which also contains a *MDSEUserInfoStd* data structure. The Association Response specifies which protocol versions and options will be used for the session.

The *ProtocolVersion* is a bit field containing the supported versions of the Data Export protocol. The Computer Client must set the bits for each version is supports. The monitor checks the supported versions and returns the bit for the highest commonly supported protocol version. If no matching version is found, the Association Request is refused.

```
typedef u_32       ProtocolVersion;
#define            MDDL_VERSION1  0x80000000
```

The *NomenclatureVersion* is a bit field containing the revision of the nomenclature which is used to name objects and their attributes. The Computer Client must set the bits for each version is supports. The monitor checks the supported versions and returns the bit for the highest commonly supported nomenclature version. If no matching version is found, the Association Request is refused.

```
typedef u_32 NomenclatureVersion;
#define            NOMEN_VERSION  0x40000000;
```

The *FunctionalUnits* is used to activate additional protocol functions. The Computer Client must set the bit for each functional unit it supports. The monitor checks the supported functional units and returns the bits for all commonly supported units (bitwise AND). No additional protocol functions have been defined yet.

```
typedef u_32        FunctionalUnits;
```

The *SystemType* is a bit field indicating whether the device is a Computer Client or a server. The Computer Client must set the SYST_CLIENT bit and the monitor will return the SYST_SERVER bit. If the SYST_CLIENT bit is not set in the Association Request, the association is refused.

```
typedef u_32 SystemType;
#define    SYST_CLIENT     0x80000000
#define    SYST_SERVER     0x00800000
```

The *StartupMode* is used to indicate the startup mode of the Computer Client and the monitor respectively. The monitor sets the bit for the startup mode which was used for the last reboot.

```
typedef u_32        StartupMode;
#define    HOT_START            0x80000000
#define    WARM_START           0x40000000
#define    COLD_START           0x20000000
```

If the monitor performs a COLD_START, all device settings are reset to the factory defaults. The configurations of the measurements might have changed and the patient data is lost.

The startup mode WARM_START and HOT_START indicate that configuration was not reset during the last restart.

The *option_list* can be used to negotiate additional protocol options in the form of an *AttributeList*. Currently, no further options are supported.

The *option_list* has a variable length. The offset of the *supported_aprofiles* field depends on the length of the *option_list*.

The *supported_aprofiles AttributeList* is used to define the available application profiles. An application profile specifies a set of protocol commands that is supported by the system. The Computer Client must add an entry for each supported profile to this list. The monitor parses the *supported_aprofiles* and returns the first profile in the list that is supported. If none of the profiles is supported, the Association Request is refused. The monitor supports the following profile:

Attribute: Poll Profile Support

The Poll Profile Support attribute contains the specification of the polling profile supported by the system.

```
Attribute ID:      NOM_POLL_PROFILE_SUPPORT
Attribute Type:    PollProfileSupport
Attribute Groups:  -
```

The *PollProfileSupport* is defined as follows:

```
typedef struct PollProfileSupport {
    PollProfileRevision    poll_profile_revision;
    RelativeTime           min_poll_period;
    u_32                   max_mtu_rx;
    u_32                   max_mtu_tx;
    u_32                   max_bw_tx;
    PollProfileOptions     options;
    AttributeList          optional_packages;
} PollProfileSupport;
```

The *PollProfileRevision* is a bit field containing the supported versions of the Polling Profile. The Computer Client must set the bits for each version it supports. The monitor checks the supported versions and returns the bit for the highest commonly supported profile version. If no matching version is found, the profile is not supported.

```
typedef u_32 PollProfileRevision;
#define POLL_PROFILE_REV_0        0x80000000
```

The *min_poll_period* specifies the minimum period with which the Computer Client wants to poll. If the monitor supports the requested poll period, it will return the value, otherwise it will return the minimum poll period it supports. The Computer Client should not send poll requests with a higher period than the negotiated value. For more information on poll periods, refer to the section "SINGLE POLL DATA REQUEST" on page 55.

The *min_poll_period* is also used to specify association time-outs. If the monitor does not receive any messages from the Computer Client within a given time, it sends an Abort message and terminates the association. The time-out periods depend on the negotiated *min_poll_period*, they are listed in the table below.

min_poll_period	**Association Time out**
< 3.3s	10s
3.3s ... 43s	3**min_poll_period*
> 43s	130s

The *max_mtu_rx* and *max_mtu_tx* fields contain the maximum size (MTU - Maximum Transport Unit) for protocol commands (the size of the protocol command is the size of the data appended after the Remote Operation Header).

The MTU negotiation uses the following procedure:

- The Computer Client determines the maximum size of a protocol command it can send and receive.

- The Computer Client sets *max_mtu_tx* to the maximum size it can transmit (i.e. the monitor should provide receive capabilities for messages of this size) and the *max_mtu_rx* to the maximum size it can receive (i.e. the monitor should not send larger commands).

- The monitor determines the maximum size of a protocol command it can send and receive.

- The monitor sets *max_mtu_tx* to the maximum size the Computer Client is allowed to transmit (this is the minimum of the *max_mtu_tx* the Computer Client requested and the message size the monitor *can receive)*. The monitor sets *max_mtu_rx* to the maximum size the client must be able to receive (this is the minimum of the *max_mtu_rx the* Computer Client requested and the message size the monitor *can send)*.

Example:

- The Computer Client can send 800 bytes and receive 500 bytes of user data in one message.

- The Computer Client sets *max_mtu_tx* to 800 and *max_mtu_rx* to 500.

- The monitor can send 700 bytes and receive 600 bytes in one message.

- The monitor sets *max_mtu_tx* to 600 bytes (the monitor cannot receive larger messages) and *max_mtu_rx* to 500 bytes (the Computer Client can not receive more than 500 bytes in a message).

The IntelliVue monitor requires that the Computer Client can receive protocol commands of at least 300 bytes. Otherwise the profile is not supported. Smaller command sizes would lead to a considerable communication overhead. The largest negotiable MTU is 1364 bytes for the LAN interface and 1000 Bytes for the MIB/RS232 interface. The resulting size of the data packets may be larger than the MTU, because the MTU covers only the size of the Command Header and the Command Specific Data.

It is recommended that the Computer Client uses a large MTU. This reduces processing overhead and in most cases avoids splitting of messages.

For wave data export, the Computer Client needs to be able to receive observed values with 256 ms of wave data in one message. The MTU should be at least 500 bytes (700 bytes with multiplexed context).

The *max_bw_tx* contains the estimated maximum transmit bandwidth which will be used. The monitor fills in the maximum transmit bandwidth it uses, the value 0xffffffff indicates that no estimation is possible (this is the default). The current software does not support bandwidth estimation.

The *PollProfileOptions* bit field is used to set additional profile options. The monitor sets the P_OPT_DYN_CREATE_OBJECTS and P_OPT_DYN_DELETE_OBJECTS bits to indicate that the number of internal objects (e.g. the number of Numerics) may change dynamically. The *PollProfileOptions* is defined as follows:

```
typedef u_32 PollProfileOptions;
#define P_OPT_DYN_CREATE_OBJECTS      0x40000000
#define P_OPT_DYN_DELETE_OBJECTS      0x20000000
```

The *optional_packages AttributeList* allows the definition of additional options supported in the profile. The Computer Client must add an entry for each optional package it requests. The monitor checks the packages and adds an entry for each package it supports in the Association Response.

An attribute constitutes an optional package. The Poll Profile Extension is an optional package available for use.

Attribute: Poll Profile Extensions

The Poll Profile Extensions attribute specifies some extensions for the standard polling profile. For more information on how to use these extensions refer to the section "EXTENDED POLL DATA REQUEST" on page 58.

```
Attribute ID:      NOM_ATTR_POLL_PROFILE_EXT
Attribute Type:    PollProfileExt
Attribute Groups:  -
```

The *PollProfileExt* is defined as follows:

```
typedef struct {
    PollProfileExtOptions options;
    AttributeList        ext_attr;
} PollProfileExt;

typedef u_32 PollProfileExtOptions;
#define POLL_EXT_PERIOD_NU_1SEC         0x80000000
#define POLL_EXT_PERIOD_NU_AVG_12SEC    0x40000000
#define POLL_EXT_PERIOD_NU_AVG_60SEC    0x20000000
#define POLL_EXT_PERIOD_NU_AVG_300SEC   0x10000000
#define POLL_EXT_PERIOD_RTSA            0x08000000
#define POLL_EXT_ENUM                   0x04000000
#define POLL_EXT_NU_PRIO_LIST           0x02000000
#define POLL_EXT_DYN_MODALITIES         0x01000000
```

The *PollProfileExtOptions* bit field defines available options for the Poll Profile Extensions package.

If the POLL_EXT_PERIOD_NU_1SEC bit is set, the Computer Client requests real-time measurements as source for Numeric data.

If the POLL_EXT_PERIOD_NU_AVG_12SEC bit is set, the Computer Client requests 12 second averaged data as source for Numeric data.

If the POLL_EXT_PERIOD_NU_AVG_60SEC bit is set, the Computer Client requests 1 minute averaged data as source for Numeric data.

If the POLL_EXT_PERIOD_NU_AVG_300SEC bit is set, the Computer Client requests 5 minute averaged data as source for Numeric data.

The Computer Client must set at least one of the bits for the numeric period, otherwise the optional package is ignored. Currently, the monitor supports only one source for an association. If more than one of the bits is set, the source with the smallest measurement period is selected. The monitor sets the corresponding bit in the Association Response message.

There may be only one active numeric source at a given time. If there is an active association on the LAN interface which has requested realtime numerics, it is not possible to establish another association on the MIB/RS232 interface which requests 1 minute averaged data. In this case, the association request would result in a refuse message.

If the POLL_EXT_PERIOD_RTSA bit is set, the computer client requests wave data. The patient monitor sets the corresponding bit in its response message to indicate wave data export capability.

The Computer Client must parse the Association Response message to find out whether the requested options have been accepted by the monitor.

If the POLL_EXT_ENUM bit is set, the computer client is allowed to request Enumeration objects.

If the POLL_NU_PRIO_LIST bit is set, the computer client is allowed to set the numeric priority list.

If the POLL_EXT_DYN_MODALITIES bit is set, the computer client gets all timestamps for metrics with dynamic modalities. They are not exported otherwise for compatibility reasons.

The *ext_attr AttributeList* is reserved for future extensions.

Release Request Message

The Release Request message does not contain variable data. It is sufficient for the Computer Client to use the building blocks listed in the section "Association Control Protocol Examples" on page 332.

Abort Message

The Abort message does not contain variable data. It is sufficient for the Computer Client to use the building blocks listed in the section "Association Control Protocol Examples" on page 332.

Message Parsing

In most cases, it is sufficient for the Computer Client to check the first byte of the association control message. The first byte defines the Session Layer header, which can be mapped to an Association Control command.

Association Response Message

The monitor sends the Association Response message if an association has been established successfully. The Computer Client must parse the User Data within this message to find out which protocol options have been negotiated.

The Computer Client should not assume that the same Association Request message will always lead to the same Association Response message. The internal state of the monitor might lead to different responses.

The Association Response message is identified by its Session Header:

```
AssocRespSessionHeader ::=
    <SessionHead (type := AC_SPDU_SI)>
```

When parsing the Association Response message, the Computer Client must find the beginning of the User Data. This can be done by identifying the following byte sequence within the message;

```
0xBE 0x80 0x28 0x80 0x81
```

or

```
0xBE 0x80 0x28 0x80 0x02 0x01 0x02 0x81
```

The User Data is defined as follows;

```
AssocRespUserData ::=
    <ASNLength>
    <MDSEUserInfoStd>
```

The last byte of the User Data must be followed by 16 bytes 0x00.

The *MDSEUserInfo* follows the same definitions as described above for the Association Request Message.

Refuse

The monitor sends a Refuse message if an Association Request message was not accepted, because it was formatted incorrectly or because the requested protocol and protocol options are not supported by the monitor.

A Refuse message is also sent, if the maximum number of concurrent associations has been reached. Currently, the monitor only supports one active association.

The Refuse messages is identified by its Session Header:

```
RefuseSessionHeader ::=
    <SessionHead (type := RF_SPDU_SI)>
```

Release Response

It is sufficient to check the Session Header to detect a Release Response message. The Session Header is defined as follows:

```
ReleaseRespSessionHeader ::=
    <SessionHead (type := DN_SPDU_SI)>
```

Attribute Data Types and Constants Used

The data types in this chapter are based on the data types introduced in the chapter "Definition of the Data Export Protocol" on page 35. Refer to this chapter for more information about the base data types.

All data types used in this guide assume that elements of structures are aligned on 2 byte boundaries. Many compilers use different alignment modes by default. Make sure that the compiler uses the right alignments when parsing and formatting protocol messages.

The Poll Reply messages may contain attributes which are not documented here. A Computer Client should ignore all unknown attributes.

With IntelliVue release G the nomenclature of some numeric and wave labels have been changed. The labels that previously resided in the namespace NOM_EMFC are now merged into the NOM_SCADA namespace and the new defined NOM_SETTING namespace.

At the end of this chapter is a mapping table to guide you through the transition.

Numeric Objects

Numeric Object Attributes

This section defines the attributes of the Numeric object, together with the attribute identifier codes and attribute data types.

Attribute: Handle

The Handle attribute identifies the Numeric object in the form of a numeric value. The Handle is unique within a device context (see Common Data Type - Global Handle). The actual value of the Handle attribute does not have a meaning. It is used for reference and relation purposes (e.g. Alert Monitor entries reference the Numeric object instance by means of the Handle).

```
Attribute ID:      NOM_ATTR_ID_HANDLE
Attribute Type:    Handle (see Definitions Shared by Protocols)
Attribute Groups:  VMO Static Context Group
Availability:      Mandatory
```

Attribute: Type

The Type attribute contains an identification of the object type.

```
Attribute ID:      NOM_ATTR_ID_TYPE
Attribute Type:    TYPE (see Definitions Shared by Protocols)
Attribute Groups:  VMO Static Context Group
Availability:      Mandatory
```

Attribute: Numeric Observed Value

The Numeric Observed Value attribute represents the (measured) value, along with state and identification data.

```
Attribute ID:      NOM_ATTR_NU_VAL_OBS
Attribute Type:    NuObsValue (see below)
Attribute Groups:  Metric Observed Value Group
Availability:      Conditional (either NuObsValue or
                   NuObsValueCmp must be present)
```

The *NuObsValue* data type is defined as follows:

```
typedef struct  {
    OIDType             physio_id;
    MeasurementState    state;
    OIDType             unit_code;
    FLOATType           value;
} NuObsValue;
```

The *physio_id* (physiological identifier) field contains a nomenclature code from the SCADA partition that identifies the represented value (typically a physiological measurement).

The *unit_code* field contains a nomenclature code from the dimension nomenclature partition. It identifies the units of measure.

The *value* field is a floating point number with the actual value. Before interpreting the numeric value, the *state* must be checked. Only if *state* indicates a valid measurement, should the *value* field be interpreted.

The *state* field is a bit field structure (multiple bits can be set simultaneously) defined as follows:

```
typedef u_16            MeasurementState;
#define INVALID                 0x8000
#define QUESTIONABLE            0x4000
#define UNAVAILABLE             0x2000
#define CALIBRATION_ONGOING     0x1000
#define TEST_DATA               0x0800
#define DEMO_DATA               0x0400
#define VALIDATED_DATA          0x0080
#define EARLY_INDICATION        0x0040
#define MSMT_ONGOING            0x0020
#define MSMT_STATE_IN_ALARM     0x0002
#define MSMT_STATE_AL_INHIBITED 0x0001
```

The bits have the following meaning:

INVALID: The source detects a sufficient degradation to render the data meaningless.

QUESTIONABLE: A problem exists, but it is still appropriate to present the data. This occurs when (1) either the degradation in the data is marginal or (2) the source cannot make a definite judgement on the reliability of the data.

UNAVAILABLE: The signal does not permit derivation of the numeric in question. This could be a transient state (e.g. first breath detected after an apnea -> no rate available), or a continuous state (no etCO$_2$ detection possible on a flat CO$_2$ wave).

CALIBRATION_ONGOING: Parameter is currently being calibrated.

TEST_DATA: The signal is an automatically generated test signal only and is not a valid patient signal. If this bit is set, the value is not suitable for patient diagnosis.

DEMO_DATA: The monitor runs in demonstration mode, the signal is automatically generated and is not a valid patient signal. If this bit is set, the value is not suitable for patient diagnosis.

VALIDATED_DATA: The value has been manually validated.

EARLY_INDICATION: The value represents an early estimate of the actual signal (the Non-Invasive Blood Pressure measurement e.g. sets this bit as soon as it has derived a systolic value, even if mean and diastolic values are still missing).

MSMT_ONGOING: A new aperiodic measurement is currently ongoing.

MSMT_STATE_IN_ALARM: Indicates that the numeric has an active alarm condition

MSMT_STATE_AL_INHIBITED: Alarms are switched off for the numeric (crossed bell)

The measurement is valid if the first octet of the state is all 0.

Attribute: Compound Numeric Observed Value

The Compound Numeric Observed Value attribute represents multiple (measured) values modelled in one Numeric object, along with state and identification data.

The Compound Numeric Observed Value is e.g. used to represent Blood Pressure measurements. For these measurements, systolic, diastolic and mean values are represented by a single Numeric object.

```
Attribute ID:      NOM_ATTR_NU_CMPD_OBS_VAL
Attribute Type:    NuObsValCmp (see below)
Attribute Groups:  Metric Observed Value Group
Availability:      Conditional (either NuObsValue or
                   NuObsValueCmp must be present)
```

The *NuObsValueCmp* data type is defined as follows:

```
typedef struct {
    u_16          count;
    u_16          length;
    NuObsValue    value[1];
} NuObsValueCmp;
```

The count field defines the number of *NuObsValue* elements in the structure. Note that the count field is variable, the number of elements may change over time. For a Blood Pressure measurement e.g there can be 3 values (systolic, diastolic, mean) or a single value only (mean only).

The length field defines the size of the array of *NuObsValue* structures in bytes.

The value field is a place holder for parsing.

Attribute: Absolute Time Stamp

The Absolute Time Stamp attribute is used to define a time tag for the current Numeric value. In the monitor, the attribute is used for aperiodic measurements only.

```
Attribute ID:      NOM_ATTR_TIME_STAMP_ABS
Attribute Type:    AbsoluteTime(see Definitions Shared by Protocols)
Attribute Groups:  Metric Observed Value Group
Availability:      Optional
```

Attribute: Relative Time Stamp

The Relative Time Stamp attribute is used to define a high resolution time tag for the current Numeric value.

```
Attribute ID:      NOM_ATTR_TIME_STAMP_REL
Attribute Type:    RelativeTime(see Definitions Shared by Protocols)
Attribute Groups:  Metric Observed Value Group
Availability:      Optional
```

Attribute: Label

The Label attribute is a 32 bit wide ID which represents the Numeric label string. The Label is unique for all numerics in the system.

```
Attribute ID:      NOM_ATTR_ID_LABEL
Attribute Type:    TextId
                   (see Protocol Common Definitions)
Attribute Group:   VMO Dynamic Context Group
Availability:      Optional
```

Attribute: Label String

The Label String attribute is a unicode string which contains the label string for a Numeric.

```
Attribute ID:      NOM_ATTR_ID_LABEL_STRING
Attribute Type:    String
                   (see Protocol Common Definitions)
Attribute Group:   VMO Dynamic Context Group
Availability:      Optional
```

The Label String does not contain the asterisk prefix displayed by the monitor to indicate whether a numeric has been manually entered. The client has to check the MetricCategory field of the MetricSpec attribute and add this prefix to obtain the identical label string that is displayed by the monitor.

Attribute: Display Resolution

The Display Resolution attribute is present if the resolution of the numeric shown on the display must be different from the resolution communicated in the Numeric Observed Value attribute. E.g. a Temperature is displayed with a resolution of 1/10, but the Observed Value is sent with a precision of 1/100 to get the necessary accuracy for differential temperatures. The Display Resolution attribute describes the format in which the value of a numeric is displayed on the screen.

```
Attribute ID:      NOM_ATTR_DISP_RES
Attribute Type:    DispResolution
Attribute Group:   VMO Dynamic Context Group
Availability:      Optional
```

The *DispResolution* is defined as follows:

```
typedef struct
{
    u_8      pre_point;
    u_8      post_point;
} DispResolution;
```

The value of *pre_point* denotes the number of digits before the decimal point. The value of *post_point* denotes the number of digits after the decimal point.

Attribute: Color

The Color attribute describes the color in which a numeric is displayed on the screen.

```
Attribute ID:       NOM_ATTR_COLOR
Attribute Type:     SimpleColour
Attribute Group:    VMO Dynamic Context Group
Availability:       Optional
```

The *SimpeColour* is defined as follows:

```
typedef u_16 SimpleColour;
#define COL_BLACK       0
#define COL_RED         1
#define COL_GREEN       2
#define COL_YELLOW      3
#define COL_BLUE        4
#define COL_MAGENTA     5
#define COL_CYAN        6
#define COL_WHITE       7
#define COL_PINK        20
#define COL_ORANGE      35
#define COL_LIGHT_GREEN 50
#define COL_LIGHT_RED   65
```

Attribute: Metric Specification

The Metric Specification attribute describes static properties of a numeric.

```
Attribute ID:       NOM_ATTR_METRIC_SPECN
Attribute Type:     MetricSpec
Attribute Group:    VMO Static Context Group
Availability:       Mandatory
```

The *MetricSpec* is defined as follows:

```
typedef struct
{
    RelativeTime        update_period;
    MetricCategory      category;
    MetricAccess        access;
    MetricStructure     structure;
    MetricRelevance     relevance;
} MetricSpec;
```

The *update_period* is the minimum time between changes of the observed value.

The *MetricCategory* is defined as follows:

```
typedef u_16            MetricCategory;
#define MCAT_UNSPEC                 0
#define AUTO_MEASUREMENT            1
#define MANUAL_MEASUREMENT          2
#define AUTO_SETTING                3
#define MANUAL_SETTING              4
#define AUTO_CALCULATION            5
#define MANUAL_CALCULATION          6
#define MULTI_DYNAMIC_CAPABILITIES  50
#define AUTO_ADJUST_PAT_TEMP        128
#define MANUAL_ADJUST_PAT_TEMP      129
#define AUTO_ALARM_LIMIT_SETTING    130
```

It allows to distinguish between measurements, calculations and settings. The values have the following meaning:

MCAT_UNSPEC: not specified

AUTO_MEASUREMENT: automatic measurement

MANUAL_MEASUREMENT: manual measurement

AUTO_SETTING: automatic setting

MANUAL_SETTING: manual setting

AUTO_CALCULATION: automatic calculation, e.g. differential temperature

MANUAL_CALCULATION: manual calculation

MULTI_DYNAMIC_CAPABILITIES: this measurement may change its category during operation or may be used in various modes.

AUTO_ADJUST_PAT_TEMP: measurement is automatically adjusted for patient temperature

MANUAL_ADJUST_PAT_TEMP: measurement manually adjusted for patient temperature

AUTO_ALARM_LIMIT_SETTING: this is not a measurement, but an alarm limit setting

The *MetricAccess* bit field provides info on how the metric value can be accessed and when a measurement is available.

```
typedef u_16           MetricAccess;
#define AVAIL_INTERMITTEND      0x8000
#define UPD_PERIODIC            0x4000
#define UPD_EPISODIC            0x2000
#define MSMT_NONCONTINUOUS      0x1000
```

The values have the following meaning:

AVAIL_INTERMITTEND: The intermitted availability bit is set, if the observed values not always available (e.g. only if a measurement is explicitly started).

UPD_PERIODIC: observed value is updated periodically

UPD_EPISODIC: observed value is updated episodically (exactly one update mode (UPD_) must be set

MSMT_NONCONTINUOUS: indicates that the measurement is non continuous (this is different from the update mode)

The *MetricStructure* describes if the object represents a single measurement or multiple

related measurements (an invasive blood pressure could be compound when it represents

a pulsatile pressure like ABP and derives systolic, diastolic, mean values)

```
typedef struct MetricStructure {
    u_8             ms_struct;
    u_8             ms_comp_no;
} MetricStructure;
```

ms_struct describes the structure of the object, 0 means simple, 1 means compound object.

ms_comp_no contains the maximum number of components in the compound, it contains 0 for simple objects.

The MetricRelevance is a 16 bit wide field for internal use only.

```
typedef u_16 MetricRelevance;
```

Attribute MetricModality

The MetricModality attribute describes metric properties of a numeric that may depend on the usage of the measurement device to obtain a measurement.

```
Attribute ID:       NOM_ATTR_METRIC_MODALITY
Attribute Type:     MetricModality
Attribute Group:    Metric Observed Value Group
Availability:       Mandatory
```

The *MetricModality* is defined as follows:

```
typedef u_16 MetricModality;

#define METRIC_MODALITY_MANUAL      0x4000
#define METRIC_MODALITY_APERIODIC   0x2000
#define METRIC_MODALITY_VERIFIED    0x1000
```

Attribute Groups

The attributes of the Numeric object are arranged in the following attribute groups:

```
Attribute Group:    VMO Static Context Group
Group ID:           NOM_ATTR_GRP_VMO_STATIC
Description:        Static context of the object
Attributes:         Type, Handle, Metric Specification

Attribute Group:    VMO Dynamic Context Group
Group ID:           NOM_ATTR_GRP_VMO_DYN
Description:        Dynamic context of the object
Attributes:         Label, Label String, Color, Display Resolution

Attribute Group:    Metric Observed Value Group
Group ID:           NOM_ATTR_GRP_METRIC_VAL_OBS
Description:        Observed values of the object
Attributes:         Nu Observed Value,
                    Compound Nu Observed Value,
                    Absolute Time Stamp, Relative Time Stamp, MetricModality
```

Dynamic Context Changes

Internally, the IntelliVue monitor uses two different communication channels for attributes from the VMO Dynamic Context Group and the Metric Observed Value Group. This can lead to possible inconsistencies between these two attribute groups. Imagine that a Computer Client is polling all attribute groups. If the user changes the Label of a numeric (VMO Dynamic Context Group), the *physio_id* in the Nu Observed Value (Metric Observed Value Group) may be updated a short period later.

For real-time Numerics, this inconsistency is typically resolved after less than one second with the periodic update of the Observed Values. For averaged Numerics, the update of the Observed Values depends on the averaging period. It may be 12 seconds, 1 minute or 5 minutes.

Wave Objects

Wave Object Attributes

This section defines the attributes of the Wave object, together with the attribute identifier codes and attribute data types.

Attribute: Handle

The Handle attribute contains an identification of the wave object in the form of a numeric value. The actual value of the Handle attribute does not have a meaning. It is used for reference and relation purposes.

```
Attribute ID:          NOM_ATTR_ID_HANDLE
Attribute Type:        Handle (see Definitions Shared by Protocols)
Attribute Groups:      VMO Static Context Group
Availability:          Mandatory
```

Attribute: Type

The Type attribute contains an identification of the object type.

```
Attribute ID:          NOM_ATTR_ID_TYPE
Attribute Type:        TYPE (see Definitions Shared by Protocols)
Attribute Groups:      VMO Static Context Group
Availability:          Mandatory
```

Attribute: Metric Specification

The Metric Specification describes static properties of a metric object.

```
Attribute ID:      NOM_ATTR_METRIC_SPECN
Attribute Type:    MetricSpec
Attribute Groups:  VMO Static Context Group
Availability:      Mandatory
```

The *MetricSpec* is defined as follows:

```
typedef struct {
        RelativeTime          update_period;
        MetricCategory        category;
        MetricAccess          access;
        MetricStructure       structure;
        MetricRelevance       relevance;
} MetricSpec;
```

The *update_period* specifies the time between observed values.

MetricCategory, *MetricAccess*, *MetricStructure*, and *MetricRelevance* are already defined for the Numeric object.

Attribute: Sample Array Specification

The Sample Array Specification describes static properties of a wave object.

```
Attribute ID:          NOM_ATTR_SA_SPECN
```

```
Attribute Type:       SaSpec
Attribute Groups:     VMO Static Context Group
Availability:         Mandatory
```

The *SaSpec* is defined as follows:

```
typedef struct {
        u_16                    array_size;
        SampleType              sample_type;
        SaFlags                 flags;
} SaSpec;
```

The *array_size* specifies the maximum number of samples in one observed value.

The *SampleType* is defined as follows:

```
typedef struct {
        u_8                     sample_size;
        u_8                     significant_bits;
} SampleType;
```

The *sample_size* specifies the number of bits used to encode one wave sample.

The number of *significant_bits* is less or equal *sample_size*. To get the actual sample value, non-significant bits must be masked if indicated in the flags value.

The *SaFlags* is defined as follows:

```
typedef u_16            SaFlags;
#define SMOOTH_CURVE                0x8000
#define DELAYED_CURVE               0x4000
#define STATIC_SCALE                0x2000
#define SA_EXT_VAL_RANGE            0x1000
```

The values have the following meaning:

SMOOTH_CURVE, DELAYED_CURVE : used for wave presentation
STATIC_SCALE: Scale and range specification does not change.
SA_EXT_VAL_RANGE: The non-significant bits in the sample value must be masked.

Attribute: Sample Array Fixed Value Specification

The Sample Array Fixed Value Specification defines a list of fixed sample values or bit masks that indicate specific conditions.

```
Attribute ID:         NOM_ATTR_SA_FIXED_VAL_SPECN
Attribute Type:       SaFixedValSpec16
Attribute Groups:     VMO Static Context Group
Availability:         Optional
```

The *SaFixedValSpec16* is a sequence of *SaFixedValSpecEntry16* elements:

```
typedef struct {
        u_16                    count;
        u_16                    length;
        SaFixedValSpecEntry16   value[1];
} SaFixedValSpec16;
typedef struct {
        SaFixedValId            sa_fixed_val_id;
        u_16                    sa_fixed_val;
} SaFixedValSpecEntry16;
```

The *SaFixedValId* is defined as follows:

```
typedef u_16            SaFixedValId;
#define SA_FIX_UNSPEC              0
#define SA_FIX_INVALID_MASK        1
#define SA_FIX_PACER_MASK          2
```

```
#define SA_FIX_DEFIB_MARKER_MASK     3
#define SA_FIX_SATURATION            4
#define SA_FIX_QRS_MASK              5
```

The values have the following meaning:

SA_FIX_UNSPEC: Not specified.
SA_FIX_INVALID_MASK: Invalid sample mask.
SA_FIX_PACER_MASK: Pace pulse detected.
SA_FIX_DEFIB_MARKER_MASK: Defib marker in this sample.
SA_FIX_SATURATION: Indicates saturation condition in this sample.
(Note: despite the name, this is a mask as well.)
SA_FIX_QRS_MASK: Indicates QRS trigger around this sample.

The *sa_fixed_val* may be a value or a bit mask, as indicated in the *sa_fixed_val_id*.

Attribute: Sample Period

The Sample Period specifies the sample rate.

```
Attribute ID:          NOM_ATTR_TIME_PD_SAMP
Attribute Type:        RelativeTime (see Definitions Shared by Protocols)
Attribute Groups:      VMO Static Context Group
Availability:          Mandatory
```

Attribute: Label

The Label attribute contains a 32 bit wide ID which represents the wave label string. The Label is unique for all waves in the system.

```
Attribute ID:          NOM_ATTR_ID_LABEL
Attribute Type:        TextId (see Definitions Shared by Protocols)
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

Attribute: Label String

The Label String is a unicode string which contains the label string for a wave.

```
Attribute ID:          NOM_ATTR_ID_LABEL_STRING
Attribute Type:        String (see Definitions Shared by Protocols)
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

Attribute: Metric State

The Metric State attribute indicates metric on or off state.

```
Attribute ID:          NOM_ATTR_METRIC_STAT
Attribute Type:        MetricState
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

The *MetricState* is a bit field defined as follows:

```
typedef u_16           MetricState;
#define METRIC_OFF                  0x8000
```

Attribute: Unit Code

The Unit Code attribute contains a nomenclature code from the dimension partition. It identifies the units of measure.

```
Attribute ID:          NOM_ATTR_UNIT_CODE
Attribute Type:        OIDType (see Definitions Shared by Protocols)
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

Attribute: Color

The Color attribute describes the color in which a wave is displayed on the screen.

```
Attribute ID:          NOM_ATTR_COLOR
Attribute Type:        SimpleColour
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

The *SimpleColour* is already defined for the Numeric object.

Attribute: Measure Mode

The Measure Mode attribute defines specific measurement modes.

```
Attribute ID:          NOM_ATTR_MODE_MSMT
Attribute Type:        MeasureMode
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

For wave objects, the following *MeasureMode* bits are defined:

```
typedef u_16           MeasureMode;
#define CO2_SIDESTREAM              0x0400
#define ECG_PACED                   0x0200
#define ECG_NONPACED                0x0100
#define ECG_DIAG                    0x0080
#define ECG_MONITOR                 0x0040
#define ECG_FILTER                  0x0020
#define ECG_MODE_EASI               0x0008
#define ECG_LEAD_PRIMARY            0x0004
```

The values have the following meaning:

CO2_SIDESTREAM: CO_2 sidestream.
ECG_PACED, ECG_NONPACED: Paced mode setting.
ECG_DIAG, ECG_MONITOR, ECG_FILTER: ECG filter setting.
ECG_MODE_EASI: EASI derived lead.
ECG_LEAD_PRIMARY: ECG primary lead.

Attribute: Metric Info Label

The Metric Info Label allows to specify an additional dynamic text (32 bit ID).

```
Attribute ID:          NOM_ATTR_METRIC_INFO_LABEL
Attribute Type:        TextId (see Definitions Shared by Protocols)
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

Attribute: Metric Info Label String

The Metric Info Label String allows to specify an additional dynamic text (unicode string).

```
Attribute ID:          NOM_ATTR_METRIC_INFO_LABEL_STR
```

```
Attribute Type:        String (see Definitions Shared by Protocols)
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

Attribute: Scale and Range Specification

The Scale and Range Specification describes a relation between scaled values and absolute values and also defines the range of the measured values and samples.

```
Attribute ID:          NOM_ATTR_SCALE_SPECN_I16
Attribute Type:        ScaleRangeSpec16
Attribute Groups:      VMO Dynamic Context Group
Availability:          Mandatory
```

The *ScaleRangeSpec16* is defined as follows:

```
typedef struct {
        FLOATType             lower_absolute_value;
        FLOATType             upper_absolute_value;
        u_16                  lower_scaled_value;
        u_16                  upper_scaled_value;
} ScaleRangeSpec16;
```

The scaled values refer to the wave samples in the observed values.

If the wave does not represent any absolute value, the absolute value fields must be *NaN* (Not a Number).

Attribute: Sample Array Physiological Range

The Sample Array Physiological Range is used for display scaling.

```
Attribute ID:          NOM_ATTR_SA_RANGE_PHYS_I16
Attribute Type:        ScaledRange16
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

The *ScaledRange16* is defined as follows:

```
typedef struct {
        u_16                  lower_scaled_value;
        u_16                  upper_scaled_value;
} ScaledRange16;
```

Attribute: Visual Grid

The Visual Grid attribute allows to define grid lines.

```
Attribute ID:          NOM_ATTR_GRID_VIS_I16
Attribute Type:        SaVisualGrid16
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

The *SaVisualGrid16* is defined as follows:

```
typedef struct {
        u_16                  count;
        u_16                  length;
        SaGridEntry16         value[1];
} SaVisualGrid16;
typedef struct {
        FLOATType             absolute_value;
        u_16                  scaled_value;
        u_16                  level;
} SaGridEntry16;
```

Different *levels* define relative importance of grid lines. *0* is the first (most important) level.

Attribute: Sample Array Calibration Specification

The Sample Array Calibration Specification allows to define the presence of a calibration bar or calibration stair.

```
Attribute ID:          NOM_ATTR_SA_CALIB_I16
Attribute Type:        SaCalData16
Attribute Groups:      VMO Dynamic Context Group
Availability:          Optional
```

The *SaCalData16* is defined as follows:

```
typedef struct {
        FLOATType             lower_absolute_value;
        FLOATType             upper_absolute_value;
        u_16                  lower_scaled_value;
        u_16                  upper_scaled_value;
        u_16                  increment;
        u_16                  cal_type;
#define BAR                   0
#define STAIR                 1
} SaCalData16;
```

Attribute: Sample Array Observed Value

The Sample Array Observed Value attribute represents the wave samples, along with state and identification data.

```
Attribute ID:          NOM_ATTR_SA_VAL_OBS
Attribute Type:        SaObsValue
Attribute Groups:      Metric Observed Value Group
Availability:          Conditional (either SaObsValue or
                       SaObsValueCmp is present)
```

The *SaObsValue* data type is defined as follows:

```
typedef struct {
        OIDType              physio_id;
        MeasurementState     state;
        struct {
                u_16                 length;
                u_8                  value[1];
        } array;
} SaObsValue;
```

The *physio_id* (physiological identifier) field contains a nomenclature code from the SCADA partition that identifies the represented wave (typically a physiological measurement).

The *state* indicates measurement validity. Refer to the Numeric object for a definition of the bit field. The measurement is valid if the first octet of the *state* is all *0*.

Attribute: Compound Sample Array Observed Value

The Compound Sample Array Observed Value attribute represents multiple waves modelled in one Wave object, along with state and identification data.

Compound Sample Array Observed Values are used to provide 250 samples/s ECG waves with common context.

```
Attribute ID:          NOM_ATTR_SA_CMPD_VAL_OBS
Attribute Type:        SaObsValueCmp
Attribute Groups:      Metric Observed Value Group
```

```
        Availability:          Conditional (either SaObsValue or
                               SaObsValueCmp is present)
```

The *SaObsValueCmp* data type is defined as follows:

```
        typedef struct {
                u_16                    count;
                u_16                    length;
                SaObsValue              value[1];
        } SaObsValueCmp;
```

The *count* field defines the number of *SaObsValue* elements in the structure.

The *length* field defines the size of the array of *SaObsValue* structures in bytes.

The *SaObsValue* data type is defined above. The elements in a compound observed value can be identified by their *physio_id*.

Attributes Groups

The attributes of the Wave object are arranged in the following attribute groups:

```
        Attribute Group:       VMO Static Context Group
        Group ID:              NOM_ATTR_GRP_VMO_STATIC
        Description:           Static context of the object
        Attributes:            Handle, Type, Metric Specification, Sample Array
                               Specification, Sample Array Fixed Value Specification,
                               Sample Period
        Attribute Group:       VMO Dynamic Context Group
        Group ID:              NOM_ATTR_GRP_VMO_DYN
        Description:           Dynamic context of the object
        Attributes:            Label, Label String, Metric State, Unit Code,
                               Color, Measure Mode, Metric Info Label, Metric Info
                               Label String, Scale and Range Specification,
                               Sample Array Physiological Range, Visual Grid,
                               Sample Array Calibration Specification
        Attribute Group:       Metric Observed Value Group
        Group ID:              NOM_ATTR_GRP_METR_VAL_OBS
        Description:           Observed values of the object
        Attributes:            Sample Array Observed Value, Compound Sample Array
                               Observed Value
```

Enumeration Objects

Enumeration Object Attributes

This section defines the attributes of the enumeration objects, together with the attribute identifier codes and attribute data types.

Enumeration Objects are not available in software revisions below E.0.

Attribute: Handle

The Handle attribute identifies the enumeration object in the form of a numeral value. The Handle is unique within a device context (see Common Data Type - Global Handle). The actual value of the Handle attribute does not have a meaning. It is used for reference and relation purposes.

```
        Attribute ID:      NOM_ATTR_ID_HANDLE
        Attribute Type:    Handle (see Definitions Shared by Protocols)
        Attribute Groups:  -
        Availability:      Mandatory
```

Attribute: Type

The Type attribute contains an identification of the object type.

```
Attribute ID:          NOM_ATTR_ID_TYPE
Attribute Type:        TYPE (see Definitions Shared by Protocols)
Attribute Groups:      VMO Static Context Group
Availability:          Mandatory
```

Attribute: Metric Specification

The Metric Specification describes static properties of a metric object.

```
Attribute ID:          NOM_ATTR_METRIC_SPECN
Attribute Type:        MetricSpec
Attribute Groups:      VMO Static Context Group
Availability:          Mandatory
```

The *MetricSpec* is defined as follows:

```
typedef struct {
        RelativeTime          update_period;
        MetricCategory        category;
        MetricAccess          access;
        MetricStructure       structure;
        MetricRelevance       relevance;
} MetricSpec;
```

The *update_period* specifies the time between observed values.

MetricCategory, *MetricAccess*, *MetricStructure*, and *MetricRelevance* are already defined for the Numeric object.

Attribute: Label

The Label attribute is a 32 bit wide ID which represents the enumeration label string.

```
Attribute ID:        NOM_ATTR_ID_LABEL
Attribute Type:      TextId
                     (see Protocol Common Definitions)
Attribute Group:     VMO Dynamic Context Group
Availability:        Optional
```

Attribute: Label String

The Label String attribute is a unicode string which contains the label string for a enumeration.

```
Attribute ID:        NOM_ATTR_ID_LABEL_STRING
Attribute Type:      String
                     (see Protocol Common Definitions)
Attribute Group:     VMO Dynamic Context Group
Availability:        Optional
```

Attribute: Color

The Color attribute describes the color in which an enumeration is displayed on the screen.

```
Attribute ID:        NOM_ATTR_COLOR
Attribute Type:      SimpleColour
Attribute Group:     VMO Dynamic Context Group
Availability:        Optional
```

Attribute: Enum-Observed-Value

The Enum-Ovserved-Value attribute describes the current state of the enumeration object.

```
Attribute ID:      NOM_ATTR_VAL_ENUM_OBS
Attribute Type:    EnumObsVal
Attribute Group:   VMO Observed Value Group
Availablity:       Optional
```

```
typedef struct {
    OIDType          physio_id;
    MeasurementState  state;
    EnumVal          value;
} EnumObsVal;

typedef struct {
    OIDType          obj_id;
    FLOATType        num_val;
    OIDType          unit_code;
} EnumObjIdVal;

typedef struct {
    u_16             choice;
    u_16             length;
    union {
            OIDType       enum_obj_id;
            EnumObjIdVal  enum_obj_id_val;
    } u;
} EnumVal;
```

The field choice of structure EnumVal defines the valid structure of union u. Its values are defined as follows:

```
#define  ENUM_OBJ_ID_CHOSEN      1
#define  ENUM_OBJ_ID_VAL_CHOSEN  4
```

Attribute Groups

The attributes of the enumeration object are arranged in the following attribute groups:

```
Attribute Group:   VMO Static Context Group
Group ID:          NOM_ATTR_GRP_VMO_STATIC
Description:       Static context of the object
Attributes:       Type, Handle, Metric Specification

Attribute Group:   VMO Dynamic Context Group
Group ID:          NOM_ATTR_GRP_VMO_DYN
Description:       Dynamic context of the object
Attributes:       Label, Label String, Color

Attribute Group:   Metric Observed Value Group
Group ID:          NOM_ATTR_GRP_METRIC_VAL_OBS
Description:       Observed values of the object
Attributes:       Enumeration Observed Value,
                  Absolute Time Stamp, Relative Time Stamp
```

System Objects

System Objects Attributes

This section defines the attributes of the Medical Device System (MDS) object, together with the attribute identifier codes and attribute data types.

Attribute: Handle

The Handle attribute identifies the MDS object in the form of a numeral value. The Handle is unique within a device context (see Common Data Type - Global Handle). The actual value of the Handle attribute does not have a meaning. It is used for reference and relation purposes.

```
Attribute ID:      NOM_ATTR_ID_HANDLE
Attribute Type:    Handle (see Definitions Shared by Protocols)
Attribute Groups:  -
Availability:      Mandatory
```

Attribute: System Type

The System Type attribute contains an identification of the device type identified with the MDS object (e.g. monitor)

```
Attribute ID:      NOM_ATTR_SYS_TYPE
Attribute Type:    TYPE (see Definitions Shared by Protocols)
Attribute Groups:  System Identification Attribute Group
Availability:      Mandatory
```

For the MDS object, the OBJ nomenclature partition is used. The code value is a static identification.

Attribute: System Model

The System Model attribute contains a manufacturer ID and a manufacturer-specific model number for the device.

```
Attribute ID:      NOM_ATTR_ID_MODEL
Attribute Type:    SystemModel
Attribute Groups:  System Identification Attribute Group
Availability:      Mandatory
```

The *SystemModel* is defined as follows:

```
typedef struct  {
    VariableLabel manufacturer;
    VariableLabel model_number;
} SystemModel;
```

The *manufacturer* field is of variable length, hence the offset of *model_number* depends on the length of *manufacturer*. Currently, the monitor uses 4 characters for the *manufacturer* and 6 characters for the *model_number* (including the terminating '\0').

Attribute: System ID

The Sytem ID attribute contains a unique identifier for the device.

```
Attribute ID:      NOM_ATTR_SYS_ID
Attribute Type:    VariableLabel
                   (see Definitions Shared by Protocols)
Attribute Groups:  System Identification Attribute Group
Availability:      Mandatory
```

The monitor uses the 6 byte MAC address as identifier. Future versions might use an 8 byte EUI-64 identifier.

Attribute: Nomenclature Version

The Nomenclature Version attribute contains the version of the nomenclature used by the device.

```
Attribute ID:      NOM_ATTR_NOM_VERS
Attribute Type:    u_32
Attribute Groups:  System Identification Attribute Group
Availability:      Mandatory
```

The Nomenclature Version is composed of 16 bit major and 16 bit minor version number. The monitor currently uses the Nomenclature Version 1.0.

Attribute: System Localization

The System Localization attribute contains information about the language version used by the device.

```
Attribute ID:      NOM_ATTR_LOCALIZN
Attribute Type:    SystemLocal
Attribute Groups:  System Identification Attribute Group
Availability:      Optional
```

The *SystemLocal* is defined as follows:

```
typedef struct {
    u_32            text_catalog_revision;
    Language        language;
    StringFormat    format;
} SystemLocal;
```

The *text_catalog_revision* contains revision information about the texts used by the monitor. The two most significant bytes contain the version of the text catalog (one byte major, one byte minor revision). The text catalog defines the possible values for Attributes of the type *TextId*. A client which depends on a *TextId* having a specific value can use this information for revision control.

The lower two bytes of the *text_catalog_revision* are used for a language revision (one byte major, one byte minor revision). The language revision denotes the mapping from a *TextId* to an actual string in the monitor language.

The *Language* describes the language used by the monitor. It is defined as follows:

```
typedef u_16 Language;
#define LANGUAGE_UNSPEC         0
#define ENGLISH                1
#define GERMAN                 2
#define FRENCH                 3
#define ITALIAN                4
#define SPANISH                5
#define DUTCH                  6
#define SWEDISH                7
#define FINNISH                8
#define NORWEG                 9
#define DANISH                 10
#define JAPANESE               11
#define REP_OF_CHINA           12
#define PEOPLE_REP_CHINA       13
#define PORTUGUESE             14
#define RUSSIAN                15
#define BYELORUSSIAN           16
#define UKRAINIAN              17
#define CROATIAN               18
#define SERBIAN                19
#define MACEDONIAN             20
#define BULGARIAN              21
#define GREEK                  22
#define POLISH                 23
#define CZECH                  24
#define SLOVAK                 25
#define SLOVENIAN              26
#define HUNGARIAN              27
#define ROMANIAN               28
#define TURKISH                29
#define LATVIAN                30
#define LITHUANIAN             31
#define ESTONIAN               32
#define KOREAN                 33
```

The *StringFormat* describes how strings are encoded. The IntelliVue monitor uses unicode encoding.

```
typedef u_16 StringFormat;
#define STRFMT_UNICODE_NT       11
```

Attribute: System Specification

The System Specification attribute contains a set of functional components supported by the system.

```
Attribute ID:       NOM_ATTR_SYS_SPECN
Attribute Type:     SystemSpec
Attribute Groups:   System Application Attribute Group
Availability:       Optional
```

The *SystemSpec* is defined as follows:

```
typedef struct {
    u_16             count;
    u_16             length;
    SystemSpecEntry value[1];
} SystemSpec;

typedef struct {
    PrivateOid      component_capab_id;
    u_16            length;
    u_16            value[1];
} SystemSpecEntry;
```

The supported components are:

```
Component ID:       NOM_MDIB_OBJ_SUPPORT
Component Type:     MdibObjectSupport
Availability:       Mandatory
```

The *MdibObjectSupport* is defined as follows:

```
typedef struct {
    u_16    count;
    u_16    length;
    MdibObjectSupportEntry       value[1];
} MdibObjectSupport;

typedef struct {
    TYPE    object_type;
    u_32    max_inst;
} MdibObjectSupportEntry;
```

The *MdibObjextSupport* contains a list of all object classes supported by the system and the maximum number of instances per class. If *max_inst* contains 0xffffffff, it is not defined.

Attribute: Mds General System Info

The Mds General System Info attribute contains global information about the monitor and its configuration.

```
Attribute ID:       NOM_ATTR_MDS_GEN_INFO
Attribute Type:     MdsGenSystemInfo
Attribute Group:    System Application Attribute Group
Availability:       Optional
```

The *MdsGenSystemInfo* is defined as follows:

```
typedef struct
{
    u_16            count;
    u_16            length;
    MdsGenSystemInfoEntry value[1];
} MdsGenSystemInfo;
```

The *MdsGenSysemInfoEntry* allows to encode generic system information. It has the following structure:

```
typedef struct
{
    u_16            choice;
#define MDS_GEN_SYSTEM_INFO_SYSTEM_PULSE_CHOSEN        1
    u_16            length;
    u_8             value[1]; /* placeholder for appended data */
} MdsGenSystemInfoEntry;
```

One MdsGenSytemInfoEntry is used to encode the System Pulse information. The monitor can generate a pulse rate from several sources.

```
Choice:         MDS_GEN_SYSTEM_INFO_SYSTEM_PULSE_CHOSEN 1
Type:           SystemPulseInfo
Availability:   Optional
```

The *SystemPulseInfo* is defined as follows:

```
typedef struct
{
    ManagedObjectId system_pulse;
    ManagedObjectId alarm_source;
} SystemPulseInfo;
```

It enfolds the *ManagedObjecId*s of the object instances selected as system-pulse respectively alarm-source.

Attribute: Production Specification

The Production Specification attribute contains a list of component revisions and serial numbers within the system.

```
Attribute ID:      NOM_ATTR_ID_PROD_SPECN
Attribute Type:    ProductionSpec
Attribute Groups:  System Production Attribute Group
Availability:      Optional
```

The *ProductionSpec* is defined as follows:

```
typedef struct {
    u_16            count;
    u_16            length;
    ProdSpecEntry   value[1];
} ProductionSpec;

typedef struct {
    u_16            spec_type;
#define UNSPECIFIED        0
#define SERIAL_NUMBER      1
#define PART_NUMBER        2
#define HW_REVISION        3
#define SW_REVISION        4
#define FW_REVISION        5
#define PROTOCOL_REVISION 6
    PrivateOid     component_id;
    VariableLabel  prod_spec;
} ProdSpecEntry;
```

The current monitor uses 10 characters for a serial number, 14 characters for part numbers and 8 characters for revision strings. The strings are not null-terminated.

The supported components are:

```
Component ID:      ID_COMP_PRODUCT
Description:       Overall product specification

Component ID:      ID_COMP_CONFIG
Description:       Specific system configuration

Component ID:      ID_COMP_BOOT
Description:       Boot code specification

Component ID:      ID_COMP_MAIN_BD
Description:       Mainboard hardware specification

Component ID:      ID_COMP_APPL_SW
Description:       Application software specification
```

See the section "Component IDs" on page 8-224 for the values of the *component_id*. The *ProductionSpec* may contain additional private entries.

To retrieve the monitor software revision, read the ProductSpecEntry with the Component ID "ID_COMP_APPL_SW". Its prod_spec attribute contains a string of the form "J.00.00" describing the running software revision.

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Attribute: MDS Status

The MDS Status attribute describes the device state.

```
Attribute ID:      NOM_ATTR_VMS_MDS_STAT
Attribute Type:    MDSStatus
Attribute Groups:  System Application Attribute Group
Availability:      Mandatory
```

The *MDSStatus* is defined as follows:

```
typedef u_16        MDSStatus;
#define    DISCONNECTED   0
#define    UNASSOCIATED   1
#define    OPERATING      6
```

The *MDSStatus* values have the following meaning:

DISCONNECTED: The monitor is not connected to the network.

UNASSOCIATED: The monitor is connected to the network, but no association is currently active.

OPERATING: The monitor has an association with a Computer Client.

Currently, a Computer Client will only see the MDS Status OPERATING, if the MDS has another Status, there is no association with a Computer Client.

Attribute: Bed Label

The Bed Label attribute contains a printable string identifying the system location.

```
Attribute ID:      NOM_ATTR_ID_BED_LABEL
Attribute Type:    String
                   (see Definitions Shared by Protocols)
Attribute Groups:  System Application Attribute Group
Availability:      Optional
```

The Bed Label can be entered in the Admit/Discharge dialog. It uses 16 bit unicode character encoding. Currently, the Bed Label is 17 characters (including terminating '\0'). If the actual label is shorter, the string is filled with '\0' characters.

Attribute: Operating Mode

The Operating Mode attribute identifies the current operating mode of the device.

```
Attribute ID:      NOM_ATTR_MODE_OP
Attribute Type:    PrivateOID
Attribute Groups:  System Application Attribute Group
Availability:      Optional
```

The Operating Mode is defined as a bit field. The following mode bits are defined:

```
#define    OPMODE_UNSPEC  0x8000
#define    MONITORING     0x4000
#define    DEMO           0x2000
#define    SERVICE        0x1000
#define    OPMODE_STANDBY 0x0002
#define    CONFIG         0x0001
```

The values have the following meaning:

OPMODE_UNSPEC: The Operating Mode is not specified.

MONITORING: Device is configured to monitor patient data (the default mode).

DEMO: Demonstration Mode with simulated patient data.

SERVICE: Device is in Service Mode.

STANDBY: Standby and Power Safe Mode.

CONFIG: Device is in Configuration Mode.

Exactly one of the bit out of the bits 0 - 4 must be set, bits 14 and 15 (the stand-by and config mode bits) can be set optionally.

Attribute: Application Area

The Application Area attribute describes the intended application area for the device.

```
Attribute ID:       NOM_ATTR_AREA_APPL
Attribute Type:     ApplicationArea
Attribute Groups:   System Application Attribute Group
Availability:       Optional
```

The *ApplicationArea* is defined as follows:

```
typedef u_16            ApplicationArea;
#define   AREA_UNSPEC            0
#define   AREA_OPERATING_ROOM    1
#define   AREA_INTENSIVE_CARE    2
#define   AREA_NEONATAL_INTENSIVE_CARE 3
#define   AREA_CARDIOLOGY_CARE   4
```

The values have the following meaning:

AREA_UNSPEC: The application area has not been specified.

AREA_OPERATING_ROOM: The application area has been specified as an operating room.

AREA_INTENSIVE_CARE: The application area has been specified as an intensive care unit.

AREA_NEONATAL_INTENSIVE_CARE: The application area has been specified as a neonatal intensive care unit.

AREA_CARDIOLOGY_CARE: The application area has been specified as a cardiology care unit.

Attribute: Date and Time

The Date and Time attribute contains the current device time.

```
Attribute ID:       NOM_ATTR_TIME_ABS
Attribute Type:     AbsoluteTime
                    (see Definitions Shared by Protocols)
Attribute Groups:   System Application Attribute Group
Availability:       Optional
```

Attribute: Relative Time

The Relative Time attribute contains the current device relative time.

```
Attribute ID:       NOM_ATTR_TIME_REL
Attribute Type:     RelativeTime
                    (see Definitions Shared by Protocols)
Attribute Groups:   System Application Attribute Group
Availability:       Optional
```

The Relative Time is set to zero after each power cycle.

Attribute: Altitude

The Altitude attribute contains the system altitude above or below sea level.

```
Attribute ID:      NOM_ATTR_ALTITUDE
Attribute Type:    i_16
Attribute Groups:  System Application Attribute Group
Availability:      Optional
```

Attribute: Line Frequency

The Line Frequency attribute describes the frequency of the main power supply in Hz.

```
Attribute ID:      NOM_ATTR_LINE_FREQ
Attribute Type:    LineFrequency
Attribute Groups:  System Application Attribute Group
Availability:      Optional
```

The *LineFrequency* is defined as follows:

```
typedef u_16            LineFrequency;
#define   LINE_F_UNSPEC  0
#define   LINE_F_50HZ    1
#define   LINE_F_60HZ    2
```

Attribute: Association Invoke ID

The Association Invoke ID attribute is a counter for the number of associations. It is incremented with each new association.

```
Attribute ID:      NOM_ATTR_ID_ASSOC_NO
Attribute Type:    u_16
Attribute Groups:  System Identification Attribute Group
Availability:      Optional
```

Attribute Groups

The attributes of the Medical Device System object are arranged in the following attribute groups:

```
Attribute Group:   System Identification Attribute Group
Group ID:          NOM_ATTR_GRP_SYS_ID
Description:        Identification of the system
Attributes:        System Type, System Model, System Id,
                   Nomenclature Version, System Localization, Association Invoke Id

Attribute Group:   System Application Attribute Group
Group ID:          NOM_ATTR_GRP_SYS_APPL
Description:        System Capabilities and Settings
Attributes:        System Specification, MDS Status, Bed Label,
                   Operating Mode, Application Area, Data and
                   Time, Relative Time, Altitude, Line
                   Frequency, Mds General System Info

Attribute Group:   System Production Attribute Group
Group ID:          NOM_ATTR_GRP_SYS_PROD
Description:        HW and SW configuration
Attributes:        Production Specification
```

Alert Monitor Object

Attributes of the Alert Monitor Object

This section defines the attributes of the Alert Monitor object, together with the attribute identifier codes and attribute data types.

The Alert Monitor object represents the overall device alert condition. It contains a global alert status and a list of active technical and patient alerts.

Attribute: Handle

The Handle attribute identifies the Alert Monitor object in the form of a numeral value. The Handle is unique within a device context (see Common Data Type - Global Handle). The actual value of the Handle attribute does not have a meaning. It is used for reference and relation purposes.

```
Attribute ID:      NOM_ATTR_ID_HANDLE
Attribute Type:    Handle (see Definitions Shared by Protocols)
Attribute Groups:  VMO Static Context Group
Availability:      Mandatory
```

Attribute: Type

The Type attribute contains an identification of the object type represented by the Alert Monitor.

```
Attribute ID:      NOM_ATTR_ID_TYPE
Attribute Type:    TYPE (see Definitions Shared by Protocols)
Attribute Groups:  VMO Static Context Group
Availability:      Mandatory
```

Attribute: Device Alert Condition

The Device Alert Condition attribute contains global device alert status information.

```
Attribute ID:      NOM_ATTR_DEV_AL_COND
Attribute Type:    DeviceAlertCondition
Attribute Groups:  Alert Monitor Group
Availability:      Mandatory
```

The *DeviceAlertCondtion* is defined as follows:

```
typedef struct {
    AlertState    device_alert_state;
    u_16          al_stat_chg_cnt;
    AlertType     max_p_alarm;
    AlertType     max_t_alarm;
    AlertType     max_aud_alarm;
} DeviceAlertCondition;
```

The *AlertState* is a bit field defined as follows:

```
typedef u_16 AlertState;
#define AL_INHIBITED          0x8000
#define AL_SUSPENDED          0x4000
#define AL_LATCHED            0x2000
#define AL_SILENCED_RESET     0x1000
#define AL_DEV_IN_TEST_MODE   0x0400
#define AL_DEV_IN_STANDBY     0x0200
#define AL_DEV_IN_DEMO_MODE   0x0100
#define AL_NEW_ALERT          0x0008
```

The *AlertState* is used for the overall device alert state and for the specific state of each alert. The bits in *AlertState* have the following meaning:

AL_INHIBITED: Alert is switched off.

AL_SUSPENDED: Alert inactivated temporarily, alert condition is acknowledged.

AL_LATCHED: Alert condition is not active but latched, note that technical alarms are never latching.

AL_SILENCED_RESET: Alert condition stopped but alarming re-enabled (only for *DeviceAlertCondition*).

AL_DEV_IN_TEST_MODE: Device is in a temporary test mode.

AL_DEV_IN_STANDBY: Device is in standby mode.

AL_DEV_IN_DEMO_MODE: Indicates that the device is in demo mode.

AL_NEW_ALERT: Indicate a new alarm (not in *DeviceAlertCondition*). A Computer Client might not see this bit if it does not poll fast enough or other delays occur.

The *al_stat_chg_cnt* is an internal change counter. A Computer Client should not interpret this field, because it can not be guaranteed that no internal message is missed.

The *AlertType* is a bit field defined as follows:

```
typedef u_16 AlertType;
#define    NO_ALERT       0
#define    LOW_PRI_T_AL   1
#define    MED_PRI_T_AL   2
#define    HI_PRI_T_AL    4
#define    LOW_PRI_P_AL   256
#define    MED_PRI_P_AL   512
#define    HI_PRI_P_AL    1024
```

IntelliVue monitors with software revision E.0 or higher allow changing of the inop severity for various inop alarms. These changes are reflected in the AlertType bitfield.

The bits have the following meaning:

NO_ALERT: No alert active.

LOW_PRI_T_AL: Low priority technical alarm (soft inop). These inops are generated after a signal analysis (e.g "Noisy ECG").

MED_PRI_T_AL: Medium priority technical alarm (hard inop). These inops are generated during inoperable parameter measurement because of hardware faults or no transducer connected (e.g "Leads Off", "ABP No Transducer")

HI_PRI_T_AL: High priority technical alarm (severe inop).

LOW_PRI_P_AL: Awareness Condition (short yellow alarm): These alarms are marked with a "**" in the alarm string and a specific short yellow alarm sound is issued. Today short yellow alarms are generated only from arrhythmia computer.

MED_PRI_P_AL: Medium priority patient alarm (yellow alarm): These alarms are marked with a "**" in the alarm string. They indicate a less critical patient condition usually due to violation of user defined criteria (e.g. limit violation alarm).

HI_PRI_P_AL: High priority patient alarm (red alarm): These alarms are marked with a "***" in the alarm string. These alarms indicate a life threatening patient condition.

Attribute: Device T-Alarm List

The Device T-Alarm List attribute contains the active technical alarms (inops) in the system.

```
Attribute ID:      NOM_ATTR_AL_MON_T_AL_LIST
Attribute Type:    DevAlarmList
Attribute Groups:  Alert Monitor Group
Availability:      Mandatory
```

The *DevAlarmList* is defined as follows:

```
typedef struct {
    u_16           count;
    u_16           length;
    DevAlarmEntry  value[1];
} DevAlarmList;

typedef struct {
    OIDType             al_source;
    OIDType             al_code;
    AlertType           al_type;
    AlertState          al_state;
    ManagedObjectId     object;
    PrivateOid          alert_info_id;
#define GEN_ALMON_INFO 513
#define STR_ALMON_INFO 516
    u_16                length;
} DevAlarmEntry;
```

The *al_source* is taken from the Object Oriented or the SCADA partition (depending on *al_code*). It identifies the origin of the alert (e.g. temperature).

The *al_code* is taken from the Events partition and describes the reason for the alert (e.g. high alarm). The least significant bit is used to define the nomenclature partition for *al_source*. Last bit 0 means SCADA partition, last bit 1 means Object Oriented partition.

The definitions for *AlertType* and *AlertState* can be found in the paragraph about the Device Alert Condition.

The *object* field contains a reference to the object which generated the alert. The object may not be known to the Computer Client, if the Data Export protocol does not allow accessing the specific object.

If the *alert_info_id* is set to GEN_ALMON_INFO, an *AlMonGenInfo* structure is appended:

```
typedef struct {
    u_16                al_inst_no;
    TextId              al_text;
    AlertPriority       priority;
    AlertFlags          flags;
} AlMonGenInfo;
```

If the *alert_info_id* is set to STR_ALMON_INFO, an *StrAlMonInfo* structure is appended:

```
typedef struct {
    u_16                al_inst_no;
    TextId              al_text;
    AlertPriority       priority;
    AlertFlags          flags;
    String              string;
} StrAlMonInfo;
```

Currently, the monitor only supports the *StrAlMonInfo* data type.

The *al_inst_no* is a private ID.

The *al_text* is a private ID.

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The *AlertPriority* is defined as follows:

```
typedef u_16      AlertPriority;
```

The *AlertPriority* only allows prioritization within a group of alarms. A Computer Client application should use the *AlertType* to distinguish low and high priority alarms.

The *AlertFlags* type is defined as follows:

```
typedef u_16                AlertFlags;
#define BEDSIDE_AUDIBLE             0x4000
#define CENTRAL_AUDIBLE            0x2000
#define VISUAL_LATCHING           0x1000
#define AUDIBLE_LATCHING          0x0800
#define SHORT_YELLOW_EXTENSION    0x0400
#define DERIVED                   0x0200
```

The bits in the *AlertFlag* have the following meaning:

BEDSIDE_AUDIBLE: Alert sound at the bedside

CENTRAL_AUDIBLE: Alert sound at the central station

VISUAL_LATCHING: Alert is visible after the alarm condition has ceased. The alarm indication will exist until a specific action is taken by a user (e.g. Silence/Reset).

AUDIBLE_LATCHING: Alert is sound issued after the alarm condition has ceased. The alarm indication will exist until a specific action is taken by a user (e.g. Silence/Reset).

SHORT_YELLOW_EXTENSION: Alarm is not active but artificially extended for short yellow behavior.

DERIVED: Derived alarm.

The *String* contains the a description of the alarm in the language supported by the monitor. *Strings* for patient alarms are prefixed with two "**" or three "***" alarm stars (see "Definitions Shared by Protocols" on page 6-35 for UNICODE character encoding). Currently, the String is 19 characters long, including the terminating '\0'.

Attribute: Device P-Alarm List

The Device P-Alarm List attribute contains the active patient alarm in the system.

```
Attribute ID:      NOM_ATTR_AL_MON_P_AL_LIST
Attribute Type:    DevAlarmList
Attribute Groups:  Alert Monitor Group
Availability:      Mandatory
```

The *DevAlarmList* data type is the same as for the Device T-Alarm List.

The data in a Device T-Alarm List or Device P-Alarm List might be too large to fit in a single message. In this case the Remote Operation Linked Result message will be used (see "Remote Operation Linked Result" on page 6-44). In this case each message will contain a correctly formatted Alarm list and the Computer Client must merge the lists to get the complete Device T-Alarm List or Device P-Alarm List.

Attribute Groups

The attributes of the Alert Monitor object are arranged in the following attribute groups:

```
Attribute Group:    VMO Static Context Group
Group ID:           NOM_ATTR_GRP_VMO_STATIC
Description:        Static context of the object
Attributes:         TYPE, Handle

Attribute Group:    Alert Monitor Group
Group ID:           NOM_ATTR_GRP_AL_MON
Description:        Alarm related attributes
Attributes:         Device Alert Condition, Device P-Alarm List,
                    Device T-Alarm List
```

Patient Demographics Object

NOTE   Not all objects described below will be available on all monitor models.

Attributes of the Patient Demographic Object

This section defines the attributes of the Patient Demographics object, together with the attribute identifier codes and attribute data types.

The Patient Demographics object contains the patient information present in the system.

Attribute: Handle

The Handle attribute identifies the Patient Demographics object in the form of a numeral value. The Handle is unique within a device context (see Common Data Type - Global Handle). The actual value of the Handle attribute does not have a meaning. It is used for reference and relation purposes.

```
Attribute ID:       NOM_ATTR_ID_HANDLE
Attribute Type:     Handle (see Definitions Shared by Protocols)
Attribute Groups:   Patient Demographics Attribute Group
Availability:       Mandatory
```

Attribute: Pat Demo State

The Pat Demo State attribute describes the current state of the Patient Demographics object.

```
Attribute ID:       NOM_ATTR_PT_DEMOG_ST
Attribute Type:     PatDemoState
Attribute Groups:   Patient Demographics Attribute Group
Availability:       Mandatory
```

The *PatDemoState* is defined as follows:

```
typedef u_16        PatDmgState;
#define    EMPTY          0
#define    PRE_ADMITTED   1
#define    ADMITTED       2
#define    DISCHARGED     8
```

The values have the following meaning:

EMPTY: No patient information present.

PRE_ADMITTED: Currently not used.

ADMITTED: Patient information is present and valid.

DISCHARGED: Data is still available, but patient is no longer assigned to device.

Attribute: Patient Type

The Patient Type attribute describes the type of patient admitted to the system.

```
Attribute ID:      NOM_ATTR_PT_TYPE
Attribute Type:    PatientType
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

The Patient Type is defined as follows:

```
typedef u_16       PatientType;
#define    PAT_TYPE_UNSPECIFIED  0
#define    ADULT                 1
#define    PEDIATRIC             2
#define    NEONATAL              3
```

The Patient Type can be set by the user in the Admit/Discharge dialog (Patient Cat.).

Attribute: Patient Paced Mode

The Patient Paced Mode attribute indicates whether the patient is paced or not.

```
Attribute ID:      NOM_ATTR_PT_PACED_MOD
Attribute Type:    PatPacedMode
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

The *PatPacedMode* is defined as follows:

```
typedef u_16       PatPacedMode;
#define    PAT_NOT_PACED         0
#define    PAT_PACED_GEN         1
```

Values greater one are reserved to indicate special paced modes. The Computer Client should test for "== 0" or "!= 0".

Attribute: Given Name

The Given Name attribute contains the first name of the patient.

```
Attribute ID:      NOM_ATTR_PT_NAME_GIVEN
Attribute Type:    String
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Currently, the Given Name can be up to 19 characters long, including the terminating '\0'.

Attribute: Middle Name

The Middle Name attribute contains the middle name of the patient.

```
Attribute ID:      NOM_ATTR_PT_NAME_MIDDLE
Attribute Type:    String
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Currently, the Middle Name can be up to 19 characters long, including terminating '\0'.

Attribute: Family Name

The Family Name attribute contains the last name of the patient.

```
Attribute ID:      NOM_ATTR_PT_NAME_FAMILY
Attribute Type:    String
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Currently, the Family Name can be up to 19 characters long, including terminating '\0'.

Attribute: Patient ID

The Patient ID attribute contains the ID of the patient.

```
Attribute ID:      NOM_ATTR_PT_LIFETIME_ID (identical to previous NOM_ATTR_PT_ID)
Attribute Type:    String
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Currently, the Patient ID (Medical Record Number - MRN) can be up to 17 characters long, including the terminating '\0'.

Since Rev. G the Patient ID is called Lifetime ID.

Attribute: Encounter ID

The Encounter ID attribute contains the ID of the current visit of the patient.

```
Attribute ID:      NOM_ATTR_PT_ENCOUNTER_ID
Attribute Type:    String
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Currently, the Encounter ID can be up to 17 characters long, including the terminating '\0'.

Attribute: Patient Sex

The Patient Sex attribute contains the sex of the patient.

```
Attribute ID:      NOM_ATTR_PT_SEX
Attribute Type:    PatientSex
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

The *PatientSex* is described as follows:

```
typedef u_16        PatientSex;
#define    SEX_UNKNOWN         0
#define    MALE                1
#define    FEMALE              2
#define    SEX_UNSPECIFIED     9
```

The values have the following meaning:

SEX_UNKNOWN: Patient sex is not known

MALE: Patient is male

FEMALE: Patient is female

SEX_UNSPECIFIED: Patient sex is not specified

Attribute: Date of Birth

The Date of Birth attribute contains the Date of Birth of the patient.

```
Attribute ID:      NOM_ATTR_PT_DOB
Attribute Type:    AbsoluteTime
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Attribute: Patient Height

The Patient Height attribute contains the height of the patient.

```
Attribute ID:      NOM_ATTR_PT_HEIGHT
Attribute Type:    PatMeasure
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

The *PatMeasure* is defined as follows:

```
typedef struct {
    FLOATType         value;
    OIDType           m_unit;
} PatMeasure;
```

The *value* contains the actual value of the attribute and the *m_units* indicates the unit of measurement for the *value*.

Attribute: Patient Weight

The Patient Height attribute contains the weight of the patient.

```
Attribute ID:      NOM_ATTR_PT_WEIGHT
Attribute Type:    PatMeasure
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Attribute: Patient Age

The Patient Age attribute contains the age of the patient.

```
Attribute ID:      NOM_ATTR_PT_AGE
Attribute Type:    PatMeasure
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Attribute: Patient BSA

The Patient BSA attribute contains the body surface area of the patient.

```
Attribute ID:      NOM_ATTR_PT_BSA
Attribute Type:    PatMeasure
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Attribute: Patient BSA Formula

The Patient BSA Formula attribute describes the formula which is used for the calculation of the patient body surface area.

```
Attribute ID:      NOM_ATTR_PT_BSA_FORMULA
Attribute Type:    PatBsaFormula
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

The *PatBsaFormula* is described as follows:

```
typedef u_16      PtBsaFormula;
#define    BSA_FORMULA_UNSPEC     0
#define    BSA_FORMULA_BOYD       1
#define    BSA_FORMULA_DUBOIS     2
```

The values have the following meaning:

BSA_FORMULA_UNSPEC: Formula not specified

BSA_FORMULA_BOYD: BSA calculation according to Boyd

BDA_FORMULA_DUBOIS:: BSA calculation according to Dubois

Attribute: Notes1

The Notes1 attribute provides additional information about the patient.

```
Attribute ID:      NOM_ATTR_PT_NOTES1
Attribute Type:    String
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Currently, the Notes1 field can be up to 31 characters long, including the terminating '\0'.

Attribute: Notes2

The Notes2 attribute provides additional information about the patient.

```
Attribute ID:      NOM_ATTR_PT_NOTES2
Attribute Type:    String
Attribute Groups:  Patient Demographics Attribute Group
Availability:      Optional
```

Currently, the Notes2 field can be up to 31 characters long, including the terminating '\0'.

Attribute Groups

The attributes of the Patient Demographics object are arranged in the following attribute groups:

```
Attribute Group:   Patient Demographics Attribute Group
Group ID:          NOM_ATTR_GRP_PT_DEMOG
Description:        Attributes containing patient information
Attributes:        all attributes
```

Patient Conflict Handling

The patient information is stored in the monitor, the measurement server and the central station (if present). This can lead to patient conflicts when the patient information in these locations differ. If the monitor detects a patient conflict, it will display a "Patient Selection" window which allows the user to resolve the conflict.

In the case of a patient conflict, the behavior of the Data Export software is as follows:

- If the Patient Type or Patient Paced Mode attribute is different, the data from the measurement server is considered as relevant.

- If the patient is different (devices have been disconnected and a new patient has been admitted), the Patient Type and Patient Paced Mode information from the measurement server is exported. The other attributes are cleared and the Family Name attribute is set to "???".

Connect Indication Attributes

This section describes the attributes contained in the Connect Indication Message.

Attribute: System Type

The System Type attribute describes the type of the system (e.g. Monitor).

```
Attribute ID:      NOM_ATTR_SYS_TYPE
Attribute Type:    TYPE (see Definitions Shared by Protocols)
Attribute Groups:  -
Availability:      -
```

Attribute: Protocol Support

The Protocol Support contains an entry for each protocol supported on the network interface.

```
Attribute ID:      NOM_ATTR_PCOL_SUPPORT
Attribute Type:    ProtoSupport
Attribute Groups:  -
Availability:      -
```

The *ProtoSupport* is defined as follows:

```
typedef struct {
    u_16             count;
    u_16             length;
    ProtoSupportEntry value[1];
} ProtoSupport;

typedef struct {
    ApplProtoId      appl_proto;
    TransProtoId     trans_proto;
    u_16             port_number;
    ProtoOptions     options;
} ProtoSupportEntry;

typedef u_16 ApplProtoId;
#define    AP_ID_ACSE          1
#define    AP_ID_DATA_OUT      5

typedef u_16 TransProtoId;
#define    TP_ID_UDP           1

typedef u_16        ProtoOptions;
#define    P_OPT_WIRELESS      0x8000
```

The Computer Client should parse the available protocols and search for the AP_ID_DATA_OUT. This entry specifies the port for the Data Export Protocol. The corresponding Association Control Protocol runs on the same port.

The Computer Client must only send requests to the port specified for the Data Export Protocol.

Attribute: System Localization

The System Localization attribute describes the handling of natural language items.

```
Attribute ID:      NOM_ATTR_LOCALIZN
Attribute Type:    SystemLocal
Attribute Groups:  -
Availability:      -
```

The *SystemLocal* is defined as follows:

```
typedef struct {
    u_32            syslocal_revision;
    Language        language;
    StringFormat    format;
} SystemLocal;
```

The *syslocal_revision* contains the revision of the text catalog used for internal texts.

The *Language* describes the language used in any String type. It is defined as follows:

```
typedef u_16            Language;
#define     LANGUAGE_UNSPEC     0
#define     ENGLISH             1
#define     GERMAN              2
#define     FRENCH              3
#define     ITALIAN             4
#define     SPANISH             5
#define     DUTCH               6
#define     SWEDISH             7
#define     FINNISH             8
#define     NORWEG              9
#define     DANISH              10
#define     JAPANESE            11
#define     REP_OF_CHINA        12
#define     PEOPLE_REP_CHINA    13
#define     PORTUGUESE          14
#define     RUSSIAN             15
#define     BYELORUSSIAN        16
#define     UKRAINIAN           17
#define     CROATIAN            18
#define     SERBIAN             19
#define     MACEDONIAN          20
#define     BULGARIAN           21
#define     GREEK               22
#define     POLISH              23
#define     CZECH               24
#define     SLOVAK              25
#define     SLOVENIAN           26
#define     HUNGARIAN           27
#define     ROMANIAN            28
#define     TURKISH             29
#define     LATVIAN             30
#define     LITHUANIAN          31
#define     ESTONIAN            32
#define     KOREAN              33
```

The *StringFormat* defines the format used for the *String* data type. The monitor uses 16bit Unicode characters.

```
typedef u_16            StringFormat;
#define                 STRFMT_UNICODE_NT 11
```

Attribute: IP Address Information

The IP Address Information attribute identifies the network interface of the monitor.

```
Attribute ID:      NOM_ATTR_NET_ADDR_INFO
Attribute Type:    IpAddressInfo
Attribute Groups:  -
Availability:      -
```

The *IpAddressInfo* is defined as follows:

```
typedef struct IpAddressInfo {
    MACAddress      mac_address;
    IPAddress       ip_address;
    IPAddress       subnet_mask;
} IpAddressInfo;

typedef struct MACAddress {
    u_8             value[6];
} MACAddress;

typedef struct IPAddress {
    u_8             value[4];
} IPAddress;
```

Partition IDs

The following sections contain a list of identifiers which are used within the monitor. Each identifier is unique within a given partition.

```
#define NOM_PART_OBJ                      1
    /* Object Oriented Elements */
#define NOM_PART_SCADA                    2
    /* Physiological Measurements */
#define NOM_PART_EVT                      3
    /* Events for Alerts */
#define NOM_PART_DIM                      4
    /* Units of Measurement */
#define NOM_PART_PGRP                     6
    /* Identification of Parameter Groups */
#define NOM_PART_INFRASTRUCT             8
    /* Infrastructure Elements */
#define NOM_PART_EMFC                     1025
    /* EMFC */
#define NOM_PART_SETTINGS                1026
    /* Settings */
```

Object Classes

The following IDs identify object types. They are taken from the Object Oriented Elements partition. These objects may be the source of alerts (see "Alert Monitor Object" on page 99).

```
NOM_MOC_VMO                                       1
    VMO
NOM_MOC_VMO_METRIC_NU                             6
    Numeric
NOM_MOC_VMO_METRIC_SA_RT                          9
    Realtime Sample Array
NOM_MOC_VMS_MDS                                   33
    MDS
NOM_MOC_VMS_MDS_COMPOS_SINGLE_BED                 35
    Composit Single Bed MDS
NOM_MOC_VMS_MDS_SIMP                              37
    Simple MDS
NOM_MOC_BATT                                      41
    Battery
NOM_MOC_PT_DEMOG                                  42
    Patient Demographics
NOM_MOC_VMO_AL_MON                                54
    Alert Monitor
NOM_ACT_POLL_MDIB_DATA                            3094
    Poll Action
NOM_NOTI_MDS_CREAT                                3334
    MDS Create
NOM_NOTI_CONN_INDIC                               3351
    Connect Indication
NOM_DEV_METER_CONC_SKIN_GAS                       4264
    Skin Gas
NOM_DEV_METER_FLOW_BLD                            4284
    Blood Flow
NOM_DEV_ANALY_CONC_GAS_MULTI_PARAM_MDS            4113
    Gas Analyzer
NOM_DEV_ANALY_CONC_GAS_MULTI_PARAM_VMD            4114
    Gas
NOM_DEV_METER_CONC_SKIN_GAS_MDS                   4265
    Skin Gas
NOM_DEV_MON_PHYSIO_MULTI_PARAM_MDS                4429
    Multi-Param
NOM_DEV_PUMP_INFUS_MDS                            4449
    Pump Infus
NOM_DEV_SYS_PT_VENT_MDS                           4465
    Ventilator
NOM_DEV_SYS_PT_VENT_VMD                           4466
    Ventilator
NOM_DEV_SYS_MULTI_MODAL_MDS                       4493
    Multi-Modal MDS
NOM_DEV_SYS_MULTI_MODAL_VMD                       4494
    Multi-Modal
NOM_DEV_SYS_VS_CONFIG_MDS                         5209
    config MDS
NOM_DEV_SYS_VS_UNCONFIG_MDS                       5213
    unconfig MDS
NOM_DEV_ANALY_SAT_O2_VMD                          4106
    sat O2
NOM_DEV_ANALY_CONC_GAS_MULTI_PARAM_VMD            4114
    Gas
NOM_DEV_ANALY_FLOW_AWAY_VMD                       4130
    Flow Away
NOM_DEV_ANALY_CARD_OUTPUT_VMD                     4134
    C.O.
```

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```
NOM_DEV_ANALY_PRESS_BLD_VMD                  4174
    Press
NOM_DEV_ANALY_RESP_RATE_VMD                  4186
    RR
NOM_DEV_CALC_VMD                             4206
    Calculation
NOM_DEV_ECG_VMD                              4262
    ECG
NOM_DEV_METER_CONC_SKIN_GAS_VMD              4266
    Skin Gas
NOM_DEV_EEG_VMD                              4274
    EEG
NOM_DEV_METER_TEMP_BLD_VMD                   4350
    Blood Temp
NOM_DEV_METER_TEMP_VMD                       4366
    Temp
NOM_DEV_MON_BLD_CHEM_MULTI_PARAM_VMD         4398
    Bld Chem
NOM_DEV_SYS_PT_VENT_VMD                      4466
    Ventilator
NOM_DEV_SYS_MULTI_MODAL_VMD                  4494
    Multi-Modal
NOM_DEV_SYS_ANESTH_VMD                       4506
    Aneshesia
NOM_DEV_GENERAL_VMD                          5122
    General
NOM_DEV_ECG_RESP_VMD                         5130
    ECG-Resp
NOM_DEV_ARRHY_VMD                            5134
    Arrythmia
NOM_DEV_PULS_VMD                             5138
    Pulse
NOM_DEV_ST_VMD                               5142
    ST
NOM_DEV_CO2_VMD                              5146
    CO2
NOM_DEV_PRESS_BLD_NONINV_VMD                 5150
    Noninv Press
NOM_DEV_CEREB_PERF_VMD                       5154
    Cereb Perf
NOM_DEV_CO2_CTS_VMD                          5158
    CO2 CTS
NOM_DEV_CO2_TCUT_VMD                         5162
    TcCO2
NOM_DEV_O2_VMD                               5166
    O2
NOM_DEV_O2_CTS_VMD                           5170
    CTS
NOM_DEV_O2_TCUT_VMD                          5174
    Tc02
NOM_DEV_TEMP_DIFF_VMD                        5178
    Diff Temp
NOM_DEV_CNTRL_VMD                            5182
    Control
NOM_DEV_WEDGE_VMD                            5190
    Wedge
NOM_DEV_O2_VEN_SAT_VMD                       5194
    O2 Vent Sat
NOM_DEV_CARD_RATE_VMD                        5202
    HR
NOM_DEV_METER_PRESS_VMD                      5230
    IUP
NOM_DEV_PLETH_VMD                            5238
    Pleth
NOM_SAT_O2_TONE_FREQ                         61448
```

```
        Private Attribute
NOM_DEV_MON_FETAL_MULTI_PARAM_MDS                   61833
        Fetal Measurements
NOM_DEV_ANALY_USOUND_VMD                            61838
        Fetal Ultrasound
NOM_DEV_ECG_FETAL_VMD                               61842
        Fetal direct ECG
NOM_DEV_ANALY_TOCO_VMD                              61846
        TOCO
NOM_DEV_RECORDER_VMD                                61862
        Fetal Recorder
NOM_DEV_STATISTICS_VMD                              61870
        OB statistics
NOM_OBJ_BATT_SENSOR                                 62200
        Wireless battery sensor
NOM_DEV_ANALY_OB_TI                                 62244
        Trace Interpretation
NOM_DEV_ANALY_OB_TI_VMD                             62246
        Trace Interpretation
NOM_DEV_ECG_MATERNAL_VMD                            62310
        MECG
NOM_OBJ_BATT_SENSOR_CLSPO2                          62523
        Wireless SpO2 sensor
NOM_OBJ_BATT_SENSOR_CLNBP                           62524
        Wireless NBP sensor
NOM_OBJ_BATT_CHARGER_CLSPO2                         62526
        Wireless SpO2 charger
NOM_OBJ_BATT_CHARGER_CLNBP                          62527
        Wireless NBP charger
NOM_OBJ_XMTR_CLSPO2                                 62529
        Wireless SpO2 Transducer
NOM_OBJ_XMTR_CLNBP                                  62530
        Wireless NBP Transducer
NOM_OBJ_SETTINGS_CLSPO2                             62532
        Wireless SpO2 configuration
NOM_OBJ_SETTINGS_CLNBP                              62533
        Wireless NBP configuration
NOM_DEV_METER_TEMP_INFRARED                         62556
        Tympanic Temperature
NOM_DEV_METER_TEMP_INFRARED_MDS                     62557
        Tympanic Temperature
NOM_DEV_METER_TEMP_INFRARED_VMD                     62558
        Tympanic Temperature
NOM_DEV_METER_TEMP_INFRARED_CHAN                    62559
        Tympanic Temperature
NOM_OBJ_OBR_IF_1                                    63899
        OBRadio Interface 1
NOM_OBJ_OBR_CONFIG                                  63900
        OB wireless configuration
NOM_OBJ_OBR_CONFIG_MDS                              63901
        OB wireless configuration
NOM_OBJ_OBR_CONFIG_VMD                              63902
        OB wireless configuration
NOM_OBJ_OBR_CONFIG_CHAN                             63903
        OB wireless configuration
```

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```
NOM_OBJ_HIF_KEY                                61584
    Key
NOM_OBJ_DISP                                   61616
    Display
NOM_OBJ_SOUND_GEN                              61648
    Sound Generator
NOM_OBJ_SETTING                                61649
    Setting
NOM_OBJ_PRINTER                                61650
    Printer
NOM_OBJ_EVENT                                  61683
    Event
NOM_OBJ_BATT_CHARGER                           61690
    Battery Charger
NOM_OBJ_ECG_OUT                                61691
    ECG out
NOM_OBJ_INPUT_DEV                              61692
    Input Device
NOM_OBJ_NETWORK                                61693
    Network
NOM_OBJ_QUICKLINK                              61694
    Quicklink Bar
NOM_OBJ_SPEAKER                                61695
    Speaker
NOM_OBJ_PUMP                                   61716
    Pump
NOM_OBJ_IR                                     61717
    IR
NOM_ACT_POLL_MDIB_DATA_EXT                     61755
    Extended Poll Action
NOM_DEV_ANALY_PULS_CONT                        61800
    Puls Cont
NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD             61806
    BIS
NOM_DEV_HIRES_TREND                            61820
    Hires Trend
NOM_DEV_HIRES_TREND_MDS                        61821
    Hires Trend
NOM_DEV_HIRES_TREND_VMD                        61822
    Hires Trend
NOM_DEV_MON_PT_EVENT_VMD                       61826
    Events
NOM_DEV_DERIVED_MSMT                           61828
    Derived Measurement
NOM_DEV_DERIVED_MSMT_MDS                       61829
    Derived Measurement
NOM_DEV_DERIVED_MSMT_VMD                       61830
    Derived Measurement
NOM_OBJ_SENSOR                                 61902
    Sensor
NOM_OBJ_XDUCR                                  61903
    Transducer
NOM_OBJ_CHAN_1                                 61916
    Channel 1
NOM_OBJ_CHAN_2                                 61917
    Channel 2
NOM_OBJ_AWAY_AGENT_1                           61918
    Agent 1
NOM_OBJ_AWAY_AGENT_2                           61919
    Agent 2
NOM_OBJ_HIF_MOUSE                              61983
    MOUSE
NOM_OBJ_HIF_TOUCH                              61984
    TOUCH
```

```
NOM_OBJ_HIF_SPEEDPOINT                          61985
    Speedpoint
NOM_OBJ_HIF_ALARMBOX                            61986
    Alarmbox
NOM_OBJ_BUS_I2C                                 61987
    I2C Bus
NOM_OBJ_CPU_SEC                                 61988
    2nd CPU
NOM_OBJ_LED                                     61990
    LED
NOM_OBJ_RELAY                                   61991
    Relay
NOM_OBJ_BATT_1                                  61996
    Battery 1
NOM_OBJ_BATT_2                                  61997
    Battery 2
NOM_OBJ_DISP_SEC                                61998
    2nd Display
NOM_OBJ_AGM                                     61999
    AGM
NOM_OBJ_TELEMON                                 62014
    TeleMon
NOM_OBJ_XMTR                                    62015
    Transmitter
NOM_OBJ_CABLE                                   62016
    Cable
NOM_OBJ_TELEMETRY_XMTR                          62053
    Telemetry Transmitter
NOM_OBJ_MMS                                     62070
    MMS
NOM_OBJ_DISP_THIRD                              62073
    Third Display
NOM_OBJ_BATT                                    62078
    Battery
NOM_OBJ_BATT_TELE                               62091
    Battery Tele
NOM_DEV_PROT_WATCH_CHAN                         62095
    Protocol Watch generic
NOM_OBJ_PROT_WATCH_1                            62097
    Protocol Watch Protocol No. 1
NOM_OBJ_PROT_WATCH_2                            62098
    Protocol Watch Protocol No. 2
NOM_OBJ_PROT_WATCH_3                            62099
    Protocol Watch Protocol No. 3
NOM_OBJ_ECG_SYNC                                62147
    ECG Sync
NOM_DEV_METAB_VMD                               62162
    Metabolism
NOM_OBJ_SENSOR_O2_CO2                           62165
    SENSOR O2 CO2
NOM_OBJ_SRR_IF_1                                62208
    SRR Interface 1
NOM_OBJ_DISP_REMOTE                             62228
    REMOTE DISPLAY
```

Physiological Identifier

A Physiological Identifier denotes the origin of a physiological measurement. The identifiers are located in the SCADA partition. The Physiological Identifier is transmitted as part of the numeric or wave observed value. The Physiological Identifier may not be unique. However, it is guaranteed that the Label ID is unique. The Label ID is mapped to a Label String based on the text catalogue (see "Attribute: System Localization" on page 92). Note that the mapping listed below may not be complete and is subject to changes and additions, due to revision changes and additions from additional interfaced devices. The table below should be viewed as an example.

The list below shows the numerics and waves which are supported by the monitor. The numerics and waves are sorted according to their internal priority, i.e. numerics or waves with a higher priority are listed first. This information depends heavily on the software revision of the monitor and the connected devices. Especially data coming from a VueLink module depends on the version of the VueLink driver and the specification of the connected external device. The list contains the possible unit codes for the numerics and waves. The unit codes for numerics/waves acquired through data import interfaces (e.g. VueLink) are not documented, because this data depends on the implementation of the specific data import driver. If a particular parameter is sourced from VueLink or IntelliBridge EC10, for some external devices numerical measurements listed as compound numeric in the below table may be provided as "simple" numerics. In this case, the corresponding 32bit label identifier is constructed by the listed physiological identifier (16bit) with preceding 16 bits 0x0002 (for measurements) or 0x0402 (for settings).

For a given software revision, the IntelliVue monitor may not export all of the numerics specified below. The IntelliVue monitor may export numerics, which are not specified here. If a numeric is exported also depends on the configuration of the monitor. In general, a numeric will only be available if the required measurement module is connected and if the specific measurement is activated. Some measurements require the presence of more than one measurement module or special configuration steps may be necessary to activate the measurement.

Numerics

```
HR          Heart Rate
            Label:
            NLS_NOM_ECG_CARD_BEAT_RATE                         0x00024182
            Observed Value:
            NOM_ECG_CARD_BEAT_RATE                             0x4182
            Units:
            NOM_DIM_BEAT_PER_MIN                               0x0AA0
btbHR       Cardiac Beat-to-Beat Rate
            Label:
            NLS_NOM_ECG_CARD_BEAT_RATE_BTB                     0x0002418A
            Observed Value:
            NOM_ECG_CARD_BEAT_RATE_BTB                         0x418A
PVC         Premature Ventricular Contractions
            Label:
            NLS_NOM_ECG_V_P_C_CNT                              0x00024261
            Observed Value:
            NOM_ECG_V_P_C_CNT                                  0x4261
            Units:
            NOM_DIM_BEAT_PER_MIN                               0x0AA0
ST          ST generic label
            Label:
            NLS_NOM_ECG_AMPL_ST                                0x00020300
            Compound Observed Value:
            NOM_ECG_AMPL_ST_I                                  0x0301
            NOM_ECG_AMPL_ST_II                                 0x0302
            NOM_ECG_AMPL_ST_III                                0x033D
```

```
                        NOM_ECG_AMPL_ST_AVR                              0x033E
                        NOM_ECG_AMPL_ST_AVL                              0x033F
                        NOM_ECG_AMPL_ST_AVF                              0x0340
                        NOM_ECG_AMPL_ST_V                                0x0343
                        NOM_ECG_AMPL_ST_MCL                              0x034B
                        NOM_ECG_AMPL_ST_V1                               0x0303
                        NOM_ECG_AMPL_ST_V2                               0x0304
                        NOM_ECG_AMPL_ST_V3                               0x0305
                        NOM_ECG_AMPL_ST_V4                               0x0306
                        NOM_ECG_AMPL_ST_V5                               0x0307
                        NOM_ECG_AMPL_ST_V6                               0x0308
                        NOM_ECG_AMPL_ST_V7                               0x0309
                        NOM_ECG_AMPL_ST_V8                               0x0347
                        NOM_ECG_AMPL_ST_V9                               0x03FC
                        NOM_ECG_AMPL_ST_V3R                              0x030B
                        NOM_ECG_AMPL_ST_V4R                              0x030C
                        NOM_ECG_AMPL_ST_V5R                              0x030D
                        NOM_ECG_AMPL_ST_V6R                              0x030E
                        NOM_ECG_AMPL_ST_AS                               0x0365
                        NOM_ECG_AMPL_ST_ES                               0x0364
                        NOM_ECG_AMPL_ST_AI                               0x0366
                        Units:
                        NOM_DIM_MILLI_M                                  0x0512
STindx      ST Index
                        Label:
                        NLS_NOM_ECG_AMPL_ST_INDEX                        0x0002F03D
                        Observed Value:
                        NOM_ECG_AMPL_ST_INDEX                            0xF03D
                        Units:
                        NOM_DIM_MILLI_M                                  0x0512
QTc
                        Label:
                        NLS_NOM_ECG_TIME_PD_QTc                          0x00023F24
                        Observed Value:
                        NOM_ECG_TIME_PD_QTc                              0x3F24
                        Units:
                        NOM_DIM_MILLI_SEC                                0x0892
DeltaQTc
                        Label:
                        NLS_NOM_ECG_TIME_PD_QTc_DELTA                    0x0002F156
                        Observed Value:
                        NOM_ECG_TIME_PD_QTc_DELTA                        0xF156
                        Units:
                        NOM_DIM_MILLI_SEC                                0x0892
QT
                        Label:
                        NLS_NOM_ECG_TIME_PD_QT_GL                        0x00023F20
                        Observed Value:
                        NOM_ECG_TIME_PD_QT_GL                            0x3F20
                        Units:
                        NOM_DIM_MILLI_SEC                                0x0892
QT-HR       QT HEARTRATE
                        Label:
                        NLS_NOM_ECG_TIME_PD_QT_HEART_RATE                0x0002F154
                        Observed Value:
                        NOM_ECG_TIME_PD_QT_HEART_RATE                    0xF154
                        Units:
                        NOM_DIM_BEATS_PER_MIN
QT Bsl
                        Label:
                        NLS_NOM_ECG_TIME_PD_QT_BASELINE                  0x0002F155
                        Observed Value:
                        NOM_ECG_TIME_PD_QT_BASELINE                      0xF155
                        Units:
                        NOM_DIM_MILLI_SEC                                0x0892
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QTHRBl      QT BASELINE HEARTRATE
            Label:
            NLS_NOM_ECG_TIME_PD_QT_BASELINE_HEART_RATE          0x0002F157
            Observed Value:
            NOM_ECG_TIME_PD_QT_BASELINE_HEART_RATE              0xF157
            Units:
            NOM_DIM_MILLI_SEC                                   0x0892
Pulse       Pulse Rate
            Label:
            NLS_NOM_PULS_RATE                                  0x0002480A
            Observed Value:
            NOM_PULS_RATE                                      0x480A
            Units:
            NOM_DIM_BEAT_PER_MIN                               0x0AA0
SpO2        Arterial Oxigen Saturation
            Label:
            NLS_NOM_PULS_OXIM_SAT_O2                           0x00024BB8
            Observed Value:
            NOM_PULS_OXIM_SAT_O2                               0x4BB8
            Units:
            NOM_DIM_PERCENT                                    0x0220
Pulse       Pulse Rate from Plethysmogram
            Label:
            NLS_NOM_PULS_OXIM_PULS_RATE                        0x00024822
            Observed Value:
            NOM_PLETH_PULS_RATE                                0x4822
            Units:
            NOM_DIM_BEAT_PER_MIN                               0x0AA0
SpO2pr      Oxigen Saturation
            Label:
            NLS_NOM_PULS_OXIM_SAT_O2_PRE_DUCTAL                0x0002F1C0
            Observed Value:
            NOM_PULS_OXIM_SAT_O2_PRE_DUCTAL                    0xF1C0
            Units:
            NOM_DIM_PERCENT                                    0x0220
Pulse       Pulse Rate from Plethysmogram (pre ductal)
            Label:
            NLS_SPO2_NAMES_PULS_OXIM_PULS_RATE_PRE_DUCTAL      0x8015543D
            Observed Value:
            NOM_PLETH_PULS_RATE                                0x4822
            Units:
            NOM_DIM_BEAT_PER_MIN                               0x0AA0
SpO2po      Oxigen Saturation
            Label:
            NLS_NOM_PULS_OXIM_SAT_O2_POST_DUCTAL               0x0002F1D4
            Observed Value:
            NOM_PULS_OXIM_SAT_O2_POST_DUCTAL                   0xF1D4
            Units:
            NOM_DIM_PERCENT                                    0x0220
Pulse       Pulse Rate from Plethysmogram (post ductal)
            Label:
            NLS_SPO2_NAMES_PULS_OXIM_PULS_RATE_POST_DUCTAL     0x80155440
            Observed Value:
            NOM_PLETH_PULS_RATE                                0x4822
            Units:
            NOM_DIM_BEAT_PER_MIN                               0x0AA0
%SpO2T      SpO2 parameter label as sourced by the Telemetry system
            Label:
            NLS_NOM_PULS_OXIM_SAT_O2_TELE                      0x0002F09C
            Observed Value:
            NOM_PULS_OXIM_SAT_O2_TELE                          0xF09C
            Units:
            NOM_DIM_PERCENT                                    0x0220
PulseT      Pulse parameter label as sourced by the Telemetry system
            Label:
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                  NLS_NOM_PULS_OXIM_PULS_RATE_TELE              0x0002F09D
                  Observed Value:
                  NOM_PULS_OXIM_PULS_RATE_TELE                  0xF09D
                  Units:
                  NOM_DIM_BEAT_PER_MIN                          0x0AA0
SpO2 r    Arterial Oxigen Saturation (right)
                  Label:
                  NLS_NOM_PULS_OXIM_SAT_O2_ART_RIGHT            0x00024BCC
                  Observed Value:
                  NOM_PULS_OXIM_SAT_O2_ART_RIGHT                0x4BCC
                  Units:
                  NOM_DIM_PERCENT                               0x0220
Pulse     Pulse Rate from Plethysmogram (right)
                  Label:
                  NLS_SPO2_NAMES_PULS_OXIM_PULS_RATE_RIGHT      0x80155402
                  Observed Value:
                  NOM_PLETH_PULS_RATE                           0x4822
                  Units:
                  NOM_DIM_BEAT_PER_MIN                          0x0AA0
SpO2 l    Arterial Oxigen Saturation (left)
                  Label:
                  NLS_NOM_PULS_OXIM_SAT_O2_ART_LEFT             0x00024BC8
                  Observed Value:
                  NOM_PULS_OXIM_SAT_O2_ART_LEFT                 0x4BC8
                  Units:
                  NOM_DIM_PERCENT                               0x0220
Pulse     Pulse Rate from Plethysmogram (left)
                  Label:
                  NLS_SPO2_NAMES_PULS_OXIM_PULS_RATE_LEFT       0x80155401
                  Observed Value:
                  NOM_PLETH_PULS_RATE                           0x4822
                  Units:
                  NOM_DIM_BEAT_PER_MIN                          0x0AA0
DeltaSpO2 Difference between two SpO2 Values (like Left - Right)
                  Label:
                  NLS_NOM_PULS_OXIM_SAT_O2_DIFF                 0x00024BC4
                  Observed Value:
                  NOM_PULS_OXIM_SAT_O2_DIFF                     0x4BC4
                  Units:
                  NOM_DIM_PERCENT                               0x0220
Perf      Perfusion Indicator
                  Label:
                  NLS_NOM_PULS_OXIM_PERF_REL                    0x00024BB0
                  Observed Value:
                  NOM_PULS_OXIM_PERF_REL                        0x4BB0
                  Units:
                  NOM_DIM_DIMLESS                               0x0200
PerfPr    Relative Perfusion Left
                  Label:
                  NLS_NOM_PULS_OXIM_PERF_REL_PRE_DUCTAL         0x0002F22C
                  Observed Value:
                  NOM_PULS_OXIM_PERF_REL_PRE_DUCTAL             0xF22C
                  Units:
                  NOM_DIM_DIMLESS                               0x0200
PerfPo    Relative Perfusion Left
                  Label:
                  NLS_NOM_PULS_OXIM_PERF_REL_POST_DUCTAL        0x0002F1DC
                  Observed Value:
                  NOM_PULS_OXIM_PERF_REL_POST_DUCTAL            0xF1DC
                  Units:
                  NOM_DIM_DIMLESS                               0x0200
Perf T    Perf  from Telemetry
                  Label:
                  NLS_NOM_PULS_OXIM_PERF_REL_TELE               0x0002F12C
                  Observed Value:
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              NOM_PULS_OXIM_PERF_REL_TELE                    0xF12C
              Units:
              NOM_DIM_DIMLESS                                0x0200
Perf r        Relative Perfusion Right label
              Label:
              NLS_NOM_PULS_OXIM_PERF_REL_RIGHT               0x0002F08B
              Observed Value:
              NOM_PULS_OXIM_PERF_REL_RIGHT                   0xF08B
              Units:
              NOM_DIM_DIMLESS                                0x0200
Perf l        Relative Perfusion Left
              Label:
              NLS_NOM_PULS_OXIM_PERF_REL_LEFT                0x0002F08A
              Observed Value:
              NOM_PULS_OXIM_PERF_REL_LEFT                    0xF08A
              Units:
              NOM_DIM_DIMLESS                                0x0200
NBP           non-invasive blood pressure
              Label:
              NLS_NOM_PRESS_BLD_NONINV                       0x00024A04
              Observed Value (from VueLink):
              NOM_PRESS_BLD_NONINV                           0x4A04
              Compound Observed Value:
              NOM_PRESS_BLD_NONINV_SYS                       0x4A05
              NOM_PRESS_BLD_NONINV_DIA                       0x4A06
              NOM_PRESS_BLD_NONINV_MEAN                      0x4A07
              Units:
              NOM_DIM_MMHG                                   0x0F20
              NOM_DIM_KILO_PASCAL                            0x0F03
Pulse         Pulse from NBP
              Label:
              NLS_NOM_PRESS_BLD_NONINV_PULS_RATE             0x0002F0E5
              Observed Value:
              NOM_PRESS_BLD_NONINV_PULS_RATE                 0xF0E5
              Units:
              NOM_DIM_BEAT_PER_MIN                           0x0AA0
ABP           Arterial Blood Pressure (ABP)
              Label:
              NLS_NOM_PRESS_BLD_ART_ABP                      0x00024A14
              Observed Value (from VueLink):
              NOM_PRESS_BLD_ART_ABP                          0x4A14
              Compound Observed Value:
              NOM_PRESS_BLD_ART_ABP_SYS                      0x4A15
              NOM_PRESS_BLD_ART_ABP_DIA                      0x4A16
              NOM_PRESS_BLD_ART_ABP_MEAN                     0x4A17
              Units:
              NOM_DIM_MMHG                                   0x0F20
              NOM_DIM_KILO_PASCAL                            0x0F03
Pulse         Pulse derived from ABP
              Label:
              NLS_PRESS_NAMES_PULSE_FROM_ABP                 0x80035402
              Observed Value:
              NOM_PULS_RATE                                  0x480A
              Units:
              NOM_DIM_BEAT_PER_MIN                           0x0AA0
ART           Arterial Blood Pressure (ART)
              Label:
              NLS_NOM_PRESS_BLD_ART                          0x00024A10
              Observed Value (from VueLink):
              NOM_PRESS_BLD_ART                              0x4A10
              Compound Observed Value:
              NOM_PRESS_BLD_ART_SYS                          0x4A11
              NOM_PRESS_BLD_ART_DIA                          0x4A12
              NOM_PRESS_BLD_ART_MEAN                         0x4A13
              Units:
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                    NOM_DIM_MMHG                                   0x0F20
                    NOM_DIM_KILO_PASCAL                            0x0F03
Pulse               Pulse derived from ART
                    Label:
                    NLS_PRESS_NAMES_PULSE_FROM_ART                 0x80035403
                    Observed Value:
                    NOM_PULS_RATE                                  0x480A
                    Units:
                    NOM_DIM_BEAT_PER_MIN                           0x0AA0
Ao                  Arterial Blood Pressure in the Aorta (Ao)
                    Label:
                    NLS_NOM_PRESS_BLD_AORT                         0x00024A0C
                    Observed Value (from VueLink):
                    NOM_PRESS_BLD_AORT                             0x4A0C
                    Compound Observed Value:
                    NOM_PRESS_BLD_AORT_SYS                         0x4A0D
                    NOM_PRESS_BLD_AORT_DIA                         0x4A0E
                    NOM_PRESS_BLD_AORT_MEAN                        0x4A0F
                    Units:
                    NOM_DIM_MMHG                                   0x0F20
                    NOM_DIM_KILO_PASCAL                            0x0F03
Pulse               Pulse derived from Ao
                    Label:
                    NLS_PRESS_NAMES_PULSE_FROM_AO                  0x80035404
                    Observed Value:
                    NOM_PULS_RATE                                  0x480A
                    Units:
                    NOM_DIM_BEAT_PER_MIN                           0x0AA0
PAP                 Pulmonary Arterial Pressure (PAP)
                    Label:
                    NLS_NOM_PRESS_BLD_ART_PULM                     0x00024A1C
                    Observed Value (from VueLink):
                    NOM_PRESS_BLD_ART_PULM                         0x4A1C
                    Compound Observed Value:
                    NOM_PRESS_BLD_ART_PULM_SYS                     0x4A1D
                    NOM_PRESS_BLD_ART_PULM_DIA                     0x4A1E
                    NOM_PRESS_BLD_ART_PULM_MEAN                    0x4A1F
                    Units:
                    NOM_DIM_MMHG                                   0x0F20
                    NOM_DIM_KILO_PASCAL                            0x0F03
Pulse               Pulse derived from PAP
                    Label:
                    NLS_PRESS_NAMES_PULSE_FROM_PAP                 0x80035405
                    Observed Value:
                    NOM_PULS_RATE                                  0x480A
                    Units:
                    NOM_DIM_BEAT_PER_MIN                           0x0AA0
CVP                 Central Venous Pressure (CVP)
                    Label:
                    NLS_NOM_PRESS_BLD_VEN_CENT                     0x00024A44
                    Observed Value (from VueLink):
                    NOM_PRESS_BLD_VEN_CENT                         0x4A44
                    Compound Observed Value:
                    NOM_PRESS_BLD_VEN_CENT_SYS                     0x4A45
                    NOM_PRESS_BLD_VEN_CENT_DIA                     0x4A46
                    NOM_PRESS_BLD_VEN_CENT_MEAN                    0x4A47
                    Units:
                    NOM_DIM_MMHG                                   0x0F20
                    NOM_DIM_KILO_PASCAL                            0x0F03
Pulse               Pulse derived from CVP
                    Label:
                    NLS_PRESS_NAMES_PULSE_FROM_CVP                 0x80035406
                    Observed Value:
                    NOM_PULS_RATE                                  0x480A
                    Units:
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                     NOM_DIM_BEAT_PER_MIN                              0x0AA0
      RAP            Right Atrial Pressure (RAP)
                     Label:
                     NLS_NOM_PRESS_BLD_ATR_RIGHT                       0x00024A34
                     Observed Value (from VueLink):
                     NOM_PRESS_BLD_ATR_RIGHT                           0x4A34
                     Compound Observed Value:
                     NOM_PRESS_BLD_ATR_RIGHT_SYS                       0x4A35
                     NOM_PRESS_BLD_ATR_RIGHT_DIA                       0x4A36
                     NOM_PRESS_BLD_ATR_RIGHT_MEAN                      0x4A37
                     Units:
                     NOM_DIM_MMHG                                      0x0F20
                     NOM_DIM_KILO_PASCAL                               0x0F03
      Pulse          Pulse derived from RAP
                     Label:
                     NLS_PRESS_NAMES_PULSE_FROM_RAP                    0x80035407
                     Observed Value:
                     NOM_PULS_RATE                                     0x480A
                     Units:
                     NOM_DIM_BEAT_PER_MIN                              0x0AA0
      LAP            Left Atrial Pressure (LAP)
                     Label:
                     NLS_NOM_PRESS_BLD_ATR_LEFT                        0x00024A30
                     Observed Value (from VueLink):
                     NOM_PRESS_BLD_ATR_LEFT                            0x4A30
                     Compound Observed Value:
                     NOM_PRESS_BLD_ATR_LEFT_SYS                        0x4A31
                     NOM_PRESS_BLD_ATR_LEFT_DIA                        0x4A32
                     NOM_PRESS_BLD_ATR_LEFT_MEAN                       0x4A33
                     Units:
                     NOM_DIM_MMHG                                      0x0F20
                     NOM_DIM_KILO_PASCAL                               0x0F03
      Pulse          Pulse derived from LAP
                     Label:
                     NLS_PRESS_NAMES_PULSE_FROM_LAP                    0x80035408
                     Observed Value:
                     NOM_PULS_RATE                                     0x480A
                     Units:
                     NOM_DIM_BEAT_PER_MIN                              0x0AA0
      ICP            Intra-cranial Pressure (ICP)
                     Label:
                     NLS_NOM_PRESS_INTRA_CRAN                          0x00025808
                     Observed Value (from VueLink):
                     NOM_PRESS_INTRA_CRAN                              0x5808
                     Compound Observed Value:
                     NOM_PRESS_INTRA_CRAN_SYS                          0x5809
                     NOM_PRESS_INTRA_CRAN_DIA                          0x580A
                     NOM_PRESS_INTRA_CRAN_MEAN                         0x580B
                     Units:
                     NOM_DIM_MMHG                                      0x0F20
                     NOM_DIM_KILO_PASCAL                               0x0F03
      Pulse          Pulse derived from ICP
                     Label:
                     NLS_PRESS_NAMES_PULSE_FROM_ICP                    0x80035409
                     Observed Value:
                     NOM_PULS_RATE                                     0x480A
                     Units:
                     NOM_DIM_BEAT_PER_MIN                              0x0AA0
      UAP            Umbilical Arterial Pressure (UAP)
                     Label:
                     NLS_NOM_PRESS_BLD_ART_UMB                         0x00024A28
                     Observed Value (from VueLink):
                     NOM_PRESS_BLD_ART_UMB                             0x4A28
                     Compound Observed Value:
                     NOM_PRESS_BLD_ART_UMB_SYS                         0x4A29
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               NOM_PRESS_BLD_ART_UMB_DIA                          0x4A2A
               NOM_PRESS_BLD_ART_UMB_MEAN                         0x4A2B
               Units:
               NOM_DIM_MMHG                                       0x0F20
               NOM_DIM_KILO_PASCAL                                0x0F03
Pulse          Pulse derived from UAP
               Label:
               NLS_PRESS_NAMES_PULSE_FROM_UAP                     0x8003540A
               Observed Value:
               NOM_PULS_RATE                                      0x480A
               Units:
               NOM_DIM_BEAT_PER_MIN                               0x0AA0
UVP            Umbilical Venous Pressure (UVP)
               Label:
               NLS_NOM_PRESS_BLD_VEN_UMB                          0x00024A48
               Observed Value (from VueLink):
               NOM_PRESS_BLD_VEN_UMB                              0x4A48
               Compound Observed Value:
               NOM_PRESS_BLD_VEN_UMB_SYS                          0x4A49
               NOM_PRESS_BLD_VEN_UMB_DIA                          0x4A4A
               NOM_PRESS_BLD_VEN_UMB_MEAN                         0x4A4B
               Units:
               NOM_DIM_MMHG                                       0x0F20
               NOM_DIM_KILO_PASCAL                                0x0F03
Pulse          Pulse derived from UVP
               Label:
               NLS_PRESS_NAMES_PULSE_FROM_UVP                     0x8003540B
               Observed Value:
               NOM_PULS_RATE                                      0x480A
               Units:
               NOM_DIM_BEAT_PER_MIN                               0x0AA0
FAP            Femoral Arterial Pressure (FAP)
               Label:
               NLS_NOM_PRESS_BLD_ART_FEMORAL                      0x0002F0BC
               Compound Observed Value:
               NOM_PRESS_BLD_ART_FEMORAL_SYS                      0xF0BD
               NOM_PRESS_BLD_ART_FEMORAL_DIA                      0xF0BE
               NOM_PRESS_BLD_ART_FEMORAL_MEAN                     0xF0BF
               Units:
               NOM_DIM_MMHG                                       0x0F20
               NOM_DIM_KILO_PASCAL                                0x0F03
Pulse          Pulse derived from FAP
               Label:
               NLS_PRESS_NAMES_PULSE_FROM_FAP                     0x80035434
               Observed Value:
               NOM_PULS_RATE                                      0x480A
               Units:
               NOM_DIM_BEAT_PER_MIN                               0x0AA0
BAP            Brachial Arterial Blood Pressure (BAP)
               Label:
               NLS_NOM_PRESS_BLD_ART_BRACHIAL                     0x0002F0C0
               Compound Observed Value:
               NOM_PRESS_BLD_ART_BRACHIAL_SYS                     0xF0C1
               NOM_PRESS_BLD_ART_BRACHIAL_DIA                     0xF0C2
               NOM_PRESS_BLD_ART_BRACHIAL_MEAN                    0xF0C3
               Units:
               NOM_DIM_MMHG                                       0x0F20
               NOM_DIM_KILO_PASCAL                                0x0F03
Pulse          Pulse derived from BAP
               Label:
               NLS_PRESS_NAMES_PULSE_FROM_BAP                     0x80035437
               Observed Value:
               NOM_PULS_RATE                                      0x480A
               Units:
               NOM_DIM_BEAT_PER_MIN                               0x0AA0
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IC1        Intracranial Pressure 1 (IC1)
           Label:
           NLS_NOM_PRESS_INTRA_CRAN_1                           0x0002F0B4
           Compound Observed Value:
           NOM_PRESS_INTRA_CRAN_1_DIA                           0xF0B6
           NOM_PRESS_INTRA_CRAN_1_SYS                           0xF0B5
           NOM_PRESS_INTRA_CRAN_1_MEAN                          0xF0B7
           Units:
           NOM_DIM_MMHG                                         0x0F20
           NOM_DIM_KILO_PASCAL                                  0x0F03
Pulse      Pulse derived from IC1
           Label:
           NLS_PRESS_NAMES_PULSE_FROM_IC1                       0x8003542E
           Observed Value:
           NOM_PULS_RATE                                        0x480A
           Units:
           NOM_DIM_BEAT_PER_MIN                                 0x0AA0
IC2        Intracranial Pressure 2 (IC2)
           Label:
           NLS_NOM_PRESS_INTRA_CRAN_2                           0x0002F0B8
           Compound Observed Value:
           NOM_PRESS_INTRA_CRAN_2_SYS                           0xF0B9
           NOM_PRESS_INTRA_CRAN_2_DIA                           0xF0BA
           NOM_PRESS_INTRA_CRAN_2_MEAN                          0xF0BB
           Units:
           NOM_DIM_MMHG                                         0x0F20
           NOM_DIM_KILO_PASCAL                                  0x0F03
Pulse      Pulse derived from IC2
           Label:
           NLS_PRESS_NAMES_PULSE_FROM_IC2                       0x80035431
           Observed Value:
           NOM_PULS_RATE                                        0x480A
           Units:
           NOM_DIM_BEAT_PER_MIN                                 0x0AA0
P          unspecific pressure
           Label:
           NLS_NOM_PRESS_BLD                                    0x00024A00
           Observed Value (from VueLink):
           NOM_PRESS_BLD                                        0x4A00
           Compound Observed Value:
           NOM_PRESS_BLD_SYS                                    0x4A01
           NOM_PRESS_BLD_DIA                                    0x4A02
           NOM_PRESS_BLD_MEAN                                   0x4A03
           Units:
           NOM_DIM_MMHG                                         0x0F20
           NOM_DIM_KILO_PASCAL                                  0x0F03
Pulse      Pulse derived from unspecific Pressure
           Label:
           NLS_PRESS_NAMES_PULSE_FROM_P                         0x80035401
           Observed Value:
           NOM_PULS_RATE                                        0x480A
           Units:
           NOM_DIM_BEAT_PER_MIN                                 0x0AA0
P1         Generic Pressure 1 (P1)
           Label:
           NLS_NOM_PRESS_GEN_1                                  0x0002F0A4
           Observed Value (from VueLink):
           NOM_PRESS_GEN_1                                      0xF0A4
           Compound Observed Value:
           NOM_PRESS_GEN_1_SYS                                  0xF0A5
           NOM_PRESS_GEN_1_DIA                                  0xF0A6
           NOM_PRESS_GEN_1_MEAN                                 0xF0A7
           Units:
           NOM_DIM_MMHG                                         0x0F20
           NOM_DIM_KILO_PASCAL                                  0x0F03
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           Pulse        Pulse derived from P1
                        Label:
                        NLS_PRESS_NAMES_PULSE_FROM_P1              0x80035422
                        Observed Value:
                        NOM_PULS_RATE                              0x480A
                        Units:
                        NOM_DIM_BEAT_PER_MIN                       0x0AA0
           P2           Generic Pressure 2 (P2)
                        Label:
                        NLS_NOM_PRESS_GEN_2                        0x0002F0A8
                        Observed Value (from VueLink):
                        NOM_PRESS_GEN_2                            0xF0A8
                        Compound Observed Value:
                        NOM_PRESS_GEN_2_SYS                        0xF0A9
                        NOM_PRESS_GEN_2_DIA                        0xF0AA
                        NOM_PRESS_GEN_2_MEAN                       0xF0AB
                        Units:
                        NOM_DIM_MMHG                               0x0F20
                        NOM_DIM_KILO_PASCAL                        0x0F03
           Pulse        Pulse derived from P2
                        Label:
                        NLS_PRESS_NAMES_PULSE_FROM_P2              0x80035425
                        Observed Value:
                        NOM_PULS_RATE                              0x480A
                        Units:
                        NOM_DIM_BEAT_PER_MIN                       0x0AA0
           P3           Generic Pressure 3 (P3)
                        Label:
                        NLS_NOM_PRESS_GEN_3                        0x0002F0AC
                        Observed Value (from VueLink):
                        NOM_PRESS_GEN_3                            0xF0AC
                        Compound Observed Value:
                        NOM_PRESS_GEN_3_SYS                        0xF0AD
                        NOM_PRESS_GEN_3_DIA                        0xF0AC
                        NOM_PRESS_GEN_3_MEAN                       0xF0AF
                        Units:
                        NOM_DIM_MMHG                               0x0F20
                        NOM_DIM_KILO_PASCAL                        0x0F03
           Pulse        Pulse derived from P3
                        Label:
                        NLS_PRESS_NAMES_PULSE_FROM_P3              0x80035428
                        Observed Value:
                        NOM_PULS_RATE                              0x480A
                        Units:
                        NOM_DIM_BEAT_PER_MIN                       0x0AA0
           P4           Generic Pressure 4 (P4)
                        Label:
                        NLS_NOM_PRESS_GEN_4                        0x0002F0B0
                        Observed Value (from VueLink):
                        NOM_PRESS_GEN_4                            0xF0B0
                        Compound Observed Value:
                        NOM_PRESS_GEN_4_SYS                        0xF0B1
                        NOM_PRESS_GEN_4_DIA                        0xF0B2
                        NOM_PRESS_GEN_4_MEAN                       0xF0B3
                        Units:
                        NOM_DIM_MMHG                               0x0F20
                        NOM_DIM_KILO_PASCAL                        0x0F03
           Pulse        Pulse derived from P4
                        Label:
                        NLS_PRESS_NAMES_PULSE_FROM_P4              0x8003542B
                        Observed Value:
                        NOM_PULS_RATE                              0x480A
                        Units:
                        NOM_DIM_BEAT_PER_MIN                       0x0AA0
           IUP          Intra-Uterine Pressure
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                    Label:
                    NLS_NOM_PRESS_INTRA_UTERAL                      0x0002F0D8
                    Observed Value:
                    NOM_PRESS_BLD                                   0x4A00
        PAWP        Pulmonary Artery Wedge Pressure
                    Label:
                    NLS_NOM_PRESS_BLD_ART_PULM_WEDGE                0x00024A24
                    Observed Value:
                    NOM_PRESS_BLD_ART_PULM_WEDGE                    0x4A24
                    Units:
                    NOM_DIM_MMHG                                    0x0F20
                    NOM_DIM_KILO_PASCAL                             0x0F03
        CPP         Cerebral Perfusion Pressure
                    Label:
                    NLS_NOM_PRESS_CEREB_PERF                        0x00025804
                    Observed Value:
                    NOM_PRESS_CEREB_PERF                            0x5804
                    Units:
                    NOM_DIM_MMHG                                    0x0F20
                    NOM_DIM_KILO_PASCAL                             0x0F03
        PPV         Pulse Pressure Variation
                    Label:
                    NLS_NOM_PULS_PRESS_VAR                          0x0002F0E3
                    Observed Value:
                    NOM_PULS_PRESS_VAR                              0xF0E3
        CCO         Continuous Cardiac Output
                    Label:
                    NLS_NOM_OUTPUT_CARD_CTS                         0x00024BDC
                    Observed Value:
                    NOM_OUTPUT_CARD_CTS                             0x4BDC
                    Units:
                    NOM_DIM_X_L_PER_MIN                             0x0C00
        CCI         Continuous Cardiac Output Index
                    Label:
                    NLS_NOM_OUTPUT_CARD_INDEX_CTS                   0x0002F047
                    Observed Value:
                    NOM_OUTPUT_CARD_INDEX_CTS                       0xF047
                    Units:
                    NOM_DIM_X_L_PER_MIN_PER_M_SQ                    0x0B20
        SV          Stroke Volume
                    Label:
                    NLS_NOM_VOL_BLD_STROKE                          0x00024B84
                    Observed Value:
                    NOM_VOL_BLD_STROKE                              0x4B84
                    Units:
                    NOM_DIM_MILLI_L                                 0x0652
        SI          Stroke Index
                    Label:
                    NLS_NOM_VOL_BLD_STROKE_INDEX                    0x0002F048
                    Observed Value:
                    NOM_VOL_BLD_STROKE_INDEX                        0xF048
                    Units:
                    NOM_DIM_MILLI_L_PER_M_SQ                        0x0592
        SVV         Stroke Volume Variation
                    Label:
                    NLS_NOM_VOL_BLD_STROKE_VAR                      0x0002F049
                    Observed Value:
                    NOM_VOL_BLD_STROKE_VAR                          0xF049
                    Units:
                    NOM_DIM_PERCENT                                 0x0220
        dPmax       Index of Left Ventricular Contractility
                    Label:
                    NLS_NOM_GRAD_PRESS_BLD_AORT_POS_MAX             0x00024C25
                    Observed Value:
                    NOM_GRAD_PRESS_BLD_AORT_POS_MAX                 0x4C25
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C.O.       Cardiac Output
           Label:
           NLS_NOM_OUTPUT_CARD                                  0x00024B04
           Observed Value:
           NOM_OUTPUT_CARD                                      0x4B04
           Units:
           NOM_DIM_X_L_PER_MIN                                  0x0C00
C.I.       Cardiac Index
           Label:
           NLS_NOM_OUTPUT_CARD_INDEX                            0x0002490C
           Observed Value:
           NOM_OUTPUT_CARD_INDEX                                0x490C
           Units:
           NOM_DIM_X_L_PER_MIN_PER_M_SQ                         0x0B20
ITBV       Intrathoracic Blood Volume
           Label:
           NLS_NOM_VOL_BLD_INTRA_THOR                           0x0002F040
           Observed Value:
           NOM_VOL_BLD_INTRA_THOR                               0xF040
           Units:
           NOM_DIM_MILLI_L                                      0x0652
ITBVI      Intrathoracic Blood Volume Index
           Label:
           NLS_NOM_VOL_BLD_INTRA_THOR_INDEX                     0x0002F041
           Observed Value:
           NOM_VOL_BLD_INTRA_THOR_INDEX                         0xF041
           Units:
           NOM_DIM_MILLI_L_PER_M_SQ                             0x0592
EVLW       Extravascular Lung Water
           Label:
           NLS_NOM_VOL_LUNG_WATER_EXTRA_VASC                    0x0002F042
           Observed Value:
           NOM_VOL_LUNG_WATER_EXTRA_VASC                        0xF042
           Units:
           NOM_DIM_MILLI_L                                      0x0652
EVLWI      Extravascular Lung Water Index
           Label:
           NLS_NOM_VOL_LUNG_WATER_EXTRA_VASC_INDEX              0x0002F043
           Observed Value:
           NOM_VOL_LUNG_WATER_EXTRA_VASC_INDEX                  0xF043
           Units:
           NOM_DIM_MILLI_L_PER_KG                               0x0C72
GEDV       Global End Diastolic Volume
           Label:
           NLS_NOM_VOL_GLOBAL_END_DIA                           0x0002F044
           Observed Value:
           NOM_VOL_GLOBAL_END_DIA                               0xF044
           Units:
           NOM_DIM_MILLI_L                                      0x0652
GEDVI      Global End Diastolic Volume Index
           Label:
           NLS_NOM_VOL_GLOBAL_END_DIA_INDEX                     0x0002F045
           Observed Value:
           NOM_VOL_GLOBAL_END_DIA_INDEX                         0xF045
           Units:
           NOM_DIM_MILLI_L_PER_M_SQ                             0x0592
CFI        Cardiac Function Index
           Label:
           NLS_NOM_CARD_FUNC_INDEX                              0x0002F046
           Observed Value:
           NOM_CARD_FUNC_INDEX                                  0xF046
           Units:
           NOM_DIM_DIMLESS                                      0x0200
PVPI       Pulmonary Vascular Permeability Index
           Label:
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                    NLS_NOM_PERM_VASC_PULM_INDEX                    0x0002F106
                    Observed Value:
                    NOM_PERM_VASC_PULM_INDEX                        0xF106
GEF                 Global Ejection Fraction
                    Label:
                    NLS_NOM_FRACT_EJECT                             0x0002F105
                    Observed Value:
                    NOM_FRACT_EJECT                                0xF105
SNR                 Signal to Noise ratio
                    Label:
                    NLS_NOM_SNR                                     0x0002F101
                    Observed Value:
                    NOM_SNR                                        0xF101
RLShnt              Right-to-Left Heart Shunt
                    Label:
                    NLS_NOM_SHUNT_RIGHT_LEFT                        0x0002F14A
                    Observed Value:
                    NOM_SHUNT_RIGHT_LEFT                           0xF14A
                    Units:
                    NOM_DIM_MILLI_SECOND
SaO2                Oxygen Saturation
                    Label:
                    NLS_NOM_SAT_O2_ART                             0x00024B34
                    Observed Value:
                    NOM_SAT_O2_ART                                 0x4B34
SvO2                Mixed Venous Oxygen Saturation
                    Label:
                    NLS_NOM_SAT_O2_VEN                             0x00024B3C
                    Observed Value:
                    NOM_SAT_O2_VEN                                 0x4B3C
                    Units:
                    NOM_DIM_PERCENT                                0x0220
ScvO2               Central Venous Oxygen Saturation
                    Label:
                    NLS_NOM_SAT_O2_VEN_CENT                        0x0002F100
                    Observed Value:
                    NOM_SAT_O2_VEN_CENT                            0xF100
SO2                 O2 Saturation
                    Label:
                    NLS_NOM_SAT_O2                                 0x00024B2C
                    Observed Value:
                    NOM_SAT_O2                                     0x4B2C
                    Units:
                    NOM_DIM_PERCENT
SO2 l               Oxygen Saturation Left Side
                    Label:
                    NLS_NOM_SAT_O2_LEFT                            0x0002F89D
                    Observed Value:
                    NOM_SAT_O2_ART                                 0x4B34
SO2 r               Oxygen Saturation Right Side
                    Label:
                    NLS_NOM_SAT_O2_RIGHT                           0x0002F89E
                    Observed Value:
                    NOM_SAT_O2_ART                                 0x4B34
SO2 1               O2 Saturation 1 (generic)
                    Label:
                    NLS_NOM_SAT_O2_GEN_1                           0x0002F962
                    Observed Value:
                    NOM_SAT_O2_GEN_1                               0xF962
                    Units:
                    NOM_DIM_PERCENT                                0x0220
SO2 2               O2 Saturation 2 (generic)
                    Label:
                    NLS_NOM_SAT_O2_GEN_2                           0x0002F963
                    Observed Value:
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                      NOM_SAT_O2_GEN_2                                    0xF963
                      Units:
                      NOM_DIM_PERCENT                                     0x0220
        SO2 3         O2 Saturation 3 (generic)
                      Label:
                      NLS_NOM_SAT_O2_GEN_3                                0x0002F964
                      Observed Value:
                      NOM_SAT_O2_GEN_3                                    0xF964
                      Units:
                      NOM_DIM_PERCENT                                     0x0220
        SO2 4         O2 Saturation 4 (generic)
                      Label:
                      NLS_NOM_SAT_O2_GEN_4                                0x0002F965
                      Observed Value:
                      NOM_SAT_O2_GEN_4                                    0xF965
                      Units:
                      NOM_DIM_PERCENT                                     0x0220
        rSO2-1        Regional Oxygen Saturation of Channel 1
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_1                           0x0002F95C
                      Observed Value:
                      NOM_SAT_O2_REGIONAL_1                               0xF95C
        rSO2-2        Regional Oxygen Saturation of Channel 2
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_2                           0x0002F95D
                      Observed Value:
                      NOM_SAT_O2_REGIONAL_2                               0xF95D
        rSO2-3        Regional Oxygen Saturation of Channel 3
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_3                           0x0002F95E
                      Observed Value:
                      NOM_SAT_O2_REGIONAL_3                               0xF95E
        rSO2-4        Regional Oxygen Saturation of Channel 4
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_4                           0x0002F95F
                      Observed Value:
                      NOM_SAT_O2_REGIONAL_4                               0xF95F
        rSO2_5        -
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_5                           0x0002FB95
                      Observed Value:
                      NOM_SAT_O2_REGIONAL_5                               0xFB95
        rSO2_6        -
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_6                           0x0002FB96
                      Observed Value:
                      NOM_SAT_O2_REGIONAL_6                               0xFB96
        AUC_1         -
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_1          0x0002FBA5
                      Observed Value:
                      NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_1              0xFBA5
        AUC_2         -
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_2          0x0002FBA6
                      Observed Value:
                      NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_2              0xFBA6
        AUC_3
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_3          0x0002FBA7
                      Observed Value:
                      NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_3              0xFBA7
        AUC_4         -
                      Label:
                      NLS_NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_4          0x0002FBA8
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                    Observed Value:
                    NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_4            0xFBA8
         AUC_5      -
                    Label:
                    NLS_NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_5        0x0002FBA9
                    Observed Value:
                    NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_5            0xFBA9
         AUC_6      -
                    Label:
                    NLS_NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_6        0x0002FBAA
                    Observed Value:
                    NOM_SAT_O2_REGIONAL_AREA_UNDER_CURVE_6            0xFBAA
         s%PIF      -
                    Label:
                    NLS_NOM_SETT_FLOW_AWAY_INSP_MAX_REL              0x0402F9E4
                    Observed Value:
                    NOM_SETT_FLOW_AWAY_INSP_MAX_REL                  0xF9E4

         %SpMV      -
                    Label:
                    NLS_NOM_VENT_VOL_MINUTE_AWAY_SPONT_REL           0x0002F9FB
                    Observed Value:
                    NOM_VENT_VOL_MINUTE_AWAY_SPONT_REL               0xfF9FB
                    Units:
                    UNDEFINED
         SpMVal     -
                    Label:
                    NLS_NOM_VOL_MINUTE_AWAY_SPONT_ALV                0x0002FB83
                    Observed Value:
                    NOM_VOL_MINUTE_AWAY_SPONT_ALV                    0xFB83
         %Leak      -
                    Label:
                    NLS_NOM_VENT_VOL_LEAK_REL                        0x0002F9FC
                    Observed Value:
                    NOM_VENT_VOL_LEAK_REL                            0xF9FC
         LkPat      -
                    Label:
                    NLS_NOM_VENT_FLOW_LEAK_ESTIMATED_PATIENT         0x0002FB7F
                    Observed Value:
                    NOM_VENT_FLOW_LEAK_ESTIMATED_PATIENT             0xFB7F
         LkTot      -
                    Label:
                    NLS_NOM_VENT_FLOW_LEAK_ESTIMATED_TOTAL           0x0002FB80
                    Observed Value:
                    NOM_VENT_FLOW_LEAK_ESTIMATED_TOTAL               0xFB80
                    Units:
                    UNDEFINED
         s%PEF      -
                    Label:
                    NLS_NOM_SETT_FLOW_AWAY_EXP_MAX_REL              0x0402fF9FD
                    Observed Value:
                    NOM_SETT_FLOW_AWAY_EXP_MAX_REL                   0xF9FD
         Edimin     -
                    Label:
                    NLS_NOM_ELEC_POTL_DIAPHRAGM_MIN                  0x0002FA02
                    Observed Value:
                    NOM_ELEC_POTL_DIAPHRAGM_MIN                      0xFA02
         sDConc     -
                    Label:
                    NLS_NOM_SETT_CONC_DRUG                           0x04026840
                    Observed Value:
                    NOM_SETT_CONC_DRUG                               0x6840
         Edimax     -
                    Label:
                    NLS_NOM_ELEC_POTL_DIAPHRAGM_MAX                  0x0002FA03
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                   Observed Value:
                   NOM_ELEC_POTL_DIAPHRAGM_MAX                          0xFA03
         sDlvRt    -
                   Label:
                   NLS_NOM_SETT_FLOW_DRUG_DELIV                         0x0402686C
                   Observed Value:
                   NOM_SETT_FLOW_DRUG_DELIV                             0x686C
         WOBv      -
                   Label:
                   NLS_NOM_VENT_WORK_BREATHING                          0x0002FA05
                   Observed Value:
                   NOM_VENT_WORK_BREATHING                              0xFA05
         sWOBva    -
                   Label:
                   NLS_NOM_SETT_VENT_WORK_BREATHING_ASSIST              0x0402FBB8
                   Observed Value:
                   NOM_SETT_VENT_WORK_BREATHING_ASSIST                 0xFBB8
         sVBol     -
                   Label:
                   NLS_NOM_SETT_VOL_FLUID_BOLUS                         0x040268A4
                   Observed Value:
                   NOM_SETT_VOL_FLUID_BOLUS                             0x68A4
         WOBp      -
                   Label:
                   NLS_NOM_AWAY_WORK_BREATHING                          0x0002FA06
                   Observed Value:
                   NOM_AWAY_WORK_BREATHING                              0xFA06
         sVtot     -
                   Label:
                   NLS_NOM_SETT_VOL_FLUID_TBI                           0x040268BC
                   Observed Value:
                   NOM_SETT_VOL_FLUID_TBI                               0x68BC
         InfTim    -
                   Label:
                   NLS_NOM_TIME_PD_REMAIN                               0x000268DC
                   Observed Value:
                   NOM_TIME_PD_REMAIN                                   0x68DC
         sKVO      -
                   Label:
                   NLS_NOM_SETT_FLOW_KVO                                0x040268E0
                   Observed Value:
                   NOM_SETT_FLOW_KVO                                    0x68E0
         sDosRt    -
                   Label:
                   NLS_NOM_SETT_RATE_DOSE                               0x040268E4
                   Observed Value:
                   NOM_SETT_RATE_DOSE                                   0x68E4
         sDrug     -
                   Label:
                   NLS_NOM_SETT_DRUG_NAME_TYPE                          0x0402d00A
                   Observed Value:
                   NOM_SETT_DRUG_NAME_TYPE                              0xd00A
         sPuMod    -
                   Label:
                   NLS_NOM_SETT_PUMP_MODE                               0x0402D0B8
                   Observed Value:
                   NOM_SETT_PUMP_MODE                                  0xD0B8
         PuStat    -
                   Label:
                   NLS_NOM_PUMP_STAT                                    0x0002D0BC
                   Observed Value:
                   NOM_PUMP_STAT                                        0xD0BC
         Rrasst    -
                   Label:
                   NLS_NOM_VENT_RESP_RATE_ASSISTED                      0x0002F9C0
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                        Observed Value:
                        NOM_VENT_RESP_RATE_ASSISTED                          0xF9C0
           sRRmax       -
                        Label:
                        NLS_NOM_SETT_RESP_RATE_SPONT_MAX                     0x0402F9C4
                        Observed Value:
                        NOM_SETT_RESP_RATE_SPONT_MAX                         0xF9C4
           sPADel       -
                        Label:
                        NLS_NOM_SETT_PRESS_AWAY_ALARM_DELAY                  0x0402F9C8
                        Observed Value:
                        NOM_SETT_PRESS_AWAY_ALARM_DELAY                      0xF9C8
           sRRbak       -
                        Label:
                        NLS_NOM_SETT_VENT_RESP_RATE_BACKUP                   0x0402F9CC
                        Observed Value:
                        NOM_SETT_VENT_RESP_RATE_BACKUP                       0xf9CC
           sPIbak       -
                        Label:
                        NLS_NOM_SETT_PRESS_AWAY_INSP_BACKUP                  0x0402F9D0
                        Observed Value:
                        NOM_SETT_PRESS_AWAY_INSP_BACKUP                      0xF9D0
           sTVbak       -
                        Label:
                        NLS_NOM_SETT_VOL_AWAY_TIDAL_BACKUP                   0x0402F9D4
                        Observed Value:
                        NOM_SETT_VOL_AWAY_TIDAL_BACKUP                       0xF9D4
           sTube        -
                        Label:
                        NLS_NOM_SETT_VENT_TUBE_TYPE                          0x0402FB3D
                        Observed Value:
                        NOM_SETT_VENT_TUBE_TYPE                              0xFB3D
           sTubeC       -
                        Label:
                        NLS_NOM_SETT_VENT_TUBE_COMPENSATION                  0x0402F9D8
                        Observed Value:
                        NOM_SETT_VENT_TUBE_COMPENSATION                      0xF9D8
           sTubeD       -
                        Label:
                        NLS_NOM_SETT_VENT_TUBE_DIAMETER                      0x0402F9DC
                        Observed Value:
                        NOM_SETT_VENT_TUBE_DIAMETER                          0xF9DC
           sTimax       -
                        Label:
                        NLS_NOM_SETT_VENT_TIME_PD_INSP_MAX                   0x0402F9E0
                        Observed Value:
                        NOM_SETT_VENT_TIME_PD_INSP_MAX                       0xF9E0
           sVSupp       -
                        Label:
                        NLS_NOM_SETT_VENT_MODE_SUPPORT                       0x0402F9E8
                        Observed Value:
                        NOM_SETT_VENT_MODE_SUPPORT                           0xF9E8
           sFlCtr       -
                        Label:
                        NLS_NOM_SETT_VENT_MODE_AUTOFLOW                      0x0402f9EC
                        Observed Value:
                        NOM_SETT_VENT_MODE_AUTOFLOW                          0xf9EC
           r2           -
                        Label:
                        NLS_NOM_AWAY_CORR_COEF_R_SQUARE                      0x0002F9F9
                        Observed Value:
                        NOM_AWAY_CORR_COEF_R_SQUARE                          0xF9F9
           E            -
                        Label:
                        NLS_NOM_ELAS_LUNG                                    0x0002F9FA
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                        Observed Value:
                        NOM_ELAS_LUNG                                          0xF9FA
          Ptrach        -
                        Label:
                        NLS_NOM_PRESS_TRACHEA                                  0x0002F9FE
                        Observed Value:
                        NOM_PRESS_TRACHEA                                      0xF9FE
          sHumid        -
                        Label:
                        NLS_NOM_SETT_VENT_HUMIDIFIER_TYPE                      0x0402F9FF
                        Observed Value:
                        NOM_SETT_VENT_HUMIDIFIER_TYPE                          0xF9FF
          sdPin         -
                        Label:
                        NLS_NOM_SETT_VENT_PRESS_AWAY_PRESS_AWAY_INSP_PV_DELTA  0x0402FA07
                        Observed Value:
                        NOM_SETT_VENT_PRESS_AWAY_PRESS_AWAY_INSP_PV_DELTA      0xFA07
          sdPEEP        -
                        Label:
                        NLS_NOM_SETT_VENT_PRESS_AWAY_PEEP_PV_DELTA             0x0402FA08
                        Observed Value:
                        NOM_SETT_VENT_PRESS_AWAY_PEEP_PV_DELTA                 0xFA08
          sTAmax        -
                        Label:
                        NLS_NOM_SETT_VENT_TIME_PD_APNEA_MAX                    0x0402FA09
                        Observed Value:
                        NOM_SETT_VENT_TIME_PD_APNEA_MAX                        0xFA09
          sBreaT        -
                        Label:
                        NLS_NOM_SETT_TIME_PD_BREATH_TOTAL                      0x0402FA12
                        Observed Value:
                        NOM_SETT_TIME_PD_BREATH_TOTAL                          0xFA12
          sEdiTr        -
                        Label:
                        NLS_NOM_SETT_VENT_ELEC_POTL_DIAPHRAGM_TRIG             0x0402FA0A
                        Observed Value:
                        NOM_SETT_VENT_ELEC_POTL_DIAPHRAGM_TRIG                 0xFA0A
          sNAVA         -
                        Label:
                        NLS_NOM_SETT_VENT_PRESS_AWAY_TO_ELEC_POTL_DIAPHRAGM    0x0402FA0B
                        Observed Value:
                        NOM_SETT_VENT_PRESS_AWAY_TO_ELEC_POTL_DIAPHRAGM        0xFA0B
          %EdiTr        -
                        Label:
                        NLS_NOM_RATIO_BREATH_EDI_TRIG                          0x0002FA0C
                        Observed Value:
                        NOM_RATIO_BREATH_EDI_TRIG                              0xFA0C
          %EdiCy        -
                        Label:
                        NLS_NOM_RATIO_BREATH_EDI_CYCL_OFF                      0x0002FA0D
                        Observed Value:
                        NOM_RATIO_BREATH_EDI_CYCL_OFF                          0xFA0D
          TV/kg         -
                        Label:
                        NLS_NOM_VOL_AWAY_TIDAL_PER_KG_BODY_WEIGHT              0x0002FA10
                        Observed Value:
                        NOM_VOL_AWAY_TIDAL_PER_KG_BODY_WEIGHT                  0xFA10
          TVe/kg        -
                        Label:
                        NLS_NOM_VOL_AWAY_TIDAL_EXP_PER_KG_BODY_WEIGHT          0x0002FB7B
                        Observed Value:
                        NOM_VOL_AWAY_TIDAL_EXP_PER_KG_BODY_WEIGHT              0xFB7B
          Tlow          -
                        Label:
                        NLS_NOM_VENT_TIME_PD_EXP_APRV                          0x0002F940
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                        Observed Value:
                        NOM_VENT_TIME_PD_EXP_APRV                              0xF940
          Phigh         -
                        Label:
                        NLS_NOM_VENT_PRESS_AWAY_INSP_APRV                     0x0002F92E
                        Observed Value:
                        NOM_VENT_PRESS_AWAY_INSP_APRV                          0xF92E
          Plow          -
                        Label:
                        NLS_NOM_VENT_PRESS_AWAY_EXP_APRV                      0x0002F92D
                        Observed Value:
                        NOM_VENT_PRESS_AWAY_EXP_APRV                           0xF92D
          sHFFrq        -
                        Label:
                        NLS_NOM_SETT_VENT_FREQ_HFV                            0x0402FA2E
                        Observed Value:
                        NOM_SETT_VENT_FREQ_HFV                                 0xFA2E
          sHFMAP        -
                        Label:
                        NLS_NOM_SETT_PRESS_AWAY_MEAN_HFV                      0x0402FA33
                        Observed Value:
                        NOM_SETT_PRESS_AWAY_MEAN_HFV                           0xFA33
          sHFVTV        -
                        Label:
                        NLS_NOM_SETT_VENT_VOL_TIDAL_HFV                       0x0402F8BF
                        Observed Value:
                        NOM_SETT_VENT_VOL_TIDAL_HFV                            0xF8BF
          Pxmean        -
                        Label:
                        NLS_NOM_PRESS_AWAY_AUX_MEAN                           0x0002FA27
                        Observed Value:
                        NOM_PRESS_AWAY_AUX_MEAN                                0xFA27
          Pxmin         -
                        Label:
                        NLS_NOM_PRESS_AWAY_AUX_MIN                            0x0002FA26
                        Observed Value:
                        NOM_PRESS_AWAY_AUX_MIN                                 0xFA26
          Pxpeak        -
                        Label:
                        NLS_NOM_PRESS_AWAY_AUX_MAX                            0x0002FA25
                        Observed Value:
                        NOM_PRESS_AWAY_AUX_MAX                                 0xFA25
          FRC           -
                        Label:
                        NLS_NOM_CAPAC_RESID                                   0x0002FA28
                        Observed Value:
                        NOM_CAPAC_RESID                                        0xFA28
          VCO2m²        -
                        Label:
                        NLS_NOM_FLOW_CO2_PROD_RESP_PER_AREA_BODY_SURFACE      0x0002FA2D
                        Observed Value:
                        NOM_FLOW_CO2_PROD_RESP_PER_AREA_BODY_SURFACE           0xFA2D
          VCO2kg        -
                        Label:
                        NLS_NOM_FLOW_CO2_PROD_RESP_PER_KG_BODY_WEIGHT        0x0002FA2C
                        Observed Value:
                        NOM_FLOW_CO2_PROD_RESP_PER_KG_BODY_WEIGHT             0xFA2C
          VO2m²         -
                        Label:
                        NLS_NOM_SAT_O2_CONSUMP_PER_AREA_BODY_SURFACE         0x0002FA2B
                        Observed Value:
                        NOM_SAT_O2_CONSUMP_PER_AREA_BODY_SURFACE              0xFA2B
          VO2kg         -
                        Label:
                        NLS_NOM_SAT_O2_CONSUMP_PER_KG_BODY_WEIGHT            0x0002FA2A
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                    Observed Value:
                    NOM_SAT_O2_CONSUMP_PER_KG_BODY_WEIGHT                 0xFA2A
        sPi-e       -
                    Label:
                    NLS_NOM_SETT_VENT_PRESS_AWAY_INSP_EXP_DIFF            0x0402FA29
                    Observed Value:
                    NOM_SETT_VENT_PRESS_AWAY_INSP_EXP_DIFF                0xFA29
        CRT         -
                    Label:
                    NLS_NOM_TIME_PD_CAP_REFILL                            0x0002FAA4
                    Compund Observed Value:
                    NOM_TIME_PD_CAP_REFILL                                0xFAA4
                    NOM_AWAY_CO2_ET_MIXED                                 0xFB86
                    Units:
                    NOM_DIM_SEC                                           0x0880
        NI          -
                    Label:
                    NLS_NOM_EEG_NARCOTREND_INDEX                          0x0002FAF4
                    Observed Value:
                    NOM_EEG_NARCOTREND_INDEX                              0xFAF4
        STI         -
                    Label:
                    NLS_NOM_EEG_SHARP_TRANSIENT_INTENS                    0x0002FAF5
                    Observed Value:
                    NOM_EEG_SHARP_TRANSIENT_INTENS                        0xFAF5
        Tmatt       -
                    Label:
                    NLS_NOM_TEMP_MATTRESS                                 0x0002FAD4
                    Observed Value:
                    NOM_TEMP_MATTRESS                                     0xFAD4
        sPower      -
                    Label:
                    NLS_NOM_SETT_HEATING_PWR_INCUBATOR                    0x0402F886
                    Observed Value:
                    NOM_SETT_HEATING_PWR_INCUBATOR                        0xF886
        sTmatt      -
                    Label:
                    NLS_NOM_SETT_TEMP_MATTRESS                            0x0402FAD4
                    Observed Value:
                    NOM_SETT_TEMP_MATTRESS                                0xFAD4
        sTair       -
                    Label:
                    NLS_NOM_SETT_TEMP_AIR_INCUB                           0x0402F12A
                    Observed Value:
                    NOM_SETT_TEMP_AIR_INCUB                               0xF12A
        sTskin      -
                    Label:
                    NLS_NOM_SETT_TEMP_SKIN                                0x04024B74
                    Observed Value:
                    NOM_SETT_TEMP_SKIN                                    0x4B74
        HeatPa      -
                    Label:
                    NLS_NOM_HEATING_PWR_TCUT_SENSOR_ABS                   0x0002FAF0
                    Observed Value:
                    NOM_HEATING_PWR_TCUT_SENSOR_ABS                       0xFAF0
        HeatPr      -
                    Label:
                    NLS_NOM_HEATING_PWR_TCUT_SENSOR_REL                   0x0002FAF1
                    Observed Value:
                    NOM_HEATING_PWR_TCUT_SENSOR_REL                       0xFAF1
        PVI         -
                    Label:
                    NLS_NOM_PULS_OXIM_PLETH_AMPL_VAR_INDEX                0x0002FB60
                    Observed Value:
                    NOM_PULS_OXIM_PLETH_AMPL_VAR_INDEX                    0xFB60
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                            Units:
                            NOM_DIM_PERCENT                                    0x0220
            SpMet           -
                            Label:
                            NLS_NOM_PULS_OXIM_HB_MET_ART                       0x0002FB61
                            Observed Value:
                            NOM_PULS_OXIM_HB_MET_ART                           0xFB61
                            Units:
                            NOM_DIM_PERCENT                                    0x0220
            SpCO            -
                            Label:
                            NLS_NOM_PULS_OXIM_HB_CO_ART                        0x0002FB62
                            Observed Value:
                            NOM_PULS_OXIM_HB_CO_ART                            0xFB62
                            Units:
                            NOM_DIM_PERCENT                                    0x0220
            OffsHb          -
                            Label:
                            NLS_NOM_PULS_OXIM_HB_CORR_VAL                      0x0002FB68
                            Observed Value:
                            NOM_PULS_OXIM_HB_CORR_VAL                          0xFB68
                            Units:
                            NOM_DIM_X_G_PER_DL                                 0x0840
                            NOM_DIM_MILLI_MOLE_PER_L                           0x1272
            SpHb            -
                            Label:
                            NLS_NOM_PULS_OXIM_HB_TOTAL                         0x0002FBCF
                            Observed Value:
                            NOM_PULS_OXIM_HB_TOTAL                             0xFBCF
                            Units:
                            NOM_DIM_X_G_PER_DL                                 0x0840
                            NOM_DIM_MILLI_MOLE_PER_L                           0x1272
            SpHb            -
                            Label:
                            NLS_NOM_PULS_OXIM_HB_TOTAL_ART                     0x0002FB63
                            Observed Value:
                            NOM_PULS_OXIM_HB_TOTAL_ART                         0xFB63
                            Units:
                            NOM_DIM_X_G_PER_DL                                 0x0840
                            NOM_DIM_MILLI_MOLE_PER_L                           0x1272
            SpHbv           -
                            Label:
                            NLS_NOM_PULS_OXIM_HB_TOTAL_VEN                     0x0002FB64
                            Observed Value:
                            NOM_PULS_OXIM_HB_TOTAL_VEN                         0xFB64
                            Units:
                            NOM_DIM_X_G_PER_DL                                 0x0840
                            NOM_DIM_MILLI_MOLE_PER_L                           0x1272
            cSpHb           -
                            Label:
                            NLS_NOM_PULS_OXIM_HB_TOTAL_CORR                    0x0002FBD0
                            Observed Value:
                            NOM_PULS_OXIM_HB_TOTAL_CORR                        0xFBD0
                            Units:
                            NOM_DIM_X_G_PER_DL                                 0x0840
                            NOM_DIM_MILLI_MOLE_PER_L                           0x1272
            cSpHb           -
                            Label:
                            NLS_NOM_PULS_OXIM_HB_TOTAL_ART_CORR                0x0002FB65
                            Observed Value:
                            NOM_PULS_OXIM_HB_TOTAL_ART_CORR                    0xFB65
                            Units:
                            NOM_DIM_X_G_PER_DL                                 0x0840
                            NOM_DIM_MILLI_MOLE_PER_L                           0x1272
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cSpHbv      -
            Label:
            NLS_NOM_PULS_OXIM_HB_TOTAL_VEN_CORR                     0x0002FB66
            Observed Value:
            NOM_PULS_OXIM_HB_TOTAL_VEN_CORR                         0xFB66
            Units:
            NOM_DIM_X_G_PER_DL                                      0x0840
            NOM_DIM_MILLI_MOLE_PER_L                                0x1272
SpOC        -
            Label:
            NLS_NOM_PULS_OXIM_CONC_HB_O2_ART_CALC                   0x0002FB67
            Observed Value:
            NOM_PULS_OXIM_CONC_HB_O2_ART_CALC                       0xFB67
            Units:
            NOM_DIM_MILLI_L_PER_DL                                  0x1912
TWrdAd      -
            Label:
            NLS_NOM_PAT_TIME_PD_SINCE_LAST_WARD_ADMIS               0x0002FBC5
            Observed Value:
            NOM_PAT_TIME_PD_SINCE_LAST_WARD_ADMIS                   0xFBC5
            Units:
            NOM_DIM_HR                                              0x08C0
            NOM_DIM_DAY                                             0x08E0
            NOM_DIM_HR                                              0x0900
WardAd      -
            Label:
            NLS_NOM_PAT_TIME_WARD_ADMIS                             0x0002FBC6
            Observed Value:
            NOM_PAT_TIME_WARD_ADMIS                                 0xFBC6
            Units:
            NOM_DIM_HR                                              0x08C0
            NOM_DIM_DAY                                             0x08E0
            NOM_DIM_HR                                              0x0900
BMI         -
            Label:
            NLS_NOM_RATIO_MASS_BODY_LEN_SQ                          0x0002E150
            Observed Value:
            NOM_RATIO_MASS_BODY_LEN_SQ                              0xE150
            Units:
            NOM_DIM_KG_PER_M_SQ                                     0x07A3
sCComp      Gambro Prismaflex
            Label:
            NLS_NOM_SETT_CALCIUM_COMP                               0x0402FAA3
            Observed Value:
            NOM_SETT_CALCIUM_COMP                                   0xFAA3
sCitLo      Gambro Prismaflex
            Label:
            NLS_NOM_SETT_CITRATE_LOAD                               0x0402FAA0
            Observed Value:
            NOM_SETT_CITRATE_LOAD                                   0xFAA0
sCConc      Gambro Prismaflex
            Label:
            NLS_NOM_SETT_CONC_CALCIUM_SOLUTION                      0x0402FAA2
            Observed Value:
            NOM_SETT_CONC_CALCIUM_SOLUTION                          0xFAA2
sCSCAC      Gambro Prismaflex
            Label:
            NLS_NOM_SETT_CONC_CITRATE_ACID_SOLUTION                 0x0402FA9F
            Observed Value:
            NOM_SETT_CONC_CITRATE_ACID_SOLUTION                     0xFA9F
sCitDo      Gambro Prismaflex
            Label:
            NLS_NOM_SETT_CONC_CITRATE_BLD                           0x0402FA9D
            Observed Value:
            NOM_SETT_CONC_CITRATE_BLD                               0xFA9D
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sCitCo	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_CONC_CITRATE_SOLUTION	0x0402FA9E
	Observed Value:	
	NOM_SETT_CONC_CITRATE_SOLUTION	0xFA9E
cHCTo	Gambro Prismaflex	
	Label:	
	NLS_NOM_CONC_HCT_POST_DIALYS	0x0002FBD2
	Observed Value:	
	NOM_CONC_HCT_POST_DIALYS	0xFBD2
scHCTi	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_CONC_HCT_PRE_DIALYS	0x0402FBD1
	Observed Value:	
	NOM_SETT_CONC_HCT_PRE_DIALYS	0xFBD1
nFilt	Gambro Prismaflex	
	Label:	
	NLS_NOM_FILTER_SETS_USED_CUMULATED_DIALYS	0x0002FBEA
	Observed Value:	
	NOM_FILTER_SETS_USED_CUMULATED_DIALYS	0xFBEA
sBFl	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_FLOW_BLD_DIALYSIS	0x0402FA8C
	Observed Value:	
	NOM_SETT_FLOW_BLD_DIALYSIS	0xFA8C
sCSR	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_FLOW_CALCIUM_PUMP	0x0402FAA1
	Observed Value:	
	NOM_SETT_FLOW_CALCIUM_PUMP	0xFAA1
sDialF	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_FLOW_DIALYSIS_DIALYSATE	0x0402FA8F
	Observed Value:	
	NOM_SETT_FLOW_DIALYSIS_DIALYSATE	0xFA8F
sEfflF	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_FLOW_DIALYSIS_EFFLUENT	0x0402FA91
	Observed Value:	
	NOM_SETT_FLOW_DIALYSIS_EFFLUENT	0xFA91
sPBPFl	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_FLOW_DIALYSIS_PRE_BLD	0x0402FA90
	Observed Value:	
	NOM_SETT_FLOW_DIALYSIS_PRE_BLD	0xFA90
sRPoFl	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_FLOW_DIALYSIS_REPLACEMENT_POST	0x0402FA8E
	Observed Value:	
	NOM_SETT_FLOW_DIALYSIS_REPLACEMENT_POST	0xFA8E
sRPrFl	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_FLOW_DIALYSIS_REPLACEMENT_PRE	0x0402FA8D
	Observed Value:	
	NOM_SETT_FLOW_DIALYSIS_REPLACEMENT_PRE	0xFA8D
sWTbal	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_FLOW_DIFF_FLUID_BAL_PD_TOT	0x0402FA9B
	Observed Value:	
	NOM_SETT_FLOW_DIFF_FLUID_BAL_PD_TOT	0xFA9B
sHepRt	Gambro Prismaflex	
	Label:	
	NLS_NOM_SETT_FLOW_HEPARIN_PUMP	0x0402FA9C
	Observed Value:	
	NOM_SETT_FLOW_HEPARIN_PUMP	0xFA9C

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sUFR          Gambro Prismaflex
              Label:
              NLS_NOM_SETT_RATIO_FLOW_EFFLUENT_BLD_DIALYSIS          0x0402FA94
              Observed Value:
              NOM_SETT_RATIO_FLOW_EFFLUENT_BLD_DIALYSIS             0xFA94
sFufrP        Gambro Prismaflex
              Label:
              NLS_NOM_SETT_RATIO_FLOW_FILT_FRACT_UFR_PLASMA_DIALYS  0x0402FBD4
              Observed Value:
              NOM_SETT_RATIO_FLOW_FILT_FRACT_UFR_PLASMA_DIALYS      0xFBD4
VeffNh        Gambro Prismaflex
              Label:
              NLS_NOM_RATIO_VOL_EFFLUENT_PER_HR_DIALYS             0x0002FBE5
              Observed Value:
              NOM_RATIO_VOL_EFFLUENT_PER_HR_DIALYS                 0xFBE5
EffDn         Gambro Prismaflex
              Label:
              NLS_NOM_RATIO_VOL_EFFLUENT_TOT_DIALYS                0x0002FBD3
              Observed Value:
              NOM_RATIO_VOL_EFFLUENT_TOT_DIALYS                    0xFBD3
VdpoNh        Gambro Prismaflex
              Label:
              NLS_NOM_RATIO_VOL_REPL_POST_DELIV_PER_HR_DIALYS      0x0002FBE3
              Observed Value:
              NOM_RATIO_VOL_REPL_POST_DELIV_PER_HR_DIALYS          0xFBE3
VrePN         Gambro Prismaflex
              Label:
              NLS_NOM_RATIO_VOL_REPL_WITH_PBP_CUMULATED_DIALYS     0x0002FBDE
              Observed Value:
              NOM_RATIO_VOL_REPL_WITH_PBP_CUMULATED_DIALYS         0xFBDE
VrePNh        Gambro Prismaflex
              Label:
              NLS_NOM_RATIO_VOL_REPL_WITH_PBP_CUMULATED_PER_HR_DIALYS  0x0002FBDD
              Observed Value:
              NOM_RATIO_VOL_REPL_WITH_PBP_CUMULATED_PER_HR_DIALYS  0xFBDD
VdprNh        Gambro Prismaflex
              Label:
              NLS_NOM_RATIO_VOL_REPL_WITH_PBP_PRE_DELIV_PER_HR_DIALYS  0x0002FBE1
              Observed Value:
              NOM_RATIO_VOL_REPL_WITH_PBP_PRE_DELIV_PER_HR_DIALYS  0xFBE1
VufrN         Gambro Prismaflex
              Label:
              NLS_NOM_RATIO_VOL_UFR_CUMULATED_PER_HR_DIALYS        0x0002FBDA
              Observed Value:
              NOM_RATIO_VOL_UFR_CUMULATED_PER_HR_DIALYS            0xFBDA
VufrNh        Gambro Prismaflex
              Label:
              NLS_NOM_RATIO_VOL_UFR_PER_HR_DIALYS                  0x0002FBD9
              Observed Value:
              NOM_RATIO_VOL_UFR_PER_HR_DIALYS                      0xFBD9
sBolIn        Gambro Prismaflex
              Label:
              NLS_NOM_SETT_TIME_PD_BOLUS_DELIV                     0x0402FA93
              Observed Value:
              NOM_SETT_TIME_PD_BOLUS_DELIV                         0xFA93
FiltTi        Gambro Prismaflex
              Label:
              NLS_NOM_TIME_PD_FILTER_USE_DIALYS                    0x0002FBD5
              Observed Value:
              NOM_TIME_PD_FILTER_USE_DIALYS                        0xFBD5
Vdly/h        Gambro Prismaflex
              Label:
              NLS_NOM_VOL_DIALYSATE_PER_HR_DIALYS                  0x0002FBE7
              Observed Value:
              NOM_VOL_DIALYSATE_PER_HR_DIALYS                      0xFBE7
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Veff/h      Gambro Prismaflex
            Label:
            NLS_NOM_VOL_EFFLUENT_PER_HR_DIALYS                              0x0002FBE4
            Observed Value:
            NOM_VOL_EFFLUENT_PER_HR_DIALYS                                  0xFBE4
sEPFL       Gambro Prismaflex
            Label:
            NLS_NOM_SETT_VOL_FLUID_BALANCE_PATIENT_LIMIT_DIALYSIS           0x0402FA96
            Observed Value:
            NOM_SETT_VOL_FLUID_BALANCE_PATIENT_LIMIT_DIALYSIS               0xFA96
sMaxG       Gambro Prismaflex
            Label:
            NLS_NOM_SETT_VOL_MAX_GAIN                                       0x0402FA95
            Observed Value:
            NOM_SETT_VOL_MAX_GAIN                                           0xFA95
Vrem/h      Gambro Prismaflex
            Label:
            NLS_NOM_VOL_PAT_FLUID_REMOVAL_PER_HR_DIALYS                     0x0002FBD6
            Observed Value:
            NOM_VOL_PAT_FLUID_REMOVAL_PER_HR_DIALYS                         0xFBD6
VPBP/h      Gambro Prismaflex
            Label:
            NLS_NOM_VOL_PBP_PER_HR_DIALYS                                   0x0002FBE6
            Observed Value:
            NOM_VOL_PBP_PER_HR_DIALYS                                       0xFBE6
Vrep/h      Gambro Prismaflex
            Label:
            NLS_NOM_VOL_REPL_PER_HR_DIALYS                                  0x0002FBE8
            Observed Value:
            NOM_VOL_REPL_PER_HR_DIALYS                                      0xFBE8
Vdpo/h      Gambro Prismaflex
            Label:
            NLS_NOM_VOL_REPL_POST_DELIV_PER_HR_DIALYS                       0x0002FBE2
            Observed Value:
            NOM_VOL_REPL_POST_DELIV_PER_HR_DIALYS                           0xFBE2
VreP        Gambro Prismaflex
            Label:
            NLS_NOM_VOL_REPL_WITH_PBP_CUMULATED_DIALYS                      0x0002FBDC
            Observed Value:
            NOM_VOL_REPL_WITH_PBP_CUMULATED_DIALYS                          0xFBDC
VreP/h      Gambro Prismaflex
            Label:
            NLS_NOM_VOL_REPL_WITH_PBP_PER_HR_DIALYS                         0x0002FBDB
            Observed Value:
            NOM_VOL_REPL_WITH_PBP_PER_HR_DIALYS                             0xFBDB
Vdpr        Gambro Prismaflex
            Label:
            NLS_NOM_VOL_REPL_WITH_PBP_PRE_DELIV_CUMULATED_DIALYS            0x0002FBE0
            Observed Value:
            NOM_VOL_REPL_WITH_PBP_PRE_DELIV_CUMULATED_DIALYS                0xFBE0
Vdpr/h      Gambro Prismaflex
            Label:
            NLS_NOM_VOL_REPL_WITH_PBP_PRE_DELIV_PER_HR_DIALYS               0x0002FBDF
            Observed Value:
            NOM_VOL_REPL_WITH_PBP_PRE_DELIV_PER_HR_DIALYS                   0xFBDF
Vsyr/h      Gambro Prismaflex
            Label:
            NLS_NOM_VOL_SYRINGE_PER_HR_DIALYS                               0x0002FBE9
            Observed Value:
            NOM_VOL_SYRINGE_PER_HR_DIALYS                                   0xFBE9
Vufr        Gambro Prismaflex
            Label:
            NLS_NOM_VOL_UFR_CUMULATED_DIALYS                                0x0002FBD8
            Observed Value:
            NOM_VOL_UFR_CUMULATED_DIALYS                                    0xFBD8
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Vufr/h      Gambro Prismaflex
            Label:
            NLS_NOM_VOL_UFR_PER_HR_DIALYS                    0x0002FBD7
            Observed Value:
            NOM_VOL_UFR_PER_HR_DIALYS                        0xFBD7
cNBP        -
            Label:
            NLS_NOM_PRESS_BLD_NONINV_CTS                     0x0002FB90
            Compound Observed Value:
            NOM_PRESS_BLD_NONINV_CTS_SYS                     0xFB91
            NOM_PRESS_BLD_NONINV_CTS_DIA                     0xFB92
            NOM_PRESS_BLD_NONINV_CTS_MEAN                    0xFB93
NBP_T       -
            Label:
            NLS_NOM_PRESS_BLD_NONINV_TELE                    0x0002F0A0
            Compound Observed Value:
            NOM_PRESS_BLD_NONINV_TELE_SYS                    0xF0A1
            NOM_PRESS_BLD_NONINV_TELE_DIA                    0xF0A2
            NOM_PRESS_BLD_NONINV_TELE_MEAN                   0xF0A3
AccAir      -
            Label:
            NLS_NOM_AIR_COMSUMP_TOT                          0x0002FA60
            Observed Value:
            NOM_AIR_COMSUMP_TOT                              0xFA60
iCFI        -
            Label:
            NLS_NOM_CARD_FUNC_INDEX_NONCTS                   0x0002FB0F
            Observed Value:
            NOM_CARD_FUNC_INDEX_NONCTS                       0xFB0F
Chos        -
            Label:
            NLS_NOM_COMPL_BREATHING_HOSES                    0x0002FB33
            Observed Value:
            NOM_COMPL_BREATHING_HOSES                        0xFB33
AccDes      -
            Label:
            NLS_NOM_DESFL_COMSUMP_TOT                        0x0002FA44
            Observed Value:
            NOM_DESFL_COMSUMP_TOT                            0xFA44
sdBISl      -
            Label:
            NLS_NOM_EEG_BIS_STDDEV_LEFT                      0x0002FACB
            Observed Value:
            NOM_EEG_BIS_STDDEV_LEFT                          0xFACB
sdBISr      -
            Label:
            NLS_NOM_EEG_BIS_STDDEV_RIGHT                     0x0002FACC
            Observed Value:
            NOM_EEG_BIS_STDDEV_RIGHT                         0xFACC
sdEMGl      -
            Label:
            NLS_NOM_EEG_EMG_STDDEV_LEFT                      0x0002FACE
            Observed Value:
            NOM_EEG_EMG_STDDEV_LEFT                          0xFACE
sdEMGr      -
            Label:
            NLS_NOM_EEG_EMG_STDDEV_RIGHT                     0x0002FACF
            Observed Value:
            NOM_EEG_EMG_STDDEV_RIGHT                         0xFACF
AccENF      -
            Label:
            NLS_NOM_ENFL_COMSUMP_TOT                         0x0002FA4C
            Observed Value:
            NOM_ENFL_COMSUMP_TOT                             0xFA4C
```

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REF           -
              Label:
              NLS_NOM_FRACT_EJECT_NONCTS                          0x0002FB0E
              Observed Value:
              NOM_FRACT_EJECT_NONCTS                              0xFB0E
AccHAL        -
              Label:
              NLS_NOM_HALTH_COMSUMP_TOT                           0x0002FA54
              Observed Value:
              NOM_HALTH_COMSUMP_TOT                               0xFA54
AccISO        -
              Label:
              NLS_NOM_ISOFL_COMSUMP_TOT                           0x0002FA48
              Observed Value:
              NOM_ISOFL_COMSUMP_TOT                               0xFA48
AccN2O        -
              Label:
              NLS_NOM_N2O_COMSUMP_TOT                             0x0002FA5C
              Observed Value:
              NOM_N2O_COMSUMP_TOT                                 0xFA5C
AccO2         -
              Label:
              NLS_NOM_O2_COMSUMP_TOT                              0x0002FA58
              Observed Value:
              NOM_O2_COMSUMP_TOT                                  0xFA58
IBW           -
              Label:
              NLS_NOM_PAT_WEIGHT_IDEAL                            0x0002FAD9
              Observed Value:
              NOM_PAT_WEIGHT_IDEAL                                0xFAD9
iPVPI         -
              Label:
              NLS_NOM_PERM_VASC_PULM_INDEX_NONCTS                 0x0002FB0D
              Observed Value:
              NOM_PERM_VASC_PULM_INDEX_NONCTS                     0xFB0D
iARTm         -
              Label:
              NLS_NOM_PRESS_BLD_ART_MEAN_NONCTS                   0x0002FB19
              Observed Value:
              NOM_PRESS_BLD_ART_MEAN_NONCTS                       0xFB19
iCVP          -
              Label:
              NLS_NOM_PRESS_BLD_VEN_CENT_NONCTS                   0x0002FB18
              Observed Value:
              NOM_PRESS_BLD_VEN_CENT_NONCTS                       0xFB18
AccP          -
              Label:
              NLS_NOM_PRESS_DIALYSIS_ACCESS                       0x0002FA7D
              Observed Value:
              NOM_PRESS_DIALYSIS_ACCESS                           0xFA7D
EfflP         -
              Label:
              NLS_NOM_PRESS_DIALYSIS_EFFLUENT                     0x0002FA7F
              Observed Value:
              NOM_PRESS_DIALYSIS_EFFLUENT                         0xFA7F
FiltP         -
              Label:
              NLS_NOM_PRESS_DIALYSIS_FILTER                       0x0002FA7E
              Observed Value:
              NOM_PRESS_DIALYSIS_FILTER                           0xFA7E
RetP          -
              Label:
              NLS_NOM_PRESS_DIALYSIS_RETURN                       0x0002FA80
              Observed Value:
              NOM_PRESS_DIALYSIS_RETURN                           0xFA80
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TMP             -
                Label:
                NLS_NOM_PRESS_DIFF_HYDRAULIC_BLD_DIALYZER              0x0002FA81
                Observed Value:
                NOM_PRESS_DIFF_HYDRAULIC_BLD_DIALYZER                  0xFA81
DP              -
                Label:
                NLS_NOM_PRESS_DIFF_IN_OUT_DIALYZER                     0x0002FA82
                Observed Value:
                NOM_PRESS_DIFF_IN_OUT_DIALYZER                         0xFA82
iAvgPR          -
                Label:
                NLS_NOM_PULS_RATE_NONCTS                               0x0002FB10
                Observed Value:
                NOM_PULS_RATE_NONCTS                                   0xFB10
sBIE1:          -
                Label:
                NLS_NOM_SETT_RATIO_IE_BACKUP                           0x0402FB9E
                Observed Value:
                NOM_SETT_RATIO_IE_BACKUP                               0xFB9E
sE              -
                Label:
                NLS_NOM_SETT_RATIO_IE_E                                0x0402FB7D
                Observed Value:
                NOM_SETT_RATIO_IE_E                                    0xFB7D
sI              -
                Label:
                NLS_NOM_SETT_RATIO_IE_I                                0x0402FB7C
                Observed Value:
                NOM_SETT_RATIO_IE_I                                    0xFB7C
iSVRI           -
                Label:
                NLS_NOM_RES_VASC_SYS_INDEX_NONCTS                      0x0002FB06
                Observed Value:
                NOM_RES_VASC_SYS_INDEX_NONCTS                          0xFB06
iSVRI           -
                Label:
                NLS_NOM_RES_VASC_SYS_NONCTS                            0x0002FB05
                Observed Value:
                NOM_RES_VASC_SYS_NONCTS                                0xFB05
iVO2e           -
                Label:
                NLS_NOM_SAT_O2_CONSUMP_ESTIMATED_NONCTS                0x0002FB16
                Observed Value:
                NOM_SAT_O2_CONSUMP_ESTIMATED_NONCTS                    0xFB16
iVO2Ie          -
                Label:
                NLS_NOM_SAT_O2_CONSUMP_INDEX_ESTIMATED_NONCTS          0x0002FB17
                Observed Value:
                NOM_SAT_O2_CONSUMP_INDEX_ESTIMATED_NONCTS              0xFB17
iVO2I           -
                Label:
                NLS_NOM_SAT_O2_CONSUMP_INDEX_NONCTS                    0x0002FB15
                Observed Value:
                NOM_SAT_O2_CONSUMP_INDEX_NONCTS                        0xFB15
iVO2            -
                Label:
                NLS_NOM_SAT_O2_CONSUMP_NONCTS                          0x0002FB14
                Observed Value:
                NOM_SAT_O2_CONSUMP_NONCTS                              0xFB14
iDO2I           -
                Label:
                NLS_NOM_SAT_O2_DELIVER_INDEX_NONCTS                    0x0002FB13
                Observed Value:
                NOM_SAT_O2_DELIVER_INDEX_NONCTS                        0xFB13
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iDO2I        -
             Label:
             NLS_NOM_SAT_O2_DELIVER_NONCTS                        0x0002FB12
             Observed Value:
             NOM_SAT_O2_DELIVER_NONCTS                            0xFB12
AccSEV       -
             Label:
             NLS_NOM_SEVOFL_COMSUMP_TOT                           0x0002FA50
             Observed Value:
             NOM_SEVOFL_COMSUMP_TOT                               0xFA50
iAvgBT       -
             Label:
             NLS_NOM_TEMP_ART_NONCTS                              0x0002FB11
             Observed Value:
             NOM_TEMP_ART_NONCTS                                  0xFB11
sInTiB       -
             Label:
             NLS_NOM_SETT_TIME_PD_INSP_BACKUP                     0x0402FBA1
             Observed Value:
             NOM_SETT_TIME_PD_INSP_BACKUP                         0xFBA1
InTtvTi      -
             Label:
             NLS_NOM_TIME_PD_NEXT_INTERVENTION_DIALYSIS           0x0002FA83
             Observed Value:
             NOM_TIME_PD_NEXT_INTERVENTION_DIALYSIS               0xFA83
RunTi        -
             Label:
             NLS_NOM_TIME_PD_TREATMENT_DIALYSIS                   0x0002FA8A
             Observed Value:
             NOM_TIME_PD_TREATMENT_DIALYSIS                       0xFA8A
sfgFmn       -
             Label:
             NLS_NOM_SETT_VENT_AWAY_FLOW_MIN                      0x0402FB39
             Observed Value:
             NOM_SETT_VENT_AWAY_FLOW_MIN                          0xFB39
sEndFl       -
             Label:
             NLS_NOM_SETT_VENT_FLOW_INSP_MAX_BREATH_END           0x0402FA70
             Observed Value:
             NOM_SETT_VENT_FLOW_INSP_MAX_BREATH_END               0xFA70
sPi-eB       -
             Label:
             NLS_NOM_SETT_VENT_PRESS_AWAY_INSP_EXP_DIFF_BACKUP    0x0402FBA2
             Observed Value:
             NOM_SETT_VENT_PRESS_AWAY_INSP_EXP_DIFF_BACKUP        0xFBA2
RRCO2        -
             Label:
             NLS_NOM_VENT_RESP_RATE_CO2                           0x0002FB27
             Observed Value:
             NOM_VENT_RESP_RATE_CO2                               0xFB27
RRawf        -
             Label:
             NLS_NOM_VENT_RESP_RATE_FLOW                          0x0002FB28
             Observed Value:
             NOM_VENT_RESP_RATE_FLOW                              0xFB28
StrssI       -
             Label:
             NLS_NOM_VENT_STRESS_INDEX                            0x0002FAED
             Observed Value:
             NOM_VENT_STRESS_INDEX                                0xFAED
BVolPr       -
             Label:
             NLS_NOM_VOL_TOTAL_BLD_DIALYSIS                       0x0002FA8B
             Observed Value:
             NOM_VOL_TOTAL_BLD_DIALYSIS                           0xFA8B
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sNebTi          -
                Label:
                NLS_NOM_SETT_VENT_TIME_PD_NEBULIZER                      0x0402FB99
                Observed Value:
                NOM_SETT_VENT_TIME_PD_NEBULIZER                          0xFB99
sPSVbd          -
                Label:
                NLS_NOM_SETT_VENT_TIME_PD_PSV_BACKUP_DELAY               0x0402FA74
                Observed Value:
                NOM_SETT_VENT_TIME_PD_PSV_BACKUP_DELAY                   0xFA74
Lksys           -
                Label:
                NLS_NOM_VENT_VOL_LEAK_SYSTEM                             0x0002FB31
                Observed Value:
                NOM_VENT_VOL_LEAK_SYSTEM                                 0xFB31
iITBVI          -
                Label:
                NLS_NOM_VOL_BLD_INTRA_THOR_INDEX_NONCTS                  0x0002FB0A
                Observed Value:
                NOM_VOL_BLD_INTRA_THOR_INDEX_NONCTS                      0xFB0A
iITVB           -
                Label:
                NLS_NOM_VOL_BLD_INTRA_THOR_NONCTS                        0x0002FB09
                Observed Value:
                NOM_VOL_BLD_INTRA_THOR_NONCTS                            0xFB09
iSI             -
                Label:
                NLS_NOM_VOL_BLD_STROKE_INDEX_NONCTS                      0x0002FB04
                Observed Value:
                NOM_VOL_BLD_STROKE_INDEX_NONCTS                          0xFB04
iSV             -
                Label:
                NLS_NOM_VOL_BLD_STROKE_NONCTS                            0x0002FB03
                Observed Value:
                NOM_VOL_BLD_STROKE_NONCTS                                0xFB03
DialC           -
                Label:
                NLS_NOM_VOL_DIALYSIS_CUMULATED_DIALYSATE                 0x0002FA86
                Observed Value:
                NOM_VOL_DIALYSIS_CUMULATED_DIALYSATE                     0xFA86
EfflC           -
                Label:
                NLS_NOM_VOL_DIALYSIS_CUMULATED_EFFLUENT                  0x0002FA88
                Observed Value:
                NOM_VOL_DIALYSIS_CUMULATED_EFFLUENT                      0xFA88
PreBC           -
                Label:
                NLS_NOM_VOL_DIALYSIS_CUMULATED_PRE_BLD                   0x0002FA87
                Observed Value:
                NOM_VOL_DIALYSIS_CUMULATED_PRE_BLD                       0xFA87
RpostC          -
                Label:
                NLS_NOM_VOL_DIALYSIS_CUMULATED_REPLACEMENT_POST          0x0002FA85
                Observed Value:
                NOM_VOL_DIALYSIS_CUMULATED_REPLACEMENT_POST              0xFA85
RpreC           -
                Label:
                NLS_NOM_VOL_DIALYSIS_CUMULATED_REPLACEMENT_PRE           0x0002FA84
                Observed Value:
                NOM_VOL_DIALYSIS_CUMULATED_REPLACEMENT_PRE               0xFA84
SyrC            -
                Label:
                NLS_NOM_VOL_DIALYSIS_CUMULATED_SYRINGE                   0x0002FA89
                Observed Value:
                NOM_VOL_DIALYSIS_CUMULATED_SYRINGE                       0xFA89
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Wtcum         -
              Label:
              NLS_NOM_VOL_DIFF_FLUID_BAL_PD_TOT                  0x0002FA9A
              Observed Value:
              NOM_VOL_DIFF_FLUID_BAL_PD_TOT                      0xFA9A
iGEDVI        -
              Label:
              NLS_NOM_VOL_GLOBAL_END_DIA_INDEX_NONCTS            0x0002FA08
              Observed Value:
              NOM_VOL_GLOBAL_END_DIA_INDEX_NONCTS                0xFA08
iGEDV         -
              Label:
              NLS_NOM_VOL_GLOBAL_END_DIA_NONCTS                  0x0002FA07
              Observed Value:
              NOM_VOL_GLOBAL_END_DIA_NONCTS                      0xFB07
iEVLWI        -
              Label:
              NLS_NOM_VOL_LUNG_WATER_EXTRA_VASC_INDEX_NONCTS     0x0002FB0C
              Observed Value:
              NOM_VOL_LUNG_WATER_EXTRA_VASC_INDEX_NONCTS         0xFB0C
iEVLWI        -
              Label:
              NLS_NOM_VOL_LUNG_WATER_EXTRA_VASC_NONCTS           0x0002FB0B
              Observed Value:
              NOM_VOL_LUNG_WATER_EXTRA_VASC_NONCTS               0xFB0B
              Units:
              UNDEFINED
LI            Light Intenisty. SvO2
              Label:
              NLS_NOM_INTENS_LIGHT                               0x0002F072
              Observed Value:
              NOM_INTENS_LIGHT                                   0xF072
DO2           Oxygen Availability DO2
              Label:
              NLS_NOM_SAT_O2_DELIVER                             0x0002F06D
              Observed Value:
              NOM_SAT_O2_DELIVER                                 0xF06D
DO2I          Oxygen Availability Index
              Label:
              NLS_NOM_SAT_O2_DELIVER_INDEX                       0x0002F06E
              Observed Value:
              NOM_SAT_O2_DELIVER_INDEX                           0xF06E
O2ER          Oxygen Extraction Ratio
              Label:
              NLS_NOM_RATIO_SAT_O2_CONSUMP_DELIVER               0x0002F06F
              Observed Value:
              NOM_RATIO_SAT_O2_CONSUMP_DELIVER                   0xF06F
Qs/Qt         Percent Alveolarvenous Shunt Qs/Qt
              Label:
              NLS_NOM_RATIO_ART_VEN_SHUNT                        0x0002F070
              Observed Value:
              NOM_RATIO_ART_VEN_SHUNT                            0xF070
AaDO2         Alveolar- Arterial Oxygen Difference
              Label:
              NLS_NOM_SAT_DIFF_O2_ART_ALV                        0x00024B40
              Observed Value:
              NOM_SAT_DIFF_O2_ART_ALV                            0x4B40
Sp-vO2        Difference between Spo2 and SvO2
              Label:
              NLS_NOM_SAT_DIFF_O2_ART_VEN                        0x0002F06C
              Observed Value:
              NOM_SAT_DIFF_O2_ART_VEN                            0xF06C
tcGas         Generic Term for the Transcutaneous Gases
              Label:
              NLS_NOM_GAS_TCUT                                   0x0002F051
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                     Observed Value:
                     NOM_GAS_TCUT                                    0xF051
tcpO2     Transcutaneous Oxygen Partial Pressure
                     Label:
                     NLS_NOM_O2_TCUT                                 0x000250D0
                     Observed Value:
                     NOM_O2_TCUT                                     0x50D0
                     Units:
                     NOM_DIM_MMHG                                    0x0F20
                     NOM_DIM_KILO_PASCAL                            0x0F03
tcpCO2    Transcutaneous Carbon Dioxide Partial Pressure
                     Label:
                     NLS_NOM_CO2_TCUT                                0x000250CC
                     Observed Value:
                     NOM_CO2_TCUT                                    0x50CC
                     Units:
                     NOM_DIM_MMHG                                    0x0F20
                     NOM_DIM_KILO_PASCAL                            0x0F03
SitTim    NOM_DIM_MIN
                     Label:
                     NLS_NOM_TIME_TCUT_SENSOR                        0x0002F03E
                     Observed Value:
                     NOM_TIME_TCUT_SENSOR                            0xF03E
SensrT Sensor Temperature
                     Label:
                     NLS_NOM_TEMP_TCUT_SENSOR                        0x0002F03F
                     Observed Value:
                     NOM_TEMP_TCUT_SENSOR                            0xF03F
                     Units:
                     NOM_DIM_DEGC                                    0x17A0
                     NOM_DIM_FAHR                                    0x1140
HeatPw NOM_DIM_MILLI_WATT
                     Label:
                     NLS_NOM_HEATING_PWR_TCUT_SENSOR                 0x0002F076
                     Observed Value:
                     NOM_HEATING_PWR_TCUT_SENSOR                     0xF076
CO2       CO2 concentration
                     Label:
                     NLS_NOM_AWAY_CO2                                0x000250AC
                     Observed Value (from VueLink):
                     NOM_AWAY_CO2                                    0x50AC
                     Compound Observed Value:
                     NOM_AWAY_CO2_ET                                 0x50B0
                     NOM_AWAY_CO2_INSP_MIN                           0x50BA
                     Units:
                     NOM_DIM_MMHG                                    0x0F20
                     NOM_DIM_PERCENT                                 0x0220
                     NOM_DIM_KILO_PASCAL                            0x0F03
RRspir    Respiration Rate from Spirometry
                     Label:
                     NLS_NOM_AWAY_RESP_RATE_SPIRO                    0x0002F0E2
                     Observed Value:
                     NOM_AWAY_RESP_RATE_SPIRO                        0xF0E2
                     Units:
                     NOM_DIM_RESP_PER_MIN                            0x0AE0
awRR      Airway Respiration Rate
                     Label:
                     NLS_NOM_AWAY_RESP_RATE                          0x00025012
                     Observed Value:
                     NOM_AWAY_RESP_RATE                              0x5012
                     Units:
                     NOM_DIM_RESP_PER_MIN                            0x0AE0
acResp    Acoustic Respiration
                     Label:
                     NLS_NOM_ACOUSTIC_RESP                           0x0002FB5E
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                         Observed Value:
                         NOM_ACOUSTIC_RESP                                  0xFB5E
                         Units:
                         UNDEFINED
            O2           Generic oxigen measurement label
                         Label:
                         NLS_NOM_CONC_AWAY_O2                               0x00025164
                         Observed Value (from VueLink):
                         NOM_CONC_AWAY_O2                                   0x5164
                         Compound Observed Value:
                         NOM_CONC_AWAY_O2_ET                               0x5378
                         NOM_CONC_AWAY_O2_INSP                             0x5284
                         Units:
                         NOM_DIM_MMHG                                       0x0F20
                         NOM_DIM_PERCENT                                    0x0220
                         NOM_DIM_KILO_PASCAL                                0x0F03
            FIO2         Fractional Inspired Oxygen FIO2
                         Label:
                         NLS_NOM_VENT_CONC_AWAY_O2_INSP                     0x00027498
                         Observed Value:
                         NOM_VENT_CONC_AWAY_O2_INSP                         0x7498
            RR           Respiration Rate
                         Label:
                         NLS_NOM_RESP_RATE                                  0x0002500A
                         Observed Value:
                         NOM_RESP_RATE                                      0x500A
                         Units:
                         NOM_DIM_RESP_PER_MIN                               0x0AE0
            T.I.         Transthoracic Impedance
                         Label:
                         NLS_NOM_IMPED_TTHOR                                0x000250E4
                         Observed Value:
                         NOM_IMPED_TTHOR                                    0x50E4
            RRac         Accoustic Respiration Rate
                         Label:
                         NLS_NOM_ACOUSTIC_RESP_RATE                         0x0002FB5F
                         Observed Value:
                         NOM_ACOUSTIC_RESP_RATE                             0xFB5F
                         Units:
                         NOM_DIM_RESP_PER_MIN                               0x0AE0
            VCO2         CO2 Production
                         Label:
                         NLS_NOM_FLOW_CO2_PROD_RESP                         0x000250E0
                         Observed Value:
                         NOM_FLOW_CO2_PROD_RESP                             0x50E0
            VCO2ti       CO2 Tidal Production
                         Label:
                         NLS_NOM_FLOW_CO2_PROD_RESP_TIDAL                   0x0002F882
                         Observed Value:
                         NOM_FLOW_CO2_PROD_RESP_TIDAL                       0xF882
            Pplat        Plateau Pressure
                         Label:
                         NLS_NOM_PRESS_RESP_PLAT                            0x000250E8
                         Observed Value:
                         NOM_PRESS_RESP_PLAT                                0x50E8
            PplDyn       Plateau Pressure
                         Label:
                         NLS_NOM_PRESS_RESP_PLAT_DYN                        0x0002FBB6
                         Observed Value:
                         NOM_PRESS_RESP_PLAT_DYN                            0xFBB6
            AWP          Airway Pressure Wave
                         Label:
                         NLS_NOM_PRESS_AWAY                                 0x000250F0
                         Observed Value:
                         NOM_PRESS_AWAY                                     0x50F0
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AWPmin     Airway Pressure Minimum
           Label:
           NLS_NOM_PRESS_AWAY_MIN                            0x000250F2
           Observed Value:
           NOM_PRESS_AWAY_MIN                                0x50F2
CPAP       Continuous Positive Airway Pressure
           Label:
           NLS_NOM_PRESS_AWAY_CTS_POS                        0x000250F4
           Observed Value:
           NOM_PRESS_AWAY_CTS_POS                            0x50F4
iPEEP      Intrinsic PEEP Breathing Pressure
           Label:
           NLS_NOM_PRESS_AWAY_END_EXP_POS_INTRINSIC          0x00025100
           Observed Value:
           NOM_PRESS_AWAY_END_EXP_POS_INTRINSIC              0x5100
AWPin      Airway Pressure Wave - measured in the inspiratory path
           Label:
           NLS_NOM_PRESS_AWAY_INSP                           0x00025108
           Observed Value:
           NOM_PRESS_AWAY_INSP                               0x5108
PIP        Positive Inspiratory ressure
           Label:
           NLS_NOM_PRESS_AWAY_INSP_MAX                       0x00025109
           Observed Value:
           NOM_PRESS_AWAY_INSP_MAX                           0x5109
MnAwP      Mean Airway Pressure. Printer Context
           Label:
           NLS_NOM_PRESS_AWAY_INSP_MEAN                      0x0002510B
           Observed Value:
           NOM_PRESS_AWAY_INSP_MEAN                          0x510B
I:E 1:     Inpired:Expired Ratio
           Label:
           NLS_NOM_RATIO_IE                                  0x00025118
           Compound Observed Value:
           NOM_RATIO_IE_I                                    0xFB7C
           NOM_RATIO_IE_E                                    0xFB7D
Vd/Vt      Ratio of Deadspace to Tidal Volume Vd/Vt
           Label:
           NLS_NOM_RATIO_AWAY_DEADSP_TIDAL                   0x0002511C
           Observed Value:
           NOM_RATIO_AWAY_DEADSP_TIDAL                       0x511C
Raw        Static Lung Resistance
           Label:
           NLS_NOM_RES_AWAY                                  0x00025120
           Observed Value:
           NOM_RES_AWAY                                      0x5120
TV         Tidal Volume
           Label:
           NLS_NOM_VOL_AWAY_TIDAL                            0x0002513C
           Observed Value (from VueLink):
           NOM_VOL_AWAY_TIDAL                                0x513C
           Compound Observed Value:
TVexp      expired Tidal Volume
           Label:
           NLS_NOM_VOL_AWAY_EXP_TIDAL                        0x0002F0E1
           Observed Value:
           NOM_VOL_AWAY_EXP_TIDAL                            0xF0E1
TVin       inspired Tidal Volume
           Label:
           NLS_NOM_VOL_AWAY_INSP_TIDAL                       0x0002F0E0
           Observed Value:
           NOM_VOL_AWAY_INSP_TIDAL                           0xF0E0
MINVOL     Airway Minute Volum Inspiratory
           Label:
           NLS_NOM_VOL_MINUTE_AWAY                           0x00025148
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                    Observed Value (from VueLink):
                    NOM_VOL_MINUTE_AWAY                                      0x5148
                    Compound Observed Value:
                    NOM_VOL_MINUTE_AWAY_EXP                                  0x514C
                    NOM_VOL_MINUTE_AWAY_INSP                                 0x5150
                    Units:
                    NOM_DIM_X_L_PER_MIN                                      0x0C00
        PlatTi      Plateau Time
                    Label:
                    NLS_NOM_TIME_PD_RESP_PLAT                                0x0002F0FF
                    Observed Value:
                    NOM_TIME_PD_RESP_PLAT                                    0xF0FF
        SpMV        Spontaneous Minute Volume
                    Label:
                    NLS_NOM_VENT_VOL_MINUTE_AWAY_SPONT                       0x0002F091
                    Observed Value:
                    NOM_VENT_VOL_MINUTE_AWAY_SPONT                           0xF091
        SpMVe       Spontaneous Minute Volume
                    Label:
                    NLS_NOM_VENT_VOL_MINUTE_AWAY_SPONT_EXP                   0x0002FB1B
                    Observed Value:
                    NOM_VENT_VOL_MINUTE_AWAY_SPONT_EXP                       0xFB1B
        DeltaO2     relative Dead Space
                    Label:
                    NLS_NOM_VENT_CONC_AWAY_O2_DELTA                          0x00025168
                    Observed Value:
                    NOM_VENT_CONC_AWAY_O2_DELTA                              0x5168
        PECO2       Partial O2 Venous
                    Label:
                    NLS_NOM_VENT_AWAY_CO2_EXP                                0x0002517C
                    Observed Value:
                    NOM_VENT_AWAY_CO2_EXP                                    0x517C
        AWFin       Airway Flow Wave - measured in the inspiratory path
                    Label:
                    NLS_NOM_VENT_FLOW_INSP                                   0x0002518C
                    Observed Value:
                    NOM_VENT_FLOW_INSP                                       0x518C
        VQI         Ventilation Perfusion Index
                    Label:
                    NLS_NOM_VENT_FLOW_RATIO_PERF_ALV_INDEX                   0x00025190
                    Observed Value:
                    NOM_VENT_FLOW_RATIO_PERF_ALV_INDEX                       0x5190
        Poccl       Occlusion Pressure
                    Label:
                    NLS_NOM_VENT_PRESS_OCCL                                  0x0002519C
                    Observed Value:
                    NOM_VENT_PRESS_OCCL                                      0x519C
        PEEP        Positive End-Expiratory Pressure PEEP
                    Label:
                    NLS_NOM_VENT_PRESS_AWAY_END_EXP_POS                      0x000251A8
                    Observed Value:
                    NOM_VENT_PRESS_AWAY_END_EXP_POS                          0x51A8
        Vd          Dead Space Volume Vd
                    Label:
                    NLS_NOM_VENT_VOL_AWAY_DEADSP                             0x000251B0
                    Observed Value:
                    NOM_VENT_VOL_AWAY_DEADSP                                 0x51B0
        relVd       relative Dead Space
                    Label:
                    NLS_NOM_VENT_VOL_AWAY_DEADSP_REL                         0x000251B4
                    Observed Value:
                    NOM_VENT_VOL_AWAY_DEADSP_REL                             0x51B4
        TrpVol      Lung Volume Trapped
                    Label:
                    NLS_NOM_VENT_VOL_LUNG_TRAPD                              0x000251B8
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                        Observed Value:
                        NOM_VENT_VOL_LUNG_TRAPD                          0x51B8
        Leak             Leakage
                        Label:
                        NLS_NOM_VENT_VOL_LEAK                            0x00025370
                        Observed Value:
                        NOM_VENT_VOL_LEAK                                0x5370
        ALVENT          Alveolar Ventilation ALVENT
                        Label:
                        NLS_NOM_VENT_VOL_LUNG_ALV                        0x00025374
                        Observed Value:
                        NOM_VENT_VOL_LUNG_ALV                            0x5374
        VC              Vital Lung Capacity
                        Label:
                        NLS_NOM_CAPAC_VITAL                              0x00025080
                        Observed Value:
                        NOM_CAPAC_VITAL                                  0x5080
        COMP            generic label Lung Compliance
                        Label:
                        NLS_NOM_COMPL_LUNG                               0x00025088
                        Observed Value:
                        NOM_COMPL_LUNG                                   0x5088
        Cdyn            Dynamic Lung Compliance
                        Label:
                        NLS_NOM_COMPL_LUNG_DYN                           0x0002508C
                        Observed Value:
                        NOM_COMPL_LUNG_DYN                               0x508C
        Cstat           Static Lung Compliance
                        Label:
                        NLS_NOM_COMPL_LUNG_STATIC                        0x00025090
                        Observed Value:
                        NOM_COMPL_LUNG_STATIC                            0x5090
        PIF             Inspiratory Peak Flow
                        Label:
                        NLS_NOM_FLOW_AWAY_INSP_MAX                       0x000250DD
                        Observed Value:
                        NOM_FLOW_AWAY_INSP_MAX                           0x50DD
        PEF             Expiratory Peak Flow
                        Label:
                        NLS_NOM_FLOW_AWAY_EXP_MAX                        0x000250D9
                        Observed Value:
                        NOM_FLOW_AWAY_EXP_MAX                            0x50D9
        bbVCO2          -
                        Label:
                        NLS_NOM_FLOW_CO2_PROD_RESP_BB                    0x0002F1B4
                        Observed Value:
                        NOM_FLOW_CO2_PROD_RESP_BB                        0xF1B4
        Valv            -
                        Label:
                        NLS_NOM_VOL_LUNG_ALV                             0x0002F1B0
                        Observed Value:
                        NOM_VOL_LUNG_ALV                                 0xF1B0
        awVd            -
                        Label:
                        NLS_NOM_VOL_AWAY_DEADSP                          0x00025140
                        Observed Value:
                        NOM_VOL_AWAY_DEADSP                              0x5140
        appVd           -
                        Label:
                        NLS_NOM_VENT_VOL_DEADSP_APP                      0x0002F1B8
                        Observed Value:
                        NOM_VENT_VOL_DEADSP_APP                          0xF1B8
                        Units:
                        UNDEFINED
        Vdalv           -
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                        Label:
                        NLS_NOM_VOL_DEADSP_ALV                          0x0002FB84
                        Observed Value:
                        NOM_VOL_DEADSP_ALV                             0xFB84
            TValv       -
                        Label:
                        NLS_NOM_VOL_TIDAL_ALV                          0x0002FB85
                        Observed Value:
                        NOM_VOL_TIDAL_ALV                             0xFB85
            RQ          -
                        Label:
                        NLS_NOM_QUO_RESP                              0x00025114
                        Observed Value:
                        NOM_QUO_RESP                                 0x5114

            EE          -
                        Label:
                        NLS_NOM_ENERGY_EXPEND                         0x0002F1A4
                        Observed Value:
                        NOM_ENERGY_EXPEND                            0xF1A4
            dE          -
                        Label:
                        NLS_NOM_ENERGY_BAL                            0x0002F1A5
                        Observed Value:
                        NOM_ENERGY_BAL                               0xF1A5
            BIS         Bispectral Index
                        Label:
                        NLS_NOM_EEG_BISPECTRAL_INDEX                  0x0002F04E
                        Observed Value:
                        NOM_EEG_BISPECTRAL_INDEX                     0xF04E
                        Units:
                        NOM_DIM_DIMLESS                              0x0200
            BIS L       Bispectral Index Left
                        Label:
                        NLS_NOM_EEG_BISPECTRAL_INDEX_LEFT            0x0002FABE
                        Observed Value:
                        NOM_EEG_BISPECTRAL_INDEX_LEFT               0xFABE
            BIS R       Bispectral Index Right
                        Label:
                        NLS_NOM_EEG_BISPECTRAL_INDEX_RIGHT           0x0002FABF
                        Observed Value:
                        NOM_EEG_BISPECTRAL_INDEX_RIGHT              0xFABF
            SQI         Signal Quality Index
                        Label:
                        NLS_NOM_EEG_BIS_SIG_QUAL_INDEX               0x0002F04D
                        Observed Value:
                        NOM_EEG_BIS_SIG_QUAL_INDEX                  0xF04D
                        Units:
                        NOM_DIM_PERCENT                              0x0220
            SQI L       Signal Quality Index Left
                        Label:
                        NLS_NOM_EEG_BIS_SIG_QUAL_INDEX_LEFT          0x0002FAC2
                        Observed Value:
                        NOM_EEG_BIS_SIG_QUAL_INDEX_LEFT             0xFAC2
            SQI R       Signal Quality Index Right
                        Label:
                        NLS_NOM_EEG_BIS_SIG_QUAL_INDEX_RIGHT         0x0002FAC3
                        Observed Value:
                        NOM_EEG_BIS_SIG_QUAL_INDEX_RIGHT            0xFAC3
            BISSQI      -
                        Label:
                        NLS_BIS_NAMES_SQI_INDICATOR                   0x80195401
                        Observed Value:
                        UNKNOWN
            EMG         Electromyography
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                    Label:
                    NLS_NOM_EMG_ELEC_POTL_MUSCL                          0x0002593C
                    Observed Value:
                    NOM_EMG_ELEC_POTL_MUSCL                              0x593C
                    Units:
                    NOM_DIM_DECIBEL                                      0x1920
EMG L               Electromyography Left
                    Label:
                    NLS_NOM_EMG_ELEC_POTL_MUSCL_LEFT                     0x0002FAC0
                    Observed Value:
                    NOM_EMG_ELEC_POTL_MUSCL_LEFT                         0xFAC0
EMG R               Electromyography Right
                    Label:
                    NLS_NOM_EMG_ELEC_POTL_MUSCL_RIGHT                    0x0002FAC1
                    Observed Value:
                    NOM_EMG_ELEC_POTL_MUSCL_RIGHT                        0xFAC1
BISEMG              -
                    Label:
                    NLS_BIS_NAMES_EMG_INDICATOR                          0x80195402
                    Observed Value:
                    UNKNOWN
TP                  Total Power
                    Label:
                    NLS_NOM_EEG_PWR_SPEC_TOT                             0x000259B8
                    Observed Value:
                    NOM_EEG_PWR_SPEC_TOT                                 0x59B8
                    Units:
                    NOM_DIM_DECIBEL                                      0x1920
TP1                 Total Power channel 1
                    Label:
                    NLS_EEG_NAMES_CHAN_TP1                               0x800F5403
                    Observed Value:
                    NOM_EEG_PWR_SPEC_TOT                                 0x59B8
                    Units:
                    NOM_DIM_NANO_WATT                                    0x0FD4
TP2                 Total Power channel 2
                    Label:
                    NLS_EEG_NAMES_CHAN_TP2                               0x800F5404
                    Observed Value:
                    NOM_EEG_PWR_SPEC_TOT                                 0x59B8
                    Units:
                    NOM_DIM_NANO_WATT                                    0x0FD4
TP3                 Total Power channel 3
                    Label:
                    NLS_EEG_NAMES_CHAN_TP3                               0x800F5436
                    Observed Value:
                    NOM_EEG_PWR_SPEC_TOT                                 0x59B8
                    Units:
                    NOM_DIM_NANO_WATT                                    0x0FD4
TP4                 Total Power channel 4
                    Label:
                    NLS_EEG_NAMES_CHAN_TP4                               0x800F5438
                    Observed Value:
                    NOM_EEG_PWR_SPEC_TOT                                 0x59B8
                    Units:
                    NOM_DIM_NANO_WATT                                    0x0FD4
TP L                Total Power Left Side
                    Label:
                    NLS_NOM_EEG_PWR_SPEC_TOT_LEFT                        0x0002F871
                    Observed Value:
                    NOM_EEG_PWR_SPEC_TOT_LEFT                            0xF871
TP R                Total Power Right Side
                    Label:
                    NLS_NOM_EEG_PWR_SPEC_TOT_RIGHT                       0x0002F872
                    Observed Value:
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                    NOM_EEG_PWR_SPEC_TOT_RIGHT                              0xF872
        TPrel       Total Power Relative?
                    Label:
                    NLS_NOM_EEG_PWR_SPEC_REL                                0x0002F050
                    Observed Value:
                    NOM_EEG_PWR_SPEC_REL                                    0xF050
                    Units:
                    UNDEFINED
        ASYM        Asymmetry
                    Label:
                    NLS_NOM_EEG_BIS_ASYM                                    0x0002FAD0
                    Observed Value:
                    NOM_EEG_BIS_ASYM                                        0xFAD0
        ASYM L      Asymmetry Left
                    Label:
                    NLS_NOM_EEG_BIS_ASYM_LEFT                               0x0002FBCC
                    Observed Value:
                    NOM_EEG_BIS_ASYM_LEFT                                   0xFBCC
        ASYM R      Asymmetry Right
                    Label:
                    NLS_NOM_EEG_BIS_ASYM_RIGHT                              0x0002FBCD
                    Observed Value:
                    NOM_EEG_BIS_ASYM_RIGHT                                  0xFBCD
                    Units:
                    UNDEFINED
        SR          Suppression Ratio
                    Label:
                    NLS_NOM_EEG_RATIO_SUPPRN                                0x0002F04A
                    Observed Value:
                    NOM_EEG_RATIO_SUPPRN                                    0xF04A
                    Units:
                    NOM_DIM_PERCENT                                         0x0220
        SR L        Suppression Ratio Left
                    Label:
                    NLS_NOM_EEG_RATIO_SUPPRN_LEFT                           0x0002FAC4
                    Observed Value:
                    NOM_EEG_RATIO_SUPPRN_LEFT                               0xFAC4
        SR R        Suppression Ratio Right
                    Label:
                    NLS_NOM_EEG_RATIO_SUPPRN_RIGHT                          0x0002FAC5
                    Observed Value:
                    NOM_EEG_RATIO_SUPPRN_RIGHT                              0xFAC5
                    Units:
                    UNDEFINED
        BurstL      -
                    Label:
                    NLS_NOM_EEG_NOM_SPK_LEFT                                0x0002FAC6
                    Observed Value:
                    NOM_EEG_NOM_SPK_LEFT                                    0xFAC6
        BurstR      -
                    Label:
                    NLS_NOM_EEG_NOM_SPK_RIGHT                               0x0002FAC7
                    Observed Value:
                    NOM_EEG_NOM_SPK_RIGHT                                   0xFAC7
        SEF         Spectral Edge Frequency
                    Label:
                    NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE           0x00025988
                    Observed Value:
                    NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE               0x5988
                    Units:
                    NOM_DIM_HZ                                              0x09C0
        SEF L       Spectral Edge Frequency Left Side
                    Label:
                    NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE_LEFT      0x0002F853
                    Observed Value:
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                         NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE_LEFT   0xf853
          SEF R          Spectral Edge Frequency Right Side
                         Label:
                         NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE_RIGHT      0x0002F854
                         Observed Value:
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE_RIGHT          0xF854
          MDF            Mean Dominant Frequency
                         Label:
                         NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN                 0x0002597C
                         Observed Value:
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN                     0x597C
                         Units:
                         NOM_DIM_HZ                                              0x09C0
          PPF            Peak Power Frequency
                         Label:
                         NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK                     0x00025984
                         Observed Value:
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK                         0x5984
                         Units:
                         NOM_DIM_HZ                                              0x09C0
          Frequ1         generic label for EEG channel 1
                         Label:
                         NLS_EEG_NAMES_CHAN_FREQ1                                0x800F5413
                         Compound Observed Value:
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE               0x5988
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN                     0x597C
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK                         0x5984
                         Units:
                         NOM_DIM_HZ                                              0x09C0
          Frequ2         generic label for EEG channel 2
                         Label:
                         NLS_EEG_NAMES_CHAN_FREQ2                                0x800F5414
                         Compound Observed Value:
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE               0x5988
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN                     0x597C
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK                         0x5984
                         Units:
                         NOM_DIM_HZ                                              0x09C0
          Frequ3         generic label for EEG channel 3
                         Label:
                         NLS_EEG_NAMES_CHAN_FREQ3                                0x800F5456
                         depends on configuration
          SEF3           Spectral Edge Frequency
                         Label:
                         NLS_EEG_NAMES_CHAN_SEF3                                 0x800F543A
                         Observed Value:
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE               0x5988
                         Units:
                         NOM_DIM_HZ                                              0x09C0
          MDF3           Mean Domain Frequency
                         Label:
                         NLS_EEG_NAMES_CHAN_MDF3                                 0x800F543E
                         Observed Value:
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN                     0x597C
                         Units:
                         NOM_DIM_HZ                                              0x09C0
          PPF3           Peak Power Frequency
                         Label:
                         NLS_EEG_NAMES_CHAN_PPF3                                 0x800F5442
                         Observed Value:
                         NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK                         0x5984
                         Units:
                         NOM_DIM_HZ                                              0x09C0
          Frequ4         generic label for EEG channel 4
                         Label:
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                      NLS_EEG_NAMES_CHAN_FREQ4                      0x800F5458
                      depends on configuration
          SEF4        Spectral Edge Frequency
                      Label:
                      NLS_EEG_NAMES_CHAN_SEF4                       0x800F543C
                      Observed Value:
                      NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE      0x5988
                      Units:
                      NOM_DIM_HZ                                    0x09C0
          MDF4        Mean Domain Frequency
                      Label:
                      NLS_EEG_NAMES_CHAN_MDF4                       0x800F5440
                      Observed Value:
                      NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN           0x597C
                      Units:
                      NOM_DIM_HZ                                    0x09C0
          PPF4        Peak Power Frequency
                      Label:
                      NLS_EEG_NAMES_CHAN_PPF4                       0x800F5444
                      Observed Value:
                      NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK               0x5984
                      Units:
                      NOM_DIM_HZ                                    0x09C0
          Prcnt1      generic label for EEG channel 1
                      Label:
                      NLS_EEG_NAMES_CHAN_PCNT1                      0x800F5415
                      Compound Observed Value:
                      NOM_EEG_PWR_SPEC_ALPHA_REL                    0x59D4
                      NOM_EEG_PWR_SPEC_BETA_REL                     0x59D8
                      NOM_EEG_PWR_SPEC_DELTA_REL                    0x59DC
                      NOM_EEG_PWR_SPEC_THETA_REL                    0x59E0
                      Units:
                      NOM_DIM_PERCENT                               0x0220
          Prcnt2      generic label for EEG channel 2
                      Label:
                      NLS_EEG_NAMES_CHAN_PCNT2                      0x800F5416
                      Compound Observed Value:
                      NOM_EEG_PWR_SPEC_ALPHA_REL                    0x59D4
                      NOM_EEG_PWR_SPEC_BETA_REL                     0x59D8
                      NOM_EEG_PWR_SPEC_DELTA_REL                    0x59DC
                      NOM_EEG_PWR_SPEC_THETA_REL                    0x59E0
                      Units:
                      NOM_DIM_PERCENT                               0x0220
          Prcnt3      generic label for EEG channel 3
                      Label:
                      NLS_EEG_NAMES_CHAN_PCNT3                      0x800F545A
                      depends on configuration
          Alpha3      Alpha
                      Label:
                      NLS_EEG_NAMES_CHAN_ALPHA3                     0x800F5446
                      Observed Value:
                      NOM_EEG_PWR_SPEC_ALPHA_REL                    0x59D4
                      Units:
                      NOM_DIM_PERCENT                               0x0220
          Beta3       Beta
                      Label:
                      NLS_EEG_NAMES_CHAN_BETA3                      0x800F544A
                      Observed Value:
                      NOM_EEG_PWR_SPEC_BETA_REL                     0x59D8
                      Units:
                      NOM_DIM_PERCENT                               0x0220
          Delta3      Delta
                      Label:
                      NLS_EEG_NAMES_CHAN_DELTA3                     0x800F5452
                      Observed Value:
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                        NOM_EEG_PWR_SPEC_DELTA_REL                        0x59DC
                        Units:
                        NOM_DIM_PERCENT                                   0x0220
            Theta3      Theta
                        Label:
                        NLS_EEG_NAMES_CHAN_THETA3                         0x800F544E
                        Observed Value:
                        NOM_EEG_PWR_SPEC_THETA_REL                        0x59E0
                        Units:
                        NOM_DIM_PERCENT                                   0x0220
            Prcnt4      generic label for EEG channel 4
                        Label:
                        NLS_EEG_NAMES_CHAN_PCNT4                          0x800F545C
                        depends on configuration
            Alpha4      Alpha
                        Label:
                        NLS_EEG_NAMES_CHAN_ALPHA4                         0x800F5448
                        Observed Value:
                        NOM_EEG_PWR_SPEC_ALPHA_REL                        0x59D4
                        Units:
                        NOM_DIM_PERCENT                                   0x0220
            Beta4       Beta
                        Label:
                        NLS_EEG_NAMES_CHAN_BETA4                          0x800F544C
                        Observed Value:
                        NOM_EEG_PWR_SPEC_BETA_REL                         0x59D8
                        Units:
                        NOM_DIM_PERCENT                                   0x0220
            Delta4      Delta
                        Label:
                        NLS_EEG_NAMES_CHAN_DELTA4                         0x800F5454
                        Observed Value:
                        NOM_EEG_PWR_SPEC_DELTA_REL                        0x59DC
                        Units:
                        NOM_DIM_PERCENT                                   0x0220
            Theta4      Theta
                        Label:
                        NLS_EEG_NAMES_CHAN_THETA4                         0x800F5450
                        Observed Value:
                        NOM_EEG_PWR_SPEC_THETA_REL                        0x59E0
                        Units:
                        NOM_DIM_PERCENT                                   0x0220
            BSR1        BSR channel 1
                        Label:
                        NLS_EEG_NAMES_CHAN_BSR1                           0x800F5462
                        Observed Value:
                        NOM_EEG_RATIO_SUPPRN                              0xF04A
                        Units:
                        NOM_DIM_PERCENT                                   0x0220
            BSR2        BSR channel 2
                        Label:
                        NLS_EEG_NAMES_CHAN_BSR2                           0x800F5464
                        Observed Value:
                        NOM_EEG_RATIO_SUPPRN                              0xF04A
                        Units:
                        NOM_DIM_PERCENT                                   0x0220
            BSR3        BSR channel 3
                        Label:
                        NLS_EEG_NAMES_CHAN_BSR3                           0x800F5466
                        Observed Value:
                        NOM_EEG_RATIO_SUPPRN                              0xF04A
                        Units:
                        NOM_DIM_PERCENT                                   0x0220
            BSR4        BSR channel 4
                        Label:
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                    NLS_EEG_NAMES_CHAN_BSR4                              0x800F5468
                    Observed Value:
                    NOM_EEG_RATIO_SUPPRN                                 0xF04A
                    Units:
                    NOM_DIM_PERCENT                                      0x0220
          aEEG1     amplified EEG channel 1
                    Label:
                    NLS_EEG_NAMES_CHAN_AEEG1                             0x800F546A
                    Observed Value:
                    NOM_EEG_AMPL_INTEGR                                  0xF05A
                    Units:
                    NOM_DIM_MICRO_VOLT                                   0x10B3
          aEEG2     amplified EEG channel 2
                    Label:
                    NLS_EEG_NAMES_CHAN_AEEG2                             0x800F546C
                    Observed Value:
                    NOM_EEG_AMPL_INTEGR                                  0xF05A
                    Units:
                    NOM_DIM_MICRO_VOLT                                   0x10B3
          aEEG3     amplified EEG channel 3
                    Label:
                    NLS_EEG_NAMES_CHAN_AEEG3                             0x800F546E
                    Observed Value:
                    NOM_EEG_AMPL_INTEGR                                  0xF05A
                    Units:
                    NOM_DIM_MICRO_VOLT                                   0x10B3
          +aEEG4    amplified EEG channel 4
                    Label:
                    NLS_EEG_NAMES_CHAN_AEEG4                             0x800F5470
                    Observed Value:
                    NOM_EEG_AMPL_INTEGR                                  0xF05A
                    Units:
                    NOM_DIM_MICRO_VOLT                                   0x10B3
          AAI       A-Line ARX Index
                    Label:
                    NLS_NOM_ELEC_EVOK_POTL_CRTX_ACOUSTIC_AAI             0x0002F873
                    Observed Value:
                    NOM_ELEC_EVOK_POTL_CRTX_ACOUSTIC_AAI                 0xF873
          BSI       Burst Suppression Indicator
                    Label:
                    NLS_NOM_EEG_BURST_SUPPRN_INDEX                       0x0002F840
                    Observed Value:
                    NOM_EEG_BURST_SUPPRN_INDEX                           0xF840
          Temp      Unspecific Temperature
                    Label:
                    NLS_NOM_TEMP                                         0x00024B48
                    Observed Value:
                    NOM_TEMP                                             0x4B48
                    Units:
                    NOM_DIM_DEGC                                         0x17A0
                    NOM_DIM_FAHR                                         0x1140
          Trect     Rectal Temperature
                    Label:
                    NLS_NOM_TEMP_RECT                                    0x0002E004
                    Observed Value:
                    NOM_TEMP_RECT                                        0xE004
                    Units:
                    NOM_DIM_DEGC                                         0x17A0
                    NOM_DIM_FAHR                                         0x1140
          Tblood    Tblood
                    Label:
                    NLS_NOM_TEMP_BLD                                     0x0002E014
                    Observed Value:
                    NOM_TEMP_BLD                                         0xE014
                    Units:
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                        NOM_DIM_DEGC                                   0x17A0
                        NOM_DIM_FAHR                                   0x1140
        Tcore           Core (Body) Temperature
                        Label:
                        NLS_NOM_TEMP_CORE                             0x00024B60
                        Observed Value:
                        NOM_TEMP_CORE                                  0x4B60
                        Units:
                        NOM_DIM_DEGC                                   0x17A0
                        NOM_DIM_FAHR                                   0x1140
        Tskin           Skin Temperature
                        Label:
                        NLS_NOM_TEMP_SKIN                             0x00024B74
                        Observed Value:
                        NOM_TEMP_SKIN                                  0x4B74
                        Units:
                        NOM_DIM_DEGC                                   0x17A0
                        NOM_DIM_FAHR                                   0x1140
        Tesoph          Esophagial Temperature
                        Label:
                        NLS_NOM_TEMP_ESOPH                            0x00024B64
                        Observed Value:
                        NOM_TEMP_ESOPH                                 0x4B64
                        Units:
                        NOM_DIM_DEGC                                   0x17A0
                        NOM_DIM_FAHR                                   0x1140
        Tnaso           Naso pharyngial Temperature
                        Label:
                        NLS_NOM_TEMP_NASOPH                           0x00024B6C
                        Observed Value:
                        NOM_TEMP_NASOPH                                0x4B6C
                        Units:
                        NOM_DIM_DEGC                                   0x17A0
                        NOM_DIM_FAHR                                   0x1140
        Tart            Areterial Temperature
                        Label:
                        NLS_NOM_TEMP_ART                              0x00024B50
                        Observed Value:
                        NOM_TEMP_ART                                   0x4B50
                        Units:
                        NOM_DIM_DEGC                                   0x17A0
                        NOM_DIM_FAHR                                   0x1140
        Tven            Venous Temperature
                        Label:
                        NLS_NOM_TEMP_VEN                              0x00024B7C
                        Observed Value:
                        NOM_TEMP_VEN                                   0x4B7C
                        Units:
                        NOM_DIM_DEGC                                   0x17A0
                        NOM_DIM_FAHR                                   0x1140
        Tvesic          Temperature of the Urine fluid
                        Label:
                        NLS_NOM_TEMP_VESICAL                          0x0002F0C4
                        Observed Value:
                        NOM_TEMP_VESICAL                               0xF0C4
        Ttymp           Tympanic Temperature
                        Label:
                        NLS_NOM_TEMP_TYMP                             0x00024B78
                        Observed Value:
                        NOM_TEMP_TYMP                                  0x4B78
                        Units:
                        NOM_DIM_DEGC                                   0x17A0
                        NOM_DIM_FAHR                                   0x1140
        Tcereb          Cerebral Temperature
                        Label:
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               NLS_NOM_TEMP_CEREBRAL                          0x0002F0C5
               Observed Value:
               NOM_TEMP_CEREBRAL                             0xF0C5
               Units:
               NOM_DIM_DEGC                                  0x17A0
               NOM_DIM_FAHR                                  0x1140
Tamb           Ambient Temperature
               Label:
               NLS_NOM_TEMP_AMBIENT                          0x0002F0C6
               Observed Value:
               NOM_TEMP_AMBIENT                              0xF0C6
               Units:
               NOM_DIM_DEGC                                  0x17A0
               NOM_DIM_FAHR                                  0x1140
Tairwy         Airway Temperature
               Label:
               NLS_NOM_TEMP_AWAY                             0x00024B54
               Observed Value:
               NOM_TEMP_AWAY                                 0x4B54
               Units:
               NOM_DIM_DEGC                                  0x17A0
               NOM_DIM_FAHR                                  0x1140
Tinj           Injectate Temperature
               Label:
               NLS_NOM_TEMP_INJ                              0x00024B68
               Observed Value:
               NOM_TEMP_INJ                                  0x4B68
T1Core         Core Temperature 1 (generic)
               Label:
               NLS_NOM_TEMP_CORE_GEN_1                       0x0002F966
               Observed Value:
               NOM_TEMP_CORE_GEN_1                           0xF966
               Units:
               NOM_DIM_DEGC                                  0x17A0
               NOM_DIM_FAHR                                  0x1140
T2Core         Core Temperature 2 (generic)
               Label:
               NLS_NOM_TEMP_CORE_GEN_2                       0x0002F967
               Observed Value:
               NOM_TEMP_CORE_GEN_2                           0xF967
               Units:
               NOM_DIM_DEGC                                  0x17A0
               NOM_DIM_FAHR                                  0x1140
DeltaTemp      Difference Temperature
               Label:
               NLS_NOM_TEMP_DIFF                             0x0002E018
               Observed Value:
               NOM_TEMP_DIFF                                 0xE018
               Units:
               NOM_DIM_DEGC                                  0x17A0
               NOM_DIM_FAHR                                  0x1140
Tbody          Patient Temperature
               Label:
               NLS_NOM_TEMP_BODY                             0x00024B5C
               Observed Value:
               NOM_TEMP                                      0x4B48
               Units:
               NOM_DIM_DEGC                                  0x17A0
               NOM_DIM_FAHR                                  0x1140
pTrect         Predictive Rectal Temperature
               Label:
               NLS_NOM_TEMP_RECT_PRED                        0x0002F114
               Observed Value:
               NOM_TEMP_RECT_PRED                            0xF114
               Units:
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                        NOM_DIM_DEGC                                    0x17A0
                        NOM_DIM_FAHR                                    0x1140
        pToral          Predictive Oral Temperature
                        Label:
                        NLS_NOM_TEMP_ORAL_PRED                          0x0002F110
                        Observed Value:
                        NOM_TEMP_ORAL_PRED                              0xF110
                        Units:
                        NOM_DIM_DEGC                                    0x17A0
                        NOM_DIM_FAHR                                    0x1140
        pTaxil          Predictive Axillary Temperature
                        Label:
                        NLS_NOM_TEMP_AXIL_PRED                          0x0002F118
                        Observed Value:
                        NOM_TEMP_AXIL_PRED                              0xF118
                        Units:
                        NOM_DIM_DEGC                                    0x17A0
                        NOM_DIM_FAHR                                    0x1140
        T1              Generic Temperature 1 (T1)
                        Label:
                        NLS_NOM_TEMP_GEN_1                              0x0002F0C7
                        Observed Value:
                        NOM_TEMP_GEN_1                                  0xF0C7
                        Units:
                        NOM_DIM_DEGC                                    0x17A0
                        NOM_DIM_FAHR                                    0x1140
        T2              Generic Temperature 2 (T2)
                        Label:
                        NLS_NOM_TEMP_GEN_2                              0x0002F0C8
                        Observed Value:
                        NOM_TEMP_GEN_2                                  0xF0C8
                        Units:
                        NOM_DIM_DEGC                                    0x17A0
                        NOM_DIM_FAHR                                    0x1140
        T3              Generic Temperature 3 (T3)
                        Label:
                        NLS_NOM_TEMP_GEN_3                              0x0002F0C9
                        Observed Value:
                        NOM_TEMP_GEN_3                                  0xF0C9
                        Units:
                        NOM_DIM_DEGC                                    0x17A0
                        NOM_DIM_FAHR                                    0x1140
        T4              Generic Temperature 4 (T4)
                        Label:
                        NLS_NOM_TEMP_GEN_4                              0x0002F0CA
                        Observed Value:
                        NOM_TEMP_GEN_4                                  0xF0CA
                        Units:
                        NOM_DIM_DEGC                                    0x17A0
                        NOM_DIM_FAHR                                    0x1140
        N2              generic N2 label
                        Label:
                        NLS_NOM_CONC_AWAY_N2                            0x0002537C
                        Observed Value (from VueLink):
                        NOM_CONC_AWAY_N2                                0x537C
                        Compound Observed Value:
                        NOM_CONC_AWAY_N2_ET                             0x5380
                        NOM_CONC_AWAY_N2_INSP                           0x5384
                        Units:
                        NOM_DIM_MMHG                                    0x0F20
                        NOM_DIM_PERCENT                                 0x0220
                        NOM_DIM_KILO_PASCAL                            0x0F03
        N2O             generic Nitrous Oxide label
                        Label:
                        NLS_NOM_CONC_AWAY_N2O                           0x000251F0
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                    Observed Value (from VueLink):
                    NOM_CONC_AWAY_N2O                                0x51F0
                    Compound Observed Value:
                    NOM_CONC_AWAY_N2O_ET                             0x522C
                    NOM_CONC_AWAY_N2O_INSP                           0x5280
                    Units:
                    NOM_DIM_MMHG                                     0x0F20
                    NOM_DIM_PERCENT                                  0x0220
                    NOM_DIM_KILO_PASCAL                             0x0F03
        ISO         generic Isoflurane label
                    Label:
                    NLS_NOM_CONC_AWAY_ISOFL                          0x000251E8
                    Observed Value (from VueLink):
                    NOM_CONC_AWAY_ISOFL                              0x51E8
                    Compound Observed Value:
                    NOM_CONC_AWAY_ISOFL_ET                           0x5224
                    NOM_CONC_AWAY_ISOFL_INSP                         0x5278
                    Units:
                    NOM_DIM_MMHG                                     0x0F20
                    NOM_DIM_PERCENT                                  0x0220
                    NOM_DIM_KILO_PASCAL                             0x0F03
        SEV         generic Sevoflurane label
                    Label:
                    NLS_NOM_CONC_AWAY_SEVOFL                         0x000251E4
                    Observed Value (from VueLink):
                    NOM_CONC_AWAY_SEVOFL                             0x51E4
                    Compound Observed Value:
                    NOM_CONC_AWAY_SEVOFL_ET                          0x5220
                    NOM_CONC_AWAY_SEVOFL_INSP                        0x5274
                    Units:
                    NOM_DIM_MMHG                                     0x0F20
                    NOM_DIM_PERCENT                                  0x0220
                    NOM_DIM_KILO_PASCAL                             0x0F03
        ENF         generic Enflurane label
                    Label:
                    NLS_NOM_CONC_AWAY_ENFL                           0x000251DC
                    Observed Value (from VueLink):
                    NOM_CONC_AWAY_ENFL                               0x51DC
                    Compound Observed Value:
                    NOM_CONC_AWAY_ENFL_ET                            0x5218
                    NOM_CONC_AWAY_ENFL_INSP                          0x526C
                    Units:
                    NOM_DIM_MMHG                                     0x0F20
                    NOM_DIM_PERCENT                                  0x0220
                    NOM_DIM_KILO_PASCAL                             0x0F03
        HAL         generic Halothane label
                    Label:
                    NLS_NOM_CONC_AWAY_HALOTH                         0x000251E0
                    Observed Value (from VueLink):
                    NOM_CONC_AWAY_HALOTH                             0x51E0
                    Compound Observed Value:
                    NOM_CONC_AWAY_HALOTH_ET                          0x521C
                    NOM_CONC_AWAY_HALOTH_INSP                        0x5270
                    Units:
                    NOM_DIM_MMHG                                     0x0F20
                    NOM_DIM_PERCENT                                  0x0220
                    NOM_DIM_KILO_PASCAL                             0x0F03
        DES         generic Desflurane label
                    Label:
                    NLS_NOM_CONC_AWAY_DESFL                          0x000251D8
                    Observed Value (from VueLink):
                    NOM_CONC_AWAY_DESFL                              0x51D8
                    Compound Observed Value:
                    NOM_CONC_AWAY_DESFL_ET                           0x5214
                    NOM_CONC_AWAY_DESFL_INSP                         0x5268
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                Units:
                NOM_DIM_MMHG                                        0x0F20
                NOM_DIM_PERCENT                                     0x0220
                NOM_DIM_KILO_PASCAL                                 0x0F03
AGT             generic Agent label
                Label:
                NLS_NOM_CONC_AWAY_AGENT                             0x00025388
                Observed Value (from VueLink):
                NOM_CONC_AWAY_AGENT                                 0x5388
                Compound Observed Value:
                NOM_CONC_AWAY_AGENT_ET                              0x538C
                Units:
                NOM_DIM_MMHG                                        0x0F20
                NOM_DIM_PERCENT                                     0x0220
                NOM_DIM_KILO_PASCAL                                 0x0F03
inAGT           Generic Inspired Agent Concentration
                Label:
                NLS_NOM_CONC_AWAY_AGENT_INSP                        0x00025390
                Observed Value:
                NOM_CONC_AWAY_AGENT_INSP                            0x5390
                Units:
                NOM_DIM_MMHG                                        0x0F20
                NOM_DIM_KILO_PASCAL                                 0x0F03
                NOM_DIM_PERCENT                                     0x0220
AGT1            generic Agent1 label
                Label:
                NLS_GASES_NAMES_CONC_AWAY_AGENT1                    0x805A5401
                Compound Observed Value:
                NOM_CONC_AWAY_AGENT_ET                              0x538C
                NOM_CONC_AWAY_AGENT_INSP                            0x5390
                Units:
                NOM_DIM_MMHG                                        0x0F20
                NOM_DIM_PERCENT                                     0x0220
                NOM_DIM_KILO_PASCAL                                 0x0F03
AGT2            generic Agent2 label
                Label:
                NLS_GASES_NAMES_CONC_AWAY_AGENT2                    0x805A5402
                Compound Observed Value:
                NOM_CONC_AWAY_AGENT_ET                              0x538C
                NOM_CONC_AWAY_AGENT_INSP                            0x5390
                Units:
                NOM_DIM_MMHG                                        0x0F20
                NOM_DIM_PERCENT                                     0x0220
                NOM_DIM_KILO_PASCAL                                 0x0F03
MAC             Minimum Alveolar Concentration
                Label:
                NLS_NOM_CONC_AWAY_MAC                               0x0002F099
                Observed Value:
                NOM_CONC_AWAY_MAC                                   0xF099
MAC             Airway MAC Concentration
                Label:
                NLS_NOM_CONC_AWAY_SUM_MAC                           0x0002F05D
                Compound Observed Value:
                NOM_CONC_AWAY_SUM_MAC_ET                            0xF05E
                NOM_CONC_AWAY_SUM_MAC_INSP                          0xF05F
SVR             Systemic Vascular Resistance
                Label:
                NLS_NOM_RES_VASC_SYS                                0x00024B28
                Observed Value:
                NOM_RES_VASC_SYS                                    0x4B28
                Units:
                NOM_DIM_X_DYNE_PER_SEC_PER_CM5                      0x1020
SVRI            Systemic Vascular Resistance Index
                Label:
                NLS_NOM_RES_VASC_SYS_INDEX                          0x00024900
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                        Observed Value:
                        NOM_RES_VASC_SYS_INDEX                          0x4900
          LVSW          Left Ventricular Stroke Volume
                        Label:
                        NLS_NOM_WK_LV_STROKE                           0x00024B9C
                        Observed Value:
                        NOM_WK_LV_STROKE                               0x4B9C
          LVSWI         Left Ventricular Stroke Volume Index
                        Label:
                        NLS_NOM_WK_LV_STROKE_INDEX                    0x00024904
                        Observed Value:
                        NOM_WK_LV_STROKE_INDEX                        0x4904
          RVSW          Right Ventricular Stroke Volume
                        Label:
                        NLS_NOM_WK_RV_STROKE                          0x00024BA4
                        Observed Value:
                        NOM_WK_RV_STROKE                              0x4BA4
          RVSWI         Right Ventricular Stroke Work Index
                        Label:
                        NLS_NOM_WK_RV_STROKE_INDEX                    0x00024908
                        Observed Value:
                        NOM_WK_RV_STROKE_INDEX                        0x4908
          PVR           Pulmonary vascular Resistance
                        Label:
                        NLS_NOM_RES_VASC_PULM                         0x00024B24
                        Observed Value:
                        NOM_RES_VASC_PULM                             0x4B24
          PVRI          Pulmonary vascular Resistance PVRI
                        Label:
                        NLS_NOM_RES_VASC_PULM_INDEX                   0x0002F067
                        Observed Value:
                        NOM_RES_VASC_PULM_INDEX                       0xF067
          LCW           Left Cardiac Work
                        Label:
                        NLS_NOM_WK_CARD_LEFT                          0x00024B90
                        Observed Value:
                        NOM_WK_CARD_LEFT                              0x4B90
          LCWI          Left Cardiac Work Index
                        Label:
                        NLS_NOM_WK_CARD_LEFT_INDEX                    0x0002F068
                        Observed Value:
                        NOM_WK_CARD_LEFT_INDEX                        0xF068
          RCW           Right Cardiac Work
                        Label:
                        NLS_NOM_WK_CARD_RIGHT                         0x00024B94
                        Observed Value:
                        NOM_WK_CARD_RIGHT                             0x4B94
          RCWI          Right Cardiac Work Index
                        Label:
                        NLS_NOM_WK_CARD_RIGHT_INDEX                   0x0002F069
                        Observed Value:
                        NOM_WK_CARD_RIGHT_INDEX                       0xF069
          VO2           Oxygen Consumption VO2
                        Label:
                        NLS_NOM_SAT_O2_CONSUMP                        0x00024B00
                        Observed Value:
                        NOM_SAT_O2_CONSUMP                            0x4B00
          GCS           Glasgow Coma Score
                        Label:
                        NLS_NOM_SCORE_GLAS_COMA                       0x00025880
                        Observed Value:
                        NOM_SCORE_GLAS_COMA                           0x5880
                        Units:
                        NOM_DIM_DIMLESS                               0x0200
          EyeRsp        SubScore of the GCS: Eye Response
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              Label:
              NLS_NOM_SCORE_EYE_SUBSC_GLAS_COMA                  0x00025882
              Observed Value:
              NOM_SCORE_EYE_SUBSC_GLAS_COMA                      0x5882
MotRsp        SubScore of the GCS: Motoric  Response
              Label:
              NLS_NOM_SCORE_MOTOR_SUBSC_GLAS_COMA                0x00025883
              Observed Value:
              NOM_SCORE_MOTOR_SUBSC_GLAS_COMA                    0x5883
VblRsp        SubScore of the GCS: Verbal Response
              Label:
              NLS_NOM_SCORE_SUBSC_VERBAL_GLAS_COMA               0x00025884
              Observed Value:
              NOM_SCORE_SUBSC_VERBAL_GLAS_COMA                   0x5884
HC            Head Circumferince
              Label:
              NLS_NOM_CIRCUM_HEAD                                0x00025900
              Observed Value:
              NOM_CIRCUM_HEAD                                    0x5900
PRL           Pupil Reaction Left eye - light reaction of left eye's pupil
              Label:
              NLS_NOM_TIME_PD_PUPIL_REACT_LEFT                   0x00025924
              Observed Value:
              NOM_TIME_PD_PUPIL_REACT_LEFT                       0x5924
PRR           Pupil Reaction Righteye - light reaction of right eye's pupil
              Label:
              NLS_NOM_TIME_PD_PUPIL_REACT_RIGHT                  0x00025928
              Observed Value:
              NOM_TIME_PD_PUPIL_REACT_RIGHT                      0x5928
pHa           pH in arterial Blood
              Label:
              NLS_NOM_CONC_PH_ART                                0x00027004
              Observed Value:
              NOM_CONC_PH_ART                                    0x7004
PaCO2         Partial Pressure of arterial Carbon Dioxide
              Label:
              NLS_NOM_CONC_PCO2_ART                              0x00027008
              Observed Value:
              NOM_CONC_PCO2_ART                                  0x7008
PaO2          Partial O2 arterial
              Label:
              NLS_NOM_CONC_PO2_ART                               0x0002700C
              Observed Value:
              NOM_CONC_PO2_ART                                   0x700C
Hb            Hemoglobin in arterial Blood
              Label:
              NLS_NOM_CONC_HB_ART                                0x00027014
              Observed Value:
              NOM_CONC_HB_ART                                    0x7014
CaO2          Arterial Oxygen Content CaO2
              Label:
              NLS_NOM_CONC_HB_O2_ART                             0x00027018
              Observed Value:
              NOM_CONC_HB_O2_ART                                 0x7018
pHv           pH in venous Blood
              Label:
              NLS_NOM_CONC_PH_VEN                                0x00027034
              Observed Value:
              NOM_CONC_PH_VEN                                    0x7034
PvCO2         Partial CO2 in the venous blood
              Label:
              NLS_NOM_CONC_PCO2_VEN                              0x00027038
              Observed Value:
              NOM_CONC_PCO2_VEN                                  0x7038
PvO2          Partial O2 Venous
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           Label:
           NLS_NOM_CONC_PO2_VEN                                      0x0002703C
           Observed Value:
           NOM_CONC_PO2_VEN                                          0x703C
CvO2       Venous   Oxygen Content
           Label:
           NLS_NOM_CONC_HB_O2_VEN                                    0x00027048
           Observed Value:
           NOM_CONC_HB_O2_VEN                                        0x7048
UrNa       Natrium in Urine
           Label:
           NLS_NOM_CONC_NA_URINE                                     0x0002706C
           Observed Value:
           NOM_CONC_NA_URINE                                         0x706C
SerNa      Natrium in Serum
           Label:
           NLS_NOM_CONC_NA_SERUM                                     0x000270D8
           Observed Value:
           NOM_CONC_NA_SERUM                                         0x70D8
pH         pH in the Blood Plasma
           Label:
           NLS_NOM_CONC_PH_GEN                                       0x00027104
           Observed Value:
           NOM_CONC_PH_GEN                                           0x7104
HCO3       Hydrocarbon concentration in Blood Plasma
           Label:
           NLS_NOM_CONC_HCO3_GEN                                     0x00027108
           Observed Value:
           NOM_CONC_HCO3_GEN                                         0x7108
Na         Natrium (Sodium)
           Label:
           NLS_NOM_CONC_NA_GEN                                       0x0002710C
           Observed Value:
           NOM_CONC_NA_GEN                                           0x710C
K          Kalium (Potassium)
           Label:
           NLS_NOM_CONC_K_GEN                                        0x00027110
           Observed Value:
           NOM_CONC_K_GEN                                            0x7110
Glu        Glucose
           Label:
           NLS_NOM_CONC_GLU_GEN                                      0x00027114
           Observed Value:
           NOM_CONC_GLU_GEN                                          0x7114
PCO2       Partial CO2
           Label:
           NLS_NOM_CONC_PCO2_GEN                                     0x00027140
           Observed Value:
           NOM_CONC_PCO2_GEN                                         0x7140
PO2        Partial O2.
           Label:
           NLS_NOM_CONC_PO2_GEN                                      0x00027174
           Observed Value:
           NOM_CONC_PO2_GEN                                          0x7174
Hct        Haematocrit
           Label:
           NLS_NOM_CONC_HCT_GEN                                      0x00027184
           Observed Value:
           NOM_CONC_HCT_GEN                                          0x7184
BE         Base Excess of Blood
           Label:
           NLS_NOM_BASE_EXCESS_BLD_ART                               0x0002716C
           Observed Value:
           NOM_BASE_EXCESS_BLD_ART                                   0x716C
VO2I       Oxygen Consumption Index VO2I
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                    Label:
                    NLS_NOM_SAT_O2_CONSUMP_INDEX                        0x0002F06A
                    Observed Value:
                    NOM_SAT_O2_CONSUMP_INDEX                            0xF06A
PB                  Barometric Pressure = Ambient Pressure
                    Label:
                    NLS_NOM_PRESS_AIR_AMBIENT                           0x0002F06B
                    Observed Value:
                    NOM_PRESS_AIR_AMBIENT                               0xF06B
InjVol              Injectate Volume (Cardiac Output)
                    Label:
                    NLS_NOM_VOL_INJ                                    0x0002F079
                    Observed Value:
                    NOM_VOL_INJ                                        0xF079
ETVI                ExtraVascular Thermo Volume Index. Cardiac Output.
                    Label:
                    NLS_NOM_VOL_THERMO_EXTRA_VASC_INDEX                0x0002F07A
                    Observed Value:
                    NOM_VOL_THERMO_EXTRA_VASC_INDEX                    0xF07A
CompCt              Generic Numeric Calculation Constant
                    Label:
                    NLS_NOM_NUM_CALC_CONST                             0x0002F07B
                    Observed Value:
                    NOM_METRIC_NOS                                     0xEFFF
Cl                  Chloride
                    Label:
                    NLS_NOM_CONC_CHLORIDE_GEN                          0x00027168
                    Observed Value:
                    NOM_CONC_CHLORIDE_GEN                              0x7168
BUN                 Blood Urea Nitrogen
                    Label:
                    NLS_NOM_CONC_BLD_UREA_NITROGEN                     0x0002F08F
                    Observed Value:
                    NOM_CONC_BLD_UREA_NITROGEN                         0xF08F
                    Units:
                    NOM_DIM_MILLI_G_PER_DL                             0x0852
                    NOM_DIM_MILLI_MOLE_PER_L                           0x1272
BEecf               Base Excess of Extra-Cellular Fluid
                    Label:
                    NLS_NOM_CONC_BASE_EXCESS_ECF                       0x0002F090
                    Observed Value:
                    NOM_CONC_BASE_EXCESS_ECF                           0xF090
Ca-vO2              Arteriovenous Oxygen Difference Ca-vO2
                    Label:
                    NLS_NOM_CONC_DIFF_HB_O2_ATR_VEN                    0x0002F092
                    Observed Value:
                    NOM_CONC_DIFF_HB_O2_ATR_VEN                        0xF092
CathCt              Generic Numeric Calculation Constant
                    Label:
                    NLS_NOM_NUM_CATHETER_CONST                         0x0002F07C
                    Observed Value:
                    NOM_NUM_CATHETER_CONST                             0xF07C
BSA                 Body Surface Area
                    Label:
                    NLS_NOM_AREA_BODY_SURFACE                          0x0002F071
                    Observed Value:
                    NOM_AREA_BODY_SURFACE                              0xF071
                    Units:
                    NOM_DIM_M_SQ                                       0x05C0
                    NOM_DIM_IN_SQ                                      0x0000
Weight              Patient Weight
                    Label:
                    NLS_NOM_PAT_WEIGHT                                 0x0002F093
                    Observed Value:
                    NOM_PAT_WEIGHT                                     0xF093
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                   Units:
                   NOM_DIM_KG                                       0x06C3
                   NOM_DIM_LB                                       0x0000
                   NOM_DIM_KG                                       0x0000
         Height    Patient Height
                   Label:
                   NLS_NOM_PAT_HEIGHT                               0x0002F094
                   Observed Value:
                   NOM_PAT_HEIGHT                                   0xF094
         P5        Generic Pressure 5 (P5)
                   Label:
                   NLS_NOM_PRESS_GEN_5                              0x0002F3F4
                   Observed Value (from VueLink):
                   NOM_PRESS_GEN_5                                  0xF3F4
                   Compound Observed Value:
                   NOM_PRESS_GEN_5_SYS                              0xF3F5
                   NOM_PRESS_GEN_5_DIA                              0xF3F6
                   NOM_PRESS_GEN_5_MEAN                             0xF3F7
                   Units:
                   NOM_DIM_MMHG                                     0x0F20
                   NOM_DIM_KILO_PASCAL                              0x0F03
         P6        Generic Pressure 6 (P6)
                   Label:
                   NLS_NOM_PRESS_GEN_6                              0x0002F3F8
                   Observed Value (from VueLink):
                   NOM_PRESS_GEN_6                                  0xF3F8
                   Compound Observed Value:
                   NOM_PRESS_GEN_6_SYS                              0xF3F9
                   NOM_PRESS_GEN_6_DIA                              0xF3FA
                   NOM_PRESS_GEN_6_MEAN                             0xF3FB
                   Units:
                   NOM_DIM_MMHG                                     0x0F20
                   NOM_DIM_KILO_PASCAL                              0x0F03
         P7        Generic Pressure 7 (P7)
                   Label:
                   NLS_NOM_PRESS_GEN_7                              0x0002F3FC
                   Observed Value (from VueLink):
                   NOM_PRESS_GEN_7                                  0xF3FC
                   Compound Observed Value:
                   NOM_PRESS_GEN_7_SYS                              0xF3FD
                   NOM_PRESS_GEN_7                                  0xF3FC
                   NOM_PRESS_GEN_7_MEAN                             0xF3FF
                   Units:
                   NOM_DIM_MMHG                                     0x0F20
                   NOM_DIM_KILO_PASCAL                              0x0F03
         P8        Generic Pressure 8 (P8)
                   Label:
                   NLS_NOM_PRESS_GEN_8                              0x0002F400
                   Observed Value (from VueLink):
                   NOM_PRESS_GEN_8                                  0xF400
                   Compound Observed Value:
                   NOM_PRESS_GEN_8_SYS                              0xF401
                   NOM_PRESS_GEN_8_DIA                              0xF402
                   NOM_PRESS_GEN_8_MEAN                             0xF403
                   Units:
                   NOM_DIM_MMHG                                     0x0F20
                   NOM_DIM_KILO_PASCAL                              0x0F03
         BUN/cr    BUN Creatinine Ratio
                   Label:
                   NLS_NOM_RATIO_BUN_CREA                           0x0002F88F
                   Observed Value:
                   NOM_RATIO_BUN_CREA                               0xF88F
                   Units:
                   NOM_DIM_DIMLESS                                  0x0200
         TFC       Thoracic Fluid Content
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                    Label:
                    NLS_NOM_VOL_FLUID_THORAC                      0x0002F8C5
                    Observed Value:
                    NOM_VOL_FLUID_THORAC                          0xF8C5
TFI                 Thoracic Fluid Content Index
                    Label:
                    NLS_NOM_VOL_FLUID_THORAC_INDEX                0x0002F8C6
                    Observed Value:
                    NOM_VOL_FLUID_THORAC_INDEX                    0xF8C6
ACI                 Accelerated Cardiac Index
                    Label:
                    NLS_NOM_OUTPUT_CARD_INDEX_ACCEL               0x0002F889
                    Observed Value:
                    NOM_OUTPUT_CARD_INDEX_ACCEL                   0xF889
HI                  Heart Contractility Index
                    Label:
                    NLS_NOM_CARD_CONTRACT_HEATHER_INDEX           0x0002F81C
                    Observed Value:
                    NOM_CARD_CONTRACT_HEATHER_INDEX               0xF81C
CH2O                Free Water Clearance
                    Label:
                    NLS_NOM_FREE_WATER_CLR                        0x0002F884
                    Observed Value:
                    NOM_FREE_WATER_CLR                            0xF884
COsm                Osmolar Clearance
                    Label:
                    NLS_NOM_CREA_OSM                              0x0002F83F
                    Observed Value:
                    NOM_CREA_OSM                                  0xF83F
CreaCl              Creatinine Clearance
                    Label:
                    NLS_NOM_CONC_CREA_CLR                         0x0002F16C
                    Observed Value:
                    NOM_CONC_CREA_CLR                             0xF16C
FeNa                Fractional Excretion of Sodium
                    Label:
                    NLS_NOM_FRACT_EXCR_NA                         0x0002F194
                    Observed Value:
                    NOM_FRACT_EXCR_NA                             0xF194
IMV                 Intermittent Mandatory Ventilation
                    Label:
                    NLS_NOM_VENT_MODE_MAND_INTERMIT               0x0002D02A
                    Observed Value:
                    NOM_VENT_MODE_MAND_INTERMIT                   0xD02A
PlOsm               Plasma Osmolarity
                    Label:
                    NLS_NOM_PLASMA_OSM                            0x0002F16B
                    Observed Value:
                    NOM_PLASMA_OSM                                0xF16B
SCrea               Serum Creatinine
                    Label:
                    NLS_NOM_CONC_CREA_SER                         0x0002F827
                    Observed Value:
                    NOM_CONC_CREA_SER                             0xF827
U/POsm              Urine Plasma Osmolarity Ratio
                    Label:
                    NLS_NOM_RATIO_URINE_SER_OSM                   0x0002F898
                    Observed Value:
                    NOM_RATIO_URINE_SER_OSM                       0xF898
U/SCr               Urine Serum Creatinine Ratio
                    Label:
                    NLS_NOM_RATIO_CONC_URINE_CREA_SER             0x0002F892
                    Observed Value:
                    NOM_RATIO_CONC_URINE_CREA_SER                 0xF892
UrCrea              Urine Creatinine
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                Label:
                NLS_NOM_CONC_CREA_URINE                               0x0002F196
                Observed Value:
                NOM_CONC_CREA_URINE                                   0xF196
UrK             Urine Potassium
                Label:
                NLS_NOM_CONC_K_URINE                                  0x0002F197
                Observed Value:
                NOM_CONC_K_URINE                                      0xF197
UrKEx           Urinary Potassium Excretion
                Label:
                NLS_NOM_CONC_K_URINE_EXCR                             0x0002F198
                Observed Value:
                NOM_CONC_K_URINE_EXCR                                 0xF198
UrNa/K          Urine Sodium/Potassium Ratio
                Label:
                NLS_NOM_RATIO_CONC_URINE_NA_K                         0x0002F893
                Observed Value:
                NOM_RATIO_CONC_URINE_NA_K                             0xF893
UrNaEx          Urine Sodium Excretion
                Label:
                NLS_NOM_CONC_NA_EXCR                                  0x0002F830
                Observed Value:
                NOM_CONC_NA_EXCR                                      0xF830
UrOsm           Urine Osmolarity
                Label:
                NLS_NOM_CONC_OSM_URINE                                0x0002F199
                Observed Value:
                NOM_CONC_OSM_URINE                                    0xF199
UrVol           Urine Volume
                Label:
                NLS_NOM_VOL_URINE_BAL_PD                              0x00026824
                Observed Value:
                NOM_VOL_URINE_BAL_PD                                  0x6824
NsLoss          Nitrogen Balance
                Label:
                NLS_NOM_NSLOSS                                        0x0002F16D
                Observed Value:
                NOM_NSLOSS                                            0xF16D
                Units:
                NOM_DIM_PERCENT                                       0x0220
Length          Length for neonatal/pediatric
                Label:
                NLS_NOM_BIRTH_LENGTH                                  0x0002F818
                Observed Value:
                NOM_BIRTH_LENGTH                                      0xF818
G.Age           Gestational age for neonatal
                Label:
                NLS_NOM_AGE_GEST                                      0x0002F811
                Observed Value:
                NOM_AGE_GEST                                          0xF811
BSA(B)          BSA formula: Boyd
                Label:
                NLS_NOM_AREA_BODY_SURFACE_ACTUAL_BOYD                 0x0002F812
                Observed Value:
                NOM_AREA_BODY_SURFACE                                 0xF071
                Units:
                NOM_DIM_M_SQ                                          0x05C0
                NOM_DIM_IN_SQ                                         0x0000
BSA(D)          BSA formula: Dubois
                Label:
                NLS_NOM_AREA_BODY_SURFACE_ACTUAL_DUBOIS               0x0002F813
                Observed Value:
                NOM_AREA_BODY_SURFACE                                 0xF071
                Units:
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                         NOM_DIM_M_SQ                                          0x05c0
                         NOM_DIM_IN_SQ                                         0x0000
           PVcP          Pressure Ventilation Control Pressure
                         Label:
                         NLS_NOM_VENT_PRESS_AWAY_PV                            0x0002F8BC
                         Observed Value:
                         NOM_VENT_PRESS_AWAY_PV                                0xF8BC
           Rdyn          Dynamic Lung Resistance
                         Label:
                         NLS_NOM_RES_AWAY_DYN                                  0x0002F899
                         Compound Observed Values:
                         NOM_RES_AWAY_DYN_INSP                                 0xFB81
                         NOM_RES_AWAY_DYN_EXP                                  0xFB82
           Rstat         Dynamic Lung Resistance
                         Label:
                         NLS_NOM_RES_AWAY_STAT                                 0x0002FB94
                         Observed Value:
                         NOM_RES_AWAY_STAT                                     0xFB94
           NgInsP        Negative Inspiratory Pressure
                         Label:
                         NLS_NOM_PRESS_AWAY_NEG_MAX                            0x000250F9
                         Observed Value:
                         NOM_PRESS_AWAY_NEG_MAX                                0x50F9
           SpPkFl        Spontaneous Peak Flow
                         Label:
                         NLS_NOM_FLOW_AWAY_MAX_SPONT                           0x0002F87D
                         Observed Value:
                         NOM_FLOW_AWAY_MAX_SPONT                               0xF87D
           SpAWRR        Spontaneous Airway Respiration Rate
                         Label:
                         NLS_NOM_AWAY_RESP_RATE_SPONT                          0x0002F815
                         Observed Value:
                         NOM_AWAY_RESP_RATE_SPONT                              0xF815
           PlGain        Pleth Gain
                         Label:
                         NLS_NOM_PULS_OXIM_PLETH_GAIN                          0x0002F88D
                         Observed Value:
                         NOM_PULS_OXIM_PLETH_GAIN                              0xF88D
           fgAGT         Fresh gas Anesthetic Agent
                         Label:
                         NLS_NOM_FLOW_AWAY_AGENT                               0x0002F876
                         Observed Value:
                         NOM_CONC_AWAY_AGENT                                   0x5388
           O2EI          Oxygen Extraction Index
                         Label:
                         NLS_NOM_EXTRACT_O2_INDEX                              0x0002F875
                         Observed Value:
                         NOM_EXTRACT_O2_INDEX                                  0xF875
           REF           Right Heart Ejection Fraction
                         Label:
                         NLS_NOM_RIGHT_HEART_FRACT_EJECT                       0x0002F89B
                         Observed Value:
                         NOM_RIGHT_HEART_FRACT_EJECT                           0xF89B
           EDV           End Diastolic Volume
                         Label:
                         NLS_NOM_VOL_VENT_L_END_DIA                            0x00024C00
                         Observed Value:
                         NOM_VOL_GLOBAL_END_DIA                                0xF044
           ESV           End Systolic Volume
                         Label:
                         NLS_NOM_VOL_VENT_L_END_SYS                            0x00024C04
                         Observed Value:
                         NOM_VOL_VENT_L_END_SYS                                0x4C04
           EDVI          End Diastolic Volume Index
                         Label:
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                      NLS_NOM_VOL_VENT_L_END_DIA_INDEX            0x0002F8D0
                      Observed Value:
                      NOM_VOL_GLOBAL_END_DIA_INDEX                0xF045
          ESVI        End Systolic Volume Index
                      Label:
                      NLS_NOM_VOL_VENT_L_END_SYS_INDEX            0x0002F8D1
                      Observed Value:
                      NOM_VOL_VENT_L_END_SYS_INDEX                0xF8D1
          RiseTi      Rise Time
                      Label:
                      NLS_NOM_VENT_TIME_PD_RAMP                   0x0002F8BD
                      Observed Value:
                      NOM_VENT_TIME_PD_RAMP                       0xF8BD
          HFVAmp      High Frequency Ventilation Amplitude
                      Label:
                      NLS_NOM_VENT_AMPL_HFV                       0x0002F8B1
                      Observed Value:
                      NOM_VENT_AMPL_HFV                           0xF8B1
          UrUrea      Urine Urea
                      Label:
                      NLS_NOM_CONC_UREA_URINE                     0x0002F195
                      Observed Value:
                      NOM_CONC_UREA_URINE                         0xF195
          UrpH        pH value in the Urine
                      Label:
                      NLS_NOM_CONC_PH_URINE                       0x00027064
                      Observed Value:
                      NOM_CONC_PH_URINE                           0x7064
          tCO2        total of CO2 - result of Blood gas Analysis
                      Label:
                      NLS_NOM_CONC_CO2_TOT                        0x0002F825
                      Observed Value:
                      NOM_CONC_CO2_TOT                            0xF825
          tBili       total Bilirubin
                      Label:
                      NLS_NOM_CONC_BILI_TOT                       0x0002F177
                      Observed Value:
                      NOM_CONC_BILI_TOT                           0xF177
          SerGlu      Glucose in Serum
                      Label:
                      NLS_NOM_CONC_GLU_SER                        0x0002F82A
                      Observed Value:
                      NOM_CONC_GLU_SER                            0xF82A
          UrGlu       Glucose in Urine
                      Label:
                      NLS_NOM_CONC_GLU_URINE                      0x0002F19F
                      Observed Value:
                      NOM_CONC_GLU_URINE                          0xF19F
          dBili       direct Bilirubin
                      Label:
                      NLS_NOM_CONC_BILI_DIRECT                    0x0002F17A
                      Observed Value:
                      NOM_CONC_BILI_DIRECT                        0xF17A
          SerCa       Calcium in Serum
                      Label:
                      NLS_NOM_CONC_CA_SER                         0x0002F824
                      Observed Value:
                      NOM_CONC_CA_SER                             0xF824
          tSerCa      total of Calcium in Serum
                      Label:
                      NLS_NOM_CONC_tCA_SER                        0x0002F15D
                      Observed Value:
                      NOM_CONC_tCA_SER                            0xF15D
          SerMg       Magnesium in Serum
                      Label:
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                    NLS_NOM_CONC_MG_SER                              0x0002F15C
                    Observed Value:
                    NOM_CONC_MG_SER                                  0xF15C
        SerPho      Phosphat in Serum
                    Label:
                    NLS_NOM_CONC_P_SER                               0x0002F15E
                    Observed Value:
                    NOM_CONC_P_SER                                   0xF15E
        SerK        Kalium (Potassium) in Serum
                    Label:
                    NLS_NOM_CONC_K_SER                               0x0002F82F
                    Observed Value:
                    NOM_CONC_K_SER                                   0xF82F
        SerCl       Clorid in Serum
                    Label:
                    NLS_NOM_CONC_CHLOR_SER                           0x0002F15F
                    Observed Value:
                    NOM_CONC_CHLOR_SER                               0xF15F
        SerAlb      Albumine in Serum
                    Label:
                    NLS_NOM_CONC_ALB_SER                             0x0002F163
                    Observed Value:
                    NOM_CONC_ALB_SER                                 0xF163
        UrCl        Clorid in Urine
                    Label:
                    NLS_NOM_CONC_CHLOR_URINE                         0x0002F19A
                    Observed Value:
                    NOM_CONC_CHLOR_URINE                             0xF19A
        SerGlo      Globulin in Serum
                    Label:
                    NLS_NOM_CONC_GLO_SER                             0x0002F829
                    Observed Value:
                    NOM_CONC_GLO_SER                                 0xF829
        SerPro      (Total) Protein in Serum
                    Label:
                    NLS_NOM_CONC_PROT_SER                            0x0002F178
                    Observed Value:
                    NOM_CONC_PROT_SER                                0xF178
        SrUrea      Serum Urea
                    Label:
                    NLS_NOM_UREA_SER                                 0x0002F8AD
                    Observed Value:
                    NOM_UREA_SER                                     0xF8AD
        WBC         White Blood Count (leucocyte count)
                    Label:
                    NLS_NOM_WB_CNT                                   0x0002F168
                    Observed Value:
                    NOM_WB_CNT                                       0xF168
        RBC         Red Blood Count (erithrocyte count)
                    Label:
                    NLS_NOM_RB_CNT                                   0x0002F169
                    Observed Value:
                    NOM_RB_CNT                                       0xF169
        Plts        Platelets  (thrombocyte count)
                    Label:
                    NLS_NOM_PLTS_CNT                                 0x0002F167
                    Observed Value:
                    NOM_PLTS_CNT                                     0xF167
        Bands       -
                    Label:
                    NLS_NOM_BANDED_NEUTROPHIL_CNT                   0x0002FBF3
                    Observed Value:
                    NOM_BANDED_NEUTROPHIL_CNT                        0xFBF3
                    Units:
                    NOM_DIM_PERCENT                                  0x0220
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MCV            Mean Corpuscular Volume
               Label:
               NLS_NOM_VOL_CORP_MEAN                               0x0002F8C4
               Observed Value:
               NOM_VOL_CORP_MEAN                                   0xF8C4
MCH            Mean Corpuscular Hemoglobin. Is the erythrocyte hemoglobin content
               Label:
               NLS_NOM_HB_CORP_MEAN                                0x0002F885
               Observed Value:
               NOM_HB_CORP_MEAN                                    0xF885
MCHC           Mean Corpuscular Hemoglobin Concentration
               Label:
               NLS_NOM_CONC_HB_CORP_MEAN                           0x0002F82C
               Observed Value:
               NOM_CONC_HB_CORP_MEAN                               0xF82C
PTT            Partial Thromboplastin Time
               Label:
               NLS_NOM_TIME_PD_PTT                                 0x0002F8A5
               Observed Value:
               NOM_TIME_PD_PTT                                     0xF8A5
PT             Prothrombin Time
               Label:
               NLS_NOM_TIME_PD_PT                                  0x0002F18B
               Observed Value:
               NOM_TIME_PD_PT                                      0xF18B
TT             Thrombin Time
               Label:
               NLS_NOM_TIME_PD_THROMBIN                            0x0002F191
               Observed Value:
               NOM_TIME_PD_THROMBIN                                0xF191
AP             Alkalische Phosphatase
               Label:
               NLS_NOM_CONC_AP                                     0x0002F185
               Observed Value:
               NOM_CONC_AP                                         0xF185
alphaA         Alpha Amylase
               Label:
               NLS_NOM_CONC_ALPHA_AMYLASE                          0x0002F186
               Observed Value:
               NOM_CONC_ALPHA_AMYLASE                              0xF186
CHE            Cholesterinesterase
               Label:
               NLS_NOM_CONC_CHE                                    0x0002F182
               Observed Value:
               NOM_CONC_CHE                                        0xF182
SerCK          Creatinin Kinase
               Label:
               NLS_NOM_CONC_CREA_KIN_SER                           0x0002F180
               Observed Value:
               NOM_CONC_CREA_KIN_SER                               0xF180
CK-MB          Creatine Cinase of type muscle-brain
               Label:
               NLS_NOM_CONC_CREA_KIN_MB                            0x0002F181
               Observed Value:
               NOM_CONC_CREA_KIN_MB                                0xF181
CK-MM          Creatine Cinase of type muscle
               Label:
               NLS_NOM_CONC_CREA_KIN_MM                            0x0002F17F
               Observed Value:
               NOM_CONC_CREA_KIN_MM                                0xF17F
GGT            Gamma GT = Gamma Glutamyltranspeptidase
               Label:
               NLS_NOM_CONC_GGT                                    0x0002F189
               Observed Value:
               NOM_CONC_GGT                                        0xF189
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GOT        Glutamic Oxaloacetic Transaminase
           Label:
           NLS_NOM_CONC_GOT                                       0x0002F188
           Observed Value:
           NOM_CONC_GOT                                           0xF188
GPT        Glutamic-Pyruvic-Transaminase
           Label:
           NLS_NOM_CONC_GPT                                       0x0002F187
           Observed Value:
           NOM_CONC_GPT                                           0xF187
Fe         Ferrum
           Label:
           NLS_NOM_CONC_FE_GEN                                    0x0002F160
           Observed Value:
           NOM_CONC_FE_GEN                                        0xF160
Chol       Cholesterin
           Label:
           NLS_NOM_CONC_CHOLESTEROL                               0x0002F16E
           Observed Value:
           NOM_CONC_CHOLESTEROL                                   0xF16E
TGL        Triglyzeride
           Label:
           NLS_NOM_CONC_TGL                                       0x0002F16F
           Observed Value:
           NOM_CONC_TGL                                           0xF16F
UrPro      (Total) Protein in Urine
           Label:
           NLS_NOM_CONC_PRO_URINE                                 0x0002F19B
           Observed Value:
           NOM_CONC_PRO_URINE                                     0xF19B
UrCa       Calzium in Urine
           Label:
           NLS_NOM_CONC_CA_URINE                                  0x0002F19C
           Observed Value:
           NOM_CONC_CA_URINE                                      0xF19C
CO-Hb      Carboxy Hemoglobin
           Label:
           NLS_NOM_CONC_HB_CO_GEN                                 0x00027180
           Observed Value:
           NOM_CONC_HB_CO_GEN                                     0x7180
HbF        Fetal Hemoglobin
           Label:
           NLS_NOM_CONC_HB_FETAL                                  0x0002F165
           Observed Value:
           NOM_CONC_HB_FETAL                                      0xF165
Met-Hb     MetHemoglobin
           Label:
           NLS_NOM_CONC_HB_MET_GEN                                0x0002717C
           Observed Value:
           NOM_CONC_HB_MET_GEN                                    0x717C
tPro       Total Protein
           Label:
           NLS_NOM_CONC_PROT_TOT                                  0x0002F179
           Observed Value:
           NOM_CONC_PROT_TOT                                      0xF179
LDH        Lactate Dehydrogenase
           Label:
           NLS_NOM_CONC_LDH                                       0x0002F17B
           Observed Value:
           NOM_CONC_LDH                                           0xF17B
AST        Aspartin - Aminotransferase
           Label:
           NLS_NOM_CONC_AST                                       0x0002F184
           Observed Value:
           NOM_CONC_AST                                           0xF184
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ALP           Alveolarproteinose Rosen-Castleman-Liebow- Syndrom
              Label:
              NLS_NOM_CONC_ALP                                   0x0002F81D
              Observed Value:
              NOM_CONC_ALP                                       0xF81D
RC            Reticulocyte Count
              Label:
              NLS_NOM_RET_CNT                                    0x0002F16A
              Observed Value:
              NOM_RET_CNT                                        0xF16A
CT            Coagulation Time
              Label:
              NLS_NOM_TIME_PD_COAGULATION                        0x0002F192
              Observed Value:
              NOM_TIME_PD_COAGULATION                            0xF192
ESR           Erythrocyte sedimentation rate
              Label:
              NLS_NOM_ES_RATE                                    0x0002F17C
              Observed Value:
              NOM_ES_RATE                                        0xF17C
KCT           Kaolin cephalin time
              Label:
              NLS_NOM_TIME_PD_KAOLIN_CEPHALINE                   0x0002F8A4
              Observed Value:
              NOM_TIME_PD_KAOLIN_CEPHALINE                       0xF8A4
Rexp          Expiratory Resistance
              Label:
              NLS_NOM_RES_AWAY_EXP                               0x00025124
              Observed Value:
              NOM_RES_AWAY_EXP                                   0x5124
ExpTi         Expiratory Time
              Label:
              NLS_NOM_TIME_PD_EXP                                0x0002F8A1
              Observed Value:
              NOM_TIME_PD_EXP                                    0xF8A1
Rinsp         Inspiratory Resistance
              Label:
              NLS_NOM_RES_AWAY_INSP                              0x00025128
              Observed Value:
              NOM_RES_AWAY_INSP                                  0x5128
eeFlow        Expiratory Peak Flow
              Label:
              NLS_NOM_FLOW_AWAY_EXP_ET                           0x0002F87A
              Observed Value:
              NOM_FLOW_AWAY_EXP_ET                               0xF87A
Pmax          Maximum Pressure during a breathing cycle
              Label:
              NLS_NOM_VENT_PRESS_AWAY_INSP_MAX                   0x0002F8BB
              Observed Value:
              NOM_PRESS_AWAY_INSP_MAX                            0x5109
AccVol        Infusion Pump Accumulated volume. Measured value
              Label:
              NLS_NOM_VOL_INFUS_ACTUAL_TOTAL                     0x000268FC
              Observed Value:
              NOM_VOL_INFUS_ACTUAL_TOTAL                         0x68FC
i-eN2O        Inspired - EndTidal N2O
              Label:
              NLS_NOM_VENT_CONC_AWAY_N2O_DELTA                   0x0002F8B7
              Observed Value:
              NOM_VENT_CONC_AWAY_N2O_DELTA                       0xF8B7
i-eHAL        Inspired - EndTidal Halothane
              Label:
              NLS_NOM_VENT_CONC_AWAY_HALOTH_DELTA                0x0002F8B5
              Observed Value:
              NOM_VENT_CONC_AWAY_HALOTH_DELTA                    0xF8B5
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        i-eENF      Inspired - EndTidal Enfluran
                    Label:
                    NLS_NOM_VENT_CONC_AWAY_ENFL_DELTA                        0x0002F8B4
                    Observed Value:
                    NOM_VENT_CONC_AWAY_ENFL_DELTA                            0xF8B4
        i-eISO      Inspired - EndTidal Isofluran
                    Label:
                    NLS_NOM_VENT_CONC_AWAY_ISOFL_DELTA                       0x0002F8B6
                    Observed Value:
                    NOM_VENT_CONC_AWAY_ISOFL_DELTA                           0xF8B6
        i-eSEV      Inspired - EndTidal Sevofluran
                    Label:
                    NLS_NOM_VENT_CONC_AWAY_SEVOFL_DELTA                      0x0002F8B9
                    Observed Value:
                    NOM_VENT_CONC_AWAY_SEVOFL_DELTA                          0xF8B9
        i-eDES      Inspired - EndTidal Desfluran
                    Label:
                    NLS_NOM_VENT_CONC_AWAY_DESFL_DELTA                       0x0002F8B3
                    Observed Value:
                    NOM_VENT_CONC_AWAY_DESFL_DELTA                           0xF8B3
        i-eAGT      Inspired - EndTidal Agent
                    Label:
                    NLS_NOM_VENT_CONC_AWAY_AGENT_DELTA                       0x0002F8B2
                    Observed Value:
                    NOM_VENT_CONC_AWAY_AGENT_DELTA                           0xF8B2
        cktO2       O2 measured in the Patient Circuit
                    Label:
                    NLS_NOM_VENT_CONC_AWAY_O2_CIRCUIT                        0x0002F8B8
                    Observed Value:
                    NOM_VENT_CONC_AWAY_O2_CIRCUIT                            0xF8B8
        MMV         Mandatory Minute Volume
                    Label:
                    NLS_NOM_VENT_VOL_MINUTE_AWAY_MAND                        0x000251CC
                    Observed Value:
                    NOM_VENT_VOL_MINUTE_AWAY_MAND                            0x51CC
        RRaw        Airway Respiration Rate. Used by the Ohmeda Ventilator.
                    Label:
                    NLS_NOM_VENT_RESP_RATE                                   0x00025022
                    Observed Value:
                    NOM_AWAY_RESP_RATE                                       0x5012
        HFMVin      Inspired High Frequency Mandatory Minute Volume
                    Label:
                    NLS_NOM_VOL_MINUTE_AWAY_INSP_HFV                         0x0002F8CD
                    Observed Value:
                    NOM_VOL_MINUTE_AWAY_INSP_HFV                             0xF8CD
        DCO2        High Frequency Gas Transport Coefficient value
                    Label:
                    NLS_NOM_COEF_GAS_TRAN                                    0x000251D4
                    Observed Value:
                    NOM_COEF_GAS_TRAN                                        0x51D4
        SpTVex      Spontaenous Expired Tidal Volume
                    Label:
                    NLS_NOM_VOL_AWAY_EXP_TIDAL_SPONT                         0x0002F8C2
                    Observed Value:
                    NOM_VOL_AWAY_EXP_TIDAL_SPONT                             0xF8C2
        SpTV        Spontaneuous Tidal Volume
                    Label:
                    NLS_NOM_VENT_VOL_TIDAL_SPONT                             0x0002F0F3
                    Observed Value:
                    NOM_VENT_VOL_TIDAL_SPONT                                 0xF0F3
        MTV         Mandatory Tidal Volume
                    Label:
                    NLS_NOM_VENT_VOL_TIDAL_MAND                              0x0002F0F2
                    Observed Value:
                    NOM_VENT_VOL_TIDAL_MAND                                  0xF0F2
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HFTVin      Inspired High Frequency Tidal Volume
            Label:
            NLS_NOM_VENT_VOL_AWAY_INSP_TIDAL_HFV              0x0002F8BE
            Observed Value:
            NOM_VENT_VOL_AWAY_INSP_TIDAL_HFV                  0xF8BE
HFVTV       High Frequency Fraction Ventilation Tidal Volume
            Label:
            NLS_NOM_VENT_VOL_TIDAL_HFV                        0x0002F8BF
            Observed Value:
            NOM_VENT_VOL_TIDAL_HFV                            0xF8BF
extHR       denotes a Heart Rate received from an external device
            Label:
            NLS_NOM_CARD_BEAT_RATE_EXT                        0x0002F81B
            Observed Value:
            NOM_ECG_CARD_BEAT_RATE                            0x4182
Rf-I        ST Reference Value for Lead I
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_I                    0x0002F411
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_I                        0xF411
Rf-II       ST Reference Value for Lead II
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_II                   0x0002F412
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_II                       0xF412
Rf-III      ST Reference Value for Lead III
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_III                  0x0002F44D
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_III                      0xF44D
Rf-aVR      ST Reference Value for Lead aVR
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_AVR                  0x0002F44E
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_AVR                      0xF44E
Rf-aVL      ST Reference Value for Lead aVL
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_AVL                  0x0002F44F
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_AVL                      0xF44F
Rf-aVF      ST Reference Value for Lead aVF
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_AVF                  0x0002F450
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_AVF                      0xF450
Rf-V1       ST Reference Value for Lead V1
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_V1                   0x0002F413
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_V1                       0xF413
Rf-V2       ST Reference Value for Lead V2
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_V2                   0x0002F414
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_V2                       0xF414
Rf-V3       ST Reference Value for Lead V3
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_V3                   0x0002F415
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_V3                       0xF415
Rf-V4       ST Reference Value for Lead V4
            Label:
            NLS_NOM_ECG_AMPL_ST_BASELINE_V4                   0x0002F416
            Observed Value:
            NOM_ECG_AMPL_ST_BASELINE_V4                       0xF416
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Rf-V5        ST Reference Value for Lead V5
             Label:
             NLS_NOM_ECG_AMPL_ST_BASELINE_V5                    0x0002F417
             Observed Value:
             NOM_ECG_AMPL_ST_BASELINE_V5                        0xF417
Rf-V6        ST Reference Value for Lead V6
             Label:
             NLS_NOM_ECG_AMPL_ST_BASELINE_V6                    0x0002F418
             Observed Value:
             NOM_ECG_AMPL_ST_BASELINE_V6                        0xF418
LT %AL       Percent Alpha - Left (LT) Side
             Label:
             NLS_NOM_EEG_PWR_SPEC_ALPHA_REL_LEFT                0x0002F859
             Observed Value:
             NOM_EEG_PWR_SPEC_ALPHA_REL                         0x59D4
LT %BE       Percent Beta - Left  Side
             Label:
             NLS_NOM_EEG_PWR_SPEC_BETA_REL_LEFT                 0x0002F85F
             Observed Value:
             NOM_EEG_PWR_SPEC_BETA_REL                          0x59D8
LT %DL       Percent Delta - Left  Side
             Label:
             NLS_NOM_EEG_PWR_SPEC_DELTA_REL_LEFT                0x0002F867
             Observed Value:
             NOM_EEG_PWR_SPEC_DELTA_REL                         0x59DC
LT %TH       Percent Theta - Left  Side
             Label:
             NLS_NOM_EEG_PWR_SPEC_THETA_REL_LEFT                0x0002F86D
             Observed Value:
             NOM_EEG_PWR_SPEC_THETA_REL                         0x59E0
LT AL        Absolute Alpha - Left  Side
             Label:
             NLS_NOM_EEG_PWR_SPEC_ALPHA_ABS_LEFT                0x0002F855
             Observed Value:
             NOM_EEG_PWR_SPEC_ALPHA_ABS_LEFT                    0xF855
LT BE        Absolute Beta - Left  Side
             Label:
             NLS_NOM_EEG_PWR_SPEC_BETA_ABS_LEFT                 0x0002F85B
             Observed Value:
             NOM_EEG_PWR_SPEC_BETA_ABS_LEFT                     0xF85B
LT DL        Absolute Delta - Left  Side
             Label:
             NLS_NOM_EEG_PWR_SPEC_DELTA_ABS_LEFT                0x0002F863
             Observed Value:
             NOM_EEG_PWR_SPEC_DELTA_ABS_LEFT                    0xF863
LT TH        Absolute Theta - Left  Side
             Label:
             NLS_NOM_EEG_PWR_SPEC_THETA_ABS_LEFT                0x0002F869
             Observed Value:
             NOM_EEG_PWR_SPEC_THETA_ABS_LEFT                    0xF869
LT MDF       Mean Dominant Frequency - Left Side
             Label:
             NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN_LEFT       0x0002F849
             Observed Value:
             NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN                0x597C
LT MPF       Median Power Frequency - Left Side
             Label:
             NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_MEDIAN_LEFT         0x0002F84B
             Observed Value:
             NOM_EEG_FREQ_PWR_SPEC_CRTX_MEDIAN_LEFT             0xF84B
LT PPF       Peak Power Frequency - Left Side
             Label:
             NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK_LEFT           0x0002F84F
             Observed Value:
             NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK                    0x5984
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LSCALE      Scale of the Left Channel EEG wave
            Label:
            NLS_NOM_EEG_ELEC_POTL_CRTX_GAIN_LEFT                    0x0002F841
            Observed Value:
            NOM_EEG_ELEC_POTL_CRTX_GAIN_LEFT                        0xF841
RT %AL      Percent Alpha - Right (RT) Side
            Label:
            NLS_NOM_EEG_PWR_SPEC_ALPHA_REL_RIGHT                    0x0002F85A
            Observed Value:
            NOM_EEG_PWR_SPEC_ALPHA_REL                              0x59D4
RT %BE      Percent Beta - Right Side
            Label:
            NLS_NOM_EEG_PWR_SPEC_BETA_REL_RIGHT                     0x0002F860
            Observed Value:
            NOM_EEG_PWR_SPEC_BETA_REL                               0x59D8
RT %DL      Percent Delta - Right Side
            Label:
            NLS_NOM_EEG_PWR_SPEC_DELTA_REL_RIGHT                    0x0002F868
            Observed Value:
            NOM_EEG_PWR_SPEC_DELTA_REL                              0x59DC
RT %TH      Percent Theta - Right Side
            Label:
            NLS_NOM_EEG_PWR_SPEC_THETA_REL_RIGHT                    0x0002F86E
            Observed Value:
            NOM_EEG_PWR_SPEC_THETA_REL                              0x59E0
RT AL       Absolute Alpha - Right Side
            Label:
            NLS_NOM_EEG_PWR_SPEC_ALPHA_ABS_RIGHT                    0x0002F856
            Observed Value:
            NOM_EEG_PWR_SPEC_ALPHA_ABS_RIGHT                        0xF856
RT BE       Absolute Beta - Right Side
            Label:
            NLS_NOM_EEG_PWR_SPEC_BETA_ABS_RIGHT                     0x0002F85C
            Observed Value:
            NOM_EEG_PWR_SPEC_BETA_ABS_RIGHT                         0xF85C
RT DL       Absolute Delta - Right Side
            Label:
            NLS_NOM_EEG_PWR_SPEC_DELTA_ABS_RIGHT                    0x0002F864
            Observed Value:
            NOM_EEG_PWR_SPEC_DELTA_ABS_RIGHT                        0xF864
RT TH       Absolute Theta - Right Side
            Label:
            NLS_NOM_EEG_PWR_SPEC_THETA_ABS_RIGHT                    0x0002F86A
            Observed Value:
            NOM_EEG_PWR_SPEC_THETA_ABS_RIGHT                        0xF86A
RT MDF      Mean Dominant Frequency - Right Side
            Label:
            NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN_RIGHT           0x0002F84A
            Observed Value:
            NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN                     0x597C
RT MPF      Median Power Frequency - Right Side
            Label:
            NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_MEDIAN_RIGHT             0x0002F84C
            Observed Value:
            NOM_EEG_FREQ_PWR_SPEC_CRTX_MEDIAN_RIGHT                 0xF84C
RT PPF      Peak Power Frequency - Right Side
            Label:
            NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK_RIGHT               0x0002F850
            Observed Value:
            NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK                         0x5984
RSCALE      Scale of the Right Channel EEG wave
            Label:
            NLS_NOM_EEG_ELEC_POTL_CRTX_GAIN_RIGHT                   0x0002F842
            Observed Value:
            NOM_EEG_ELEC_POTL_CRTX_GAIN_RIGHT                       0xF842
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DPosP      Duration Above Base Pressure
           Label:
           NLS_NOM_VENT_TIME_PD_PPV                          0x00025360
           Observed Value:
           NOM_VENT_TIME_PD_PPV                              0x5360
RRsync     Sync  Breath Rate
           Label:
           NLS_NOM_RESP_BREATH_ASSIST_CNT                    0x0002F89A
           Observed Value:
           NOM_RESP_BREATH_ASSIST_CNT                        0xF89A
fgDES      fresh gas agent for DESflurane
           Label:
           NLS_NOM_FLOW_AWAY_DESFL                           0x0002F878
           Observed Value:
           NOM_CONC_AWAY_DESFL                               0x51D8
fgSEV      fresh gas agent for SEVoflurane
           Label:
           NLS_NOM_FLOW_AWAY_SEVOFL                          0x0002F880
           Observed Value:
           NOM_CONC_AWAY_SEVOFL                              0x51E4
fgHAL      fresh gas agent for HALothane
           Label:
           NLS_NOM_FLOW_AWAY_HALOTH                          0x0002F87B
           Observed Value:
           NOM_CONC_AWAY_HALOTH                              0x51E0
fgENF      fresh gas agent for ENFlurane
           Label:
           NLS_NOM_FLOW_AWAY_ENFL                            0x0002F879
           Observed Value:
           NOM_CONC_AWAY_ENFL                                0x51DC
fgISO      fresh gas agent for ISOflurane
           Label:
           NLS_NOM_FLOW_AWAY_ISOFL                           0x0002F87C
           Observed Value:
           NOM_CONC_AWAY_ISOFL                               0x51E8
fgN2O      N2O concentration in the fresh gas line
           Label:
           NLS_NOM_FLOW_AWAY_N2O                             0x0002F87E
           Observed Value:
           NOM_CONC_AWAY_N2O                                 0x51F0
fgO2       Oxygen concentration in the fresh gas line
           Label:
           NLS_NOM_FLOW_AWAY_O2                              0x0002F87F
           Observed Value:
           NOM_CONC_AWAY_O2                                  0x5164
fgAir      Fresh Gas Flow of Air
           Label:
           NLS_NOM_FLOW_AWAY_AIR                             0x0002F877
           Observed Value:
           NOM_FLOW_AWAY_AIR                                 0xF877
fgFlow     Total Fresh Gas Flow
           Label:
           NLS_NOM_FLOW_AWAY_TOT                             0x0002F881
           Observed Value:
           NOM_FLOW_AWAY_TOT                                 0xF881
AGTLev     Liquid level in the anesthetic agent bottle
           Label:
           NLS_NOM_VOL_LVL_LIQUID_BOTTLE_AGENT               0x0002F8C7
           Observed Value:
           NOM_VOL_LVL_LIQUID_BOTTLE_AGENT                   0xF8C7
ISOLev     Liquid level in the ISOflurane bottle
           Label:
           NLS_NOM_VOL_LVL_LIQUID_BOTTLE_ISOFL               0x0002F8CB
           Observed Value:
           NOM_VOL_LVL_LIQUID_BOTTLE_ISOFL                   0xF8CB
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ENFLev      Liquid level in the ENFlurane bottle
            Label:
            NLS_NOM_VOL_LVL_LIQUID_BOTTLE_ENFL                          0x0002F8C9
            Observed Value:
            NOM_VOL_LVL_LIQUID_BOTTLE_ENFL                              0xF8C9
HALLev      Liquid level in the HALothane bottle
            Label:
            NLS_NOM_VOL_LVL_LIQUID_BOTTLE_HALOTH                        0x0002F8CA
            Observed Value:
            NOM_VOL_LVL_LIQUID_BOTTLE_HALOTH                            0xF8CA
DESLev      Liquid level in the DESflurane bottle
            Label:
            NLS_NOM_VOL_LVL_LIQUID_BOTTLE_DESFL                         0x0002F8C8
            Observed Value:
            NOM_VOL_LVL_LIQUID_BOTTLE_DESFL                             0xF8C8
SEVLev      Liquid level in the SEVoflurane bottle
            Label:
            NLS_NOM_VOL_LVL_LIQUID_BOTTLE_SEVOFL                        0x0002F8CC
            Observed Value:
            NOM_VOL_LVL_LIQUID_BOTTLE_SEVOFL                            0xF8CC
NO          -
            Label:
            NLS_NOM_CONC_AWAY_NO                                        0x0002FB97
            Observed Value:
            NOM_CONC_AWAY_NO                                            0xFB97
NO2         -
            Label:
            NLS_NOM_CONC_AWAY_NO2                                       0x0002FB98
            Observed Value:
            NOM_CONC_AWAY_NO2                                           0xFB98
            Units:
            UNDEFINED
UrVSht      Urimeter - Urine Shift Volume.
            Label:
            NLS_NOM_VOL_URINE_SHIFT                                     0x0002F8CF
            Observed Value:
            NOM_VOL_URINE_SHIFT                                         0xF8CF
UrFl        Urimeter - Urine Flow.
            Label:
            NLS_NOM_FLOW_URINE_INSTANT                                  0x0002680C
            Observed Value:
            NOM_FLOW_URINE_INSTANT                                      0x680C
iCa         ionized Calcium
            Label:
            NLS_NOM_CONC_CA_GEN                                         0x00027118
            Observed Value:
            NOM_CONC_CA_GEN                                             0x7118
'Hb         Calculated Hemoglobin
            Label:
            NLS_NOM_CONC_HB_ART_CALC                                    0x0002F82B
            Observed Value:
            NOM_CONC_HB_ART                                             0x7014
pHc         pH value in the capillaries
            Label:
            NLS_NOM_CONC_PH_CAP                                         0x0002F158
            Observed Value:
            NOM_CONC_PH_CAP                                             0xF158
&pH         Adjusted pH at &Patient Temperature
            Label:
            NLS_NOM_CONC_PH_GEN_ADJ                                     0x0002F838
            Observed Value:
            NOM_CONC_PH_GEN_ADJ                                         0xF838
&pHa        Adjusted pH in the arterial Blood
            Label:
            NLS_NOM_CONC_PH_ART_ADJ                                     0x0002F836
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                        Observed Value:
                        NOM_CONC_PH_ART                                  0x7004
        &pHv            Adjusted pH value in the venous Blood
                        Label:
                        NLS_NOM_CONC_PH_VEN_ADJ                          0x0002F839
                        Observed Value:
                        NOM_CONC_PH_VEN                                  0x7034
        &pHc            Adjusted pH value in the capillaries
                        Label:
                        NLS_NOM_CONC_PH_CAP_ADJ                          0x0002F837
                        Observed Value:
                        NOM_CONC_PH_CAP_ADJ                              0xF837
        PcO2            Partial O2 in the capillaries
                        Label:
                        NLS_NOM_CONC_PO2_CAP                             0x0002F15A
                        Observed Value:
                        NOM_CONC_PO2_CAP                                 0xF15A
        &PO2            Adjusted PO2 at Patient Temperature
                        Label:
                        NLS_NOM_CONC_PO2_GEN_ADJ                         0x0002F83D
                        Observed Value:
                        NOM_CONC_PO2_GEN                                 0x7174
        &PaO2           Adjusted PaO2 at Patient Temperature on the arterial blood
                        Label:
                        NLS_NOM_CONC_PO2_ART_ADJ                         0x0002F83B
                        Observed Value:
                        NOM_CONC_PO2_ART_ADJ                             0xF83B
        &PvO2           Adjusted PvO2 at Patient Temperature
                        Label:
                        NLS_NOM_CONC_PO2_VEN_ADJ                         0x0002F83E
                        Observed Value:
                        NOM_CONC_PO2_VEN                                 0x703C
        &PcO2           Adjusted PcO2 at Patient Temperature
                        Label:
                        NLS_NOM_CONC_PO2_CAP_ADJ                         0x0002F83C
                        Observed Value:
                        NOM_CONC_PO2_CAP_ADJ                             0xF83C
        PcCO2           Partial CO2 in the capillaries
                        Label:
                        NLS_NOM_CONC_PCO2_CAP                            0x0002F159
                        Observed Value:
                        NOM_CONC_PCO2_CAP                                0xF159
        &PCO2           Computed PCO2 at Patient Temperature
                        Label:
                        NLS_NOM_CONC_PCO2_GEN_ADJ                        0x0002F834
                        Observed Value:
                        NOM_CONC_PCO2_GEN                                0x7140
        &PaCO2          Computed PaCO2 at Patient Temperature on the arterial blood
                        Label:
                        NLS_NOM_CONC_PCO2_ART_ADJ                        0x0002F832
                        Observed Value:
                        NOM_CONC_PCO2_ART_ADJ                            0xF832
        &PvCO2          Computed PvCO2 at Patient Temperature
                        Label:
                        NLS_NOM_CONC_PCO2_VEN_ADJ                        0x0002F835
                        Observed Value:
                        NOM_CONC_PCO2_VEN                                0x7038
        &PcCO2          Computed PcO2 at Patient Temperature
                        Label:
                        NLS_NOM_CONC_PCO2_CAP_ADJ                        0x0002F833
                        Observed Value:
                        NOM_CONC_PCO2_CAP_ADJ                            0xF833
        'tCO2           Calculated total CO2
                        Label:
                        NLS_NOM_CONC_CO2_TOT_CALC                        0x0002F826
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                    Observed Value:
                    NOM_CONC_CO2_TOT_CALC                              0xF826
        'SO2        Calculated SO2
                    Label:
                    NLS_NOM_SAT_O2_CALC                                0x0002F89C
                    Observed Value:
                    NOM_SAT_O2_ART                                     0x4B34
        'SaO2       Calculated SaO2
                    Label:
                    NLS_NOM_SAT_O2_ART_CALC                            0x0002F164
                    Observed Value:
                    NOM_SAT_O2_ART_CALC                                0xF164
        'SvO2       Calculated SvO2
                    Label:
                    NLS_NOM_SAT_O2_VEN_CALC                            0x0002F166
                    Observed Value:
                    NOM_SAT_O2_VEN                                     0x4B3C
        'ScO2       Calculated ScO2
                    Label:
                    NLS_NOM_SAT_O2_CAP_CALC                            0x0002F1A0
                    Observed Value:
                    NOM_SAT_O2_CAP_CALC                                0xF1A0
        'HCO3       Calculated HCO3
                    Label:
                    NLS_NOM_CONC_HCO3_GEN_CALC                         0x0002F82E
                    Observed Value:
                    NOM_CONC_HCO3_GEN                                  0x7108
        'BEecf      Calculated Base Excess
                    Label:
                    NLS_NOM_CONC_BASE_EXCESS_ECF_CALC                  0x0002F821
                    Observed Value:
                    NOM_CONC_BASE_EXCESS_ECF                           0xF090
        'AnGap      Calculated AnionGap
                    Label:
                    NLS_NOM_CONC_AN_GAP_CALC                           0x0002F1A1
                    Observed Value:
                    NOM_CONC_AN_GAP_CALC                               0xF1A1
        Urea        Urea used by the i-Stat
                    Label:
                    NLS_NOM_CONC_UREA_GEN                              0x0002F172
                    Observed Value:
                    NOM_CONC_UREA_GEN                                  0xF172
        'BE,B       Calculated Base Excess in Blood
                    Label:
                    NLS_NOM_BASE_EXCESS_BLD_ART_CALC                   0x0002F817
                    Observed Value:
                    NOM_BASE_EXCESS_BLD_ART                            0x716C
        iMg         ionized Magnesium
                    Label:
                    NLS_NOM_CONC_MG_ION                                0x0002F15B
                    Observed Value:
                    NOM_CONC_MG_ION                                    0xF15B
        Crea        Creatinine - Measured Value by the i-Stat Module
                    Label:
                    NLS_NOM_CONC_CREA                                  0x0002F173
                    Observed Value:
                    NOM_CONC_CREA                                      0xF173
        'B/Cre      Ratio BUN/Creatinine. Calculated value by the i-Stat module
                    Label:
                    NLS_NOM_RATIO_CONC_BLD_UREA_NITROGEN_CREA_CALC     0x0002F890
                    Observed Value:
                    NOM_RATIO_CONC_BLD_UREA_NITROGEN_CREA_CALC         0xF890
        'U/Cre      Ratio Urea/Creatinine. Calculated value by the i-Stat module
                    Label:
                    NLS_NOM_RATIO_CONC_URINE_CREA_CALC                 0x0002F891
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                   Observed Value:
                   NOM_RATIO_CONC_URINE_CREA_CALC                    0xF891
        Lact       Lactate. SMeasured value by the i-Stat module
                   Label:
                   NLS_NOM_CONC_LACT                                 0x0002F174
                   Observed Value:
                   NOM_CONC_LACT                                     0xF174
        Elapse     Time to Elapse Counter
                   Label:
                   NLS_NOM_TIME_PD_FROM_LAST_MSMT                    0x0002F8A2
                   Observed Value:
                   NOM_TIME_PD_FROM_LAST_MSMT                        0xF8A2
                   Units:
                   NOM_DIM_SEC                                       0x0880
        Air T      Air Temperature in the Incubator
                   Label:
                   NLS_NOM_TEMP_AIR_INCUB                            0x0002F12A
                   Observed Value:
                   NOM_TEMP_AIR_INCUB                                0xF12A
        Hum        Humidity in the Incubator
                   Label:
                   NLS_NOM_HUMID                                     0x0002F103
                   Observed Value:
                   NOM_HUMID                                         0xF103
        Power      Power requ'd to set the Air&Pat Temp in the incubator
                   Label:
                   NLS_NOM_HEATING_PWR_INCUBATOR                     0x0002F886
                   Observed Value:
                   NOM_HEATING_PWR_INCUBATOR                         0xF886
        BagWgt     Weight of the Urine Disposable Bag
                   Label:
                   NLS_NOM_WEIGHT_URINE_COL                          0x0002F8D3
                   Observed Value:
                   NOM_WEIGHT_URINE_COL                              0xF8D3
        tUrVol     Total Urine Volume of the current measurement period
                   Label:
                   NLS_NOM_VOL_URINE_BAL_PD_INSTANT                  0x0002F8CE
                   Observed Value:
                   NOM_VOL_URINE_BAL_PD_INSTANT                      0xF8CE
        UrDens     Density of the Urine fluid
                   Label:
                   NLS_NOM_FLUID_DENS_URINE                          0x0002F19D
                   Observed Value:
                   NOM_FLUID_DENS_URINE                              0xF19D
        Age        actual patient age. measured in years
                   Label:
                   NLS_NOM_AGE                                       0x0002F810
                   Observed Value:
                   NOM_AGE                                           0xF810
                   Units:
                   NOM_DIM_YR                                        0x0940
                   NOM_DIM_WEEKS                                     0x0900
                   NOM_DIM_YR                                        0x08E0
        U/O        Daily Urine output
                   Label:
                   NLS_NOM_FLOW_URINE_PREV_24HR                      0x0002F883
                   Observed Value:
                   NOM_FLOW_URINE_PREV_24HR                          0xF883
        DrnVol     -
                   Label:
                   NLS_NOM_FLOW_FLUID_DRAIN_PREV_HR                  0x00026810
                   Observed Value:
                   NOM_FLOW_FLUID_DRAIN_PREV_HR                      0x6810
                   Units:
                   NOM_DIM_MILLI_L_PER_HR                            0x0C32
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BagVol      Current fluid (Urine) in the Urine Bag
            Label:
            NLS_NOM_VOL_URINE_COL                               0x00026830
            Observed Value:
            NOM_VOL_URINE_COL                                   0x6830
PtVent      Parameter which informs whether the Patient is ventilated
            Label:
            NLS_NOM_VENT_ACTIVE                                 0x0002F8B0
            Observed Value:
            NOM_VENT_ACTIVE                                     0xF8B0
sO2max      -
            Label:
            NLS_NOM_SETT_VENT_INSP_O2_LEVEL_ELEVATED            0x0402FB9D
            Observed Value:
            NOM_SETT_VENT_INSP_O2_LEVEL_ELEVATED                0xFB9D
Vsigh       -
            Label:
            NLS_NOM_VENT_SIGH_VOLUME                            0x0002FBB4
            Observed Value:
            NOM_VENT_SIGH_VOLUME                                0xFBB4
PaFIO2      PaO2 to FIO2 ratio. Expressed in mmHg to % ratio
            Label:
            NLS_NOM_RATIO_PaO2_FIO2                             0x0002F894
            Observed Value:
            NOM_RATIO_PaO2_FIO2                                 0xF894
SpRR        Spontaneous Respiration Rate
            Label:
            NLS_NOM_RESP_RATE_SPONT                             0x0002F828
            Observed Value:
            NOM_RESP_RATE_SPONT                                 0xF828
MRR         Mandatory Respiratory Rate
            Label:
            NLS_NOM_VENT_RESP_RATE_MAND                         0x0002F0F1
            Observed Value:
            NOM_VENT_RESP_RATE_MAND                             0xF0F1
inAGTs      Inspired secondary Anesthetic Agent
            Label:
            NLS_NOM_CONC_AWAY_AGENT_INSP_SEC                    0x0002F81F
            Observed Value:
            NOM_CONC_AWAY_AGENT_INSP                            0x5390
etAGTs      EndTidal secondary Anesthetic Agent
            Label:
            NLS_NOM_CONC_AWAY_AGENT_ET_SEC                      0x0002F81E
            Observed Value:
            NOM_CONC_AWAY_AGENT_ET                              0x538C
DBScnt      Double Burst Stimulation count - Number of DBS responses
            Label:
            NLS_NOM_NMT_DOUBLE_BURST_CNT                        0x0002f86c
            Observed Value:
            NOM_NMT_DOUBLE_BURST_CNT                            0xF86C
            Units:
            NOM_DIM_DIMLESS                                     0x0200
TOFcnt      Train Of Four (TOF) count - Number of TOF responses.
            Label:
            NLS_NOM_TRAIN_OF_FOUR_CNT                           0x0002F8AB
            Observed Value:
            NOM_TRAIN_OF_FOUR_CNT                               0xF8AB
TOFrat      Train Of Four (TOF) ratio
            Label:
            NLS_NOM_RATIO_TRAIN_OF_FOUR                         0x0002F897
            Observed Value:
            NOM_RATIO_TRAIN_OF_FOUR                             0xF897
Twitch      Twitch height of the 1Hz/0.1Hz stimulation response
            Label:
            NLS_NOM_TWITCH_AMPL                                 0x0002F8AC
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                       Observed Value:
                       NOM_TWITCH_AMPL                                  0xF8AC
        PTC            Post Tetatic Count stimulation
                       Label:
                       NLS_NOM_PTC_CNT                                  0x0002F88B
                       Observed Value:
                       NOM_PTC_CNT                                      0xF88B
        RemTi          Remaining Time until next stimulation
                       Label:
                       NLS_NOM_TIME_PD_EVOK_REMAIN                      0x0002F8A0
                       Observed Value:
                       NOM_TIME_PD_EVOK_REMAIN                          0xF8A0
        TOF1           TrainOf Four (TOF) first response value TOF1
                       Label:
                       NLS_NOM_TRAIN_OF_FOUR_1                          0x0002F8A7
                       Observed Value:
                       NOM_TRAIN_OF_FOUR_1                              0xF8A7
        TOF2           TrainOf Four (TOF) first response value TOF2
                       Label:
                       NLS_NOM_TRAIN_OF_FOUR_2                          0x0002F8A8
                       Observed Value:
                       NOM_TRAIN_OF_FOUR_2                              0xF8A8
        TOF3           TrainOf Four (TOF) first response value TOF3
                       Label:
                       NLS_NOM_TRAIN_OF_FOUR_3                          0x0002F8A9
                       Observed Value:
                       NOM_TRAIN_OF_FOUR_3                              0xF8A9
        TOF4           TrainOf Four (TOF) first response value TOF4
                       Label:
                       NLS_NOM_TRAIN_OF_FOUR_4                          0x0002F8AA
                       Observed Value:
                       NOM_TRAIN_OF_FOUR_4                              0xF8AA
        sRepTi         Setting: Preset Train Of Four (Slow TOF) repetition time
                       Label:
                       NLS_NOM_SETT_TIME_PD_TRAIN_OF_FOUR              0x0402F8A6
                       Observed Value:
                       NOM_SETT_TIME_PD_TRAIN_OF_FOUR                  0xF8A6
        ACT            Activated Clotting Time. Measured value by the i-Stat module
                       Label:
                       NLS_NOM_TIME_PD_ACT                              0x0002F18A
                       Observed Value:
                       NOM_TIME_PD_ACT                                  0xF18A
        aPTTWB         aPTT Whole Blood
                       Label:
                       NLS_NOM_TIME_PD_aPTT_WB                          0x0002F18D
                       Observed Value:
                       NOM_TIME_PD_aPTT_WB                              0xF18D
                       Units:
                       NOM_DIM_SEC                                      0x0880
        aPTTPE         aPTT Plasma Equivalent Time
                       Label:
                       NLS_NOM_TIME_PD_aPTT_PE                          0x0002F18E
                       Observed Value:
                       NOM_TIME_PD_aPTT_PE                              0xF18E
                       Units:
                       NOM_DIM_SEC                                      0x0880
        PTTrat         Activated Partial Thromboplastin Time Ratio
                       Label:
                       NLS_NOM_RATIO_TIME_PD_PTT                        0x0002F896
                       Observed Value:
                       NOM_RATIO_TIME_PD_PTT                            0xF896
        PT WB          Prothrombin Time (Blood)
                       Label:
                       NLS_NOM_TIME_PD_PT_WB                            0x0002F18F
                       Observed Value:
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                    NOM_TIME_PD_PT_WB                                   0xF18F
                    Units:
                    NOM_DIM_SEC                                         0x0880
PT PE               Prothrombin Time (Plasma)
                    Label:
                    NLS_NOM_TIME_PD_PT_PE                               0x0002F190
                    Observed Value:
                    NOM_TIME_PD_PT_PE                                   0xF190
                    Units:
                    NOM_DIM_SEC                                         0x0880
PTrat               Prothrombin Time Ratio
                    Label:
                    NLS_NOM_RATIO_TIME_PD_PT                            0x0002F895
                    Observed Value:
                    NOM_RATIO_TIME_PD_PT                                0xF895
                    Units:

PT INR              Prothrombin Time - International Normalized Ratio
                    Label:
                    NLS_NOM_PT_INTL_NORM_RATIO                          0x0002F18C
                    Observed Value:
                    NOM_PT_INTL_NORM_RATIO                              0xF18C
cTnI                Cardiac Troponin I
                    Label:
                    NLS_NOM_CARDIAC_TROPONIN_I                          0x0002F0F4
                    Observed Value:
                    NOM_CARDIAC_TROPONIN_I                              0xF0F4
CPB                 Cardio Pulmonary Bypass Flag
                    Label:
                    NLS_NOM_CARDIO_PULMONARY_BYPASS_MODE                0x0002F0F5
                    Observed Value:
                    NOM_CARDIO_PULMONARY_BYPASS_MODE                    0xF0F5
BNP                 Cardiac Brain Natriuretic Peptide
                    Label:
                    NLS_NOM_BNP                                         0x0002F0F6
                    Observed Value:
                    NOM_BNP                                             0xF0F6
InsTi               Spontaneous Inspiration Time
                    Label:
                    NLS_NOM_TIME_PD_INSP                                0x0002F8A3
                    Observed Value:
                    NOM_TIME_PD_INSP                                    0xF8A3
C20/C               Overdistension Index
                    Label:
                    NLS_NOM_C20_PER_C_INDEX                             0x0002F81A
                    Observed Value:
                    NOM_C20_PER_C_INDEX                                 0xF81A
TC                  Time Constant
                    Label:
                    NLS_NOM_AWAY_TC                                     0x0002F816
                    Observed Value:
                    NOM_AWAY_TC                                         0xF816
r                   Correlation Coefficient
                    Label:
                    NLS_NOM_AWAY_CORR_COEF                              0x0002F814
                    Observed Value:
                    NOM_AWAY_CORR_COEF                                  0xF814
RVrat               Rate Volume Ratio
                    Label:
                    NLS_NOM_RATIO_AWAY_RATE_VOL_AWAY                    0x0002F88E
                    Observed Value:
                    NOM_RATIO_AWAY_RATE_VOL_AWAY                        0xF88E
iCa(N)              ionized Calcium Normalized
                    Label:
                    NLS_NOM_CONC_CA_GEN_NORM                            0x0002F822
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                      Observed Value:
                      NOM_CONC_CA_GEN_NORM                            0xF822
        TVPSV         Tidal Volume (TV) in Pressure Support Ventilation mode
                      Label:
                      NLS_NOM_VOL_AWAY_TIDAL_PSV                      0x0002F8C3
                      Observed Value:
                      NOM_VOL_AWAY_TIDAL_PSV                          0xF8C3
        'iCa-N        Ionized Calcium Normalized
                      Label:
                      NLS_NOM_CONC_CA_GEN_NORM_CALC                   0x0002F823
                      Observed Value:
                      NOM_CONC_CA_GEN_NORM_CALC                       0xF823
        Th/Tl         -
                      Label:
                      NLS_NOM_RATIO_TIME_PD_BIPAP_HI_LO               0x0002FB7E
                      Compound Observed Value:
                      NOM_RATIO_TIME_PD_BIPAP_HI_LO_PART_HI           0xFBBC
                      NOM_RATIO_TIME_PD_BIPAP_HI_LO_PART_LO           0xFBBD
        RSBI          Rapid Shallow Breathing Index
                      Label:
                      NLS_NOM_BREATH_RAPID_SHALLOW_INDEX              0x0002F819
                      Observed Value:
                      NOM_BREATH_RAPID_SHALLOW_INDEX                  0xF819
        sAWRR         Setting: Airway Respiratory Rate
                      Label:
                      NLS_NOM_SETT_AWAY_RESP_RATE                     0x04025012
                      Observed Value:
                      NOM_AWAY_RESP_RATE                              0x5012
        sTV           Setting: Tidal Volume
                      Label:
                      NLS_NOM_SETT_VOL_AWAY_TIDAL                     0x0402513C
                      Observed Value:
                      NOM_VOL_AWAY_TIDAL                              0x513C
        sPIF          Setting: Peak Inspiratory Flow
                      Label:
                      NLS_NOM_SETT_FLOW_AWAY_INSP_MAX                 0x040250DD
                      Observed Value:
                      NOM_PRESS_AWAY_INSP_MAX                         0x5109
        sFIO2         Setting: Inspired Oxygen Concentration
                      Label:
                      NLS_NOM_SETT_VENT_CONC_AWAY_O2_INSP             0x04027498
                      Observed Value:
                      NOM_VENT_CONC_AWAY_O2_INSP                      0x7498
        sPltTi        Setting: Plateau Time
                      Label:
                      NLS_NOM_SETT_TIME_PD_RESP_PLAT                  0x0402F0FF
                      Observed Value:
                      NOM_SETT_TIME_PD_RESP_PLAT                      0xF0FF
        sPltTA        -
                      Label:
                      NLS_NOM_SETT_VENT_TIME_PD_RESP_PLAT_APNEA       0x0402FBAE
                      Observed Value:
                      NOM_SETT_VENT_TIME_PD_RESP_PLAT_APNEA           0xFBAE
        sPplat        -
                      Label:
                      NLS_NOM_SETT_PRESS_RESP_PLAT                    0x040250E8
                      Observed Value:
                      NOM_SETT_PRESS_RESP_PLAT                        0x50E8
        sSghR         Setting: Sigh Rate
                      Label:
                      NLS_NOM_SETT_VENT_SIGH_RATE                     0x0402F93C
                      Observed Value:
                      NOM_SETT_VENT_SIGH_RATE                         0xF93C
        sSghTV        Setting: Sigh Tidal Volume
                      Label:
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                    NLS_NOM_SETT_VENT_VOL_TIDAL_SIGH              0x0402F8C0
                    Observed Value:
                    NOM_SETT_VENT_VOL_TIDAL_SIGH                  0xF8C0
       sSghNr       Setting: Multiple Sigh Number
                    Label:
                    NLS_NOM_SETT_VENT_SIGH_MULT_RATE              0x0402F93B
                    Observed Value:
                    NOM_SETT_VENT_SIGH_MULT_RATE                  0xF93B
       sATV         Setting: Apnea Tidal Volume
                    Label:
                    NLS_NOM_SETT_VOL_AWAY_TIDAL_APNEA             0x0402F951
                    Observed Value:
                    NOM_SETT_VOL_AWAY_TIDAL_APNEA                 0xF951
       sARR         Setting: Apnea Respiration Rate
                    Label:
                    NLS_NOM_SETT_AWAY_RESP_RATE_APNEA             0x0402F8DE
                    Observed Value:
                    NOM_SETT_AWAY_RESP_RATE_APNEA                 0xF8DE
       sAPkFl       Setting: Apnea Peak Flow
                    Label:
                    NLS_NOM_SETT_FLOW_AWAY_INSP_APNEA             0x0402F8ED
                    Observed Value:
                    NOM_SETT_FLOW_AWAY_INSP_APNEA                 0xF8ED
       sAFIO2       Setting: Apnea Inspired O2 Concentration
                    Label:
                    NLS_NOM_SETT_VENT_CONC_AWAY_O2_INSP_APNEA     0x0402F917
                    Observed Value:
                    NOM_SETT_VENT_CONC_AWAY_O2_INSP_APNEA         0xF917
       sPSV         Setting: Pressure Support Ventilation
                    Label:
                    NLS_NOM_SETT_VENT_PRESS_AWAY_PV               0x0402F8BC
                    Observed Value:
                    NOM_SETT_VENT_PRESS_AWAY_PV                   0xF8BC
       sPSVh        -
                    Label:
                    NLS_NOM_SETT_VENT_PRESS_AWAY_INSP_PSV_APRV    0x0402FB8C
                    Observed Value:
                    NOM_SETT_VENT_PRESS_AWAY_INSP_PSV_APRV        0xFB8C
       sPSVl        -
                    Label:
                    NLS_NOM_SETT_VENT_PRESS_AWAY_EXP_PSV_APRV     0x0402FB8D
                    Observed Value:
                    NOM_SETT_VENT_PRESS_AWAY_EXP_PSV_APRV         0xFB8D
       sEnSgh       Setting: Enable Sigh
                    Label:
                    NLS_NOM_SETT_VENT_MODE_SIGH                   0x0402F923
                    Observed Value:
                    NOM_SETT_VENT_MODE_SIGH                       0xF923
       sO2Suc       Setting: Suction Oxygen Concentration
                    Label:
                    NLS_NOM_SETT_VENT_O2_SUCTION_MODE             0x0402F928
                    Observed Value:
                    NOM_SETT_VENT_O2_SUCTION_MODE                 0xF928
       sBasFl       Setting: Flow-by Base Flow
                    Label:
                    NLS_NOM_SETT_VENT_AWAY_FLOW_BASE              0x0402F910
                    Observed Value:
                    NOM_SETT_VENT_AWAY_FLOW_BASE                  0xF910
       sSenFl       Setting: Flow-by Sensitivity Flow
                    Label:
                    NLS_NOM_SETT_VENT_AWAY_FLOW_SENSE             0x0402F911
                    Observed Value:
                    NOM_SETT_VENT_AWAY_FLOW_SENSE                 0xF911
       sFlSeC       -
                    Label:
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                        NLS_NOM_SETT_VENT_AWAY_FLOW_SENSE_CYCLE          0x0402FBB2
                        Observed Value:
                        NOM_SETT_VENT_AWAY_FLOW_SENSE_CYCLE              0xFBB2
            sPVinT      Setting: Pressure Ventilation Inspiratory Time
                        Label:
                        NLS_NOM_SETT_VENT_TIME_PD_INSP_PV                0x0402F943
                        Observed Value:
                        NOM_SETT_VENT_TIME_PD_INSP_PV                    0xF943
            sAlnTi      -
                        Label:
                        NLS_NOM_SETT_VENT_TIME_PD_INSP_APNEA             0x0402FB89
                        Observed Value:
                        NOM_SETT_VENT_TIME_PD_INSP_APNEA                 0xFB89
            sTsigh      -
                        Label:
                        NLS_NOM_SETT_VENT_TIME_PD_SIGH_INTERVAL          0x0402FB34
                        Observed Value:
                        NOM_SETT_VENT_TIME_PD_SIGH_INTERVAL              0xFB34
            sAPVcP      Setting: Apnea Pressure Ventilation Control Pressure
                        Label:
                        NLS_NOM_SETT_VENT_PRESS_AWAY_PV_APNEA            0x0402F933
                        Observed Value:
                        NOM_SETT_VENT_PRESS_AWAY_PV_APNEA                0xF933
            sAPVRR      Setting: Apnea Pressure Ventilation Respiration Rate
                        Label:
                        NLS_NOM_SETT_VENT_RESP_RATE_PV_APNEA             0x0402F93A
                        Observed Value:
                        NOM_SETT_VENT_RESP_RATE_PV_APNEA                 0xF93A
            sAPVTi      Setting: Apnea Pressure Ventilation Inspiratory Time
                        Label:
                        NLS_NOM_SETT_VENT_TIME_PD_INSP_PV_APNEA          0x0402F944
                        Observed Value:
                        NOM_SETT_VENT_TIME_PD_INSP_PV_APNEA              0xF944
            sAPVO2      Setting: Apnea Pressure Ventilation Oxygen Concentration
                        Label:
                        NLS_NOM_SETT_VENT_CONC_AWAY_O2_INSP_PV_APNEA     0x0402F918
                        Observed Value:
                        NOM_SETT_VENT_CONC_AWAY_O2_INSP_PV_APNEA         0xF918
            sAPVhP      Setting: Apnea Pressure Ventilation High Airway Pressure
                        Label:
                        NLS_NOM_SETT_VENT_PRESS_AWAY_MAX_PV_APNEA        0x0402F931
                        Observed Value:
                        NOM_SETT_VENT_PRESS_AWAY_MAX_PV_APNEA            0xF931
            sPVI        Setting: Pressure Ventilation I component of I:E Ratio
                        Label:
                        NLS_NOM_SETT_RATIO_IE_INSP_PV                    0x0402F902
                        Observed Value:
                        NOM_SETT_RATIO_IE_INSP_PV                        0xF902
            sPVE        Setting: Pressure Ventilation E component of I:E Ratio
                        Label:
                        NLS_NOM_SETT_RATIO_IE_EXP_PV                     0x0402F900
                        Observed Value:
                        NOM_SETT_RATIO_IE_EXP_PV                         0xF900
            sAPVI       Setting: Apnea Pressure Ventilation I component of I:E Ratio
                        Label:
                        NLS_NOM_SETT_RATIO_IE_INSP_PV_APNEA              0x0402F903
                        Observed Value:
                        NOM_SETT_RATIO_IE_INSP_PV_APNEA                  0xF903
            sAPVE       Setting: Apnea Pressure Ventilation E component of I:E Ratio
                        Label:
                        NLS_NOM_SETT_RATIO_IE_EXP_PV_APNEA               0x0402F901
                        Observed Value:
                        NOM_SETT_RATIO_IE_EXP_PV_APNEA                   0xF901
            sCycTi      Setting: Cycle Time
                        Label:
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                    NLS_NOM_SETT_TIME_PD_MSMT                             0x0402F909
                    Observed Value:
                    NOM_SETT_TIME_PD_MSMT                                 0xF909
        sCycTy      Setting: Cycle Type
                    Label:
                    NLS_NOM_SETT_VENT_CYCLE_TYPE                          0x0402FB9A
                    Observed Value:
                    NOM_SETT_VENT_CYCLE_TYPE                              0xFB9A
        sIPPV       Setting: Ventilation Frequency in IPPV Mode
                    Label:
                    NLS_NOM_SETT_VENT_RESP_RATE_MODE_PPV_INTERMIT_PAP     0x0402F939
                    Observed Value:
                    NOM_SETT_VENT_RESP_RATE_MODE_PPV_INTERMIT_PAP         0xF939
        sIMV        Setting: Ventilation Frequency in IMV Mode
                    Label:
                    NLS_NOM_SETT_VENT_RESP_RATE_MODE_MAND_INTERMITT       0x0402F938
                    Observed Value:
                    NOM_VENT_MODE_MAND_INTERMIT                           0xD02A
        sPEEP       Setting: PEEP/CPAP
                    Label:
                    NLS_NOM_SETT_VENT_PRESS_AWAY_END_EXP_POS              0x040251A8
                    Observed Value:
                    NOM_VENT_PRESS_AWAY_END_EXP_POS                       0x51A8
        sSPEEP      Setting: Pressure Support PEEP
                    Label:
                    NLS_NOM_SETT_VENT_PRESS_AWAY_END_EXP_POS_INTERMIT     0x0402F92C
                    Observed Value:
                    NOM_SETT_VENT_PRESS_AWAY_END_EXP_POS_INTERMIT         0xF92C
        sMV         Setting: Minute Volume
                    Label:
                    NLS_NOM_SETT_VOL_MINUTE_AWAY                          0x04025148
                    Observed Value:
                    NOM_VOL_MINUTE_AWAY                                   0x5148
        sO2Mon      Setting: O2 Monitoring
                    Label:
                    NLS_NOM_SETT_VENT_ANALY_CONC_GAS_O2_MODE              0x0402F90E
                    Observed Value:
                    NOM_SETT_VENT_ANALY_CONC_GAS_O2_MODE                  0xF90E
        sO2Cal      Setting: O2 Calibration
                    Label:
                    NLS_NOM_SETT_VENT_O2_CAL_MODE                         0x0402F926
                    Observed Value:
                    NOM_SETT_VENT_O2_CAL_MODE                             0xF926
        sPmax       Setting: Maximum Pressure
                    Label:
                    NLS_NOM_SETT_VENT_PRESS_AWAY_INSP_MAX                 0x0402F8BB
                    Observed Value:
                    NOM_PRESS_AWAY_INSP_MAX                               0x5109
        sInsTi      Setting: Inspiratory Time
                    Label:
                    NLS_NOM_SETT_VENT_TIME_PD_INSP                        0x0402F941
                    Observed Value:
                    NOM_SETT_VENT_TIME_PD_INSP                            0xF941
        sExpTi      Setting: Exhaled Time
                    Label:
                    NLS_NOM_SETT_VENT_TIME_PD_EXP                         0x0402F93F
                    Observed Value:
                    NOM_SETT_VENT_TIME_PD_EXP                             0xF93F
        sIE 1:      Setting: Inspiration to Expiration Ratio.
                    Label:
                    NLS_NOM_SETT_RATIO_IE                                 0x04025118
                    Observed Value:
                    NOM_RATIO_IE                                         0x5118
        sRmpTi      -
                    Label:
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                    NLS_NOM_SETT_VENT_TIME_PD_PMAX_INC_RAMP              0x0402FBB3
                    Observed Value:
                    NOM_SETT_VENT_TIME_PD_PMAX_INC_RAMP                 0xFBB3
sALMRT              Setting: Alarm Percentage on Rise Time.
                    Label:
                    NLS_NOM_SETT_VENT_TIME_PD_RAMP_AL                   0x0402F946
                    Observed Value:
                    NOM_SETT_VENT_TIME_PD_RAMP_AL                       0xF946
sRIiTiA             -
                    Label:
                    NLS_NOM_SETT_VENT_TIME_PD_RAMP_APNEA_RISE           0x0402FBB1
                    Observed Value:
                    NOM_SETT_VENT_TIME_PD_RAMP_APNEA_RISE               0xFBB1
sCPAP               Setting: Continuous Positive Airway Pressure Value
                    Label:
                    NLS_NOM_SETT_PRESS_AWAY_CTS_POS                     0x040250F4
                    Observed Value:
                    NOM_PRESS_AWAY_CTS_POS                              0x50F4
sEPAP               -
                    Label:
                    NLS_NOM_SETT_PRESS_AWAY_EXP_POS                     0x0402FB8A
                    Observed Value:
                    NOM_SETT_PRESS_AWAY_EXP_POS                         0xFB8A
sFlow               Setting: Flow
                    Label:
                    NLS_NOM_SETT_VENT_FLOW                              0x0402F91B
                    Observed Value:
                    NOM_SETT_VENT_FLOW                                  0xF91B
sPIP                Setting: Positive Inspiratory Pressure
                    Label:
                    NLS_NOM_SETT_PRESS_AWAY_INSP_MAX                    0x04025109
                    Observed Value:
                    NOM_PRESS_AWAY_INSP_MAX                             0x5109
sPmin               Setting: Low Inspiratory Pressure
                    Label:
                    NLS_NOM_SETT_PRESS_AWAY_MIN                         0x040250F2
                    Observed Value:
                    NOM_SETT_PRESS_AWAY_MIN                             0x50F2
sIPApn              -
                    Label:
                    NLS_NOM_SETT_PRESS_AWAY_CTS_POS_APNEA              0x0402FB88
                    Observed Value:
                    NOM_SETT_PRESS_AWAY_CTS_POS_APNEA                  0xFB88
sAInP               -
                    Label:
                    NLS_NOM_SETT_VENT_PRESS_AWAY_INSP_APNEA            0x0402FB8B
                    Observed Value:
                    NOM_SETT_VENT_PRESS_AWAY_INSP_APNEA                0xFB8B
sPItTi              -
                    Label:
                    NLS_NOM_SETT_PRESS_AWAY_INSP_POS                    0x0402FBB7
                    Observed Value:
                    NOM_SETT_PRESS_AWAY_INSP_POS                        0xFBB7
sHFVFl              Setting: High Freqyency Ventilation Flow
                    Label:
                    NLS_NOM_SETT_FLOW_AWAY_HFV                          0x0402F8EB
                    Observed Value:
                    NOM_SETT_FLOW_AWAY_HFV                              0xF8EB
sHFVRR              Setting: High Frequency Ventilation Respiration Rate
                    Label:
                    NLS_NOM_SETT_AWAY_RESP_RATE_HFV                     0x0402F8DF
                    Observed Value:
                    NOM_SETT_AWAY_RESP_RATE_HFV                         0xF8DF
sO2                 Enumeration Type - denotes type of Instrument.
                    Label:
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                         NLS_NOM_SETT_CONC_AWAY_O2                          0x04025164
                         Observed Value:
                         NOM_CONC_AWAY_O2                                   0x5164
            sCMV         Setting: Controlled mechanical ventilation
                         Label:
                         NLS_NOM_SETT_VENT_MODE_MAND_CTS_ONOFF              0x0402F922
                         Observed Value:
                         NOM_SETT_VENT_MODE_MAND_CTS_ONOFF                  0xF922
            sSIMV        Setting: Synchronized intermittent mandatory ventilation
                         Label:
                         NLS_NOM_SETT_VENT_MODE_SYNC_MAND_INTERMIT          0x0402F924
                         Observed Value:
                         NOM_SETT_VENT_MODE_SYNC_MAND_INTERMIT              0xF924
            sMMV         Setting: Mandatory Minute Volume
                         Label:
                         NLS_NOM_SETT_VENT_VOL_MINUTE_AWAY_MAND             0x040251CC
                         Observed Value:
                         NOM_SETT_VENT_VOL_MINUTE_AWAY_MAND                 0x51CC
            sDRate       Setting: Infusion Pump Delivery Rate
                         Label:
                         NLS_NOM_SETT_FLOW_FLUID_PUMP                       0x04026858
                         Observed Value:
                         NOM_SETT_FLOW_FLUID_PUMP                           0x6858
            sPin         Setting: Pressure Ventilation Control Pressure
                         Label:
                         NLS_NOM_SETT_PRESS_AWAY_INSP                       0x04025108
                         Observed Value:
                         NOM_SETT_PRESS_AWAY_INSP                           0x5108
            sRRaw        Setting: Airway Respiration Rate. Used by the Ohmeda Ventilator.
                         Label:
                         NLS_NOM_SETT_VENT_RESP_RATE                        0x04025022
                         Observed Value:
                         NOM_AWAY_RESP_RATE                                 0x5012
            sInsFl       Setting: Inspiratory Flow.
                         Label:
                         NLS_NOM_SETT_FLOW_AWAY_INSP                        0x0402F8EC
                         Observed Value:
                         NOM_SETT_FLOW_AWAY_INSP                            0xF8EC
            sExpFl       Setting: Expiratory Flow
                         Label:
                         NLS_NOM_SETT_FLOW_AWAY_EXP                         0x0402F8EA
                         Observed Value:
                         NOM_SETT_FLOW_AWAY_EXP                             0xF8EA
            sTrVol       Setting: Trigger Flow/Volume
                         Label:
                         NLS_NOM_SETT_VENT_VOL_LUNG_TRAPD                   0x040251B8
                         Observed Value:
                         NOM_SETT_VENT_VOL_LUNG_TRAPD                       0x51B8
            sAADel       Setting: Apnea Ventilation Delay
                         Label:
                         NLS_NOM_SETT_APNEA_ALARM_DELAY                     0x0402F8D9
                         Observed Value:
                         NOM_SETT_APNEA_ALARM_DELAY                         0xF8D9
            sHFVAm       Setting: HFV Amplitude (Peak to Peak Pressure)
                         Label:
                         NLS_NOM_SETT_HFV_AMPL                              0x0402F8F3
                         Observed Value:
                         NOM_SETT_HFV_AMPL                                  0xF8F3
            sMVDel       Setting: Minute Volume Alarm Delay
                         Label:
                         NLS_NOM_SETT_VOL_MINUTE_ALARM_DELAY                0x0402F953
                         Observed Value:
                         NOM_SETT_VOL_MINUTE_ALARM_DELAY                    0xF953
            sTrgFl       Setting: Flow Trigger - delivered by the Evita 2 Vuelink Driver
                         Label:
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                    NLS_NOM_SETT_VENT_FLOW_INSP_TRIG                    0x0402F91D
                    Observed Value:
                    NOM_SETT_VENT_FLOW_INSP_TRIG                        0xF91D
sPincR              Setting: Pressure Increase Rate
                    Label:
                    NLS_NOM_SETT_VENT_AWAY_PRESS_RATE_INCREASE          0x0402F912
                    Observed Value:
                    NOM_SETT_VENT_AWAY_PRESS_RATE_INCREASE              0xF912
sVmax               Setting: Volume Warning - delivered by the Evita 2 Vuelink Driver
                    Label:
                    NLS_NOM_SETT_VENT_VOL_LIMIT_AL_HI_ONOFF             0x0402F949
                    Observed Value:
                    NOM_SETT_VENT_VOL_LIMIT_AL_HI_ONOFF                 0xF949
loPmax              Setting: Low Maximum Airway Pressure Alarm Setting.
                    Label:
                    NLS_NOM_SETT_PRESS_AWAY_INSP_MAX_LIMIT_LO           0x0402F8FB
                    Observed Value:
                    NOM_SETT_PRESS_AWAY_INSP_MAX_LIMIT_LO               0xF8FB
sTVap               Setting: Applied Tidal Volume.
                    Label:
                    NLS_NOM_SETT_VOL_AWAY_TIDAL_APPLIED                 0x0402F952
                    Observed Value:
                    NOM_SETT_VOL_AWAY_TIDAL_APPLIED                     0xF952
sSens               Setting: Assist Sensitivity. Used by the Bear 1000 ventilator.
                    Label:
                    NLS_NOM_SETT_SENS_LEVEL                             0x0402F904
                    Observed Value:
                    NOM_SETT_SENS_LEVEL                                 0xF904
sBkgFl              Setting: Background Flow Setting. Range is 2 - 30 l/min
                    Label:
                    NLS_NOM_SETT_VENT_AWAY_FLOW_BACKGROUND              0x0402F90F
                    Observed Value:
                    NOM_SETT_VENT_AWAY_FLOW_BACKGROUND                  0xF90F
sAGT                Setting: Vaporizer concentration.
                    Label:
                    NLS_NOM_SETT_FLOW_AWAY_AGENT                        0x0402F876
                    Observed Value:
                    NOM_CONC_AWAY_AGENT                                 0x5388
sISO                Setting: Vaporizer concentration for ISOflurane
                    Label:
                    NLS_NOM_SETT_CONC_AWAY_ISOFL                        0x040251E8
                    Observed Value:
                    NOM_CONC_AWAY_ISOFL                                 0x51E8
sENF                Setting: Vaporizer concentration for ENFlurane
                    Label:
                    NLS_NOM_SETT_CONC_AWAY_ENFL                         0x040251DC
                    Observed Value:
                    NOM_CONC_AWAY_ENFL                                 0x51DC
sHAL                Setting: Vaporizer concentration for HALothane
                    Label:
                    NLS_NOM_SETT_CONC_AWAY_HALOTH                       0x040251E0
                    Observed Value:
                    NOM_CONC_AWAY_HALOTH                                0x51E0
sDES                Setting: Vaporizer concentration for DESflurane
                    Label:
                    NLS_NOM_SETT_CONC_AWAY_DESFL                        0x040251D8
                    Observed Value:
                    NOM_CONC_AWAY_DESFL                                 0x51D8
sSEV                Setting: Vaporizer concentration for SEVoflurane
                    Label:
                    NLS_NOM_SETT_CONC_AWAY_SEVOFL                       0x040251E4
                    Observed Value:
                    NOM_CONC_AWAY_SEVOFL                                0x51E4
sfgAir              Setting: Total fresh gas Air flow on the mixer
                    Label:
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                     NLS_NOM_SETT_FLOW_AWAY_AIR                          0x0402F877
                     Observed Value:
                     NOM_SETT_FLOW_AWAY_AIR                              0xF877
       sfgO2         Setting: Fresh gas oxygen Flow on the mixer
                     Label:
                     NLS_NOM_SETT_FLOW_AWAY_O2                           0x0402F87F
                     Observed Value:
                     NOM_CONC_AWAY_O2                                    0x5164
       sfgFl         Setting: Total fresh gas Flow on the mixer
                     Label:
                     NLS_NOM_SETT_FLOW_AWAY_TOT                          0x0402F881
                     Observed Value:
                     NOM_SETT_FLOW_AWAY_TOT                              0xF881
       sfgN2O        Setting: fresh gas N2O flow on the mixer
                     Label:
                     NLS_NOM_SETT_FLOW_AWAY_N2O                          0x0402F87E
                     Observed Value:
                     NOM_CONC_AWAY_N2O                                   0x51F0
       sGasPr        Setting: Gas Sample point for the oxygen measurement
                     Label:
                     NLS_NOM_SETT_VENT_GAS_PROBE_POSN                    0x0402F920
                     Observed Value:
                     NOM_SETT_VENT_GAS_PROBE_POSN                        0xF920
       sO2Pr         Setting: Gas sample point for oxygen measurement
                     Label:
                     NLS_NOM_SETT_VENT_O2_PROBE_POSN                     0x0402F927
                     Observed Value:
                     NOM_SETT_VENT_O2_PROBE_POSN                         0xF927
       sTVin         Setting: inspired Tidal Volume
                     Label:
                     NLS_NOM_SETT_VOL_AWAY_INSP_TIDAL                    0x0402F0E0
                     Observed Value:
                     NOM_SETT_VOL_AWAY_INSP_TIDAL                        0xF0E0
       sSenPr        -
                     Label:
                     NLS_NOM_SETT_VENT_AWAY_PRESS_SENSE                  0x0402FBB5
                     Observed Value:
                     NOM_SETT_VENT_AWAY_PRESS_SENSE                      0xFBB5
       sTemp         Desired Environmental Temperature
                     Label:
                     NLS_NOM_SETT_TEMP                                   0x04024B48
                     Observed Value:
                     NOM_SETT_TEMP                                       0x4B48
       sUrTi         Setting: Preset period of time for the UrVol numeric
                     Label:
                     NLS_NOM_SETT_URINE_BAL_PD                           0x0402F8AF
                     Observed Value:
                     NOM_SETT_URINE_BAL_PD                               0xF8AF
       sTlow         Setting: part of the Evita 4 Airway Pressure Release Ventilation Mode
                     Label:
                     NLS_NOM_SETT_VENT_TIME_PD_EXP_APRV                  0x0402F940
                     Observed Value:
                     NOM_SETT_VENT_TIME_PD_EXP_APRV                      0xF940
       sThigh        Setting: part of the Evita 4 Airway Pressure Release Ventilation Mode
                     Label:
                     NLS_NOM_SETT_VENT_TIME_PD_INSP_APRV                 0x0402F942
                     Observed Value:
                     NOM_SETT_VENT_TIME_PD_INSP_APRV                     0xF942
       sTloS         -
                     Label:
                     NLS_NOM_SETT_VENT_TIME_PD_EXP_SYNC_APRV             0x0402FB8F
                     Observed Value:
                     NOM_SETT_VENT_TIME_PD_EXP_SYNC_APRV                 0xFB8F
       sThiS         -
                     Label:
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                         NLS_NOM_SETT_VENT_TIME_PD_INSP_SYNC_APRV          0x0402FB8E
                         Observed Value:
                         NOM_SETT_VENT_TIME_PD_INSP_SYNC_APRV              0xFB8E
            sPlow        Setting: part of the Evita 4 Airway Pressure Release Ventilation Mode
                         Label:
                         NLS_NOM_SETT_VENT_PRESS_AWAY_EXP_APRV             0x0402F92D
                         Observed Value:
                         NOM_SETT_VENT_PRESS_AWAY_EXP_APRV                 0xF92D
            sPhigh       Setting: part of the Evita 4 Airway Pressure Release Ventilation Mode
                         Label:
                         NLS_NOM_SETT_VENT_PRESS_AWAY_INSP_APRV            0x0402F92E
                         Observed Value:
                         NOM_SETT_VENT_PRESS_AWAY_INSP_APRV                0xF92E
            sVolas       Setting: Volume Assist level for the CPAP mode
                         Label:
                         NLS_NOM_SETT_VENT_VOL_AWAY_ASSIST                 0x0402F948
                         Observed Value:
                         NOM_SETT_VENT_VOL_AWAY_ASSIST                     0xF948
            sFlas        Setting: Flow Assist level for the CPAP mode
                         Label:
                         NLS_NOM_SETT_VENT_FLOW_AWAY_ASSIST                0x0402F91C
                         Observed Value:
                         NOM_SETT_VENT_FLOW_AWAY_ASSIST                    0xF91C
            sCurnt       Setting: Preset stimulation current
                         Label:
                         NLS_NOM_SETT_EVOK_CURR                            0x0402F8E7
                         Observed Value:
                         NOM_SETT_EVOK_CURR                                0xF8E7
            sChrge       Setting: Preset stimulation charge
                         Label:
                         NLS_NOM_SETT_EVOK_CHARGE                          0x0402F8E6
                         Observed Value:
                         NOM_SETT_EVOK_CHARGE                              0xF8E6
            sPulsD       Setting: Preset stimulation impulse duration
                         Label:
                         NLS_NOM_SETT_TIME_PD_EVOK                         0x0402F908
                         Observed Value:
                         NOM_SETT_TIME_PD_EVOK                             0xF908
            sfmax        Setting: Panting Limit
                         Label:
                         NLS_NOM_SETT_VENT_RESP_RATE_LIMIT_HI_PANT         0x0402F937
                         Observed Value:
                         NOM_SETT_VENT_RESP_RATE_LIMIT_HI_PANT             0xF937
            sHum         Setting: Humidity
                         Label:
                         NLS_NOM_SETT_HUMID                                0x0402F103
                         Observed Value:
                         NOM_SETT_HUMID                                    0xF103
            sHmCtl       -
                         Label:
                         NLS_NOM_SETT_HUMID_CNTRL_ONOFF                    0x0402FAF8
                         Observed Value:
                         NOM_SETT_HUMID_CNTRL_ONOFF                        0xFAF8
            highP        Alarm Limit: High Pressure
                         Label:
                         NLS_NOM_SETT_VENT_PRESS_AWAY_LIMIT_HI             0x0402F930
                         Observed Value:
                         NOM_SETT_VENT_PRESS_AWAY_LIMIT_HI                 0xF930
            loPEEP       Alarm Limit: Low PEEP/CPAP
                         Label:
                         NLS_NOM_VENT_PRESS_AWAY_END_EXP_POS_LIMIT_LO      0x0002F8BA
                         Observed Value:
                         NOM_VENT_PRESS_AWAY_END_EXP_POS_LIMIT_LO          0xF8BA
            sustP        Alarm Limit: Sustained Pressure Alarm Limit.
                         Label:
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	NLS_NOM_SETT_VENT_PRESS_AWAY_SUST_LIMIT_HI	0x0402F935
	Observed Value:	
	NOM_SETT_VENT_PRESS_AWAY_SUST_LIMIT_HI	0xF935
lowMV	Alarm Limit: Low Minute Volume Alarm Limit	
	Label:	
	NLS_NOM_SETT_VENT_VOL_MINUTE_AWAY_LIMIT_LO	0x0402F94C
	Observed Value:	
	NOM_SETT_VENT_VOL_MINUTE_AWAY_LIMIT_LO	0xF94C
lowO2	Alarm Limit: Low Oxygen (O2) Alarm Limit	
	Label:	
	NLS_NOM_SETT_VENT_CONC_AWAY_O2_LIMIT_LO	0x0402F91A
	Observed Value:	
	NOM_SETT_VENT_CONC_AWAY_O2_LIMIT_LO	0xF91A
highO2	Alarm Limit. High Oxygen (O2) Alarm Limit	
	Label:	
	NLS_NOM_SETT_VENT_CONC_AWAY_O2_LIMIT_HI	0x0402F919
	Observed Value:	
	NOM_SETT_VENT_CONC_AWAY_O2_LIMIT_HI	0xF919
highMV	Alarm Limit: High Minute Volume Alarm Limit	
	Label:	
	NLS_NOM_SETT_VENT_VOL_MINUTE_AWAY_LIMIT_HI	0x0402F94B
	Observed Value:	
	NOM_SETT_VENT_VOL_MINUTE_AWAY_LIMIT_HI	0xF94B
lowTV	Alarm Limit: Low Tidal Volume Alarm Limit	
	Label:	
	NLS_NOM_SETT_VENT_VOL_TIDAL_LIMIT_LO	0x0402F94E
	Observed Value:	
	NOM_SETT_VENT_VOL_TIDAL_LIMIT_LO	0xF94E
highTV	Alarm Limit: High Tidal Volume Alarm Limit	
	Label:	
	NLS_NOM_SETT_VENT_VOL_TIDAL_LIMIT_HI	0x0402F94D
	Observed Value:	
	NOM_SETT_VENT_VOL_TIDAL_LIMIT_HI	0xF94D
Num 1	Placeholder for Vuelink Flex Text	
	Label:	
	NLS_VUELINK_FLX1_NPS_TEXT_NUM1	0x80AAF064
	depends on configuration	
Num 2	Placeholder for Vuelink Flex Text	
	Label:	
	NLS_VUELINK_FLX1_NPS_TEXT_NUM2	0x80AAF066
	depends on configuration	
Num 3	Placeholder for Vuelink Flex Text	
	Label:	
	NLS_VUELINK_FLX1_NPS_TEXT_NUM3	0x80AAF068
	depends on configuration	
Num 4	Placeholder for Vuelink Flex Text	
	Label:	
	NLS_VUELINK_FLX1_NPS_TEXT_NUM4	0x80AAF06A
	depends on configuration	
Num 5	Placeholder for Vuelink Flex Text	
	Label:	
	NLS_VUELINK_FLX1_NPS_TEXT_NUM5	0x80AAF06C
	depends on configuration	
Num 6	Placeholder for Vuelink Flex Text	
	Label:	
	NLS_VUELINK_FLX1_NPS_TEXT_NUM6	0x80AAF06E
	depends on configuration	
Num 7	Placeholder for Vuelink Flex Text	
	Label:	
	NLS_VUELINK_FLX1_NPS_TEXT_NUM7	0x80AAF070
	depends on configuration	
Num 8	Placeholder for Vuelink Flex Text	
	Label:	
	NLS_VUELINK_FLX1_NPS_TEXT_NUM8	0x80AAF072
	depends on configuration	

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Num 9       Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM9               0x80AAF074
            depends on configuration
Num 10      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM10              0x80AAF076
            depends on configuration
Num 11      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM11              0x80AAF078
            depends on configuration
Num 12      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM12              0x80AAF07A
            depends on configuration
Num 13      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM13              0x80AAF07C
            depends on configuration
Num 14      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM14              0x80AAF07E
            depends on configuration
Num 15      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM15              0x80AAF080
            depends on configuration
Num 16      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM16              0x80AAF082
            depends on configuration
Num 17      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM17              0x80AAF084
            depends on configuration
Num 18      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM18              0x80AAF086
            depends on configuration
Num 19      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM19              0x80AAF088
            depends on configuration
Num 20      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM20              0x80AAF08A
            depends on configuration
Num 21      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM21              0x80AAF08C
            depends on configuration
Num 22      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM22              0x80AAF08E
            depends on configuration
Num 23      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM23              0x80AAF090
            depends on configuration
Num 24      Placeholder for Vuelink Flex Text
            Label:
            NLS_VUELINK_FLX1_NPS_TEXT_NUM24              0x80AAF092
            depends on configuration
PCT         Procalcitonin
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                    Label:
                    NLS_NOM_CONC_PCT                            0x0002F17D
                    Observed Value:
                    NOM_CONC_PCT                                0xF17D
                    Units:
                    NOM_DIM_PICO_G_PER_ML                       0x0875
                    NOM_DIM_NANO_G_PER_L                        0x0814
        Quick       Thromboplastine Time
                    Label:
                    NLS_NOM_TIME_PD_THROMBOPLAS                 0x0002F193
                    Observed Value:
                    NOM_TIME_PD_THROMBOPLAS                     0xF193
                    Units:
                    NOM_DIM_SEC                                 0x0880
        HDL         High Density Lipoprotein
                    Label:
                    NLS_NOM_CONC_HDL                            0x0002F170
                    Observed Value:
                    NOM_CONC_HDL                                0xF170
                    Units:
                    NOM_DIM_MILLI_MOLE_PER_L                    0x1272
                    NOM_DIM_MILLI_G_PER_DL                      0x0852
        LDL         Low Density Lipoprotein
                    Label:
                    NLS_NOM_CONC_LDL                            0x0002F171
                    Observed Value:
                    NOM_CONC_LDL                                0xF171
                    Units:
                    NOM_DIM_MILLI_MOL_PER_L
                    NOM_DIM_MILLI_G_PER_DL                      0x0852
        CRP         C-reactive Protein
                    Label:
                    NLS_NOM_CONC_CRP                            0x0002F183
                    Observed Value:
                    NOM_CONC_CRP                                0xF183
                    Units:
                    NOM_DIM_MILLI_G_PER_L                       0x0812
                    NOM_DIM_MILLI_G_PER_DL                      0x0852
        UrHb        Hemoglobin (Urine)
                    Label:
                    NLS_NOM_CONC_HB_URINE                       0x0002F19E
                    Observed Value:
                    NOM_CONC_HB_URINE                           0xF19E
                    Units:
                    NOM_DIM_X_G_PER_DL                          0x0840
                    NOM_DIM_X_G_PER_L                           0x0800
                    NOM_DIM_MILLI_MOLE_PER_L                    0x1272
        ApneaD      Apnea Time
                    Label:
                    NLS_NOM_TIME_PD_APNEA                       0x00025130
                    Observed Value:
                    NOM_TIME_PD_APNEA                           0x5130
        FICO2       Airway CO2 inspiration
                    Label:
                    NLS_NOM_VENT_CONC_AWAY_CO2_INSP             0x00025160
                    Observed Value:
                    NOM_VENT_CONC_AWAY_CO2_INSP                 0x5160
                    Units:
                    NOM_DIM_PERCENT
        HLMfl
                    Label:
                    NLS_NOM_FLOW_PUMP_HEART_LUNG_MAIN           0x0002F974
                    Observed Value:
                    NOM_FLOW_PUMP_HEART_LUNG_MAIN               0xF974
                    Units:
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SlvPfl
            Label:
            NLS_NOM_FLOW_PUMP_HEART_LUNG_SLAVE                         0x0002F975
            Observed Value:
            NOM_FLOW_PUMP_HEART_LUNG_SLAVE                             0xF975
            Units:

SucPfl
            Label:
            NLS_NOM_FLOW_PUMP_HEART_LUNG_SUCTION                       0x0002F976
            Observed Value:
            NOM_FLOW_PUMP_HEART_LUNG_SUCTION                           0xF976
            Units:

AuxPfl
            Label:
            NLS_NOM_FLOW_PUMP_HEART_LUNG_AUX                           0x0002F977
            Observed Value:
            NOM_FLOW_PUMP_HEART_LUNG_AUX                               0xF977
            Units:

PlePfl
            Label:
            NLS_NOM_FLOW_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN             0x0002F978
            Observed Value:
            NOM_FLOW_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN                 0xF978
            Units:

SplPfl
            Label:
            NLS_NOM_FLOW_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE           0x0002F979
            Observed Value:
            NOM_FLOW_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE               0xF979
            Units:

DeltaP      Blood Pressure difference
            Label:
            NLS_NOM_PRESS_BLD_DIFF                                     0x0002F968
            Observed Value:
            NOM_PRESS_BLD_DIFF                                         0xF968
            Units:
            NOM_DIM_MMHG                                               0x0F20
            NOM_DIM_KILO_PASCAL                                       0x0F03
DeltaP1      Blood Pressure difference 1 (generic)
            Label:
            NLS_NOM_PRESS_BLD_DIFF_GEN_1                               0x0002F96C
            Observed Value:
            NOM_PRESS_BLD_DIFF_GEN_1                                   0xF96C
            Units:
            NOM_DIM_MMHG                                               0x0F20
            NOM_DIM_KILO_PASCAL                                       0x0F03
DeltaP2      Blood Pressure difference 2 (generic)
            Label:
            NLS_NOM_PRESS_BLD_DIFF_GEN_2                               0x0002F970
            Observed Value:
            NOM_PRESS_BLD_DIFF_GEN_2                                   0xF970
            Units:
            NOM_DIM_MMHG                                               0x0F20
            NOM_DIM_KILO_PASCAL                                       0x0F03
AxOnTi
            Label:
            NLS_NOM_TIME_PD_PUMP_HEART_LUNG_AUX_SINCE_START           0x0002F97A
            Observed Value:
            NOM_TIME_PD_PUMP_HEART_LUNG_AUX_SINCE_START               0xF97A
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                          Units:

        AxOffT
                          Label:
                          NLS_NOM_TIME_PD_PUMP_HEART_LUNG_AUX_SINCE_STOP          0x0002F97B
                          Observed Value:
                          NOM_TIME_PD_PUMP_HEART_LUNG_AUX_SINCE_STOP              0xF97B
                          Units:

        AxDVol
                          Label:
                          NLS_NOM_VOL_DELIV_PUMP_HEART_LUNG_AUX                    0x0002F97C
                          Observed Value:
                          NOM_VOL_DELIV_PUMP_HEART_LUNG_AUX                        0xF97C
                          Units:

        AxTVol
                          Label:
                          NLS_NOM_VOL_DELIV_TOTAL_PUMP_HEART_LUNG_AUX              0x0002F97D
                          Observed Value:
                          NOM_VOL_DELIV_TOTAL_PUMP_HEART_LUNG_AUX                  0xF97D
                          Units:

        AxPlTi
                          Label:
                          NLS_NOM_TIME_PD_PLEGIA_PUMP_HEART_LUNG_AUX               0x0002F97E
                          Observed Value:
                          NOM_TIME_PD_PLEGIA_PUMP_HEART_LUNG_AUX                   0xF97E
                          Units:

        CpOnTi
                          Label:
                          NLS_NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN_SINCE_START 0x0002F97F
                          Observed Value:
                          NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN_SINCE_START    0xF97F
                          Units:

        CpOffT
                          Label:
                          NLS_NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN_SINCE_STOP 0x0002F980
                          Observed Value:
                          NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN_SINCE_STOP     0xF980
                          Units:

        CpDVol
                          Label:
                          NLS_NOM_VOL_DELIV_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN      0x0002F981
                          Observed Value:
                          NOM_VOL_DELIV_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN          0xF981
                          Units:

        CpTVol
                          Label:
                          NLS_NOM_VOL_DELIV_TOTAL_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN   0x0002F982
                          Observed Value:
                          NOM_VOL_DELIV_TOTAL_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN       0xF982
                          Units:

        CpPlTi
                          Label:
                          NLS_NOM_TIME_PD_PLEGIA_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN    0x0002F983
                          Observed Value:
                          NOM_TIME_PD_PLEGIA_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN        0xF983
                          Units:
```

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CsOnTi
            Label:
            NLS_NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE_SINCE_START 0x0002F984
            Observed Value:
            NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE_SINCE_START   0xF984
            Units:

CsOffT
            Label:
            NLS_NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE_SINCE_STOP 0x0002F985
            Observed Value:
            NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE_SINCE_STOP    0xF985
            Units:

CsDVol
            Label:
            NLS_NOM_VOL_DELIV_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE         0x0002F986
            Observed Value:
            NOM_VOL_DELIV_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE             0xF986
            Units:

CsTVol
            Label:
            NLS_NOM_VOL_DELIV_TOTAL_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE   0x0002F987
            Observed Value:
            NOM_VOL_DELIV_TOTAL_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE       0xF987
            Units:

CsPlTi
            Label:
            NLS_NOM_TIME_PD_PLEGIA_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE    0x0002F988
            Observed Value:
            NOM_TIME_PD_PLEGIA_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE        0xF988
            Units:

StO2     O2 Saturation (tissue)
            Label:
            NLS_NOM_SAT_O2_TISSUE                                        0x0002F960
            Observed Value:
            NOM_SAT_O2_TISSUE                                            0xF960
            Units:
            NOM_DIM_PERCENT                                             0x0220
CSI
            Label:
            NLS_NOM_CEREB_STATE_INDEX                                   0x0002F961
            Observed Value:
            NOM_CEREB_STATE_INDEX                                       0xF961
            Units:

Tin/Tt
            Label:
            NLS_NOM_RATIO_INSP_TOTAL_BREATH_SPONT                       0x0002F990
            Observed Value:
            NOM_RATIO_INSP_TOTAL_BREATH_SPONT                           0xF990
            Units:

PEinsp   Respiration Pressure Plateau
            Label:
            NLS_NOM_VENT_PRESS_RESP_PLAT                                0x00025368
            Observed Value:
            NOM_VENT_PRESS_RESP_PLAT                                    0x5368
            Units:

tPEEP
            Label:
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                        NLS_NOM_VENT_PRESS_AWAY_END_EXP_POS_TOTAL              0x0002F991
                        Observed Value:
                        NOM_VENT_PRESS_AWAY_END_EXP_POS_TOTAL                  0xF991
                        Units:
                        NOM_DIM_MILLI_BAR                                      0x0F72
            Cpav
                        Label:
                        NLS_NOM_COMPL_LUNG_PAV                                 0x0002F992
                        Observed Value:
                        NOM_COMPL_LUNG_PAV                                     0xF992
                        Units:

            Epav
                        Label:
                        NLS_NOM_ELAS_LUNG_PAV                                  0x0002F995
                        Observed Value:
                        NOM_ELAS_LUNG_PAV                                      0xF995
                        Units:

            Rpav
                        Label:
                        NLS_NOM_RES_AWAY_PAV                                   0x0002F993
                        Observed Value:
                        NOM_RES_AWAY_PAV                                       0xF993
                        Units:

            sEppv       -
                        Label:
                        NLS_NOM_SETT_ELAS_LUNG_PPV                             0x0402FBAF
                        Observed Value:
                        NOM_SETT_ELAS_LUNG_PPV                                 0xFBAF
            sRppv       -
                        Label:
                        NLS_NOM_SETT_RES_AWAY_PPV                              0x0402FBB0
                        Observed Value:
                        NOM_SETT_RES_AWAY_PPV                                  0xFBB0
                        Units:
                        UNDEFINED
            Rtot
                        Label:
                        NLS_NOM_RES_AWAY_EXP_TOTAL                             0x0002F994
                        Observed Value:
                        NOM_RES_AWAY_EXP_TOTAL                                 0xF994
                        Units:

            RSBInm
                        Label:
                        NLS_NOM_BREATH_RAPID_SHALLOW_INDEX_NORM                0x0002F996
                        Observed Value:
                        NOM_BREATH_RAPID_SHALLOW_INDEX_NORM                    0xF996
                        Units:

            iTemp       Infrared Temp
                        Label:
                        NLS_NOM_TEMP_INFRARED                                  0x0002FB4A
                        Observed Value:
                        NOM_TEMP_INFRARED                                      0xFB4A
                        Units:
                        NOM_DIM_DEGC                                          0x17A0
                        NOM_DIM_FAHR                                          0x1140
            iTcore      Infrared Temp Core
                        Label:
                        NLS_NOM_TEMP_CORE_INFRARED                             0x0002FB4F
                        Observed Value:
                        NOM_TEMP_CORE_INFRARED                                 0xFB4F
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                    Units:
                    NOM_DIM_DEGC                              0x17A0
                    NOM_DIM_FAHR                              0x1140
        iTrect      Infrared Temp Rectal
                    Label:
                    NLS_NOM_TEMP_RECT_INFRARED               0x0002FB4E
                    Observed Value:
                    NOM_TEMP_RECT_INFRARED                   0xFB4E
                    Units:
                    NOM_DIM_DEGC                              0x17A0
                    NOM_DIM_FAHR                              0x1140
        iToral      Infrared Temp Oral
                    Label:
                    NLS_NOM_TEMP_ORAL_INFRARED               0x0002FB4C
                    Observed Value:
                    NOM_TEMP_ORAL_INFRARED                   0xFB4C
                    Units:
                    NOM_DIM_DEGC                              0x17A0
                    NOM_DIM_FAHR                              0x1140
        iTtymp      Infrared Temp Tympanic
                    Label:
                    NLS_NOM_TEMP_TYMP_INFRARED               0x0002FB4B
                    Observed Value:
                    NOM_TEMP_TYMP_INFRARED                   0xFB4B
                    Units:
                    NOM_DIM_DEGC                              0x17A0
                    NOM_DIM_FAHR                              0x1140
        iTaxil      Infrared Temp Axillary
                    Label:
                    NLS_NOM_TEMP_AXIL_INFRARED               0x0002FB4D
                    Observed Value:
                    NOM_TEMP_AXIL_INFRARED                   0xFB4D
                    Units:
                    NOM_DIM_DEGC                              0x17A0
                    NOM_DIM_FAHR                              0x1140
        Tair        Air Temperature in the Incubator
                    Label:
                    NLS_NOM_TEMP_AIR_INCUB                   0x0002F12A
                    Observed Value:
                    NOM_TEMP_AIR_INCUB                       0xF12A
        DFHR        Direct Fetal Heart Rate
                    Label:
                    NLS_NOM_ECG_CARD_BEAT_RATE_FETAL         0x0002F0CF
                    Observed Value:
                    NOM_ECG_CARD_BEAT_RATE_FETAL             0xF0CF
        bDFHR       Any DECG
                    Label:
                    NLS_NOM_ECG_CARD_BEAT_RATE_FETAL_BTB     0x0002F0D0
                    Observed Value:
                    NOM_ECG_CARD_BEAT_RATE_FETAL_BTB         0xF0D0
                    Units:
                    NOM_DIM_BEAT_PER_MIN                     0x0AA0
        FHR         Fetal Heart Rate
                    Label:
                    NLS_NOM_USOUND_CARD_BEAT_RATE_FETAL      0x0002F0CB
                    Observed Value:
                    NOM_USOUND_CARD_BEAT_RATE_FETAL          0xF0CB
        DFHR1       DECG
                    Label:
                    NLS_OB_NAMES_ECG_CARD_BEAT_RATE_FETAL_1  0x814C5432
                    Observed Value:
                    NOM_ECG_CARD_BEAT_RATE_FETAL             0xF0CF
                    Units:
                    NLS_NOM_DIM_BEAT_PER_MIN
        FHR1        Fetal heardrate from US
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                        Label:
                        NLS_OB_NAMES_USOUND_CARD_BEAT_RATE_FETAL_1          0x814C5401
                        Observed Value:
                        NOM_USOUND_CARD_BEAT_RATE_FETAL                     0xF0CB
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
    DFHR2       DECG
                        Label:
                        NLS_OB_NAMES_ECG_CARD_BEAT_RATE_FETAL_2             0x814C5434
                        Observed Value:
                        NOM_ECG_CARD_BEAT_RATE_FETAL                        0xF0CF
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
    FHR2        Fetal heardrate from US
                        Label:
                        NLS_OB_NAMES_USOUND_CARD_BEAT_RATE_FETAL_2          0x814C5403
                        Observed Value:
                        NOM_USOUND_CARD_BEAT_RATE_FETAL                     0xF0CB
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
    DFHR3       DECG
                        Label:
                        NLS_OB_NAMES_ECG_CARD_BEAT_RATE_FETAL_3             0x814C5436
                        Observed Value:
                        NOM_ECG_CARD_BEAT_RATE_FETAL                        0xF0CF
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
    FHR3        Fetal heardrate from US
                        Label:
                        NLS_OB_NAMES_USOUND_CARD_BEAT_RATE_FETAL_3          0x814C5405
                        Observed Value:
                        NOM_USOUND_CARD_BEAT_RATE_FETAL                     0xF0CB
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
    btbFHR      Beat-To-Beat Fetal Heart Rate
                        Label:
                        NLS_NOM_USOUND_CARD_BEAT_RATE_FETAL_BTB             0x0002F0CC
                        Observed Value:
                        NOM_USOUND_CARD_BEAT_RATE_FETAL_BTB                 0xF0CC
    bDFHR1      DECG
                        Label:
                        NLS_OB_NAMES_ECG_CARD_BEAT_RATE_FETAL_BTB_1         0x814C5438
                        Observed Value:
                        NOM_ECG_CARD_BEAT_RATE_FETAL_BTB                    0xF0D0
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
    bFHR1       Fetal heardrate from US
                        Label:
                        NLS_OB_NAMES_USOUND_CARD_BEAT_RATE_FETAL_BTB_1      0x814C5407
                        Observed Value:
                        NOM_USOUND_CARD_BEAT_RATE_FETAL_BTB                 0xF0CC
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
    bDFHR2      DECG
                        Label:
                        NLS_OB_NAMES_ECG_CARD_BEAT_RATE_FETAL_BTB_2         0x814C543A
                        Observed Value:
                        NOM_ECG_CARD_BEAT_RATE_FETAL_BTB                    0xF0D0
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
    bFHR2       Fetal heardrate from US
                        Label:
                        NLS_OB_NAMES_USOUND_CARD_BEAT_RATE_FETAL_BTB_2      0x814C5409
                        Observed Value:
                        NOM_USOUND_CARD_BEAT_RATE_FETAL_BTB                 0xF0CC
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                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
            bDFHR3      DECG
                        Label:
                        NLS_OB_NAMES_ECG_CARD_BEAT_RATE_FETAL_BTB_3              0x814C543C
                        Observed Value:
                        NOM_ECG_CARD_BEAT_RATE_FETAL_BTB                         0xF0D0
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
            bFHR3       Fetal heardrate from US
                        Label:
                        NLS_OB_NAMES_USOUND_CARD_BEAT_RATE_FETAL_BTB_3           0x814C540B
                        Observed Value:
                        NOM_USOUND_CARD_BEAT_RATE_FETAL_BTB                      0xF0CC
                        Units:
                        NLS_NOM_DIM_BEAT_PER_MIN
            Pulse       Pulse Rate from Toco
                        Label:
                        NLS_NOM_PLETH_PULS_RATE_ABDOM                            0x0002F9A4
                        Observed Value:
                        NOM_PLETH_PULS_RATE_ABDOM                                0xF9A4
                        Units:
                        NOM_DIM_BEAT_PER_MIN                                     0x0AA0
            Toco        Uterine Activity
                        Label:
                        NLS_NOM_TOCO                                             0x0002F0D4
                        Observed Value:
                        NOM_TOCO                                                 0xF0D4
            IUP         Intra-Uterine Pressure
                        Label:
                        NLS_NOM_PRESS_INTRA_UTERAL                               0x0002F0D8
                        Observed Value:
                        NOM_PRESS_BLD                                           0x4A00
                        Units:
                        NOM_DIM_MMHG                                            0x0F20
                        NOM_DIM_KILO_PASCAL                                     0x0F03
```

Enumerations

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EctSta        ECG Ectopic Status label
              Label:
              NLS_NOM_ECG_STAT_ECT                               0x0002D006
              Values:
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Nomen	Description	Value
NOM_ECG_V_P_C_RUN	Run PVCs	0x4290
NOM_ECG_PACING_NON_CAPT	Pacer not capture	0x40C0
NOM_ECG_PACER_NOT_PACING	pacer not paced	0x41E0
NOM_ECG_BEAT_MISSED	missed beat	0x4058
NOM_ECG_SV_P_C_FREQUENT	frequent SVPB's	0x42F0
NOM_ECG_SV_P_C	SVPB	0x4220
NOM_ECG_SV_BEAT	SV beats	0x4208
NOM_ECG_PACED_BEAT	paced beats	0x40A8
NOM_ECG_V_P_C_PAIR	pair PVC's	0x4280
NOM_ECG_V_P_C_MULTIFOCAL	multiform PVC's	0x4278
NOM_ECG_V_P_C_RonT	R on T PVC's	0x42A0
NOM_ECG_ECT_ABSENT	no ectopic status	0x4308

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RytSta        ECG Rhythm Status label
              Label:
              NLS_NOM_ECG_STAT_RHY                               0x0002D007
              Values:
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Nomen	Description	Value
NOM_ECG_ASY_RHY	Asystole	0x4003
NOM_ECG_V_FIB_TACHY_RHY	Vent Fib/Tach	0x4020
NOM_ECG_LEARN_RHY	Learning Rhythm	0x4002
NOM_ECG_LEARN	Learning ECG	0x4528
NOM_ECG_V_TACHY_RHY	Vtach	0x401A
NOM_ECG_V_TACHY_RHY_SUST	Sustained VT	0x401B
NOM_ECG_V_RHY	Vent Rhythm	0x4018
NOM_ECG_V_BIGEM_RHY	Vent Bigeminy	0x4017
NOM_ECG_V_TRIGEM_RHY	Vent Trigeminy	0x401C
NOM_ECG_PACED_RHY	Paced Rhythm	0x4009
NOM_ECG_RHY_IRREG	Irregular HR	0x400D
NOM_ECG_SINUS_BRADY_RHY	Sinus Brady	0x4013
NOM_ECG_SINUS_RHY	Sinus Rhythm	0x4012
NOM_ECG_SINUS_TACHY_RHY	Sinus Tach	0x4014
NOM_ECG_SV_BRADY_RHY	SV Brady	0x4210
NOM_ECG_SV_RHY	SV Rhythm	0x4015
NOM_ECG_SV_TACHY_RHY	SV Tach	0x4016
NOM_ECG_RHY_UNK	Unknown ECG Rhythm	0x4010

Nomen	Description	Value
NOM_ECG_RHY_UNANALYZEABLE	Cannot Analyze ECG	0x4011
NOM_ECG_RHY_ABSENT		0x400B
NOM_ECG_RHY_NOS		0x403F
NOM_ECG_RHY	ECG Rhythm	0x400A

Waves

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ECG         Unspecific ECG wave
            Label:
            NLS_NOM_ECG_ELEC_POTL                             0x00020100
            Observed Value:
            NOM_ECG_ELEC_POTL                                 0x0100
            Units:
            NOM_DIM_MILLI_VOLT                                0x10B2
I           ECG Lead I
            Label:
            NLS_NOM_ECG_ELEC_POTL_I                           0x00020101
            Observed Value:
            NOM_ECG_ELEC_POTL_I                               0x0101
            Units:
            NOM_DIM_MILLI_VOLT                                0x10B2
II          ECG Lead II
            Label:
            NLS_NOM_ECG_ELEC_POTL_II                          0x00020102
            Observed Value:
            NOM_ECG_ELEC_POTL_II                              0x0102
            Units:
            NOM_DIM_MILLI_VOLT                                0x10B2
III         ECG Lead III
            Label:
            NLS_NOM_ECG_ELEC_POTL_III                         0x0002013D
            Observed Value:
            NOM_ECG_ELEC_POTL_III                             0x013D
            Units:
            NOM_DIM_MILLI_VOLT                                0x10B2
aVR         ECG Lead AVR
            Label:
            NLS_NOM_ECG_ELEC_POTL_AVR                         0x0002013E
            Observed Value:
            NOM_ECG_ELEC_POTL_AVR                             0x013E
            Units:
            NOM_DIM_MILLI_VOLT                                0x10B2
aVL         ECG Lead AVL
            Label:
            NLS_NOM_ECG_ELEC_POTL_AVL                         0x0002013F
            Observed Value:
            NOM_ECG_ELEC_POTL_AVL                             0x013F
            Units:
            NOM_DIM_MILLI_VOLT                                0x10B2
aVF         ECG Lead AVF
            Label:
            NLS_NOM_ECG_ELEC_POTL_AVF                         0x00020140
            Observed Value:
            NOM_ECG_ELEC_POTL_AVF                             0x0140
            Units:
            NOM_DIM_MILLI_VOLT                                0x10B2
V           ECG Lead V
            Label:
            NLS_NOM_ECG_ELEC_POTL_V                           0x00020143
            Observed Value:
            NOM_ECG_ELEC_POTL_V                               0x0143
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                        Units:
                        NOM_DIM_MILLI_VOLT                            0x10B2
        MCL             ECG Lead MCL
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_MCL                    0x0002014B
                        Observed Value:
                        NOM_ECG_ELEC_POTL_MCL                        0x014B
                        Units:
                        NOM_DIM_MILLI_VOLT                            0x10B2
        V1              ECG Lead V1
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V1                     0x00020103
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V1                         0x0103
                        Units:
                        NOM_DIM_MILLI_VOLT                            0x10B2
        V2              ECG Lead V1
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V2                     0x00020104
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V2                         0x0104
                        Units:
                        NOM_DIM_MILLI_VOLT                            0x10B2
        V3              ECG Lead V1
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V3                     0x00020105
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V3                         0x0105
                        Units:
                        NOM_DIM_MILLI_VOLT                            0x10B2
        V4              ECG Lead V1
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V4                     0x00020106
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V4                         0x0106
                        Units:
                        NOM_DIM_MILLI_VOLT                            0x10B2
        V5              ECG Lead V1
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V5                     0x00020107
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V5                         0x0107
                        Units:
                        NOM_DIM_MILLI_VOLT                            0x10B2
        V6              ECG Lead V1
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V6                     0x00020108
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V6                         0x0108
                        Units:
                        NOM_DIM_MILLI_VOLT                            0x10B2
        V7              -
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V7                     0x00020109
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V7                         0x0109
        V8              -
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V8                     0x00020147
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V8                         0x0147
        V9              -
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V9                     0x000201FC
                        Observed Value:
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                        NOM_ECG_ELEC_POTL_V9                         0x01FC
        V3R             -
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V3R                   0x0002010B
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V3R                        0x010B
                        Units:
        V4R             -
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V4R                   0x0002010C
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V4R                        0x010C
        V5R             -
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V5R                   0x0002010D
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V5R                        0x010D
        V6R             -
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_V6R                   0x0002010E
                        Observed Value:
                        NOM_ECG_ELEC_POTL_V6R                        0x010E
        MCL1            ECG Lead MCL1
                        Label:
                        NLS_NOM_ECG_ELEC_POTL_MCL1                  0x0002014C
                        Observed Value:
                        NOM_ECG_ELEC_POTL_MCL1                       0x014C
                        Units:
                        NOM_DIM_MILLI_VOLT                           0x10B2
        Pleth           PLETH wave label
                        Label:
                        NLS_NOM_PULS_OXIM_PLETH                     0x00024BB4
                        Observed Value:
                        NOM_PLETH                                    0x4BB4
                        Units:
                        NOM_DIM_DIMLESS                              0x0200
        PlethT          Pleth wave from Telemetry
                        Label:
                        NLS_NOM_PULS_OXIM_PLETH_TELE                0x0002F09B
                        Observed Value:
                        NOM_PULS_OXIM_PLETH_TELE                     0xF09B
                        Units:
                        NOM_DIM_DIMLESS                              0x0200
        PLETHl          PLETH wave (left)
                        Label:
                        NLS_NOM_PULS_OXIM_PLETH_LEFT                0x0002F08D
                        Observed Value:
                        NOM_PULS_OXIM_PLETH_LEFT                     0xF08D
                        Units:
                        NOM_DIM_DIMLESS                              0x0200
        PLETHr          PLETH wave (right)
                        Label:
                        NLS_NOM_PULS_OXIM_PLETH_RIGHT               0x0002F08C
                        Observed Value:
                        NOM_PULS_OXIM_PLETH_RIGHT                    0xF08C
                        Units:
                        NOM_DIM_DIMLESS                              0x0200
        ABP             Arterial Blood Pressure (ABP)
                        Label:
                        NLS_NOM_PRESS_BLD_ART_ABP                   0x00024A14
                        Observed Value:
                        NOM_PRESS_BLD_ART_ABP                        0x4A14
                        Units:
                        NOM_DIM_MMHG                                 0x0F20
                        NOM_DIM_KILO_PASCAL                          0x0F03
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ART          Arterial Blood Pressure (ART)
             Label:
             NLS_NOM_PRESS_BLD_ART                                  0x00024A10
             Observed Value:
             NOM_PRESS_BLD_ART                                      0x4A10
             Units:
             NOM_DIM_MMHG                                           0x0F20
             NOM_DIM_KILO_PASCAL                                    0x0F03
Ao           Arterial Blood Pressure in the Aorta (Ao)
             Label:
             NLS_NOM_PRESS_BLD_AORT                                 0x00024A0C
             Observed Value:
             NOM_PRESS_BLD_AORT                                     0x4A0C
             Units:
             NOM_DIM_MMHG                                           0x0F20
             NOM_DIM_KILO_PASCAL                                    0x0F03
PAP          Pulmonary Arterial Pressure (PAP)
             Label:
             NLS_NOM_PRESS_BLD_ART_PULM                             0x00024A1C
             Observed Value:
             NOM_PRESS_BLD_ART_PULM                                 0x4A1C
             Units:
             NOM_DIM_MMHG                                           0x0F20
             NOM_DIM_KILO_PASCAL                                    0x0F03
CVP          Central Venous Pressure (CVP)
             Label:
             NLS_NOM_PRESS_BLD_VEN_CENT                             0x00024A44
             Observed Value:
             NOM_PRESS_BLD_VEN_CENT                                 0x4A44
             Units:
             NOM_DIM_MMHG                                           0x0F20
             NOM_DIM_KILO_PASCAL                                    0x0F03
RAP          Right Atrial Pressure (RAP)
             Label:
             NLS_NOM_PRESS_BLD_ATR_RIGHT                            0x00024A34
             Observed Value:
             NOM_PRESS_BLD_ATR_RIGHT                                0x4A34
             Units:
             NOM_DIM_MMHG                                           0x0F20
             NOM_DIM_KILO_PASCAL                                    0x0F03
LAP          Left Atrial Pressure (LAP)
             Label:
             NLS_NOM_PRESS_BLD_ATR_LEFT                             0x00024A30
             Observed Value:
             NOM_PRESS_BLD_ATR_LEFT                                 0x4A30
             Units:
             NOM_DIM_MMHG                                           0x0F20
             NOM_DIM_KILO_PASCAL                                    0x0F03
ICP          Intra-cranial Pressure (ICP)
             Label:
             NLS_NOM_PRESS_INTRA_CRAN                               0x00025808
             Observed Value:
             NOM_PRESS_INTRA_CRAN                                   0x5808
             Units:
             NOM_DIM_MMHG                                           0x0F20
             NOM_DIM_KILO_PASCAL                                    0x0F03
UAP          Umbilical Arterial Pressure (UAP)
             Label:
             NLS_NOM_PRESS_BLD_ART_UMB                              0x00024A28
             Observed Value:
             NOM_PRESS_BLD_ART_UMB                                  0x4A28
             Units:
             NOM_DIM_MMHG                                           0x0F20
             NOM_DIM_KILO_PASCAL                                    0x0F03
UVP          Umbilical Venous Pressure (UVP)
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                        Label:
                        NLS_NOM_PRESS_BLD_VEN_UMB                              0x00024A48
                        Observed Value:
                        NOM_PRESS_BLD_VEN_UMB                                  0x4A48
                        Units:
                        NOM_DIM_MMHG                                          0x0F20
                        NOM_DIM_KILO_PASCAL                                   0x0F03
        FAP             Femoral Arterial Pressure (FAP)
                        Label:
                        NLS_NOM_PRESS_BLD_ART_FEMORAL                         0x0002F0BC
                        Observed Value:
                        NOM_PRESS_BLD_ART_FEMORAL                             0xF0BC
                        Units:
                        NOM_DIM_MMHG                                          0x0F20
                        NOM_DIM_KILO_PASCAL                                   0x0F03
        BAP             Brachial Arterial Pressure (BAP)
                        Label:
                        NLS_NOM_PRESS_BLD_ART_BRACHIAL                        0x0002F0C0
                        Observed Value:
                        NOM_PRESS_BLD_ART_BRACHIAL                            0xF0C0
                        Units:
                        NOM_DIM_MMHG                                          0x0F20
                        NOM_DIM_KILO_PASCAL                                   0x0F03
        IC1             Intracranial Pressure 1 (IC1)
                        Label:
                        NLS_NOM_PRESS_INTRA_CRAN_1                            0x0002F0B4
                        Observed Value:
                        NOM_PRESS_INTRA_CRAN_1                                0xF0B4
                        Units:
                        NOM_DIM_MMHG                                          0x0F20
                        NOM_DIM_KILO_PASCAL                                   0x0F03
        IC2             Intracranial Pressure 2 (IC2)
                        Label:
                        NLS_NOM_PRESS_INTRA_CRAN_2                            0x0002F0B8
                        Observed Value:
                        NOM_PRESS_INTRA_CRAN_2                                0xF0B8
                        Units:
                        NOM_DIM_MMHG                                          0x0F20
                        NOM_DIM_KILO_PASCAL                                   0x0F03
        P               unspecific pressure
                        Label:
                        NLS_NOM_PRESS_BLD                                     0x00024A00
                        Observed Value:
                        NOM_PRESS_BLD                                         0x4A00
                        Units:
                        NOM_DIM_MMHG                                          0x0F20
                        NOM_DIM_KILO_PASCAL                                   0x0F03
        P1              Generic Pressure 1 (P1)
                        Label:
                        NLS_NOM_PRESS_GEN_1                                   0x0002F0A4
                        Observed Value:
                        NOM_PRESS_GEN_1                                       0xF0A4
                        Units:
                        NOM_DIM_MMHG                                          0x0F20
                        NOM_DIM_KILO_PASCAL                                   0x0F03
        P2              Generic Pressure 2 (P2)
                        Label:
                        NLS_NOM_PRESS_GEN_2                                   0x0002F0A8
                        Observed Value:
                        NOM_PRESS_GEN_2                                       0xF0A8
                        Units:
                        NOM_DIM_MMHG                                          0x0F20
                        NOM_DIM_KILO_PASCAL                                   0x0F03
        P3              Generic Pressure 3 (P3)
                        Label:
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                      NLS_NOM_PRESS_GEN_3                              0x0002F0AC
                      Observed Value:
                      NOM_PRESS_GEN_3                                  0xF0AC
                      Units:
                      NOM_DIM_MMHG                                     0x0F20
                      NOM_DIM_KILO_PASCAL                             0x0F03
          P4          Generic Pressure 4 (P4)
                      Label:
                      NLS_NOM_PRESS_GEN_4                              0x0002F0B0
                      Observed Value:
                      NOM_PRESS_GEN_4                                  0xF0B0
                      Units:
                      NOM_DIM_MMHG                                     0x0F20
                      NOM_DIM_KILO_PASCAL                             0x0F03
          CO2         CO2 concentration
                      Label:
                      NLS_NOM_AWAY_CO2                                 0x000250AC
                      Observed Value:
                      NOM_AWAY_CO2                                     0x50AC
                      Units:
                      NOM_DIM_MMHG                                     0x0F20
                      NOM_DIM_KILO_PASCAL                             0x0F03
          acResp      Accoustic Respiration Rate
                      Label:
                      NLS_NOM_ACOUSTIC_RESP                            0x0002FB5E
                      Observed Value:
                      NOM_ACOUSTIC_RESP_RATE                           0xFB5F
                      Units:
                      NOM_DIM_RESP_PER_MIN                             0x0AE0
          O2          Generic oxigen measurement label
                      Label:
                      NLS_NOM_CONC_AWAY_O2                             0x00025164
                      Observed Value:
                      NOM_CONC_AWAY_O2                                 0x5164
                      Units:
                      NOM_DIM_MMHG                                     0x0F20
                      NOM_DIM_KILO_PASCAL                             0x0F03
          Resp        Imedance RESP wave
                      Label:
                      NLS_NOM_RESP                                     0x00025000
                      Observed Value:
                      NOM_RESP                                         0x5000
                      Units:
                      NOM_DIM_X_OHM                                    0x10C0
          AWF         Airway Flow Wave
                      Label:
                      NLS_NOM_FLOW_AWAY                                0x000250D4
                      Observed Value:
                      NOM_FLOW_AWAY                                    0x50D4
          AWP         Airway Pressure Wave
                      Label:
                      NLS_NOM_PRESS_AWAY                               0x000250F0
                      Observed Value:
                      NOM_PRESS_AWAY                                   0x50F0
          AWPin       Airway Pressure Wave - measured in the inspiratory path
                      Label:
                      NLS_NOM_PRESS_AWAY_INSP                          0x00025108
                      Observed Value:
                      NOM_PRESS_AWAY_INSP                              0x5108
          AWFin       Airway Flow Wave - measured in the inspiratory path
                      Label:
                      NLS_NOM_VENT_FLOW_INSP                           0x0002518C
                      Observed Value:
                      NOM_VENT_FLOW_INSP                               0x518C
          EEG         generic EEG and BIS label
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                       Label:
                       NLS_NOM_EEG_ELEC_POTL_CRTX                      0x0002592C
                       Observed Value:
                       NOM_EEG_ELEC_POTL_CRTX                          0x592C
                       Units:
                       NOM_DIM_MICRO_VOLT                              0x10B3
       EEG L           -
                       Label:
                       NLS_NOM_EEG_ELEC_POTL_CRTX_LEFT                 0x0002F845
                       Observed Value:
                       NOM_EEG_ELEC_POTL_CRTX_LEFT                     0xF845
       EEG R           -
                       Label:
                       NLS_NOM_EEG_ELEC_POTL_CRTX_RIGHT               0x0002F846
                       Observed Value:
                       NOM_EEG_ELEC_POTL_CRTX_RIGHT                    0xF846
       EEG1            EEG wave channel 1
                       Label:
                       NLS_EEG_NAMES_EEG_CHAN1_LBL                     0x800F5401
                       Observed Value:
                       NOM_EEG_ELEC_POTL_CRTX                          0x592C
                       Units:
                       NOM_DIM_MICRO_VOLT                              0x10B3
       EEG2            EEG wave channel 2
                       Label:
                       NLS_EEG_NAMES_EEG_CHAN2_LBL                     0x800F5402
                       Observed Value:
                       NOM_EEG_ELEC_POTL_CRTX                          0x592C
                       Units:
                       NOM_DIM_MICRO_VOLT                              0x10B3
       EEG3            EEG wave channel 3
                       Label:
                       NLS_EEG_NAMES_EEG_CHAN3_LBL                     0x800F5432
                       Observed Value:
                       NOM_EEG_ELEC_POTL_CRTX                          0x592C
                       Units:
                       NOM_DIM_MICRO_VOLT                              0x10B3
       EEG4            EEG wave channel 4
                       Label:
                       NLS_EEG_NAMES_EEG_CHAN4_LBL                     0x800F5434
                       Observed Value:
                       NOM_EEG_ELEC_POTL_CRTX                          0x592C
                       Units:
                       NOM_DIM_MICRO_VOLT                              0x10B3
       Tblood          Tblood
                       Label:
                       NLS_NOM_TEMP_BLD                                0x0002E014
                       Observed Value:
                       NOM_TEMP_BLD                                    0xE014
       N2              generic N2 label
                       Label:
                       NLS_NOM_CONC_AWAY_N2                            0x0002537C
                       Observed Value:
                       NOM_CONC_AWAY_N2                                0x537C
                       Units:
                       NOM_DIM_MMHG                                    0x0F20
                       NOM_DIM_KILO_PASCAL                             0x0F03
                       NOM_DIM_PERCENT                                 0x0220
       N2O             generic Nitrous Oxide label
                       Label:
                       NLS_NOM_CONC_AWAY_N2O                           0x000251F0
                       Observed Value:
                       NOM_CONC_AWAY_N2O                               0x51F0
                       Units:
                       NOM_DIM_MMHG                                    0x0F20
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                          NOM_DIM_KILO_PASCAL                                 0x0F03
                          NOM_DIM_PERCENT                                     0x0220
          ISO             generic Isoflurane label
                          Label:
                          NLS_NOM_CONC_AWAY_ISOFL                             0x000251E8
                          Observed Value:
                          NOM_CONC_AWAY_ISOFL                                 0x51E8
                          Units:
                          NOM_DIM_MMHG                                        0x0F20
                          NOM_DIM_KILO_PASCAL                                 0x0F03
                          NOM_DIM_PERCENT                                     0x0220
          SEV             generic Sevoflurane label
                          Label:
                          NLS_NOM_CONC_AWAY_SEVOFL                            0x000251E4
                          Observed Value:
                          NOM_CONC_AWAY_SEVOFL                                0x51E4
                          Units:
                          NOM_DIM_MMHG                                        0x0F20
                          NOM_DIM_KILO_PASCAL                                 0x0F03
                          NOM_DIM_PERCENT                                     0x0220
          ENF             generic Enflurane label
                          Label:
                          NLS_NOM_CONC_AWAY_ENFL                              0x000251DC
                          Observed Value:
                          NOM_CONC_AWAY_ENFL                                  0x51DC
                          Units:
                          NOM_DIM_MMHG                                        0x0F20
                          NOM_DIM_KILO_PASCAL                                 0x0F03
                          NOM_DIM_PERCENT                                     0x0220
          HAL             generic Halothane label
                          Label:
                          NLS_NOM_CONC_AWAY_HALOTH                            0x000251E0
                          Observed Value:
                          NOM_CONC_AWAY_HALOTH                                0x51E0
                          Units:
                          NOM_DIM_MMHG                                        0x0F20
                          NOM_DIM_KILO_PASCAL                                 0x0F03
                          NOM_DIM_PERCENT                                     0x0220
          DES             generic Desflurane label
                          Label:
                          NLS_NOM_CONC_AWAY_DESFL                             0x000251D8
                          Observed Value:
                          NOM_CONC_AWAY_DESFL                                 0x51D8
                          Units:
                          NOM_DIM_MMHG                                        0x0F20
                          NOM_DIM_KILO_PASCAL                                 0x0F03
                          NOM_DIM_PERCENT                                     0x0220
          AGT             generic Agent label
                          Label:
                          NLS_NOM_CONC_AWAY_AGENT                             0x00025388
                          Observed Value:
                          NOM_CONC_AWAY_AGENT                                 0x5388
                          Units:
                          NOM_DIM_MMHG                                        0x0F20
                          NOM_DIM_KILO_PASCAL                                 0x0F03
                          NOM_DIM_PERCENT                                     0x0220
          AGT1            generic Agent1 label
                          Label:
                          NLS_GASES_NAMES_CONC_AWAY_AGENT1                    0x805A5401
                          Observed Value:
                          NOM_CONC_AWAY_AGENT                                 0x5388
                          Units:
                          NOM_DIM_MMHG                                        0x0F20
                          NOM_DIM_KILO_PASCAL                                 0x0F03
                          NOM_DIM_PERCENT                                     0x0220
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AGT2          generic Agent2 label
              Label:
              NLS_GASES_NAMES_CONC_AWAY_AGENT2                    0x805A5402
              Observed Value:
              NOM_CONC_AWAY_AGENT                                 0x5388
              Units:
              NOM_DIM_MMHG                                        0x0F20
              NOM_DIM_KILO_PASCAL                                 0x0F03
              NOM_DIM_PERCENT                                     0x0220
P_1           non-specific label for Pressure 1
              Label:
              NLS_NOM_EMFC_P1                                     0x04010030
              Observed Value:
              NOM_PRESS_BLD                                       0x4A00
P_2           non-specific label for Pressure 2
              Label:
              NLS_NOM_EMFC_P2                                     0x04010034
              Observed Value:
              NOM_PRESS_BLD                                       0x4A00
P_3           non-specific label for Pressure 3
              Label:
              NLS_NOM_EMFC_P3                                     0x04010038
              Observed Value:
              NOM_PRESS_BLD                                       0x4A00
P_4           non-specific label for Pressure 4
              Label:
              NLS_NOM_EMFC_P4                                     0x0401003C
              Observed Value:
              NOM_PRESS_BLD                                       0x4A00
P_5           non-specific label for Pressure 5
              Label:
              NLS_NOM_EMFC_P5                                     0x04010400
              Observed Value:
              NOM_PRESS_BLD                                       0x4A00
P_6           non-specific label for Pressure 6
              Label:
              NLS_NOM_EMFC_P6                                     0x04010404
              Observed Value:
              NOM_PRESS_BLD                                       0x4A00
P_7           non-specific label for Pressure 7
              Label:
              NLS_NOM_EMFC_P7                                     0x04010408
              Observed Value:
              NOM_PRESS_BLD                                       0x4A00
P_8           non-specific label for Pressure 8
              Label:
              NLS_NOM_EMFC_P8                                     0x0401040C
              Observed Value:
              NOM_PRESS_BLD                                       0x4A00
vECG          Vector ECG
              Label:
              NLS_NOM_ELEC_POTL_VECT                              0x0002fF874
              Observed Value:
              NOM_ELEC_POTL_VECT                                 0xF874
ICG           Impedance Cardiography
              Label:
              NLS_NOM_IMPED_TTHOR_ECG                            0x0002F888
              Observed Value:
              NOM_IMPED_TTHOR_ECG                                0xF888
AWVexp        Expiratory Airway Volume Wave
              Label:
              NLS_NOM_VOL_AWAY_EXP                               0x0002F8C1
              Observed Value:
              NOM_VOL_AWAY_EXP                                   0xF8C1
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AGTs        Anesthetic Agent - secondary agent
            Label:
            NLS_NOM_CONC_AWAY_AGENT_SEC                            0x0002F820
            Observed Value:
            NOM_CONC_AWAY_AGENT_SEC                                0xF820
cmResp      -
            Label:
            NLS_NOM_RESP_CM                                        0x0002FAB8
            Observed Value:
            NOM_RESP_CM                                            0xFAB8
IUP         Intra-Uterine Pressure
            Label:
            NLS_NOM_EMFC_IUP                                       0x04010054
            Observed Value:
            NOM_PRESS_BLD                                          0x4A00
AUX         Auxiliary Wave/Parameter
            Label:
            NLS_NOM_EMFC_AUX                                       0x040100B4
            Observed Value:
            NOM_METRIC_NOS                                         0xEFFF
vECG        Vector ECG taken from ICG
            Label:
            NLS_NOM_EMFC_vECG                                      0x0401119C
            Observed Value:
            NOM_METRIC_NOS                                         0xEFFF
ICG         Impedance Cardiography
            Label:
            NLS_NOM_EMFC_ICG                                       0x040111A0
            Observed Value:
            NOM_METRIC_NOS                                         0xEFFF
AWV         Airway Volume Wave
            Label:
            NLS_NOM_EMFC_AWV                                       0x04010668
            Observed Value:
            NOM_METRIC_NOS                                         0xEFFF
L V1        Lead V1 - ECG wave label
            Label:
            NLS_NOM_EMFC_L_V1                                      0x04010764
            Observed Value:
            NOM_ECG_ELEC_POTL_V1                                   0x0103
L V2        Lead V2 - ECG wave label
            Label:
            NLS_NOM_EMFC_L_V2                                      0x04010768
            Observed Value:
            NOM_ECG_ELEC_POTL_V2                                   0x0104
L V3        Lead V3 - ECG wave label
            Label:
            NLS_NOM_EMFC_L_V3                                      0x0401076C
            Observed Value:
            NOM_ECG_ELEC_POTL_V3                                   0x0105
L V4        Lead V4 - ECG wave label
            Label:
            NLS_NOM_EMFC_L_V4                                      0x04010770
            Observed Value:
            NOM_ECG_ELEC_POTL_V4                                   0x0106
L V5        Lead V5 - ECG wave label
            Label:
            NLS_NOM_EMFC_L_V5                                      0x04010774
            Observed Value:
            NOM_ECG_ELEC_POTL_V5                                   0x0107
L V6        Lead V6 - ECG wave label
            Label:
            NLS_NOM_EMFC_L_V6                                      0x04010778
            Observed Value:
            NOM_ECG_ELEC_POTL_V6                                   0x0108
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L I        Lead I - ECG wave label
           Label:
           NLS_NOM_EMFC_L_I                                 0x0401077C
           Observed Value:
           NOM_ECG_ELEC_POTL_I                              0x0101
L II       Lead II - ECG wave label
           Label:
           NLS_NOM_EMFC_L_II                                0x04010780
           Observed Value:
           NOM_ECG_ELEC_POTL_II                             0x0102
L III      Lead III - ECG wave label
           Label:
           NLS_NOM_EMFC_L_III                               0x04010784
           Observed Value:
           NOM_ECG_ELEC_POTL_III                            0x013D
L aVR      Lead aVR - ECG wave label
           Label:
           NLS_NOM_EMFC_L_aVR                               0x04010788
           Observed Value:
           NOM_ECG_ELEC_POTL_AVR                            0x013E
L aVL      Lead aVL - ECG wave label
           Label:
           NLS_NOM_EMFC_L_aVL                               0x0401078C
           Observed Value:
           NOM_ECG_ELEC_POTL_AVL                            0x013F
L aVF      Lead aVF - ECG wave label
           Label:
           NLS_NOM_EMFC_L_aVF                               0x04010790
           Observed Value:
           NOM_ECG_ELEC_POTL_AVF                            0x0140
AWVex      Expiratory Airway Volume Wave. Measured in l.
           Label:
           NLS_NOM_EMFC_AWVex                               0x04010794
           Observed Value:
           NOM_METRIC_NOS                                   0xEFFF
PLETH2     PLETH from the second SpO2/PLETH module
           Label:
           NLS_NOM_EMFC_PLETH2                              0x0401079C
           Observed Value:
           NOM_PLETH                                        0x4BB4
LT EEG     Left channel EEG wave
           Label:
           NLS_NOM_EMFC_LT_EEG                              0x040107F0
           Observed Value:
           NOM_EEG_ELEC_POTL_CRTX                           0x592C
RT EEG     Right channel EEG wave
           Label:
           NLS_NOM_EMFC_RT_EEG                              0x0401082C
           Observed Value:
           NOM_EEG_ELEC_POTL_CRTX                           0x592C
BP         Unspecified Blood Pressure
           Label:
           NLS_NOM_EMFC_BP                                  0x04010888
           Observed Value:
           NOM_PRESS_BLD                                    0x4A00
AGTs       Anesthetic Agent - secondary agent
           Label:
           NLS_NOM_EMFC_AGTs                                0x04010CE4
           Observed Value:
           NOM_CONC_AWAY_AGENT                              0x5388
Wave 1     Placeholder for Vuelink Flex Text
           Label:
           NLS_VUELINK_FLX1_NPS_TEXT_WAVE1                  0x80AAF001
           Observed Value:
           depends on configuration
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Wave 2       Placeholder for Vuelink Flex Text
             Label:
             NLS_VUELINK_FLX1_NPS_TEXT_WAVE2                    0x80AAF003
             Observed Value:
             depends on configuration
Wave 3       Placeholder for Vuelink Flex Text
             Label:
             NLS_VUELINK_FLX1_NPS_TEXT_WAVE3                    0x80AAF005
             Observed Value:
             depends on configuration
Wave 4       Placeholder for Vuelink Flex Text
             Label:
             NLS_VUELINK_FLX1_NPS_TEXT_WAVE4                    0x80AAF007
             Observed Value:
             depends on configuration
Wave 5       Placeholder for Vuelink Flex Text
             Label:
             NLS_VUELINK_FLX1_NPS_TEXT_WAVE5                    0x80AAF009
             Observed Value:
             depends on configuration
Wave 6       Placeholder for Vuelink Flex Text
             Label:
             NLS_VUELINK_FLX1_NPS_TEXT_WAVE6                    0x80AAF00B
             Observed Value:
             depends on configuration
Wave 7       Placeholder for Vuelink Flex Text
             Label:
             NLS_VUELINK_FLX1_NPS_TEXT_WAVE7                    0x80AAF00D
             Observed Value:
             depends on configuration
Wave 8       Placeholder for Vuelink Flex Text
             Label:
             NLS_VUELINK_FLX1_NPS_TEXT_WAVE8                    0x80AAF00F
             Observed Value:
             depends on configuration
Pads         -
             Label:
             NLS_NOM_ECG_ELEC_POTL_PADS                         0x0002F136
             Observed Value:
             NOM_ECG_ELEC_POTL_PADS                             0xF136
Paddle       -
             Label:
             NLS_NOM_ECG_ELEC_POTL_PADDLES                      0x0002F137
             Observed Value:
             NOM_ECG_ELEC_POTL_PADDLES                          0xF137
EDI          -
             Label:
             NLS_NOM_ELEC_POTL_DIAPHRAGM                        0x0002FAEE
             Observed Value:
             NOM_ELEC_POTL_DIAPHRAGM                            0xFAEE
AWPx         -
             Label:
             NLS_NOM_PRESS_AWAY_AUX                             0x0002FA24
             Observed Value:
             NOM_PRESS_AWAY_AUX                                 0xFA24
DECG         DECG wave
             Label:
             NLS_NOM_ECG_ELEC_POTL_FETAL                        0x0002F0D3
             Observed Value:
             NOM_ECG_ELEC_POTL_FETAL                            0xF0D3
             Units:
             NOM_DIM_DIMLESS                                    0x0200
```

Attribute IDs

The Attribute ID specifies the type of an attribute in the AttributeList. The IDs are taken from the Object Oriented Elements partition. Unknown attributes should be ignored.

Device P-Alarm List
       NOM_ATTR_AL_MON_P_AL_LIST   0x0902

Device T-Alarm List
       NOM_ATTR_AL_MON_T_AL_LIST   0x0904

Altitude
       NOM_ATTR_ALTITUDE   0x090C

Application Area
       NOM_ATTR_AREA_APPL   0x090D

Color
       NOM_ATTR_COLOR   0x0911

Device Alert Condition
       NOM_ATTR_DEV_AL_COND   0x0916

Display Resolution
       NOM_ATTR_DISP_RES   0x0917

Visual Grid
       NOM_ATTR_GRID_VIS_I16   0x091A

Association Invoke Id
       NOM_ATTR_ID_ASSOC_NO   0x091D

Bed Label
       NOM_ATTR_ID_BED_LABEL   0x091E

Object Handle
       NOM_ATTR_ID_HANDLE   0x0921

Label
       NOM_ATTR_ID_LABEL   0x0924

Label String
       NOM_ATTR_ID_LABEL_STRING   0x0927

System Model
       NOM_ATTR_ID_MODEL   0x0928

Product Specification
       NOM_ATTR_ID_PROD_SPECN   0x092D

Object Type
       NOM_ATTR_ID_TYPE   0x092F

Line Frequency
       NOM_ATTR_LINE_FREQ   0x0935

System Localization
       NOM_ATTR_LOCALIZN   0x0937

Metric Info Label
       NOM_ATTR_METRIC_INFO_LABEL   0x093C

Metric Info Label String
       NOM_ATTR_METRIC_INFO_LABEL_STR   0x093D

Metric Specification
       NOM_ATTR_METRIC_SPECN   0x093F

Metric State
       NOM_ATTR_METRIC _STAT   0x0940

Measure Mode
       NOM_ATTR_MODE_MSMT   0x0945

Operating Mode
       NOM_ATTR_MODE_OP   0x0946

Nomenclature Version
       NOM_ATTR_NOM_VERS   0x0948

Compound Numeric Observed Value
     NOM_ATTR_NU_CMPD_VAL_OBS   0x094B

Numeric Observed Value
     NOM_ATTR_NU_VAL_OBS   0x0950

Patient BSA
     NOM_ATTR_PT_BSA   0x0956

Pat Demo State
     NOM_ATTR_PT_DEMOG_ST   0x0957

Patient Date of Birth
     NOM_ATTR_PT_DOB   0x0958

Patient ID
     NOM_ATTR_PT_ID   0x095A

Family Name
     NOM_ATTR_PT_NAME_FAMILY   0x095C

Given Name
     NOM_ATTR_PT_NAME_GIVEN   0x095D

Patient Sex
     NOM_ATTR_PT_SEX   0x0961

Patient Type
     NOM_ATTR_PT_TYPE   0x0962

Sample Array Calibration Specification
     NOM_ATTR_SA_CALIB_I16   0x0964

Compound Sample Array Observed Value
     NOM_ATTR_SA_CMPD_VAL_OBS   0x0967

Sample Array Physiological Range
     NOM_ATTR_SA_RANGE_PHYS_I16   0x096A

Sample Array Specification
     NOM_ATTR_SA_SPECN   0x096D

Sample Array Observed Value
     NOM_ATTR_SA_VAL_OBS   0x096E

Scale and Range Specification
     NOM_ATTR_SCALE_SPECN_I16   0x096F

Safety Standard
     NOM_ATTR_STD_SAFETY   0x0982

System ID
     NOM_ATTR_SYS_ID   0x0984

System Specification
     NOM_ATTR_SYS_SPECN   0x0985

System Type
     NOM_ATTR_SYS_TYPE   0x0986

Date and Time
     NOM_ATTR_TIME_ABS   0x0987

Sample Period
     NOM_ATTR_TIME_PD_SAMP   0x098D

Relative Time
     NOM_ATTR_TIME_REL   0x098F

Absolute Time Stamp
     NOM_ATTR_TIME_STAMP_ABS   0x0990

Relative Time Stamp
     NOM_ATTR_TIME_STAMP_REL   0x0991

Unit Code
     NOM_ATTR_UNIT_CODE   0x0996

Enumeration Observed Value
     NOM_ATTR_VAL_ENUM_OBS   0x099E

MDS Status
     NOM_ATTR_VMS_MDS_STAT   0x09A7

Patient Age
             NOM_ATTR_PT_AGE   0x09D8
Patient Height
             NOM_ATTR_PT_HEIGHT   0x09DC
Patient Weight
             NOM_ATTR_PT_WEIGHT   0x09DF
Sample Array Fixed Values Specification
             NOM_ATTR_SA_FIXED_VAL_SPECN   0x0A16
Patient Paced Mode
             NOM_ATTR_PT_PACED_MODE   0x0A1E
Internal Patient ID
             NOM_ATTR_PT_ID_INT   0xF001
Private Attribute
             NOM_SAT_O2_TONE_FREQ   0xF008
Private Attribute
             NOM_ATTR_CMPD_REF_LIST   0xF009
IP Address Information
             NOM_ATTR_NET_ADDR_INFO   0xF100
Protocol Support
             NOM_ATTR_PCOL_SUPPORT   0xF101
Notes1
             NOM_ATTR_PT_NOTES1   0xF129
Notes2
             NOM_ATTR_PT_NOTES2   0xF12A
Time for Periodic Polling
             NOM_ATTR_TIME_PD_POLL   0xF13E
Patient BSA Formula
             NOM_ATTR_PT_BSA_FORMULA   0xF1EC
Mds General System Info
             NOM_ATTR_MDS_GEN_INFO   0xF1FA
no of prioritized objects for poll request
             NOM_ATTR_POLL_OBJ_PRIO_NUM   0xF228
Numeric Object Priority List
             NOM_ATTR_POLL_NU_PRIO_LIST   0xF239
Wave Object Priority List
             NOM_ATTR_POLL_RTSA_PRIO_LIST   0xF23A
Metric Modality
             NOM_ATTR_METRIC_MODALITY   0xF294

The attributes are arranged in the following attribute groups:

Alert Monitor Group
             NOM_ATTR_GRP_AL_MON   0x0801
Metric Observed Value Group
             NOM_ATTR_GRP_METRIC_VAL_OBS   0x0803
Patient Demographics Attribute Group
             NOM_ATTR_GRP_PT_DEMOG   0x0807
System Application Attribute Group
             NOM_ATTR_GRP_SYS_APPL   0x080A
System Identification Attribute Group
             NOM_ATTR_GRP_SYS_ID   0x080B
System Production Attribute Group
             NOM_ATTR_GRP_SYS_PROD   0x080C
VMO Dynamic Attribute Group
             NOM_ATTR_GRP_VMO_DYN   0x0810
VMO Static Attribute Group

NOM_ATTR_GRP_VMO_STATIC   0x0811

Component IDs

The Component IDs specify system components such as the entries in the Production Specification attribute of the Medical Device Service object. A Component ID is a PrivateOid and is not assigned to any nomenclature partition.

for the overall product
   ID_COMP_PRODUCT   0x0008
for the specific bundle
   ID_COMP_CONFIG   0x0010
for the boot code
   ID_COMP_BOOT   0x0018
mainboard component
   ID_COMP_MAIN_BD   0x0050
application software component
   ID_COMP_APPL_SW   0x0058

Unit Codes

The Unit Codes describe the dimension of a physiological measurement. They are grouped in the
Units partition.

NOS	(no dimension)	
	NOM_DIM_NOS	0
/	(/)	
	NOM_DIM_DIV	2
-	(no dimension)	
	NOM_DIM_DIMLESS	512
%	(percentage)	
	NOM_DIM_PERCENT	544
ppth	(parts per thousand)	
	NOM_DIM_PARTS_PER_THOUSAND	576
ppm	(parts per million)	
	NOM_DIM_PARTS_PER_MILLION	608
mol/mol	(mole per mole)	
	NOM_DIM_X_MOLE_PER_MOLE	864
ppb	(parts per billion)	
	NOM_DIM_PARTS_PER_BILLION	672
ppt	(parts per trillion)	
	NOM_DIM_PARTS_PER_TRILLION	704
pH	(pH)	
	NOM_DIM_PH	992
drop	(vital signs count drop)	
	NOM_DIM_DROP	1024
rbc	(vital signs count red blood cells)	
	NOM_DIM_RBC	1056
beat	(vital signs count beat)	
	NOM_DIM_BEAT	1088
breath	(vital signs count breath)	
	NOM_DIM_BREATH	1120
cell	(vital signs count cells)	
	NOM_DIM_CELL	1152
cough	(vital signs count cough)	
	NOM_DIM_COUGH	1184
sigh	(vital signs count sigh)	
	NOM_DIM_SIGH	1216
%PCV	(percent of packed cell volume)	
	NOM_DIM_PCT_PCV	1248
m	(meter)	
	NOM_DIM_X_M	1280
cm	(centimeter)	
	NOM_DIM_CENTI_M	1297
mm	(millimeter)	
	NOM_DIM_MILLI_M	1298
µm	(micro-meter)	
	NOM_DIM_MICRO_M	1299
in	(inch)	
	NOM_DIM_X_INCH	1376
ml/m2	(used e.g. for SI and ITBVI)	
	NOM_DIM_MILLI_L_PER_M_SQ	1426
/m	(per meter)	
	NOM_DIM_PER_X_M	1440
/mm	(per millimeter)	

	NOM_DIM_PER_MILLI_M	1458
m2	(used e.g. for BSA calculation)	
	NOM_DIM_SQ_X_M	1472
in2	(used e.g. for BSA calculation)	
	NOM_DIM_SQ_X_INCH	1504
m3	(cubic meter)	
	NOM_DIM_CUBIC_X_M	1568
cm3	(cubic centimeter)	
	NOM_DIM_CUBIC_CENTI_M	1585
l	(liter)	
	NOM_DIM_X_L	1600
ml	(milli-liters used e.g. for EVLW ITBV SV)	
	NOM_DIM_MILLI_L	1618
ml/breath	(milli-liter per breath)	
	NOM_DIM_MILLI_L_PER_BREATH	1650
/cm3	(per cubic centimeter)	
	NOM_DIM_PER_CUBIC_CENTI_M	1681
/l	(per liter)	
	NOM_DIM_PER_X_L	1696
1/nl	(per nano-liter)	
	NOM_DIM_PER_NANO_LITER	1716
g	(gram)	
	NOM_DIM_X_G	1728
kg	(kilo-gram)	
	NOM_DIM_KILO_G	1731
mg	(milli-gram)	
	NOM_DIM_MILLI_G	1746
µg	(micro-gram)	
	NOM_DIM_MICRO_G	1747
ng	(nono-gram)	
	NOM_DIM_NANO_G	1748
lb	(pound)	
	NOM_DIM_X_LB	1760
oz	(ounce)	
	NOM_DIM_X_OZ	1792
/g	(per gram)	
	NOM_DIM_PER_X_G	1824
g-m	(used e.g. for LVSW RVSW)	
	NOM_DIM_X_G_M	1856
kg-m	(used e.g. for RCW LCW)	
	NOM_DIM_KILO_G_M	1859
g-m/m2	(used e.g. for LVSWI and RVSWI)	
	NOM_DIM_X_G_M_PER_M_SQ	1888
kg-m/m2	(used e.g. for LCWI and RCWI)	
	NOM_DIM_KILO_G_M_PER_M_SQ	1891
kg-m2	(gram meter squared)	
	NOM_DIM_KILO_G_M_SQ	1923
kg/m2	(kilo-gram per square meter)	
	NOM_DIM_KG_PER_M_SQ	1955
kg/m3	(kilo-gram per cubic meter)	
	NOM_DIM_KILO_G_PER_M_CUBE	1987
g/cm3	(gram per cubic meter)	
	NOM_DIM_X_G_PER_CM_CUBE	2016
mg/cm3	(milli-gram per cubic centimeter)	
	NOM_DIM_MILLI_G_PER_CM_CUBE	2034
µg/cm3	(micro-gram per cubic centimeter)	

	NOM_DIM_MICRO_G_PER_CM_CUBE	2035
ng/cm3	(nano-gram per cubic centimeter)	
	NOM_DIM_NANO_G_PER_CM_CUBE	2036
g/l	(gram per liter)	
	NOM_DIM_X_G_PER_L	2048
g/dl	(used e.g. for Hb)	
	NOM_DIM_X_G_PER_DL	2112
mg/dl	(milli-gram per deciliter)	
	NOM_DIM_MILLI_G_PER_DL	2130
g/ml	(gram per milli-liter)	
	NOM_DIM_X_G_PER_ML	2144
mg/ml	(milli-gram per milli-liter)	
	NOM_DIM_MILLI_G_PER_ML	2162
µg/ml	(micro-gram per milli-liter)	
	NOM_DIM_MICRO_G_PER_ML	2163
ng/ml	(nano-gram per milli-liter)	
	NOM_DIM_NANO_G_PER_ML	2164
sec	(seconds)	
	NOM_DIM_SEC	2176
msec	(milli-seconds)	
	NOM_DIM_MILLI_SEC	2194
µsec	(micro-seconds)	
	NOM_DIM_MICRO_SEC	2195
min	(minutes)	
	NOM_DIM_MIN	2208
hrs	(hours)	
	NOM_DIM_HR	2240
days	(days)	
	NOM_DIM_DAY	2272
weeks	(weeks)	
	NOM_DIM_WEEKS	2304
months	(months)	
	NOM_DIM_MON	2336
years	(years)	
	NOM_DIM_YR	2368
TOD	(time of day)	
	NOM_DIM_TOD	2400
date	(date)	
	NOM_DIM_DATE	2432
/sec	(per second)	
	NOM_DIM_PER_X_SEC	2464
Hz	(hertz)	
	NOM_DIM_HZ	2496
/min	(per minute used e.g. for the PVC count numerical value)	
	NOM_DIM_PER_MIN	2528
/hour	(per hour)	
	NOM_DIM_PER_HR	2560
/day	(per day)	
	NOM_DIM_PER_DAY	2592
/week	(per week)	
	NOM_DIM_PER_WK	2624
/month	(per month)	
	NOM_DIM_PER_MO	2656
/year	(per year)	
	NOM_DIM_PER_YR	2688
bpm	(beats per minute used e.g. for HR/PULSE)	

	NOM_DIM_BEAT_PER_MIN	2720
puls/min	(puls per minute)	
	NOM_DIM_PULS_PER_MIN	2752
rpm	(respiration breathes per minute)	
	NOM_DIM_RESP_PER_MIN	2784
m/sec	(meter per second)	
	NOM_DIM_X_M_PER_SEC	2816
mm/sec	(speed for recordings)	
	NOM_DIM_MILLI_M_PER_SEC	2834
l/min/m2	(used for CI)	
	NOM_DIM_X_L_PER_MIN_PER_M_SQ	2848
ml/min/m2	(used for DO2I VO2I O2AVI)	
	NOM_DIM_MILLI_L_PER_MIN_PER_M_SQ	2866
m2/sec	(square meter per second)	
	NOM_DIM_SQ_X_M_PER_SEC	2880
cm2/sec	(square centimeter per second)	
	NOM_DIM_SQ_CENTI_M_PER_SEC	2897
m3/sec	(cubic meter per second)	
	NOM_DIM_CUBIC_X_M_PER_SEC	2912
cm3/sec	(cubic centimeter per second)	
	NOM_DIM_CUBIC_CENTI_M_PER_SEC	2929
l/sec	(liter per second)	
	NOM_DIM_X_L_PER_SEC	3040
l/min	(liter per minutes)	
	NOM_DIM_X_L_PER_MIN	3072
dl/min	(deciliter per second)	
	NOM_DIM_DECI_L_PER_MIN	3088
ml/min	(used for DO2 VO2 ALVENT)	
	NOM_DIM_MILLI_L_PER_MIN	3090
l/hour	(liter per hour)	
	NOM_DIM_X_L_PER_HR	3104
ml/hour	(milli-liter per hour)	
	NOM_DIM_MILLI_L_PER_HR	3122
l/day	(liter per day)	
	NOM_DIM_X_L_PER_DAY	3136
ml/day	(milli-liter per day)	
	NOM_DIM_MILLI_L_PER_DAY	3154
ml/kg	(used e.g. for EVLWI)	
	NOM_DIM_MILLI_L_PER_KG	3186
kg/sec	(kilo-gram per second)	
	NOM_DIM_KILO_G_PER_SEC	3299
g/min	(gram per minute)	
	NOM_DIM_X_G_PER_MIN	3328
kg/min	(kilo-gram per minute)	
	NOM_DIM_KILO_G_PER_MIN	3331
mg/min	(milli-gram per minute)	
	NOM_DIM_MILLI_G_PER_MIN	3346
µg/min	(micro-gram per minute)	
	NOM_DIM_MICRO_G_PER_MIN	3347
ng/min	(nano-gram per minute)	
	NOM_DIM_NANO_G_PER_MIN	3348
g/hour	(gram per hour)	
	NOM_DIM_X_G_PER_HR	3360
kg/hour	(kilo-gram per hour)	
	NOM_DIM_KILO_G_PER_HR	3363
mg/hour	(milli-gram per hour)	

	NOM_DIM_MILLI_G_PER_HR	3378
µg/hour	(micro-gram per hour)	
	NOM_DIM_MICRO_G_PER_HR	3379
ng/hr	(nano-gram per hour)	
	NOM_DIM_NANO_G_PER_HR	3380
g/day	(gram per day)	
	NOM_DIM_X_G_PER_DAY	3392
kg/day	(kilo-gram per day)	
	NOM_DIM_KILO_G_PER_DAY	3395
mg/day	(milli gram per day)	
	NOM_DIM_MILLI_G_PER_DAY	3410
ug/day	(microgram per day)	
	NOM_DIM_MICRO_G_PER_DAY	3411
ng/day	(nano gram per day)	
	NOM_DIM_NANO_G_PER_DAY	3412
g/kg/min	(gram per kilo-gram per minute)	
	NOM_DIM_X_G_PER_KG_PER_MIN	3456
mg/kg/min	(milli-gram per kilo-gram per minute)	
	NOM_DIM_MILLI_G_PER_KG_PER_MIN	3474
µg/kg/min	(micro-gram per kilo-gram per minute)	
	NOM_DIM_MICRO_G_PER_KG_PER_MIN	3475
ng/kg/min	(nano-gram per kilo-gram per minute)	
	NOM_DIM_NANO_G_PER_KG_PER_MIN	3476
g/kg/hour	(gram per kilo-gram per hour)	
	NOM_DIM_X_G_PER_KG_PER_HR	3488
mg/kg/hour	(mili-gram per kilo-gram per hour)	
	NOM_DIM_MILLI_G_PER_KG_PER_HR	3506
µg/kg/hour	(micro-gram per kilo-gram per hour)	
	NOM_DIM_MICRO_G_PER_KG_PER_HR	3507
ng/kg/hour	(nano-gram per kilo-gram per hour)	
	NOM_DIM_NANO_G_PER_KG_PER_HR	3508
kg/l/sec	(kilo-gram per liter per second)	
	NOM_DIM_KILO_G_PER_L_SEC	3555
kg/m/sec	(kilo-gram per meter per second)	
	NOM_DIM_KILO_G_PER_M_PER_SEC	3683
kg-m/sec	(kilo-gram meter per second)	
	NOM_DIM_KILO_G_M_PER_SEC	3715
N-s	(newton seconds)	
	NOM_DIM_X_NEWTON_SEC	3744
N	(newton)	
	NOM_DIM_X_NEWTON	3776
Pa	(pascal)	
	NOM_DIM_X_PASCAL	3840
hPa	(hekto-pascal)	
	NOM_DIM_HECTO_PASCAL	3842
kPa	(kilo-pascal)	
	NOM_DIM_KILO_PASCAL	3843
mmHg	(mm mercury)	
	NOM_DIM_MMHG	3872
cmH2O	(centimeter H20)	
	NOM_DIM_CM_H2O	3904
mBar	(milli-bar)	
	NOM_DIM_MILLI_BAR	3954
J	(Joules)	
	NOM_DIM_X_JOULES	3968
eV	(electronvolts)	

	NOM_DIM_EVOLT	4000
W	(watt)	
	NOM_DIM_X_WATT	4032
mW	(milli-watt)	
	NOM_DIM_MILLI_WATT	4050
nW	(nano-watt)	
	NOM_DIM_NANO_WATT	4052
pW	(pico-watt)	
	NOM_DIM_PICO_WATT	4053
Dyn-sec/cm^5	(dyne second per cm^5)	
	NOM_DIM_X_DYNE_PER_SEC_PER_CM5	4128
A	(ampere)	
	NOM_DIM_X_AMPS	4160
mA	(milli-ampereused e.g. for the battery indications)	
	NOM_DIM_MILLI_AMPS	4178
C	(coulomb)	
	NOM_DIM_X_COULOMB	4192
µC	(micro-coulomb)	
	NOM_DIM_MICRO_COULOMB	4211
V	(volts)	
	NOM_DIM_X_VOLT	4256
mV	(milli-volt)	
	NOM_DIM_MILLI_VOLT	4274
µV	(micro-volt)	
	NOM_DIM_MICRO_VOLT	4275
Ohm	(Ohm)	
	NOM_DIM_X_OHM	4288
kOhm	(kilo-ohm)	
	NOM_DIM_OHM_K	4291
F	(farad)	
	NOM_DIM_X_FARAD	4352
°K	(kelvin)	
	NOM_DIM_KELVIN	4384
°F	(degree-fahrenheit)	
	NOM_DIM_FAHR	4416
cd	(candela)	
	NOM_DIM_X_CANDELA	4480
mOsm	(milli-osmole)	
	NOM_DIM_MILLI_OSM	4530
mol	(mole)	
	NOM_DIM_X_MOLE	4544
mmol	(milli-mole)	
	NOM_DIM_MILLI_MOLE	4562
mEq	(milli-equivalents)	
	NOM_DIM_MILLI_EQUIV	4594
mOsm/l	(milli-osmole per liter)	
	NOM_DIM_MILLI_OSM_PER_L	4626
mmol/l	(used for HB)	
	NOM_DIM_MILLI_MOLE_PER_L	4722
µmol/l	(micro-mol per liter)	
	NOM_DIM_MICRO_MOLE_PER_L	4723
mEq/l	(milli-equivalents per liter)	
	NOM_DIM_MILLI_EQUIV_PER_L	4850
mEq/day	(milli-equivalents per day)	
	NOM_DIM_MILLI_EQUIV_PER_DAY	5202
i.u.	(international unit)	

	NOM_DIM_X_INTL_UNIT	5472
mi.u.	(mili-international unit)	
	NOM_DIM_MILLI_INTL_UNIT	5490
i.u./cm3	(international unit per cubic centimeter)	
	NOM_DIM_X_INTL_UNIT_PER_CM_CUBE	5504
mi.u./cm3	(mili-international unit per cubic centimeter)	
	NOM_DIM_MILLI_INTL_UNIT_PER_CM_CUBE	5522
i.u./ml	(international unit per milli-liter)	
	NOM_DIM_X_INTL_UNIT_PER_ML	5600
i.u./min	(international unit per minute)	
	NOM_DIM_X_INTL_UNIT_PER_MIN	5664
k/min	(kilo intl per min)	
	NOM_DIM_KILO_INTL_UNIT_PER_MIN	5667
i.u.k/ml	(kilo intl per milli liter)	
	NOM_DIM_KILO_INTL_UNIT_PER_ML	5603
mi.u./ml	(milli-international unit per milli-liter)	
	NOM_DIM_MILLI_INTL_UNIT_PER_ML	5618
mi.u./min	(milli-international unit per minute)	
	NOM_DIM_MILLI_INTL_UNIT_PER_MIN	5682
i.u./hour	(international unit per hour)	
	NOM_DIM_X_INTL_UNIT_PER_HR	5696
i.u.k/h	(kilo intl per hour)	
	NOM_DIM_KILO_INTL_UNIT_PER_HR	5699
mi.u./hour	(milli-international unit per hour)	
	NOM_DIM_MILLI_INTL_UNIT_PER_HR	5714
i.u./kg/min	(international unit per kilo-gram per minute)	
	NOM_DIM_X_INTL_UNIT_PER_KG_PER_MIN	5792
i.u.k/kg/min	(kilo intl per kilo gram per minute)	
	NOM_DIM_KILO_INTL_UNIT_PER_KG_PER_MIN	5795
mi.u./kg/min	(milli-international unit per kilo-gram per minute)	
	NOM_DIM_MILLI_INTL_UNIT_PER_KG_PER_MIN	5810
i.u./kg/hour	(international unit per kilo-gram per hour)	
	NOM_DIM_X_INTL_UNIT_PER_KG_PER_HR	5824
k/kg/hr	(intl unit per kilogram per hour)	
	NOM_DIM_KILO_INTL_UNIT_PER_KG_PER_HR	5827
mi.u./kg/hour	(milli-international unit per kilo-gram per hour)	
	NOM_DIM_MILLI_INTL_UNIT_PER_KG_PER_HR	5842
ml/cmH2O	(milli-liter per centimeter H2O)	
	NOM_DIM_MILLI_L_PER_CM_H2O	5906
cmH2O/l/sec	(centimeter H2O per second)	
	NOM_DIM_CM_H2O_PER_L_PER_SEC	5920
ml2/sec	(milli-liter per second)	
	NOM_DIM_MILLI_L_SQ_PER_SEC	5970
cmH2O/%	(centimeter H2O per percent)	
	NOM_DIM_CM_H2O_PER_PERCENT	5984
DS*m2/cm5	(used for SVRI and PVRI)	
	NOM_DIM_DYNE_SEC_PER_M_SQ_PER_CM_5	6016
°C	(degree-celsius)	
	NOM_DIM_DEGC	6048
cmH2O/l	(centimeter H2O per liter)	
	NOM_DIM_CM_H2O_PER_L	6144
mmHg/%	(milli-meter mercury per percent)	
	NOM_DIM_MM_HG_PER_PERCENT	6176
kPa/%	(kilo-pascal per percent)	
	NOM_DIM_KILO_PA_PER_PERCENT	6211
l/mmHg	(liter per mmHg)	

	NOM_DIM_X_L_PER_MM_HG	6272
ml/mmHg	(milli-liter per milli-meter Hg)	
	NOM_DIM_MILLI_L_PER_MM_HG	6290
mAh	(milli-ampere per hour used e.g. for the battery indications)	
	NOM_DIM_MILLI_AMP_HR	6098
ml/dl	(used for CaO2 CvO2 Ca-vO2)	
	NOM_DIM_MILLI_L_PER_DL	6418
dB	(decibel)	
	NOM_DIM_DECIBEL	6432
g/mg	(gram per milli-gram)	
	NOM_DIM_X_G_PER_MILLI_G	6464
mg/mg	(milli-gram per milli-gram)	
	NOM_DIM_MILLI_G_PER_MILLI_G	6482
bpm/l	(beats per minute per liter)	
	NOM_DIM_BEAT_PER_MIN_PER_X_L	6496
bpm/ml	(beats per minute per milli-liter)	
	NOM_DIM_BEAT_PER_MIN_PER_MILLI_L	6514
1/(min*l)	(per minute per liter)	
	NOM_DIM_PER_X_L_PER_MIN	6528
m/min	(meter per minute)	
	NOM_DIM_X_M_PER_MIN	6560
cm/min	(speed for recordings)	
	NOM_DIM_CENTI_M_PER_MIN	6577
pg/ml	(pico-gram per milli-liter)	
	NOM_DIM_PICO_G_PER_ML	2165
ug/l	(micro-gram per liter)	
	NOM_DIM_MICRO_G_PER_L	2067
ng/l	(nano-gram per liter)	
	NOM_DIM_NANO_G_PER_L	2068
/mm^3	(per cubic millimeter)	
	NOM_DIM_PER_CUBIC_MILLI_M	1682
mm^3	(cubic milli-meter)	
	NOM_DIM_CUBIC_MILLI_M	1586
u/l	(intl. units per liter)	
	NOM_DIM_X_INTL_UNIT_PER_L	5568
/l	(10^6 intl. units per liter)	
	NOM_DIM_MEGA_INTL_UNIT_PER_L	5573
mol/kg	(mole per kilo-gram)	
	NOM_DIM_MILLI_MOL_PER_KG	4946
mcg/dl	(micro-gram per deci-liter)	
	NOM_DIM_MICRO_G_PER_DL	2131
mg/l	(milli-gram per liter)	
	NOM_DIM_MILLI_G_PER_L	2066
/ul	(micro-liter)	
	NOM_DIM_PER_MICRO_L	1715
complx	(-)	
	NOM_DIM_COMPLEX	61440
count	(count as a dimension)	
	NOM_DIM_COUNT	61441
part	(part)	
	NOM_DIM_PART	61442
puls	(puls)	
	NOM_DIM_PULS	61443
µV p-p	(micro-volt peak to peak)	
	NOM_DIM_UV_PP	61444
µV2	(micor-volt square)	

	NOM_DIM_UV_SQ	61445
lumen	(lumen)	
	NOM_DIM_LUMEN	61447
lb/in2	(pound per square inch)	
	NOM_DIM_LB_PER_INCH_SQ	61448
mmHg/s	(milli-meter mercury per second)	
	NOM_DIM_MM_HG_PER_SEC	61449
ml/s	(milli-liter per second)	
	NOM_DIM_ML_PER_SEC	61450
bpm/ml	(beat per minute per milli-liter)	
	NOM_DIM_BEAT_PER_MIN_PER_ML_C	61451
J/day	(joule per day)	
	NOM_DIM_X_JOULE_PER_DAY	61536
kJ/day	(kilo joule per day)	
	NOM_DIM_KILO_JOULE_PER_DAY	61539
MJ/day	(mega joule per day)	
	NOM_DIM_MEGA_JOULE_PER_DAY	61540
cal	(calories)	
	NOM_DIM_X_CALORIE	61568
kcal	(kilo calories)	
	NOM_DIM_KILO_CALORIE	61571
10**6 cal	(million calories)	
	NOM_DIM_MEGA_CALORIE	61572
cal/day	(calories per day)	
	NOM_DIM_X_CALORIE_PER_DAY	61600
kcal/day	(kilo-calories per day)	
	NOM_DIM_KILO_CALORIE_PER_DAY	61603
Mcal/day	(mega calories per day)	
	NOM_DIM_MEGA_CALORIE_PER_DAY	61604
mcal/day	(milli calorie per day)	
	NOM_DIM_MILLI_CALORIE_PER_DAY	61618
cal/ml	(calories per milli-liter)	
	NOM_DIM_X_CALORIE_PER_ML	61632
kcal/ml	(kilo calories per ml)	
	NOM_DIM_KILO_CALORIE_PER_ML	61635
mcal/ml	(milli-calories per milli-liter)	
	NOM_DIM_MILLI_CALORIE_PER_ML	61650
J/ml	(Joule per milli-liter)	
	NOM_DIM_X_JOULE_PER_ML	61664
kJ/ml	(kilo-joules per milli-liter)	
	NOM_DIM_KILO_JOULE_PER_ML	61667
RPM	(revolutions per minute)	
	NOM_DIM_X_REV_PER_MIN	61696
l/(mn*l*kg)	(per minute per liter per kilo)	
	NOM_DIM_PER_L_PER_MIN_PER_KG	61728
l/mbar	(liter per milli-bar)	
	NOM_DIM_X_L_PER_MILLI_BAR	61760
ml/mbar	(milli-liter per milli-bar)	
	NOM_DIM_MILLI_L_PER_MILLI_BAR	61778
l/kg/hr	(liter per kilo-gram per hour)	
	NOM_DIM_X_L_PER_KG_PER_HR	61792
ml/kg/hr	(milli-liter per kilogram per hour)	
	NOM_DIM_MILLI_L_PER_KG_PER_HR	61810
bar/l/s	(bar per liter per sec)	
	NOM_DIM_X_BAR_PER_LITER_PER_SEC	61824
mbar/l/s	(milli-bar per liter per sec)	

	NOM_DIM_MILLI_BAR_PER_LITER_PER_SEC	61842
bar/l	(bar per liter)	
	NOM_DIM_X_BAR_PER_LITER	61856
mbar/l	(bar per liter)	
	NOM_DIM_MILLI_BAR_PER_LITER	61874
V/mV	(volt per milli-volt)	
	NOM_DIM_VOLT_PER_MILLI_VOLT	61888
cmH2O/uV	(cm H2O per micro-volt)	
	NOM_DIM_CM_H2O_PER_MICRO_VOLT	61920
J/l	(joule per liter)	
	NOM_DIM_X_JOULE_PER_LITER	61952
l/bar	(liter per bar)	
	NOM_DIM_X_L_PER_BAR	61984
m/mV	(meter per milli-volt)	
	NOM_DIM_X_M_PER_MILLI_VOLT	62016
mm/mV	(milli-meter per milli-volt)	
	NOM_DIM_MILLI_M_PER_MILLI_VOLT	62034
l/min/kg	(liter per minute per kilo-gram)	
	NOM_DIM_X_L_PER_MIN_PER_KG	62048
ml/min/kg	(milli-liter per minute per kilo-gram)	
	NOM_DIM_MILLI_L_PER_MIN_PER_KG	62066
Pa/l/s	(pascal per liter per sec)	
	NOM_DIM_X_PASCAL_PER_L_PER_SEC	62080
hPa/l/s	(hPa per liter per sec)	
	NOM_DIM_HECTO_PASCAL_PER_L_PER_SEC	62082
kPa/l/s	(kPa per liter per sec)	
	NOM_DIM_KILO_PASCAL_PER_L_PER_SEC	62083
ml/Pa	(milli-liter per pascal)	
	NOM_DIM_MILLI_L_PER_X_PASCAL	62112
ml/hPa	(milli-liter per hecto-pascal)	
	NOM_DIM_MILLI_L_PER_HECTO_PASCAL	62114
ml/kPa	(milli-liter per kilo-pascal)	
	NOM_DIM_MILLI_L_PER_KILO_PASCAL	62115
mmHg/l/s	(mm)	
	NOM_DIM_MM_HG_PER_X_L_PER_SEC	62144
mol/h	(mole per hour)	
	NOM_DIM_X_MOLE_PER_HR	62176
mmol/h	(milli-mol per hour)	
	NOM_DIM_MILLI_MOLE_PER_HR	62194
umol/h	(micro-mole per hour)	
	NOM_DIM_MICRO_MOLE_PER_HR	62195
l/beat	(liter per beat)	
	NOM_DIM_X_L_PER_BEAT	62208
ml/beat	(milli-liter per beat)	
	NOM_DIM_MILLI_L_PER_BEAT	62226
l/beat/m2	(liter per beat per square meter)	
	NOM_DIM_X_L_PER_BEAT_PER_M_SQ	62240
ml/beat/m2	(milli-liter per beat per square meter)	
	NOM_DIM_MILLI_L_PER_BEAT_PER_M_SQ	62258
bar/s	(bar per second)	
	NOM_DIM_X_BAR_PER_SEC	62272
mbar/s	(milli-bar per second)	
	NOM_DIM_MILLI_BAR_PER_SEC	62290
pascal/l	(pascal per liter)	
	NOM_DIM_X_PASCAL_PER_L	62304
hpascal/l	(hecto pascal per liter)	

	NOM_DIM_HECTO_PASCAL_PER_L	62306
kpascal/l	(kilo pascal per liter)	
	NOM_DIM_KILO_PASCAL_PER_L	62307
mmHg/l	(mmHg per liter)	
	NOM_DIM_MM_HG_PER_L	62336
vol%/l	(volume percent per liter)	
	NOM_DIM_VOL_PERCENT_PER_L	62368
j/min	(joule per minute)	
	NOM_DIM_X_JOULE_PER_MIN	62400
mol/ml	(Mole per milli-liter)	
	NOM_DIM_X_MOLE_PER_ML	62432
mmol/ml	(milli mole per milli liter)	
	NOM_DIM_MILLI_MOLE_PER_ML	62450
umol/ml	(micro mol per ml)	
	NOM_DIM_MICRO_MOLE_PER_ML	62451
bar/min	(bar per minute)	
	NOM_DIM_X_BAR_PER_MIN	62464
mbar/min	(millibar per minute)	
	NOM_DIM_MILLI_BAR_PER_MIN	62482
pascal/min	(pascal per minute)	
	NOM_DIM_X_PASCAL_PER_MIN	62496
hpascal/min	(hecto pascal per minute)	
	NOM_DIM_HECTO_PASCAL_PER_MIN	62498
%min	(percent minute)	
	NOM_DIM_PERCENT_MIN	62528
%h	(percent hour)	
	NOM_DIM_PERCENT_HR	62560
l/cmH2O/kg	(liter per cm H2O per kilogram)	
	NOM_DIM_X_L_PER_CM_H2O_PER_KG	62592
ml/cmH2O/kg	(milli liter per cm H2O per kilo gram)	
	NOM_DIM_MILLI_L_PER_CM_H2O_PER_KG	62610
cm/H2O/min	(centimeter H2O per minute)	
	NOM_DIM_CM_H2O_PER_MIN	62624

Alert Codes

The first column in the tables below shows the alert source, the second column shows the associated alert code and the third column contains the alert text which would be displayed by the monitor. The XXX in the alert text is a placeholder for the actual alert source. It is filled depending on the alert source. Note that the alert text depends on the localization of your monitor.

The least significant bit of the alert codes listed below is used to identify the source of an alert (refer to "Alert Monitor Object" on page 99). If the alert code is marked with a (*), the associated alert source is from the object oriented nomenclature partition and hence the least significant bit of the alert code is set to 1.

NOTE   On monitors with SW Rev. G.0 or lower some alert codes will only be issued correctly, if the connected MMS or FMS has the same or a higher SW revision.

ECG/HR/Arrhy

Alert Source	Alert Code	Alert Text
`NOM_ECG_ELEC_POTL`	NOM_EVT_EQUIP_MALF	ECG EQUIP MALF
`NOM_ECG_ELEC_POTL`	NOM_EVT_LEADS_OFF	ECG LEADS OFF
`NOM_ECG_ELEC_POTL`	NOM_EVT_LEAD_DISCONN_YELLOW	!! ECG LEADS OFF
`NOM_ECG_ELEC_POTL`	NOM_EVT_LEADS_OFF	!!!ECG LEADS OFF
`NOM_ECG_ELEC_POTL`	NOM_EVT_NOISY	ECG NOISY SIGNAL
`NOM_ECG_LEAD_<xxx> any ECG lead code`	NOM_EVT_LEAD_DISCONN	<lead> LEAD OFF
`NOM_ECG_LEAD_<xxx> any ECG lead code`	NOM_EVT_NOISY	ECG EL. NOISY <lead>
`NOM_ECG_ELEC_POTL`	NOM_EVT_SIG_UNANALYZEABLE	CANNOT ANALYZE ECG
`NOM_ECG_ELEC_POTL`	NOM_EVT_UNDEF	XXXXXX UNKN. ALERT
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_ASYSTOLE	*** ASYSTOLE
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_V_FIB_TACHY	*** VENT FIB/TACH
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_BRADY_EXTREME	*** EXTREME BRADY
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_TACHY_EXTREME	*** EXTREME TACHY
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_LO	** XXXXXX LOW
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_HI	** XXXXXX HIGH
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_PACER_NOT_PACING	** PACER NT PACING
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_PACING_NON_CAPT	** PACER NOT CAPT
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_SV_TACHY	** SVT
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_BEAT_MISSED	** MISSED BEAT
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_PAUSE	** PAUSE
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_CARD_BEAT_RATE_IRREG	** IRREGULAR HR
`NOM_ECG_V_P_C_CNT`	NOM_EVT_STAT_ECG_AL_SOME_OFF	SOME ECG ALRMS OFF
`NOM_ECG_V_P_C_CNT`	NOM_EVT_STAT_ECG_AL_ALL_OFF	ALL ECG ALARMS OFF
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_TACHY	*** VTACH
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_RATE	** PVCs/min HIGH
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_RHY	** VENT RHYTHM
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_RUN	** RUN PVCs HIGH
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_PAIR	** PAIR PVCs
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_RonT	** R-ON-T PVCs
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_BIGEM	** VENT BIGEMINY
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_TRIGEM	** VENT TRIGEMINY
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_TACHY_NON_SUST	** NON-SUSTAIN VT
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_MULTIFORM	** MULTIFORM PVCs
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_PACER_NOT_PACING	* PACER NT PACING
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_PACING_NON_CAPT	* PACER NOT CAPT
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_SV_TACHY	* SVT
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_BEAT_MISSED	* MISSED BEAT
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_PAUSE	* PAUSE
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_CARD_BEAT_RATE_IRREG	* IRREGULAR HR

Alert Source	Alert Code	Alert Text
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_RATE	* PVCs/min HIGH
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_RHY	* VENT RHYTHM
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_RUN	* RUN PVCs HIGH
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_PAIR	* PAIR PVCs
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_RonT	* R-ON-T PVCs
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_BIGEM	* VENT BIGEMINY
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_TRIGEM	* VENT TRIGEMINY
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_TACHY_NON_SUST	* NON-SUSTAIN VT
`NOM_ECG_V_P_C_CNT`	NOM_EVT_ECG_V_P_C_MULTIFORM	* MULTIFORM PVCs
`NOM_OBJ_ECG_OUT`	NOM_EVT_UNAVAIL	ExtSyncOutUnsupptd

ST

Alert Source	Alert Code	Alert Text
`NOM_ECG_AMPL_ST`	NOM_EVT_SIG_UNANALYZEABLE	CANNOT ANALYZE ST
`NOM_ECG_AMPL_ST`	NOM_EVT_ST_ELEVATION	**STE Multi
`NOM_ECG_AMPL_ST_<xxx>any ST lead code`	NOM_EVT_LO	**<lead> LOW
`NOM_ECG_AMPL_ST_<xxx>any ST lead code`	NOM_EVT_HI	** <lead> HIGH
`NOM_ECG_AMPL_ST`	NOM_EVT_ST_MULTI	**ST MULTI XXX,XXX

QT Analysis

Alert Source	Alert Code	Alert Text
	NOM_EVT_SIG_UNANALYZEABLE	CANNOT ANALYZE QT
`NOM_ECG_LEAD_C,` `NOM_ECG_LEAD_RA.` `NOM_ECG_LEAD_LA,` `NOM_ECG_LEAD_LL,` `NOM_ECG_LEAD_RL,` `NOM_ECG_LEAD_C1,` `NOM_ECG_LEAD_C2,` `NOM_ECG_LEAD_C3,` `NOM_ECG_LEAD_C4,` `NOM_ECG_LEAD_C5,` `NOM_ECG_LEAD_C6,` `NOM_ECG_LEAD_A,` `NOM_ECG_LEAD_S,` `NOM_ECG_LEAD_I` `NOM_ECG_LEAD_E`	NOM_EVT_HI	** XXXXXX HIGH

Resp

Alert Source	Alert Code	Alert Text
`NOM_RESP`	NOM_EVT_LEADS_OFF	XXXXXX LEADS OFF
`NOM_RESP`	NOM_EVT_ERRATIC	XXXXXX ERRATIC
`NOM_RESP_RATE`	NOM_EVT_APNEA	*** APNEA
`NOM_RESP_RATE`	NOM_EVT_LO	** XXXXXX LOW
`NOM_RESP_RATE`	NOM_EVT_HI	** XXXXXX HIGH

Derived Measurements

Alert Source	Alert Code	Alert Text
`NOM_PRESS_CEREB_PERF`	NOM_EVT_ADVIS_SRC_CHK	XXXXXX CHK SOURCES
`NOM_RES_VASC_SYS`	NOM_EVT_ADVIS_SRC_CHK	XXXXXX CHK SOURCES
`NOM_RES_VASC_SYS_INDEX`	NOM_EVT_ADVIS_SRC_CHK	XXXXXX CHK SOURCES
`NOM_TEMP_DIFF`	NOM_EVT_ADVIS_SRC_CHK	XXXXXX CHK SOURCES
`NOM_SAT_DIFF_O2_ART_VEN`	NOM_EVT_ADVIS_SRC_CHK	XXXXXX CHK SOURCES
`NOM_PULS_OXIM_SAT_O2_DIFF`	NOM_EVT_ADVIS_SRC_CHK	XXXXXX CHK SOURCES
`NOM_RATE_DIFF_CARD_BEAT_PULSE`	NOM_EVT_ADVIS_SRC_CHK	XXXXXX CHK SOURCES
`NOM_PRESS_CEREB_PERF`	NOM_EVT_ADVIS_UNIT_CHK	XXXXXX CHK UNITS
`NOM_RES_VASC_SYS`	NOM_EVT_ADVIS_UNIT_CHK	XXXXXX CHK UNITS
`NOM_RES_VASC_SYS_INDEX`	NOM_EVT_ADVIS_UNIT_CHK	XXXXXX CHK UNITS
`NOM_TEMP_DIFF`	NOM_EVT_ADVIS_UNIT_CHK	XXXXXX CHK UNITS
`NOM_SAT_DIFF_O2_ART_VEN`	NOM_EVT_ADVIS_UNIT_CHK	XXXXXX CHK UNITS
`NOM_PULS_OXIM_SAT_O2_DIFF`	NOM_EVT_ADVIS_UNIT_CHK	XXXXXX CHK UNITS
`NOM_RATE_DIFF_CARD_BEAT_PULSE`	NOM_EVT_ADVIS_UNIT_CHK	XXXXXX CHK UNITS
`NOM_RES_VASC_SYS`	NOM_EVT_ADVIS_PRESUMED_CVP	XXXXXXSET CVP USED
`NOM_RES_VASC_SYS_INDEX`	NOM_EVT_ADVIS_PRESUMED_CVP	XXXXXXSET CVP USED
`NOM_PRESS_CEREB_PERF`	NOM_EVT_HI	** XXXXXX HIGH
`NOM_PRESS_CEREB_PERF`	NOM_EVT_LO	** XXXXXX LOW

C.O./CCO

Alert Source	Alert Code	Alert Text
NOM_VMD_CARD_OUTPUT	NOM_EVT_EQUIP_MALF+1	XXXXXX EQUIP MALF
NOM_OUTPUT_CARD_CTS	NOM_EVT_XDUCR_DISCONN	CCO/Tbl NO TRANSD.
NOM_OUTPUT_CARD	NOM_EVT_XDUCR_DISCONN	XXXXXX NO TRANSDUC
NOM_TEMP_BLOOD	NOM_EVT_RANGE_ERR	XXXXXX OVERRANGE
NOM_TEMP_BLOOD	NOM_EVT_MSMT_RANGE_OVER	XXXXXX OVERRANGE
NOM_TEMP_BLOOD	NOM_EVT_HI	** XXXXXX HIGH
NOM_TEMP_BLOOD	NOM_EVT_LO	** XXXXXX LOW
NOM_OUTPUT_CARD_CTS	NOM_EVT_UNSUPPORTED	CCO NOT SUPPORTED
NOM_OUTPUT_CARD_CTS	NOM_EVT_SRC_ABSENT	CCO NO XXX
NOM_OUTPUT_CARD_CTS	NOM_EVT_ADVIS_SRC_CHK	CCO XXX INVALID
NOM_OUTPUT_CARD_CTS	NOM_EVT_STAT_PULSE_SRC_RANGE_OVER	CCO PULSE OVERRANG
NOM_OUTPUT_CARD_CTS	NOM_EVT_ADVIS_CALIB_REQD	CCO NO CALIBRATION
NOM_OUTPUT_CARD_CTS	NOM_EVT_STAT_PRESS_SRC_RANGE_OVER	CCO PRESS OVERRANG
NOM_OUTPUT_CARD_CTS	NOM_EVT_SIG_UNANALYZEABLE	CCO BAD PRESS SIGN
NOM_OUTPUT_CARD_CTS	NOM_EVT_MSMT_RANGE_OVER	XXXXXX OVERRANGE
NOM_OUTPUT_CARD_CTS	NOM_EVT_ADVIS_CALIB_AND_ZERO_CHK	CCO RECALIBRATE
NOM_OUTPUT_CARD_CTS	NOM_EVT_HI	** XXXXXX HIGH
NOM_OUTPUT_CARD_CTS	NOM_EVT_LO	** XXXXXX LOW
NOM_OUTPUT_CARD_INDEX_CTS	NOM_EVT_ADVIS_BSA_REQD	CCI NO BSA
NOM_OUTPUT_CARD_INDEX_CTS	NOM_EVT_MSMT_RANGE_OVER	XXXXXX OVERRANGE
NOM_OUTPUT_CARD_INDEX_CTS	NOM_EVT_HI	** XXXXXX HIGH
NOM_OUTPUT_CARD_INDEX_CTS	NOM_EVT_LO	** XXXXXX LOW

EEG

Alert Source	Alert Code	Alert Text
`NOM_EEG_ELEC_POTL_CRTX`	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
`NOM_EEG_ELEC_POTL_CRTX`	NOM_EVT_XDUCR_DISCONN	XXXXXX NO TRANSDUC
`NOM_EEG_ELEC_POTL_CRTX`	NOM_EVT_LEADS_OFF	XXXXXX LEADS OFF
`NOM_EEG_ELEC_POTL_CRTX`	NOM_EVT_MSMT_RANGE_OVER	XXXXXX OVERRANGE
`NOM_EEG_ELEC_POTL_CRTX`	NOM_EVT_IMPED_HI	EEG IMPEDANCE HIGH
`NOM_EEG_ELEC_POTL_CRTX`	NOM_EVT_MUSCLE_NOISE	EEG MUSCLE NOISE
`NOM_EEG_ELEC_POTL_CRTX`	NOM_EVT_LINE_NOISE	EEG LINE NOISE
`NOM_OBJ_CHAN_1`	NOM_EVT_LEAD_DISCONN+1	EEG1 LEAD OFF XXX
`NOM_OBJ_CHAN_2`	NOM_EVT_LEAD_DISCONN+1	EEG2 LEAD OFF XXX
`NOM_OBJ_CHAN_1`	NOM_EVT_LEADS_OFF+1	XXXXXX LEADS OFF
`NOM_OBJ_CHAN_2`	NOM_EVT_LEADS_OFF+1	XXXXXX LEADS OFF
`NOM_OBJ_CHAN_1`	NOM_EVT_MSMT_RANGE_OVER+1	XXXXXX OVERRANGE
`NOM_OBJ_CHAN_2`	NOM_EVT_MSMT_RANGE_OVER+1	XXXXXX OVERRANGE
`NOM_OBJ_CHAN_1`	NOM_EVT_MUSCLE_NOISE+1	XXXXXXMUSCLE NOISE
`NOM_OBJ_CHAN_2`	NOM_EVT_LINE_NOISE+1	XXXXXX LINE NOISE
`NOM_OBJ_CHAN_1`	NOM_EVT_IMPED_HI+1	EEG1 IMPED. HIGH
`NOM_OBJ_CHAN_1`	NOM_EVT_IMPEDS_HI+1	EEG1 IMPED. HIGH
`NOM_OBJ_CHAN_2`	NOM_EVT_IMPED_HI+1	EEG2 IMPED. HIGH
`NOM_OBJ_CHAN_2`	NOM_EVT_IMPEDS_HI+1	EEG2 IMPED. HIGH

BIS

Alert Source	Alert Code	Alert Text
`NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD`	NOM_EVT_EQUIP_MALF+1	XXXXXX EQUIP MALF
`NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD`	NOM_EVT_DISCONN+1	BIS ENGINE DISCONN
`NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD`	NOM_EVT_VOLTAGE_OUT_OF_RANGE+1	BIS OVERCURRENT
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_INCOMPAT	BIS ENGINE INCOMPT
`NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD`	NOM_EVT_MALF+1	BIS ENGINE MALFUNC
`NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD`	NOM_EVT_XDUCR_DISCONN+1	BIS DSC DISCONN
`NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD`	NOM_EVT_STAT_FW_UPDATE_IN_PROGRESS+1	BIS DSC UPDATE
`NOM_OBJ_XDUCR`	NOM_EVT_INCOMPAT+1	BIS DSC INCOMPT
`NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD`	NOM_EVT_XDUCR_MALF+1	BIS DSC MALFUNC
`NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD`	NOM_EVT_SENSOR_DISCONN+1	BIS SENSOR DISCONN
`NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD`	NOM_EVT_SENSOR_MALF+1	BIS SENSOR MALFUNC

Alert Source	Alert Code	Alert Text
`NOM_OBJ_SENSOR`	NOM_EVT_INCOMPAT+1	BIS SENSOR INCOMPT
`NOM_OBJ_SENSOR`	NOM_EVT_EXH+1	BIS SENSOR USAGE
`NOM_ELECTRODE_IMPED`	NOM_EVT_ADVIS_CHK	BIS SENSOR CHECK
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_LEAD_DISCONN	BIS LEAD OFF
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_IMPED_HI	BIS HIGH IMPEDANCE
`NOM_EEG_BIS_SIG_QUAL_INDEX`	NOM_EVT_SIG_LO	BIS SQI < 15%
`NOM_EEG_BISPECTRAL_INDEX`	NOM_ELECTRODE_IMPED	BIS SENSOR CHeCK
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_LEAD_DISCONN	BIS LEAD OFF
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_IMPED_HI	BIS HIGH IMPEDANCE
`NOM_EEG_BIS_SIG_QUAL_INDEX`	NOM_EVT_LO	BIS SQI < 50%
`NOM_EEG_ELEC_POTL_CRTX`	NOM_EVT_ABSENT	BIS ISOELECTRC EEG
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_HI	** XXXXXX HIGH
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_LO	** XXXXXX LOW
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_DISCONN	BISx DISCONNECTED
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_INCOMPAT	BISx INCOMPATIBLE
`NOM_EEG_BISPECTRAL_INDEX`	NOM_EVT_MALF	BISx MALFUNCTION
`NOM_OBJ_SENSOR`	NOM_EVT_SENSOR_DISCONN+1	BIS ELECTR. DISC.
`NOM_OBJ_CABLE`	NOM_EVT_INCOMPAT+1	BIS CABLE INCOMPAT
`NOM_OBJ_CABLE`	NOM_EVT_EXH+1	BIS CABLE USAGE

NMT

Alert Source	Alert Code	Alert Text
`NOM_DEV_NMT_VMD`	NOM_EVT_MALF+1	NMT Equip Malfunct
`NOM_DEV_NMT_VMD`	NOM_EVT_INCOMPAT+1	NMT Incompatible
`NOM_DEV_NMT_VMD`	NOM_EVT_STAT_FW_UPDATE_IN_PROGRESS+1	NMT Upgrade
`NOM_DEV_NMT_VMD`	NOM_EVT_SENSOR_DISCONN+1	NMT Cable Disconn
`NOM_DEV_NMT_VMD`	NOM_EVT_SENSOR_PROB+1	NMT Cable Unknown
`NOM_DEV_NMT_VMD`	NOM_EVT_SENSOR_MALF+1	NMT Sensor Malfunc
`NOM_DEV_NMT_VMD`	NOM_EVT_LEADS_OFF+1	NMT Lead Off
`NOM_DEV_NMT_VMD`	NOM_EVT_IMPED_HI+1	NMT Impedance High
`NOM_DEV_NMT_VMD`	NOM_EVT_SHUTDOWN+1	NMT Overcurrent
`NOM_DEV_NMT_VMD`	NOM_EVT_PAT_TYPE_UNSUPPORTED+1	NMT Neo Patient?
`NOM_DEV_NMT_VMD`	NOM_EVT_STAT_CALIB_RUNNING+1	NMT Cal Running
`NOM_DEV_NMT_VMD`	NOM_EVT_CALIB_FAIL+1	NMT Cal Failed
`NOM_DEV_NMT_VMD`	NOM_EVT_MSMT_INOP+1	NMT Cannot Measure

Alert Source	Alert Code	Alert Text
`NOM_DEV_NMT_VMD`	NOM_EVT_NOISY_SIGNAL+1	NMT Noisy Signal
`NOM_DEV_NMT_VMD`	NOM_EVT_MSMT_RANGE_OVER+1	NMT Overrange
`NOM_DEV_NMT_VMD`	NOM_EVT_STAT_AL_OFF+1	NMT Alarm Suppress
`NOM_TRAIN_OF_FOUR_CNT`	NOM_EVT_HI	**TOFcnt High

Temp

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Alert Source	Alert Code	Alert Text
* any temperature (e.g.**NOM_TEMP**)	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
* any temperature (e.g.**NOM_TEMP**)	NOM_EVT_XDUCR_DISCONN	XXXXXX NO TRANSDUC
* any temperature (e.g.**NOM_TEMP**)	NOM_EVT_MSMT_RANGE_OVER	XXXXXX OVERRANGE
* any temperature (e.g.**NOM_TEMP**)	NOM_EVT_HI	** XXXXXX HIGH
* any temperature (e.g.**NOM_TEMP**)	NOM_EVT_LO	** XXXXXX LOW

Invasive Pressure

Alert Source	Alert Code	Alert Text
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_XDUCR_DISCONN	XXX NO TRANSDUCER
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_XDUCR_MALF	XXX TRANSDUC MALF
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_ADVIS_CALIB_AND_ZERO_CHK	XXX ZERO+CHECK CAL
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_MSMT_RANGE_OVER	XXX OVERRANGE
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_WAVE_ARTIF_ERR	XXX ARTIFACT
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_ADVIS_GAIN_DECR	XXXXXX REDUCE SIZE
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_WAVE_OSCIL_ABSENT	XXX NON-PULSATILE
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_NOISY	XXX NOISY SIGNAL
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_HI	** XXXXXX HIGH
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_LO	** XXXXXX LOW
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_HI	** XXXXXX HIGH
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_LO	** XXXXXX LOW
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_HI	** XXXXXX HIGH
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_LO	** XXXXXX LOW
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_MSMT_DISCONN	*** XXX DISCONNECT
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_EXTR_LO	*** XXXXXX LOW
* any pressure (e.g.**NOM_PRESS_BLD**)	NOM_EVT_EXTR_HI	*** XXXXXX HIGH
NOM_PULS_RATE	NOM_EVT_HI	** XXXXXX HIGH
NOM_PULS_RATE	NOM_EVT_LO	** XXXXXX LOW
NOM_PULS_RATE	NOM_EVT_BRADY	*** BRADY (Pulse)
NOM_PULS_RATE	NOM_EVT_TACHY	*** TACHY (Pulse)

SpO$_2$

Alert Source	Alert Code	Alert Text
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_SENSOR_MALF	XXXXXX SENSOR MALF
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_XDUCR_DISCONN	XXXXXX NO SENSOR
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_MSMT_INTERF_ERR	XXXXXX INTERFERNCE
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_ADVIS_SENSOR_CHK	XXXXXX UNKN.SENSOR
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_NOISY	XXXXXX NOISY SIGN.
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_STAT_FW_UPDATE_IN_PROGRESS	XXXXXX UPGRADE
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_WAVE_OSCIL_ABSENT	XXXXXX NON-PULSAT.

Alert Source	Alert Code	Alert Text
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_ERRATIC	XXXXXX ERRATIC
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_STAT_LEARN	XXXXXX SEARCHING
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_SUST	XXXXXX EXTD.UPDATE
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_MSMT_RANGE_UNDER	XXXXXX PULSE?
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_SENSOR_DISCONN	XXXXXX SENSOR OFF
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_WAVE_SIG_QUAL_ERR	XXXXXX POOR SIGNAL
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_SIG_LO	XXXXXX LOW PERF
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_HI	** XXXXXX HIGH
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_LO	** XXXXXX LOW
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_DESAT	*** DESAT
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_LO	** XXXXXX LOW
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_HI	** XXXXXX HIGH
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_BRADY	*** BRADY (Pulse)
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_TACHY	*** TACHY (Pulse)
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_NO_DESAT_INDEX_ALARM	No 3D Desat Index
any SpO2 (e.g. **NOM_PULS_OXIM_SAT_O2_***)	NOM_EVT_NO_PERF_INDEX_ALARM	No 3D Perf Delta
any SpO2 (e.g. **NOM_PULS_OXIM_PERF_REL_***)	NOM_EVT_PERF_INDEX_DELTA	**3D Perf Delta

SvO$_2$

Alert Source	Alert Code	Alert Text
`NOM_SAT_O2 (_VEN)`	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
`NOM_SAT_O2 (_VEN)`	NOM_EVT_CONFIG_ERR	XXXXXX CONFIG ERROR
`NOM_SAT_O2 (_VEN)`	NOM_EVT_STAT_OPT_MOD_SENSOR_CONN	SvO2 CONNCT OPTMOD
`NOM_SAT_O2 (_VEN)`	NOM_EVT_OPTIC_MODULE_ABSENT	XXXXXX NO OPTMOD
`NOM_SAT_O2 (_VEN)`	NOM_EVT_STAT_CALIB_PREINS_RUNNING	SvO2 PRE-INS CALIB
`NOM_SAT_O2 (_VEN)`	NOM_EVT_CALIB_FAIL	XXXXXX CAL FAILED
`NOM_SAT_O2 (_VEN)`	NOM_EVT_ADVIS_CALIB_REQD	XXXXXX CAL REQUIRED
`NOM_SAT_O2 (_VEN)`	NOM_EVT_STAT_CALIB_MODE	XXXXXX CAL MODE
`NOM_SAT_O2 (_VEN)`	NOM_EVT_SIG_LO	XXXXXX LOW LIGHT
`NOM_SAT_O2 (_VEN)`	NOM_EVT_MSMT_ERR	XXXXXX CANNOT MEAS
`NOM_SAT_O2 (_VEN)`	NOM_EVT_INTENS_LIGHT_ERR	XXXXXX LIGHT INTENS
`NOM_SAT_O2 (_VEN)`	NOM_EVT_STAT_CALIB_LIGHT_RUNNING	XXXXXX LIGHT CALIB
`NOM_SAT_O2 (_VEN)`	NOM_EVT_STAT_CALIB_INVIVO_RUNNING	XXXXXX IN-VIVO CALIB
`NOM_SAT_O2 (_VEN)`	NOM_EVT_STAT_OPT_MOD_SENSOR_WARMING	XXXXXX OPTMOD WARMUP
`NOM_SAT_O2 (_VEN)`	NOM_EVT_STAT_FW_UPDATE_IN_PROGRESS	XXXXXX UPGRADE
`NOM_SAT_O2 (_VEN)`	NOM_EVT_INCOMPAT	XXXXXX INCOMPAT.
`NOM_SAT_O2 (_VEN)`	NOM_EVT_OPTIC_MODULE_DEFECT	XXXXXX OPTMOD MALF
`NOM_SAT_O2 (_VEN)`	NOM_EVT_HI	** XXXXXX HIGH
`NOM_SAT_O2 (_VEN)`	NOM_EVT_LO	** XXXXXX LOW

CO$_2$

Alert Source	Alert Code	Alert Text
`NOM_AWAY_CO2`	NOM_EVT_EQUIP_MALF	CO2 EQUIP MALF
`NOM_AWAY_CO2`	NOM_EVT_EQUIP_MALF	CO2 EQUIP MALF
`NOM_AWAY_CO2`	NOM_EVT_XDUCR_DISCONN	XXXXXX NO TRANSDUC
`NOM_AWAY_CO2`	NOM_EVT_CALIB_FAIL	CO2 FAILED CAL
`NOM_AWAY_CO2`	NOM_EVT_WAIT_CAL	CO2 WAIT CAL2
`NOM_AWAY_CO2`	NOM_EVT_STAT_CALIB_RUNNING	XXXXXX CAL RUNNING
`NOM_AWAY_CO2`	NOM_EVT_STAT_CALIB_MODE	CO2 CAL MODE
`NOM_AWAY_CO2`	NOM_EVT_ADVIS_CALIB_AND_ZERO_CHK	CO2 CHECK CAL
`NOM_AWAY_CO2`	NOM_EVT_STAT_SENSOR_WARMING	CO2 SENSOR WARMUP
`NOM_AWAY_CO2`	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXXCHANGE SCALE
`NOM_AWAY_CO2`	NOM_EVT_SW_VER_UNK	CO2 UPDATE FW
`NOM_AWAY_CO2`	NOM_EVT_TUBE_DISCONN	CO2 NO TUBING
`NOM_AWAY_CO2`	NOM_EVT_TUBE_OCCL	CO2 OCCLUSION
`NOM_AWAY_CO2`	NOM_EVT_MSMT_RANGE_OVER	XXXXXX OVERRANGE
`NOM_AWAY_CO2`	NOM_EVT_TUBE_OBSTRUC	CO2 PURGING

Alert Source	Alert Code	Alert Text
NOM_AWAY_CO2	NOM_EVT_STAT_ZERO_RUNNING	CO2 AUTO ZERO
NOM_AWAY_CO2_ET	NOM_EVT_HI	** XXXXXX HIGH
NOM_AWAY_CO2_ET	NOM_EVT_LO	** XXXXXX LOW
NOM_AWAY_CO2_INSP_MIN	NOM_EVT_HI	** XXXXXX HIGH
NOM_AWAY_RESP_RATE	NOM_EVT_APNEA	*** APNEA
NOM_AWAY_RESP_RATE	NOM_EVT_LO	** XXXXXX LOW
NOM_AWAY_RESP_RATE	NOM_EVT_HI	** XXXXXX HIGH

AGM

Alert Source	Alert Code	Alert Text
`NOM_VMD_GAS_ANALY`	NOM_EVT_INCOMPAT+1	XXX INCOMPATIBLE
`NOM_VMD_GAS_ANALY`	NOM_EVT_MALF+1	XXX MALFUNCTION
`NOM_VMD_GAS_ANALY`	NOM_EVT_MALF+1	XXX MALFUNCTION
`NOM_VMD_GAS_ANALY`	NOM_EVT_STAT_STANDBY+1	XXX STANDBY
`NOM_VMD_GAS_ANALY`	NOM_EVT_STAT_DISCONN+1	XXX NOT AVAILABLE
`NOM_VMD_GAS_ANALY`	NOM_EVT_STAT_SELFTEST_RUNNING+1	XXX SELFTEST
`NOM_VMD_GAS_ANALY`	NOM_EVT_OBSTRUC+1	XXX OCCLUSION
`NOM_VMD_GAS_ANALY`	NOM_EVT_OBSTRUC+1	XXX OCCLUSION
`NOM_VMD_GAS_ANALY`	NOM_EVT_MSMT_INOP+1	XXX UNABLE TO MEAS
`NOM_VMD_GAS_ANALY`	NOM_EVT_MSMT_INOP+1	XXX UNABLE TO MEAS
`NOM_VMD_GAS_ANALY`	NOM_EVT_MSMT_RANGE_OVER+1	XXXXXX OVERRANGE
`NOM_VMD_GAS_ANALY`	NOM_EVT_STAT_CALIB_RUNNING+1	XXX ZERO RUNNING
`NOM_VMD_GAS_ANALY`	NOM_EVT_WARMING+1	XXX WARMUP
`NOM_VMD_GAS_ANALY`	NOM_EVT_CALIB_FAIL+1	XXX ZERO FAILED
`NOM_VMD_GAS_ANALY`	NOM_EVT_MSMT_ERR+1	XXX ACCURACY?
`NOM_VMD_GAS_ANALY`	NOM_EVT_STAT_AL_OFF+1	XXX ALARM SUPPRESS
`NOM_VMD_GAS_ANALY`	NOM_EVT_BREATH_ABSENT+1	XXX NO BREATH
`NOM_AWAY_CO2`	NOM_EVT_MSMT_INOP	XXX UNABLE TO MEAS
`NOM_AWAY_CO2`	NOM_EVT_DISTURB	XXX MEAS DISTURBED
`NOM_AWAY_CO2`	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXXCHANGE SCALE
`NOM_AWAY_O2`	NOM_EVT_MALF	O2 SENSOR MALFUNCT
`NOM_AWAY_O2`	NOM_EVT_CALIB_FAIL	O2 ZERO FAILED
`NOM_AWAY_O2`	NOM_EVT_MSMT_INOP	XXX UNABLE TO MEAS
`NOM_AWAY_O2`	NOM_EVT_DISTURB	XXX MEAS DISTURBED
`NOM_AWAY_O2`	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXXCHANGE SCALE
`NOM_AWAY_N2O`	NOM_EVT_MSMT_INOP	XXX UNABLE TO MEAS
`NOM_AWAY_N2O`	NOM_EVT_DISTURB	XXX MEAS DISTURBED
`NOM_AWAY_N2O`	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXXCHANGE SCALE
`NOM_AWAY_AGENT`	NOM_EVT_GAS_AGENT_IDENT_MALF	AGT ID MALFUNCTION
`NOM_AWAY_DESFL`	NOM_EVT_GAS_AGENT_IDENT_MALF	AGT ID MALFUNCTION
`NOM_AWAY_ENFL`	NOM_EVT_GAS_AGENT_IDENT_MALF	AGT ID MALFUNCTION
`NOM_AWAY_HALOTH`	NOM_EVT_GAS_AGENT_IDENT_MALF	AGT ID MALFUNCTION
`NOM_AWAY_SEVOFL`	NOM_EVT_GAS_AGENT_IDENT_MALF	AGT ID MALFUNCTION
`NOM_AWAY_ISOFL`	NOM_EVT_GAS_AGENT_IDENT_MALF	AGT ID MALFUNCTION
`NOM_AWAY_AGENT`	NOM_EVT_CALIB_FAIL	AGT ID ZERO FAILED
`NOM_AWAY_DESFL`	NOM_EVT_CALIB_FAIL	AGT ID ZERO FAILED
`NOM_AWAY_ENFL`	NOM_EVT_CALIB_FAIL	AGT ID ZERO FAILED
`NOM_AWAY_HALOTH`	NOM_EVT_CALIB_FAIL	AGT ID ZERO FAILED
`NOM_AWAY_SEVOFL`	NOM_EVT_CALIB_FAIL	AGT ID ZERO FAILED
`NOM_AWAY_ISOFL`	NOM_EVT_CALIB_FAIL	AGT ID ZERO FAILED

Alert Source	Alert Code	Alert Text
NOM_AWAY_AGENT	NOM_EVT_ADVIS_GAS_AGENT_CHK	CHECK AGENT
NOM_AWAY_DESFL	NOM_EVT_ADVIS_GAS_AGENT_CHK	CHECK AGENT
NOM_AWAY_ENFL	NOM_EVT_ADVIS_GAS_AGENT_CHK	CHECK AGENT
NOM_AWAY_HALOTH	NOM_EVT_ADVIS_GAS_AGENT_CHK	CHECK AGENT
NOM_AWAY_SEVOFL	NOM_EVT_ADVIS_GAS_AGENT_CHK	CHECK AGENT
NOM_AWAY_ISOFL	NOM_EVT_ADVIS_GAS_AGENT_CHK	CHECK AGENT
NOM_AWAY_AGENT	NOM_EVT_MSMT_INOP	XXX UNABLE TO MEAS
NOM_AWAY_DESFL	NOM_EVT_MSMT_INOP	XXX UNABLE TO MEAS
NOM_AWAY_ENFL	NOM_EVT_MSMT_INOP	XXX UNABLE TO MEAS
NOM_AWAY_HALOTH	NOM_EVT_MSMT_INOP	XXX UNABLE TO MEAS
NOM_AWAY_SEVOFL	NOM_EVT_MSMT_INOP	XXX UNABLE TO MEAS
NOM_AWAY_ISOFL	NOM_EVT_MSMT_INOP	XXX UNABLE TO MEAS
NOM_AWAY_AGENT	NOM_EVT_MSMT_RESTART	AGT MEAS RESTARTNG
NOM_AWAY_DESFL	NOM_EVT_MSMT_RESTART	AGT MEAS RESTARTNG
NOM_AWAY_ENFL	NOM_EVT_MSMT_RESTART	AGT MEAS RESTARTNG
NOM_AWAY_HALOTH	NOM_EVT_MSMT_RESTART	AGT MEAS RESTARTNG
NOM_AWAY_SEVOFL	NOM_EVT_MSMT_RESTART	AGT MEAS RESTARTNG
NOM_AWAY_ISOFL	NOM_EVT_MSMT_RESTART	AGT MEAS RESTARTNG
NOM_AWAY_AGENT	NOM_EVT_DISTURB	XXX MEAS DISTURBED
NOM_AWAY_DESFL	NOM_EVT_DISTURB	XXX MEAS DISTURBED
NOM_AWAY_ENFL	NOM_EVT_DISTURB	XXX MEAS DISTURBED
NOM_AWAY_HALOTH	NOM_EVT_DISTURB	XXX MEAS DISTURBED
NOM_AWAY_SEVOFL	NOM_EVT_DISTURB	XXX MEAS DISTURBED
NOM_AWAY_ISOFL	NOM_EVT_DISTURB	XXX MEAS DISTURBED
NOM_AWAY_AGENT	NOM_EVT_CONTAM	GAS CONTAMINANT
NOM_AWAY_DESFL	NOM_EVT_CONTAM	GAS CONTAMINANT
NOM_AWAY_ENFL	NOM_EVT_CONTAM	GAS CONTAMINANT
NOM_AWAY_HALOTH	NOM_EVT_CONTAM	GAS CONTAMINANT
NOM_AWAY_SEVOFL	NOM_EVT_CONTAM	GAS CONTAMINANT
NOM_AWAY_ISOFL	NOM_EVT_CONTAM	GAS CONTAMINANT
NOM_AWAY_AGENT	NOM_EVT_TOO_MANY_AGENTS	TOO MANY AGENTS
NOM_AWAY_DESFL	NOM_EVT_TOO_MANY_AGENTS	TOO MANY AGENTS
NOM_AWAY_ENFL	NOM_EVT_TOO_MANY_AGENTS	TOO MANY AGENTS
NOM_AWAY_HALOTH	NOM_EVT_TOO_MANY_AGENTS	TOO MANY AGENTS
NOM_AWAY_SEVOFL	NOM_EVT_TOO_MANY_AGENTS	TOO MANY AGENTS
NOM_AWAY_ISOFL	NOM_EVT_TOO_MANY_AGENTS	TOO MANY AGENTS
NOM_AWAY_AGENT	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXCHANGE SCALE
NOM_AWAY_DESFL	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXCHANGE SCALE
NOM_AWAY_ENFL	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXCHANGE SCALE
NOM_AWAY_HALOTH	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXCHANGE SCALE
NOM_AWAY_SEVOFL	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXCHANGE SCALE
NOM_AWAY_ISOFL	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXCHANGE SCALE

Alert Source	Alert Code	Alert Text
NOM_AWAY_AGENT	NOM_EVT_AGENT_MIX	AGENT MIXTURE
NOM_AWAY_DESFL	NOM_EVT_AGENT_MIX	AGENT MIXTURE
NOM_AWAY_ENFL	NOM_EVT_AGENT_MIX	AGENT MIXTURE
NOM_AWAY_HALOTH	NOM_EVT_AGENT_MIX	AGENT MIXTURE
NOM_AWAY_SEVOFL	NOM_EVT_AGENT_MIX	AGENT MIXTURE
NOM_AWAY_ISOFL	NOM_EVT_AGENT_MIX	AGENT MIXTURE
NOM_AWAY_N2	NOM_EVT_ADVIS_CHANGE_SCALE	XXXXXXCHANGE SCALE
NOM_AWAY_CO2_ET	NOM_EVT_LO	** XXXXXX LOW
NOM_AWAY_RESP_RATE	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_O2_INSP	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_AGENT_ET	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_AGENT_INSP	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_HALOTH_ET	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_HALOTH_INSP	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_ENFL_ET	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_ENFL_INSP	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_ISOFL_ET	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_ISOFL_INSP	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_SEVOFL_ET	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_SEVOFL_INSP	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_DESFL_ET	NOM_EVT_LO	** XXXXXX LOW
NOM_CONC_AWAY_DESFL_INSP	NOM_EVT_LO	** XXXXXX LOW
NOM_AWAY_CO2_ET	NOM_EVT_HI	** XXXXXX HIGH
NOM_AWAY_CO2_INSP_MIN	NOM_EVT_HI	** XXXXXX HIGH
NOM_AWAY_RESP_RATE	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_O2_INSP	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_N2O_INSP	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_AGENT_ET	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_AGENT_INSP	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_HALOTH_ET	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_HALOTH_INSP	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_ENFL_ET	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_ENFL_INSP	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_ISOFL_ET	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_ISOFL_INSP	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_SEVOFL_ET	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_SEVOFL_INSP	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_DESFL_ET	NOM_EVT_HI	** XXXXXX HIGH
NOM_CONC_AWAY_DESFL_INSP	NOM_EVT_HI	** XXXXXX HIGH
NOM_AWAY_RESP_RATE	NOM_EVT_APNEA	*** APNEA
NOM_CONC_AWAY_O2_INSP	NOM_EVT_O2_SUPPLY_LO	***inO2 LOW OXYGEN

Alert Source	Alert Code	Alert Text
`NOM_VMD_GAS_ANALY`	NOM_EVT_ADVIS_WATER_TRAP_CHK+1	CHECK WATERTRAP
`NOM_VMD_GAS_ANALY`	NOM_EVT_STAT_OFF+1	XXX SWITCHED OFF
`NOM_VMD_GAS_ANALY`	NOM_EVT_COMP_MALF+1	XXX COMPONENT MALF
`NOM_AWAY_AGENT`	NOM_EVT_AGENT_MEAS_MALF	AGT MEAS MALFUNCT
`NOM_AWAY_DESFL`	NOM_EVT_AGENT_MEAS_MALF	AGT MEAS MALFUNCT
`NOM_AWAY_ENFL`	NOM_EVT_AGENT_MEAS_MALF	AGT MEAS MALFUNCT
`NOM_AWAY_HALOTH`	NOM_EVT_AGENT_MEAS_MALF	AGT MEAS MALFUNCT
`NOM_AWAY_SEVOFL`	NOM_EVT_AGENT_MEAS_MALF	AGT MEAS MALFUNCT
`NOM_AWAY_ISOFL`	NOM_EVT_AGENT_MEAS_MALF	AGT MEAS MALFUNCT
`NOM_AWAY_AGENT`	NOM_EVT_STAT_AGENT_CALC_RUNNING	AGENT CALCULATING
`NOM_AWAY_DESFL`	NOM_EVT_STAT_AGENT_CALC_RUNNING	AGENT CALCULATING
`NOM_AWAY_ENFL`	NOM_EVT_STAT_AGENT_CALC_RUNNING	AGENT CALCULATING
`NOM_AWAY_HALOTH`	NOM_EVT_STAT_AGENT_CALC_RUNNING	AGENT CALCULATING
`NOM_AWAY_SEVOFL`	NOM_EVT_STAT_AGENT_CALC_RUNNING	AGENT CALCULATING
`NOM_AWAY_ISOFL`	NOM_EVT_STAT_AGENT_CALC_RUNNING	AGENT CALCULATING
`NOM_AWAY_AGENT`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_DESFL`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_ENFL`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_HALOTH`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_SEVOFL`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_ISOFL`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_AGENT`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_DESFL`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_ENFL`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_HALOTH`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_SEVOFL`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_AWAY_ISOFL`	NOM_EVT_AGENT_MIX	AGENT MIXTURE
`NOM_OBJ_LEA`	NOM_EVT_STAT_OFF + 1	Align Watertrap
`NOM_OBJ_LEA`	NOM_EVT_CALIB_FAIL + 1	<Gas Analyzer> Zero Failed
`NOM_CONC_AWAY_<Label>`	NOM_EVT_RANGE_OVER	<Gas Label> Overrange

System

Alert Source	Alert Code	Alert Text
NOM_OBJ_NETWORK	NOM_EVT_STAT_DISCONN+1	Unsupported LAN
NOM_OBJ_NETWORK	NOM_EVT_MALF+1	No Central Monit.
NOM_OBJ_QUICKLINK	NOM_EVT_IRREG+1	Bad Server Link
NOM_OBJ_QUICKLINK	NOM_EVT_UNSUPPORTED+1	XXXXXX UNSUPPORTD
NOM_OBJ_SPEAKER	NOM_EVT_MALF+1	Speaker Malfunct.
NOM_OBJ_INPUT_DEV	NOM_EVT_MALF+1	User I/F Malfunct.
NOM_OBJ_HIF_KEY	NOM_EVT_MALF+1	Check Keyboard
NOM_OBJ_HIF_MOUSE	NOM_EVT_MALF+1	Check Mouse Device
NOM_OBJ_HIF_TOUCH	NOM_EVT_MALF+1	Check Touch Input
NOM_OBJ_HIF_SPEEDPOINT	NOM_EVT_MALF+1	Check SpeedPoint
NOM_OBJ_HIF_ALARMBOX	NOM_EVT_MALF+1	Rem.AlarmDev.Malf.
NOM_OBJ_QUICKLINK	NOM_EVT_ADVIS_PWR_HI+1	MSL Power High
NOM_OBJ_QUICKLINK	NOM_EVT_ADVIS_PWR_OFF+1	MSL Power Off
NOM_OBJ_QUICKLINK	NOM_EVT_ADVIS_PWR_OVER+1	MSL Power Overload
NOM_OBJ_BUS_I2C	NOM_EVT_MALF+1	Internal.Comm.Malf
NOM_MOC_VMS_MDS	NOM_EVT_VOLTAGE_OUT_OF_RANGE+1	CheckInternVoltage
NOM_OBJ_QUICKLINK	NOM_EVT_VOLTAGE_OUT_OF_RANGE+1	Check MSL Voltage
NOM_MOC_VMS_MDS	NOM_EVT_TEMP_HI_GT_LIM+1	Check Monitor Temp
NOM_OBJ_SETTING	NOM_EVT_MALF+1	Check Settings
NOM_OBJ_SETTING	NOM_EVT_MALF+1	Settings Malfunc.
NOM_OBJ_CPU_SEC	NOM_EVT_MALF+1	Check Main Board 2
NOM_OBJ_SETTING	NOM_EVT_MALF+1	Check Flex Texts
NOM_OBJ_LED	NOM_EVT_MALF+1	Check Alarm Lamps
NOM_OBJ_NETWORK	NOM_EVT_MALF+1	Check Network Conf
NOM_OBJ_SETTING	NOM_EVT_MALF+1	Check Screen Res.
NOM_OBJ_SETTING	NOM_EVT_MALF+1	Check Waves
NOM_OBJ_DISP_SEC	NOM_EVT_UNSUPPORTED+1	Indep.Dsp NotSupp.
NOM_OBJ_DISP_SEC	NOM_EVT_MALF+1	Indep.Dsp Malfunc.
NOM_OBJ_DISP_THIRD	NOM_EVT_FAIL+1	Chk IndepDsp Cable
NOM_OBJ_DISP_THIRD	NOM_EVT_REVERSED+1	MCC Reversed
NOM_OBJ_DISP_THIRD	NOM_EVT_CONFIG_ERR+1	Check MCC
NOM_OBJ_DISP_THIRD	NOM_EVT_UNSUPPORTED+1	Intell.Dsp Unsupp.
NOM_OBJ_DISP_THIRD	NOM_EVT_MALF+1	Intell.Dsp Malf.
NOM_OBJ_DISP_THIRD	NOM_EVT_DISCONN+1	Intell.Dsp Missing
NOM_OBJ_DISP_THIRD	NOM_EVT_UNAVAIL+1	MCC Unsupported
NOM_OBJ_SETTING	NOM_EVT_SYNCH_UNSUPPORTED+1	Tele Sync Unsupp.
NOM_OBJ_SETTING	NOM_EVT_SYNCH_ERR+1	Check TeleSettings
NOM_OBJ_NETWORK	NOM_EVT_ECG_ADVIS_SRC_CHK+1	!!CHECK ECG SOURCE
NOM_OBJ_NETWORK	NOM_EVT_ECG_ADVIS_SRC_CHK+1	!!CHECK ECG SOURCE
NOM_OBJ_NETWORK	NOM_EVT_DEV_ASSOC_CHK+1	!! CHECK PAIRING

Alert Source	Alert Code	Alert Text
`NOM_OBJ_NETWORK`	NOM_EVT_DEV_ASSOC_CHK+1	!!!CHECK PAIRING
`NOM_OBJ_XMTR`	NOM_EVT_UNPLUGGED+1	TELE DISCONNECTED
`NOM_ECG_ELEC_POTL`	NOM_EVT_TELE_EQUIP_MALF	ECG EQUIP MALF T
`NOM_OBJ_XMTR`	NOM_EVT_EQUIP_MALF+1	TELE EQUIP MALF
`NOM_OBJ_XMTR`	NOM_EVT_UNSUPPORTED+1	TELE UNSUPPORTED
`NOM_OBJ_SETTING`	NOM_EVT_SYNCH_ERR_ECG+1	Check ECG Settings
`NOM_OBJ_SETTING`	NOM_EVT_SYNCH_ERR_SPO2T+1	Chk SpO2T Settings
`NOM_DEV_CALC_VMD`	NOM_EVT_ADVIS_SETTINGS_CHK+1	Check DrugSettings
`Used by a specific measurement.`	NOM_EVT_AGENT_MEAS_MALF+1	XXXXXX MEAS FAILED
`NOM_OBJ_MMS_EXT`	NOM_EVT_UNPLUGGED+1	MMS Ext. UNPLUGGED
`NOM_OBJ_MMS_EXT`	NOM_EVT_ADVIS_PWR_OFF + 1	MMS Ext. Unpowered
`NOM_OBJ_MMS_EXT`	NOM_EVT_MALF + 1	MMS Ext. MALF
`NOM_OBJ_MMS_EXT`	NOM_EVT_UNSUPPORTED + 1	MMS Ext. Unsupported
`NOM_OBJ_ECG_SYNC`	NOM_EVT_ADVIS_CABLE_CHK + 1	MMS Ext. Unsupported
`NOM_OBJ_ECG_SYNC`	NOM_EVT_ADVIS_CABLE_CHK + 1	CHK ECG Sync Cable
`NOM_OBJ_MMS`	NOM_EVT_ADVIS_DEACT + 1	MSMT DEACTIVATED
`NOM_OBJ_TELEMON`	NOM_EVT_ALARM_MORE_TECH +1	MORE BED ALARMS
`NOM_OBJ_XMTR`	NOM_EVT_INCOMPAT + 1	TELE CONFIG UNSUPP
`NOM_OBJ_QUICKLINK`	NOM_EVT_SYNCH_ERR+1	Chk MSL Connection
`NOM_OBJ_TELEMON`	NOM_EVT_ALARM_MORE_TECH_YELLOW +1	!!MORE BED ALARMS
`NOM_OBJ_TELEMON`	NOM_EVT_ALARM_MORE_TECH_RED+1	!!!MORE BED ALARMS
`NOM_OBJ_SPEAKER`	NOM_EVT_ADVIS_SPEAKER_SETUP_CHK + 1	Chk Audio Settings

AlarmMgr

Alert Source	Alert Code	Alert Text
`source id of the parameter`	NOM_EVT_STAT_DISCONN	XXXXXX UNPLUGGED
`source id of the parameter`	NOM_EVT_ADVIS_DEACT	XXXXXX DEACTIVATED

NBP

Alert Source	Alert Code	Alert Text
`NOM_PRESS_BLD_NONINV`	NOM_EVT_CUFF_NOT_DEFLATED	CUFF NOT DEFLATED
`NOM_PRESS_BLD_NONINV`	NOM_EVT_CUFF_NOT_DEFLATED_YELLOW	!! CUFF NOT DEFLAT
`NOM_PRESS_BLD_NONINV`	NOM_EVT_CUFF_NOT_DEFLATED_RED	!!!CUFF NOT DEFLAT
`NOM_PRESS_BLD_NONINV`	NOM_EVT_CUFF_INFLAT_OVER	NBP CUFF OVERPRESS
`NOM_PRESS_BLD_NONINV`	NOM_EVT_CUFF_INFLAT_OVER_YELLOW	!! CUFF OVERPRESS
`NOM_PRESS_BLD_NONINV`	NOM_EVT_CUFF_INFLAT_OVER_RED	!!!CUFF OVERPRESS
`NOM_PRESS_BLD_NONINV`	NOM_EVT_NBP_CUFF_DISCONN_OR_LEAK	NBP Check Cuff
`NOM_PRESS_BLD_NONINV`	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
`NOM_PRESS_BLD_NONINV`	NOM_EVT_MSMT_INTERRUP	NBP INTERRUPTED
`NOM_PRESS_BLD_NONINV`	NOM_EVT_MSMT_FAIL	NBP MEASURE FAILED
`NOM_PRESS_BLD_NONINV_MEAN`	NOM_EVT_HI	** XXXXXX HIGH
`NOM_PRESS_BLD_NONINV_MEAN`	NOM_EVT_LO	** XXXXXX LOW
`NOM_PRESS_BLD_NONINV_SYS`	NOM_EVT_HI	** XXXXXX HIGH
`NOM_PRESS_BLD_NONINV_SYS`	NOM_EVT_LO	** XXXXXX LOW
`NOM_PRESS_BLD_NONINV_DIA`	NOM_EVT_HI	** XXXXXX HIGH
`NOM_PRESS_BLD_NONINV_DIA`	NOM_EVT_LO	** XXXXXX LOW

TcGas

Alert Source	Alert Code	Alert Text
`NOM_O2_TCUT`	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
`NOM_CO2_TCUT`	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
`NOM_GAS_TCUT`	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
`NOM_O2_TCUT`	NOM_EVT_SENSOR_DISCONN	XXXXXX NO TRANSDUC
`NOM_CO2_TCUT`	NOM_EVT_SENSOR_DISCONN	XXXXXX NO TRANSDUC
`NOM_GAS_TCUT`	NOM_EVT_SENSOR_DISCONN	XXXXXX NO TRANSDUC
`NOM_O2_TCUT`	NOM_EVT_STAT_CALIB_RUNNING	XXXXXX CAL RUNNING
`NOM_CO2_TCUT`	NOM_EVT_STAT_CALIB_RUNNING	XXXXXX CAL RUNNING
`NOM_GAS_TCUT`	NOM_EVT_STAT_CALIB_RUNNING	XXXXXX CAL RUNNING
`NOM_O2_TCUT`	NOM_EVT_CALIB_FAIL	XXXXXX CAL FAILED
`NOM_CO2_TCUT`	NOM_EVT_CALIB_FAIL	XXXXXX CAL FAILED
`NOM_GAS_TCUT`	NOM_EVT_CALIB_FAIL	XXXXXX CAL FAILED
`NOM_O2_TCUT`	NOM_EVT_ADVIS_CALIB_REQD	XXXXXX CAL REQUIRD
`NOM_CO2_TCUT`	NOM_EVT_ADVIS_CALIB_REQD	XXXXXX CAL REQUIRD
`NOM_GAS_TCUT`	NOM_EVT_ADVIS_CALIB_REQD	XXXXXX CAL REQUIRD
`NOM_O2_TCUT`	NOM_EVT_ADVIS_CHANGE_SITE	XXXXXX CHANGE SITE
`NOM_CO2_TCUT`	NOM_EVT_ADVIS_CHANGE_SITE	XXXXXX CHANGE SITE

Alert Source	Alert Code	Alert Text
`NOM_GAS_TCUT`	NOM_EVT_ADVIS_CHANGE_SITE	XXXXXX CHANGE SITE
`NOM_O2_TCUT`	NOM_EVT_STAT_SENSOR_WARMING	XXXXXX STABILIZING
`NOM_CO2_TCUT`	NOM_EVT_STAT_SENSOR_WARMING	XXXXXX STABILIZING
`NOM_GAS_TCUT`	NOM_EVT_STAT_SENSOR_WARMING	XXXXXX STABILIZING
`NOM_O2_TCUT`	NOM_EVT_ADVIS_CHECK_SITE_TIME	XXXXXX CHECK TIME
`NOM_CO2_TCUT`	NOM_EVT_ADVIS_CHECK_SITE_TIME	XXXXXX CHECK TIME
`NOM_GAS_TCUT`	NOM_EVT_ADVIS_CHECK_SITE_TIME	XXXXXX CHECK TIME
`NOM_O2_TCUT`	NOM_EVT_LO	** XXXXXX LOW
`NOM_O2_TCUT`	NOM_EVT_HI	** XXXXXX HIGH
`NOM_CO2_TCUT`	NOM_EVT_LO	** XXXXXX LOW
`NOM_CO2_TCUT`	NOM_EVT_HI	** XXXXXX HIGH

Alert Source	Alert Code	Alert Text

VueLink

Alert Source	Alert Code	Alert Text
`NOM_DEV_SYS_MULTI_MODAL_MDS`	NOM_EVT_EQUIP_MALF+1	XXXXXX EQUIP MALF
`NOM_DEV_SYS_MULTI_MODAL_MDS`	NOM_EVT_CONFIG_ERR+1	XXXXXX NO CONFIG
`NOM_DEV_SYS_MULTI_MODAL_MDS`	NOM_EVT_ADVIS_SETUP_CHK+1	XXXXXX CHECK SETUP
`NOM_DEV_SYS_MULTI_MODAL_MDS`	NOM_EVT_ADVIS_CONFIG_CHK+1	XXXXXX CHK CONF.
`NOM_DEV_SYS_MULTI_MODAL_MDS`	NOM_EVT_ADVIS_CABLE_CHK+1	XXXXXX CHK CABLE
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_1+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_2+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_3+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_4+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_5+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_6+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_7+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_8+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_9+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_10+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_11+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_12+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_13+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_14+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_15+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_16+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_17+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_18+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_19+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_20+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_21+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_22+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_23+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_24+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_25+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_26+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_27+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_28+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_29+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_30+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_31+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_32+1	
depends on configuration	NOM_EVT_EXT_DEV_AL_CODE_33+1	

Battery

Alert Source	Alert Code	Alert Text
`NOM_MOC_BATT`	NOM_EVT_BATT_PROB+1	BATTERIES MALFUNC.
`NOM_MOC_BATT`	NOM_EVT_BATT_PROB+1	XXXXXX MALFUNCTION.
`NOM_OBJ_BATT_1`	NOM_EVT_BATT_PROB+1	XXXXXX MALFUNCTION
`NOM_OBJ_BATT_2`	NOM_EVT_BATT_PROB+1	XXXXXX MALFUNCTION
`NOM_MOC_BATT`	NOM_EVT_EMPTY+1	BATTERIES EMPTY
`NOM_MOC_BATT`	NOM_EVT_EMPTY+1	XXXXXX EMPTY
`NOM_OBJ_BATT_1`	NOM_EVT_EMPTY+1	XXXXXX EMPTY
`NOM_OBJ_BATT_2`	NOM_EVT_EMPTY+1	XXXXXX EMPTY
`NOM_OBJ_BATT_1`	NOM_EVT_ABSENT+1	XXXXXX MISSING
`NOM_OBJ_BATT_2`	NOM_EVT_ABSENT+1	XXXXXX MISSING
`NOM_MOC_BATT`	NOM_EVT_BATT_LO+1	BATTERIES LOW
`NOM_OBJ_BATT_1`	NOM_EVT_EMPTY+1	XXXXXX LOW
`NOM_OBJ_BATT_2`	NOM_EVT_EMPTY+1	XXXXXX LOW
`NOM_OBJ_BATT_CHARGER`	NOM_EVT_MALF+1	CHARGER MALFUNC.
`NOM_MOC_BATT`	NOM_EVT_INCOMPAT+1	BATTERIES INCOMPAT
`NOM_OBJ_BATT`	NOM_EVT_INCOMPAT+1	XXXXXX INCOMPAT.
`NOM_OBJ_BATT_1`	NOM_EVT_INCOMPAT+1	XXXXXX INCOMPAT.
`NOM_OBJ_BATT_2`	NOM_EVT_INCOMPAT+1	XXXXXX INCOMPAT.
`NOM_MOC_BATT`	NOM_EVT_TEMP_HI_GT_LIM+1	CHECK BATT TEMP
`NOM_MOC_BATT`	NOM_EVT_STAT_BATT_CHARGING +1	Charge XXXXXX now
`NOM_MOC_BATT_1`	NOM_EVT_STAT_BATT_CHARGING +1	Charge XXXXXX now
`NOM_MOC_BATT_2`	NOM_EVT_STAT_BATT_CHARGING +1	Charge XXXXXX now
`NOM_OBJ_BATT`	NOM_EVT_ABSENT+1	!!INSERT BATTERY

Telemetry

Alert Source	Alert Code	Alert Text
`NOM_ECG_ELEC_POTL`	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
`NOM_ECG_ELEC_POTL`	NOM_EVT_LEADS_OFF	XXXXXX LEADS OFF
`NOM_ECG_LEAD_C`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_RA`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_LA`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_LL`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_RL`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_C1FR`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_C2FR`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_C3FR`	NOM_EVT_LEAD_OFF	XXX LEAD OFF

Alert Source	Alert Code	Alert Text
`NOM_ECG_LEAD_C4FR`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_C5FR`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_C6FR`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_AS`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_AI`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_LEAD_ES`	NOM_EVT_LEAD_OFF	XXX LEAD OFF
`NOM_ECG_ELEC_POTL`	NOM_EVT_ADVIS_LEAD_CHK	INVALID LEADSET
`NOM_PULS_OXIM_SAT_O2_TELE`	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
`NOM_PULS_OXIM_SAT_O2_TELE`	NOM_EVT_SENSOR_MALF	XXXXXX SENSOR MALF
`NOM_PULS_OXIM_SAT_O2_TELE`	NOM_EVT_SENSOR_MALF	XXXXXX SENSOR MALF
`NOM_PULS_OXIM_SAT_O2_TELE`	NOM_EVT_MSMT_INTERF_ERR	XXXXXX INTERFERNCE
`NOM_PULS_OXIM_SAT_O2_TELE`	NOM_EVT_SIG_NOISY	XXXXXX NOISY SIGN.
`NOM_PULS_OXIM_SAT_O2_TELE`	NOM_EVT_NON_PULSATILE	XXXXXX NON-PULSAT.
`NOM_PULS_OXIM_SAT_O2_TELE`	NOM_EVT_ERRATIC	XXXXXX ERRATIC
`NOM_PULS_OXIM_SAT_O2_TELE`	NOM_EVT_SIG_LO	XXXXXX LOW PERF
`NOM_PULS_OXIM_SAT_O2_TELE`	NOM_EVT_SUST	XXXXXX EXTD.UPDATE
`NOM_PRESS_BLD_NONINV_TELE`	NOM_EVT_CUFF_NOT_DEFLATED	CUFF NOT DEFLATED
`NOM_PRESS_BLD_NONINV_TELE`	NOM_EVT_CUFF_INFLAT_OVER	NBP CUFF OVERPRESS
`NOM_PRESS_BLD_NONINV_TELE`	NOM_EVT_MSMT_INTERRUP	NBP INTERRUPTED
`NOM_PRESS_BLD_NONINV_TELE`	NOM_EVT_MSMT_FAIL	NBP MEASURE FAILED
`NOM_PRESS_BLD_NONINV_TELE`	NOM_EVT_EQUIP_MALF	XXXXXX EQUIP MALF
`NOM_OBJ_TELEMON`	NOM_EVT_ADVIS_BATT_COND+1	CHARGE MON BATT
`NOM_MOC_BATT`	NOM_EVT_BATT_LO+1	BATTERY LOW
`NOM_OBJ_XMTR`	NOM_EVT_EQUIP_MALF+1	TRANSMITTER MALF
`NOM_OBJ_XMTR`	NOM_EVT_MSMT_INTERRUP+1	TRANSMITTER OFF
`NOM_OBJ_XMTR`	NOM_EVT_STAT_STANDBY+1	TELEMETRY STANDBY
`NOM_OBJ_XMTR`	NOM_EVT_ABSENT+1	NO SIGNAL
`NOM_OBJ_XMTR`	NOM_EVT_ADVIS_NURSE_CALL+1	* NURSE CALL
`NOM_OBJ_XMTR`	NOM_EVT_WEAK+1	XXXXXX WEAK SIGNAL
`NOM_OBJ_XMTR`	NOM_EVT_MSMT_INTERF_ERR+1	XXXXXX INTERFERNCE
`NOM_OBJ_TELEMETRY_XMTR`	NOM_EVT_ALARM_MED_YELLOW_SHORT+1	* TELE ALARM
`NOM_OBJ_TELEMETRY_XMTR`	NOM_EVT_ALARM_MED_YELLOW+1	** TELE ALARM

Alert Source	Alert Code	Alert Text
`NOM_OBJ_TELEMETRY_XMTR`	NOM_EVT_ALARM_MED_RED+1	*** TELE ALARM
`NOM_OBJ_TELEMETRY_XMTR`	NOM_EVT_ALARM_TECH+1	TELE INOP
`NOM_OBJ_TELEMETRY_XMTR`	NOM_EVT_ALARM_TECH_YELLOW+1	!! TELE INOP
`NOM_OBJ_TELEMETRY_XMTR`	NOM_EVT_ALARM_TECH_RED+1	!!! TELE INOP
`NOM_OBJ_TELEMETRY_XMTR`	NOM_EVT_OUT_OF_AREA+1	OUT OF AREA
`NOM_ECG_ELEC_POTL`	NOM_EVT_LEADS_DISCONN	LEADSET UNPLUGGED
`NOM_ECG_ELEC_POTL`	NOM_EVT_SRC_ABSENT	NO ECG SOURCE
`NOM_OBJ_BATT_TELE`	NOM_EVT_BATT_LO+1	BATTERY LOW T
`NOM_OBJ_BATT_TELE`	NOM_EVT_ADVIS_BATT_REPLACE+1	REPLACE BATTERY T
`NOM_ECG_ELEC_POTL`	NOM_EVT_LEAD_DISCONN_YELLOW	!! ECG LEADS OFF
`NOM_ECG_ELEC_POTL`	NOM_EVT_LEAD_DISCONN_RED	!!!ECG LEADS OFF

Spirometry

Alert Source	Alert Code	Alert Text
`Spiro`	NOM_EVT_MSMT_RANGE_OVER+1	XXXXXX OVERRANGE
`Spiro`	NOM_EVT_MSMT_UNSUPPORTED+1	XXXXXX UNSUPPORTED
`Spiro`	NOM_EVT_MALF+1	SPIRO MALFUNCTION
`Spiro`	NOM_EVT_STAT_FW_UPDATE_IN_PROGRESS+1	SPIRO UPGRADE
`Spiro`	NOM_EVT_INCOMPAT+1	SPIRO INCOMPATIBLE
`Spiro`	NOM_EVT_MSMT_INOP+1	XXXXXX CANNOT MEAS
`Spiro`	NOM_EVT_SENSOR_DISCONN+1	SPIRO NO SENSOR
`Spiro`	NOM_EVT_SENSOR_PROB+1	SPIRO PATIENT CAT.
`Spiro`	NOM_EVT_STAT_CALIB_RUNNING+1	SPIRO PURGING
`Spiro`	NOM_EVT_CALIB_FAIL+1	SPIRO PURGE FAILED
`Spiro`	NOM_EVT_ADVIS_GAS_AGENT_CHK+1	SPIRO GAS COMPENS?
`Spiro`	NOM_EVT_ADVIS_SENSOR_CHK+1	SPIRO PATIENT CAT.
`Spiro`	NOM_EVT_STAT_AL_OFF+1	SPIRO ALARMS SUPPR
`Spiro`	NOM_EVT_BREATH_ABSENT+1	SPIRO NO BREATH

Alert Source	Alert Code	Alert Text
`NOM_AWAY_RESP_RATE_SPIR` `O`	NOM_EVT_MSMT_INOP	XXXXXX CANNOT MEAS
`NOM_COMPL_LUNG`	NOM_EVT_MSMT_INOP	XXXXXX CANNOT MEAS
`NOM_RES_AWAY`	NOM_EVT_MSMT_INOP	XXXXXX CANNOT MEAS
`NOM_VENT_PRESS_AWAY_END` `_EXP_POS`	NOM_EVT_MSMT_INOP	XXXXXX CANNOT MEAS
`NOM_PRESS_AWAY_INSP`	NOM_EVT_MSMT_INOP	XXXXXX CANNOT MEAS
`NOM_VOL_AWAY_INSP_TIDAL`	NOM_EVT_MSMT_INOP	XXXXXX CANNOT MEAS
`NOM_VOL_AWAY_EXP_TIDAL`	NOM_EVT_MSMT_INOP	XXXXXX CANNOT MEAS
`NOM_VOL_MINUTE_AWAY_INS` `P`	NOM_EVT_MSMT_INOP	XXXXXX CANNOT MEAS
`NOM_VOL_MINUTE_AWAY_EXP`	NOM_EVT_MSMT_INOP	XXXXXX CANNOT MEAS

Predictive Temp

Alert Source	Alert Code	Alert Text
`current label e.g.` `NOM_TEMP_ORAL_PRED`	NOM_EVT_MSMT_FAIL	XXXXXX MEAS FAILED
`current label e.g.` `NOM_TEMP_ORAL_PRED`	NOM_EVT_MALF	XXXXXX EQUIP MALF
`current label e.g.` `NOM_TEMP_ORAL_PRED`	NOM_EVT_INCOMPAT	XXXXXX INCOMPAT.
`current label e.g.` `NOM_TEMP_ORAL_PRED`	NOM_EVT_SENSOR_PROB	XXXXXX CHECK PROBE
`current label e.g.` `NOM_TEMP_ORAL_PRED`	NOM_EVT_XDUCR_MALF	XXXXXX PROBE MALF
`current label e.g.` `NOM_TEMP_ORAL_PRED`	NOM_EVT_XDUCR_DISCONN	XXXXXX NO PROBE
`current label e.g.` `NOM_TEMP_ORAL_PRED`	NOM_EVT_MSMT_RANGE_OVE R	XXXXXX OVERRANGE
`current label e.g.` `NOM_TEMP_ORAL_PRED`	NOM_EVT_UNPLUGGED+1	XXXXXX DEACTIVATED

Protocol Watch

Alert Source	Alert Code	Alert Text
`NOM_DEV_PROT_WATCH_CHA` `N`	NOM_EVT_ADVIS_SETTINGS_CH K+1	PW: Check Settings
`NOM_DEV_PROT_WATCH_CHA` `N`	NOM_EVT_ADVIS_ACTION_REQ D+1	PW:Action Required

Alert Source	Alert Code	Alert Text
`NOM_DEV_PROT_WATCH_CHAN`	NOM_EVT_ADVIS_ACTION_REQD_YELLOW+1	!!PW:Action Requ'd
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_TECH+1	
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_TECH+1	
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_TECH_YELLOW+1	
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_TECH_YELLOW+1	
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_TECH_RED+1	
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_TECH_RED+1	
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_TECH+1	
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_TECH+1	
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_TECH_YELLOW+1	
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_TECH_YELLOW+1	
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_TECH_RED+1	
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_TECH_RED+1	
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_TECH+1	
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_TECH+1	
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_TECH_YELLOW+1	
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_TECH_YELLOW+1	
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_TECH_RED+1	
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_TECH_RED+1	
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_MED_YELLOW_SHORT+1	
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_MED_YELLOW+1	
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_MED_RED+1	
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_MED_YELLOW_SHORT+1	
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_MED_YELLOW+1	
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_MED_RED+1	
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_MED_YELLOW_SHORT+1	
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_MED_YELLOW+1	
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_MED_RED+1	
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_TECH+1	PW ALARM

Alert Source	Alert Code	Alert Text
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_TECH_YELLOW+1	PW ALARM
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_TECH_RED+1	PW ALARM
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_TECH+1	PW ALARM
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_TECH_YELLOW+1	PW ALARM
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_TECH_RED+1	PW ALARM
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_TECH+1	PW ALARM
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_TECH_YELLOW+1	PW ALARM
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_TECH_RED+1	PW ALARM
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_MED_YELLOW+1	** PW ALARM
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_MED_YELLOW_SHORT+1	** PW ALARM
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_MED_YELLOW+1	** PW ALARM
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_MED_YELLOW_SHORT+1	** PW ALARM
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_MED_YELLOW+1	** PW ALARM
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_MED_YELLOW_SHORT+1	** PW ALARM
`NOM_OBJ_PROT_WATCH_1`	NOM_EVT_ALARM_MED_RED+1	*** PW ALARM
`NOM_OBJ_PROT_WATCH_2`	NOM_EVT_ALARM_MED_RED+1	*** PW ALARM
`NOM_OBJ_PROT_WATCH_3`	NOM_EVT_ALARM_MED_RED+1	*** PW ALARM
`NOM_DEV_PROT_WATCH_CHAN`	NOM_DEV_PROT_WATCH_CHAN	PW: In Conflict

Intellibridge

Alert Source	Alert Code	Alert Text
	NOM_EVT_ADVIS_SETUP_CHK+1	DEVICE CHECK SETUP
	NOM_EVT_ADVIS_CONFIG_CHK+1	DEVICE CHECK CONF.
	NOM_EVT_EQUIP_MALF+1	XXXXXX EQUIP MALF
	NOM_EVT_CONFIG_ERR+1	NO DEVICE DATA
	NOM_EVT_CONFIG_ERR+1	!!NO DEVICE DATA
	NOM_EVT_CONFIG_ERR+1	!!!NO DEVICE DATA
	NOM_EVT_UNPLUGGED+1	XXXXXX UNPLUGGED
	NOM_EVT_UNSUPPORTED+1	DEVICE UNSUPPORTED

Short Range Radio

Alert Source	Alert Code	Alert Text
`NOM_OBJ_SRR_IF_1`	NOM_EVT_SRR_INTERF+1	SRR INTERFERENCE
`NOM_OBJ_SRR_IF_1`	NOM_EVT_SRR_INVALID_CHAN +1	SRR INVALID CHAN
`NOM_OBJ_SRR_IF_1`	NOM_EVT_MALF+1	SRR MALFUNCTION

Fetal Recorder

Alert Source	Alert Code	Alert Text
`NOM_DEV_RECORDER_VMD`	NOM_EVT_ADVIS_REC_PAPER_ REPLACE+1	Paper End
`NOM_DEV_RECORDER_VMD`	NOM_EVT_ADVIS_REC_PAPER_S IZE+1	Wrong Paper Scale
`NOM_DEV_RECORDER_VMD`	NOM_EVT_PAPER_PROB+1	Check Paper
`NOM_DEV_RECORDER_VMD`	NOM_EVT_DOOR_OR_HANDLE _POSN_PROB+1	Recorder Open
`NOM_DEV_RECORDER_VMD`	NOM_EVT_REC_HEAD_TEMP_ HI+1	Printhead Overheat

ObMeasurement

Alert Source	Alert Code	Alert Text
`NOM_DEV_MON_FETAL_MULT I_PARAM_MDS`	NOM_EVT_MALF+1	Bus Master Malfunc
`NOM_DEV_MON_FETAL_MULT I_PARAM_MDS`	NOM_EVT_INCOMPAT+1	Bus Master Malfunc

Ultrasound

Alert Source	Alert Code	Alert Text
`NOM_DEV_ANALY_USOUND_V MD`	NOM_EVT_MALF+1	FHR1 Equip Malf
`NOM_DEV_ANALY_USOUND_V MD`	NOM_EVT_MALF+1	FHR2 Equip Malf
`NOM_DEV_ANALY_USOUND_V MD`	NOM_EVT_MALF+1	FHR3 Equip Malf
`NOM_DEV_ANALY_USOUND_V MD`	NOM_EVT_ADVIS_SIG_LOST+1	FHR1 Signal Loss
`NOM_DEV_ANALY_USOUND_V MD`	NOM_EVT_ADVIS_SIG_LOST+1	FHR2 Signal Loss

Alert Source	Alert Code	Alert Text
`NOM_DEV_ANALY_USOUND_V` `MD`	NOM_EVT_ADVIS_SIG_LOST+1	FHR3 Signal Loss
`NOM_DEV_ANALY_USOUND_V` `MD`	NOM_EVT_ADVIS_SIG_LOST+1	FHR1 Signal Loss
`NOM_DEV_ANALY_USOUND_V` `MD`	NOM_EVT_ADVIS_SIG_LOST+1	FHR2 Signal Loss
`NOM_DEV_ANALY_USOUND_V` `MD`	NOM_EVT_ADVIS_SIG_LOST+1	FHR3 Signal Loss
`NOM_USOUND_CARD_BEAT_R` `ATE_FETAL`	NOM_EVT_HI	\0157\0157 FHR1 High
`NOM_USOUND_CARD_BEAT_R` `ATE_FETAL`	NOM_EVT_HI	\0157\0157 FHR2 High
`NOM_USOUND_CARD_BEAT_R` `ATE_FETAL`	NOM_EVT_HI	\0157\0157 FHR3 High
`NOM_USOUND_CARD_BEAT_R` `ATE_FETAL`	NOM_EVT_LO	\0157\0157 FHR1 Low
`NOM_USOUND_CARD_BEAT_R` `ATE_FETAL`	NOM_EVT_LO	\0157\0157 FHR2 Low
`NOM_USOUND_CARD_BEAT_R` `ATE_FETAL`	NOM_EVT_LO	\0157\0157 FHR3 Low

DECG

Alert Source	Alert Code	Alert Text
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_LEAD_DISCONN+1	FHR1 Equip Malf
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_LEAD_DISCONN+1	FHR2 Equip Malf
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_LEAD_DISCONN+1	FHR3 Equip Malf
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_MALF+1	FHR1 Signal Loss
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_MALF+1	FHR2 Signal Loss
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_MALF+1	FHR3 Signal Loss
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_ADVIS_SIG_LOST+1	FHR1 Signal Loss
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_ADVIS_SIG_LOST+1	FHR2 Signal Loss
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_ADVIS_SIG_LOST+1	FHR3 Signal Loss
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_ADVIS_SIG_LOST+1	\0157\0157 FHR1 High
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_ADVIS_SIG_LOST+1	\0157\0157 FHR2 High
`NOM_DEV_ECG_FETAL_VMD`	NOM_EVT_ADVIS_SIG_LOST+1	\0157\0157 FHR3 High
`NOM_ECG_CARD_BEAT_RATE` `_FETAL`	NOM_EVT_HI	\0157\0157 DFHR1 High
`NOM_ECG_CARD_BEAT_RATE` `_FETAL`	NOM_EVT_HI	\0157\0157 DFHR2 High
`NOM_ECG_CARD_BEAT_RATE` `_FETAL`	NOM_EVT_HI	\0157\0157 DFHR3 High
`NOM_ECG_CARD_BEAT_RATE` `_FETAL`	NOM_EVT_LO	\0157\0157 DFHR1 Low

Alert Source	Alert Code	Alert Text
`NOM_ECG_CARD_BEAT_RATE _FETAL`	NOM_EVT_LO	\0157\0157 DFHR2 Low
`NOM_ECG_CARD_BEAT_RATE _FETAL`	NOM_EVT_LO	\0157\0157 DFHR3 Low

Toco

Alert Source	Alert Code	Alert Text
`NOM_DEV_ANALY_TOCO_VMD`	NOM_EVT_MALF+1	@6p Equip Malf
`NOM_DEV_PLETH_VMD`	NOM_EVT_MALF+1	Pulse(Toco) Malf

IUP

Alert Source	Alert Code	Alert Text
`NOM_DEV_METER_PRESS_VMD`	NOM_EVT_MALF+1	@6p Equip Malf

MECG

Alert Source	Alert Code	Alert Text
`NOM_DEV_ECG_MATERNAL_VMD`	NOM_EVT_MALF+1	@6p Equip Malf
`NOM_DEV_ECG_MATERNAL_VMD`	NOM_EVT_LEAD_DISCONN+1	@6p Leads Off
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_HI	\0157\0157 @6p High
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_LO	\0157\0157 @6p Low
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_BRADY_EXTREME	\0157\0157\0157 Extreme Brady
`NOM_ECG_CARD_BEAT_RATE`	NOM_EVT_ECG_TACHY_EXTREME	\0157\0157\0157 Extreme Tachy

TraceInterpretation

Alert Source	Alert Code	Alert Text
`NOM_DEV_ANALY_OB_TI_VMD`	NOM_EVT_ADVIS_SETTINGS_CHK+1	Check TI Config

OB Statistics

Alert Source	Alert Code	Alert Text
`NOM_DEV_STATISTICS_VMD`	NOM_EVT_ADVIS_CHK+1	Coincidence

Avalon CL

Alert Source	Alert Code	Alert Text
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_MALF+1	cl US Malfunction
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_MALF+1	cl Toco Malf
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_MALF+1	cl ECG/IUP Malf
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_UNPLUGGED+1	cl US Disconnect
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_UNPLUGGED+1	cl Toco Disconnect
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_UNPLUGGED+1	cl ECG/IUP Disconn
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_BATT_LO+1	cl US Batt Low
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_BATT_LO+1	cl Toco Batt Low
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_BATT_LO+1	cl ECG/IUP BattLow
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_EMPTY+1	cl US Batt Empty
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_EMPTY+1	!!cl US Batt Empty
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_EMPTY+1	!!!cl US BattEmpty
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_EMPTY+1	cl Toco Batt Empty
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_EMPTY+1	!!clToco BattEmpty
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_EMPTY+1	!!!clTocoBattEmpty
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_EMPTY+1	cl ECG/IUP Empty
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_EMPTY+1	!!cl ECG/IUP Empty
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_EMPTY+1	!!!clECG/IUP Empty
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_BATT_MALF+1	cl US Batt Malf
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_BATT_MALF+1	cl Toco Batt Malf
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_BATT_MALF+1	clECG/IUP BattMalf
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_TEMP_HI_GT_LIM+1	cl US Check Temp
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_TEMP_HI_GT_LIM+1	cl Toco Chk Temp
`NOM_OBJ_BATT_SENSOR`	NOM_EVT_TEMP_HI_GT_LIM+1	clECG/IUP Chk Temp
`NOM_OBJ_OBR_IF_1`	NOM_EVT_ADVIS_CONFIG_CHK+1	Check OBR Config
`NOM_OBJ_OBR_IF_1`	NOM_EVT_MALF+1	Tele Malfunction
`NOM_DEV_ECG_MATERNAL_VMD`	NOM_EVT_LEAD_DISCONN+1	!! MECG Leads Off
`NOM_DEV_ECG_MATERNAL_VMD`	NOM_EVT_LEAD_DISCONN+1	!!! MECG Leads Off

The following code from the SCADA partition are used for the alert source:

NOM_ECG_LEAD_I	1
NOM_ECG_LEAD_II	2
NOM_ECG_LEAD_LA	21
NOM_ECG_LEAD_RA	22
NOM_ECG_LEAD_LL	23
NOM_ECG_LEAD_fI	24
NOM_ECG_LEAD_fE	25
NOM_ECG_LEAD_fA	27
NOM_ECG_LEAD_C	66
NOM_ECG_LEAD_C1FR	82
NOM_ECG_LEAD_C2FR	83
NOM_ECG_LEAD_C3FR	84
NOM_ECG_LEAD_C4FR	85
NOM_ECG_LEAD_C5FR	87
NOM_ECG_LEAD_C6FR	88
NOM_ECG_LEAD_C7FR	89
NOM_ECG_LEAD_C8FR	90
NOM_ECG_LEAD_ES	100
NOM_ECG_LEAD_AS	101
NOM_ECG_LEAD_AI	102
NOM_ECG_LEAD_RL	115
NOM_ECG_LEAD_EASI_S	116
NOM_ECG_ELEC_POTL	256
NOM_ECG_ELEC_POTL_I	257
NOM_ECG_ELEC_POTL_II	258
NOM_ECG_ELEC_POTL_V1	259
NOM_ECG_ELEC_POTL_V2	260
NOM_ECG_ELEC_POTL_V3	261
NOM_ECG_ELEC_POTL_V4	262
NOM_ECG_ELEC_POTL_V5	263
NOM_ECG_ELEC_POTL_V6	264
NOM_ECG_ELEC_POTL_III	317
NOM_ECG_ELEC_POTL_AVR	318
NOM_ECG_ELEC_POTL_AVL	319
NOM_ECG_ELEC_POTL_AVF	320
NOM_ECG_ELEC_POTL_V	323
NOM_ECG_ELEC_POTL_MCL	331
NOM_ECG_ELEC_POTL_MCL1	332
NOM_ECG_AMPL_ST	768
NOM_ECG_AMPL_ST_I	769
NOM_ECG_AMPL_ST_II	770
NOM_ECG_AMPL_ST_V1	771
NOM_ECG_AMPL_ST_V2	772
NOM_ECG_AMPL_ST_V3	773
NOM_ECG_AMPL_ST_V4	774
NOM_ECG_AMPL_ST_V5	775
NOM_ECG_AMPL_ST_V6	776
NOM_ECG_AMPL_ST_III	829
NOM_ECG_AMPL_ST_AVR	830
NOM_ECG_AMPL_ST_AVL	831
NOM_ECG_AMPL_ST_AVF	832
NOM_ECG_AMPL_ST_V	835
NOM_ECG_AMPL_ST_MCL	843
NOM_ECG_AMPL_ST_ES	868
NOM_ECG_AMPL_ST_AS	869

NOM_ECG_AMPL_ST_AI	870
NOM_ECG_TIME_PD_QT_GL	16160
NOM_ECG_TIME_PD_QTc	16164
NOM_ECG_CARD_BEAT_RATE	16770
NOM_ECG_CARD_BEAT_RATE_BTB	16778
NOM_ECG_V_P_C_CNT	16993
NOM_ECG_V_P_C_RATE	16994
NOM_ECG_V_P_C_FREQ	17000
NOM_PULS	18432
NOM_PULS_RATE	18442
NOM_PLETH_PULS_RATE	18466
NOM_RES_VASC_SYS_INDEX	18688
NOM_WK_LV_STROKE_INDEX	18692
NOM_WK_RV_STROKE_INDEX	18696
NOM_OUTPUT_CARD_INDEX	18700
NOM_PRESS_BLD	18944
NOM_PRESS_BLD_SYS	18945
NOM_PRESS_BLD_DIA	18946
NOM_PRESS_BLD_MEAN	18947
NOM_PRESS_BLD_NONINV	18948
NOM_PRESS_BLD_NONINV_SYS	18949
NOM_PRESS_BLD_NONINV_DIA	18950
NOM_PRESS_BLD_NONINV_MEAN	18951
NOM_PRESS_BLD_AORT	18956
NOM_PRESS_BLD_AORT_SYS	18957
NOM_PRESS_BLD_AORT_DIA	18958
NOM_PRESS_BLD_AORT_MEAN	18959
NOM_PRESS_BLD_ART	18960
NOM_PRESS_BLD_ART_SYS	18961
NOM_PRESS_BLD_ART_DIA	18962
NOM_PRESS_BLD_ART_MEAN	18963
NOM_PRESS_BLD_ART_ABP	18964
NOM_PRESS_BLD_ART_ABP_SYS	18965
NOM_PRESS_BLD_ART_ABP_DIA	18966
NOM_PRESS_BLD_ART_ABP_MEAN	18967
NOM_PRESS_BLD_ART_PULM	18972
NOM_PRESS_BLD_ART_PULM_SYS	18973
NOM_PRESS_BLD_ART_PULM_DIA	18974
NOM_PRESS_BLD_ART_PULM_MEAN	18975
NOM_PRESS_BLD_ART_PULM_WEDGE	18980
NOM_PRESS_BLD_ART_UMB	18984
NOM_PRESS_BLD_ART_UMB_SYS	18985
NOM_PRESS_BLD_ART_UMB_DIA	18986
NOM_PRESS_BLD_ART_UMB_MEAN	18987
NOM_PRESS_BLD_ATR_LEFT	18992
NOM_PRESS_BLD_ATR_LEFT_SYS	18993
NOM_PRESS_BLD_ATR_LEFT_DIA	18994
NOM_PRESS_BLD_ATR_LEFT_MEAN	18995
NOM_PRESS_BLD_ATR_RIGHT	18996
NOM_PRESS_BLD_ATR_RIGHT_SYS	18997
NOM_PRESS_BLD_ATR_RIGHT_DIA	18998
NOM_PRESS_BLD_ATR_RIGHT_MEAN	18999
NOM_PRESS_BLD_VEN_CENT	19012
NOM_PRESS_BLD_VEN_CENT_SYS	19013
NOM_PRESS_BLD_VEN_CENT_DIA	19014
NOM_PRESS_BLD_VEN_CENT_MEAN	19015

NOM_PRESS_BLD_VEN_UMB	19016
NOM_PRESS_BLD_VEN_UMB_SYS	19017
NOM_PRESS_BLD_VEN_UMB_DIA	19018
NOM_PRESS_BLD_VEN_UMB_MEAN	19019
NOM_SAT_O2_CONSUMP	19200
NOM_OUTPUT_CARD	19204
NOM_RES_VASC_PULM	19236
NOM_RES_VASC_SYS	19240
NOM_SAT_O2	19244
NOM_SAT_O2_ART	19252
NOM_SAT_O2_VEN	19260
NOM_SAT_DIFF_O2_ART_ALV	19264
NOM_TEMP	19272
NOM_TEMP_ART	19280
NOM_TEMP_AWAY	19284
NOM_TEMP_CORE	19296
NOM_TEMP_ESOPH	19300
NOM_TEMP_INJ	19304
NOM_TEMP_NASOPH	19308
NOM_TEMP_SKIN	19316
NOM_TEMP_TYMP	19320
NOM_TEMP_VEN	19324
NOM_VOL_BLD_STROKE	19332
NOM_WK_CARD_LEFT	19344
NOM_WK_CARD_RIGHT	19348
NOM_WK_LV_STROKE	19356
NOM_WK_RV_STROKE	19364
NOM_PULS_OXIM_PERF_REL	19376
NOM_PLETH	19380
NOM_PULS_OXIM_SAT_O2	19384
NOM_PULS_OXIM_SAT_O2_DIFF	19396
NOM_PULS_OXIM_SAT_O2_ART_LEFT	19400
NOM_PULS_OXIM_SAT_O2_ART_RIGHT	19404
NOM_OUTPUT_CARD_CTS	19420
NOM_VOL_VENT_L_END_SYS	19460
NOM_GRAD_PRESS_BLD_AORT_POS_MAX	19493
NOM_RESP	20480
NOM_RESP_RATE	20490
NOM_AWAY_RESP_RATE	20498
NOM_CAPAC_VITAL	20608
NOM_COMPL_LUNG	20616
NOM_COMPL_LUNG_DYN	20620
NOM_COMPL_LUNG_STATIC	20624
NOM_CONC_AWAY_CO2	20628
NOM_CONC_AWAY_CO2_ET	20636
NOM_CONC_AWAY_CO2_INSP_MIN	20646
NOM_AWAY_CO2	20652
NOM_AWAY_CO2_ET	20656
NOM_AWAY_CO2_INSP_MIN	20666
NOM_CO2_TCUT	20684
NOM_O2_TCUT	20688
NOM_FLOW_AWAY	20692
NOM_FLOW_AWAY_EXP_MAX	20697
NOM_FLOW_AWAY_INSP_MAX	20701
NOM_FLOW_CO2_PROD_RESP	20704
NOM_IMPED_TTHOR	20708

NOM_PRESS_RESP_PLAT	20712
NOM_PRESS_AWAY	20720
NOM_PRESS_AWAY_MIN	20722
NOM_PRESS_AWAY_CTS_POS	20724
NOM_PRESS_AWAY_NEG_MAX	20729
NOM_PRESS_AWAY_END_EXP_POS_INTRINSIC	20736
NOM_PRESS_AWAY_INSP	20744
NOM_PRESS_AWAY_INSP_MAX	20745
NOM_PRESS_AWAY_INSP_MEAN	20747
NOM_RATIO_IE	20760
NOM_RATIO_AWAY_DEADSP_TIDAL	20764
NOM_RES_AWAY	20768
NOM_RES_AWAY_EXP	20772
NOM_RES_AWAY_INSP	20776
NOM_TIME_PD_APNEA	20784
NOM_VOL_AWAY_TIDAL	20796
NOM_VOL_MINUTE_AWAY	20808
NOM_VOL_MINUTE_AWAY_EXP	20812
NOM_VOL_MINUTE_AWAY_INSP	20816
NOM_CONC_AWAY_O2	20836
NOM_VENT_CONC_AWAY_O2_DELTA	20840
NOM_VENT_CONC_AWAY_O2_EXP	20844
NOM_VENT_AWAY_CO2_EXP	20860
NOM_VENT_PRESS_AWAY_END_EXP_POS	20904
NOM_VENT_VOL_AWAY_DEADSP	20912
NOM_VENT_VOL_LUNG_TRAPD	20920
NOM_VENT_CONC_AWAY_O2_INSP	29848
NOM_VENT_FLOW_RATIO_PERF_ALV_INDEX	20880
NOM_VENT_FLOW_INSP	20876
NOM_VENT_CONC_AWAY_CO2_INSP	20832
NOM_VENT_PRESS_OCCL	20892
NOM_VENT_VOL_AWAY_DEADSP_REL	20916
NOM_VENT_VOL_MINUTE_AWAY_MAND	20940
NOM_COEF_GAS_TRAN	20948
NOM_CONC_AWAY_DESFL	20952
NOM_CONC_AWAY_ENFL	20956
NOM_CONC_AWAY_HALOTH	20960
NOM_CONC_AWAY_SEVOFL	20964
NOM_CONC_AWAY_ISOFL	20968
NOM_CONC_AWAY_N2O	20976
NOM_CONC_AWAY_DESFL_ET	21012
NOM_CONC_AWAY_ENFL_ET	21016
NOM_CONC_AWAY_HALOTH_ET	21020
NOM_CONC_AWAY_SEVOFL_ET	21024
NOM_CONC_AWAY_ISOFL_ET	21028
NOM_CONC_AWAY_N2O_ET	21036
NOM_CONC_AWAY_DESFL_INSP	21096
NOM_CONC_AWAY_ENFL_INSP	21100
NOM_CONC_AWAY_HALOTH_INSP	21104
NOM_CONC_AWAY_SEVOFL_INSP	21108
NOM_CONC_AWAY_ISOFL_INSP	21112
NOM_CONC_AWAY_N2O_INSP	21120
NOM_CONC_AWAY_O2_INSP	21124
NOM_VENT_TIME_PD_PPV	21344
NOM_VENT_PRESS_RESP_PLAT	21352
NOM_VENT_VOL_LEAK	21360

NOM_VENT_VOL_LUNG_ALV	21364
NOM_CONC_AWAY_O2_ET	21368
NOM_CONC_AWAY_N2	21372
NOM_CONC_AWAY_N2_ET	21376
NOM_CONC_AWAY_N2_INSP	21380
NOM_CONC_AWAY_AGENT	21384
NOM_CONC_AWAY_AGENT_ET	21388
NOM_CONC_AWAY_AGENT_INSP	21392
NOM_PRESS_CEREB_PERF	22532
NOM_PRESS_INTRA_CRAN	22536
NOM_PRESS_INTRA_CRAN_SYS	22537
NOM_PRESS_INTRA_CRAN_DIA	22538
NOM_PRESS_INTRA_CRAN_MEAN	22539
NOM_SCORE_GLAS_COMA	22656
NOM_SCORE_EYE_SUBSC_GLAS_COMA	22658
NOM_SCORE_MOTOR_SUBSC_GLAS_COMA	22659
NOM_SCORE_SUBSC_VERBAL_GLAS_COMA	22660
NOM_CIRCUM_HEAD	22784
NOM_TIME_PD_PUPIL_REACT_LEFT	22820
NOM_TIME_PD_PUPIL_REACT_RIGHT	22824
NOM_EEG_ELEC_POTL_CRTX	22828
NOM_EMG_ELEC_POTL_MUSCL	22844
NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN	22908
NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK	22916
NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE	
	22920
NOM_EEG_PWR_SPEC_TOT	22968
NOM_EEG_PWR_SPEC_ALPHA_REL	22996
NOM_EEG_PWR_SPEC_BETA_REL	23000
NOM_EEG_PWR_SPEC_DELTA_REL	23004
NOM_EEG_PWR_SPEC_THETA_REL	23008
NOM_FLOW_URINE_INSTANT	26636
NOM_VOL_URINE_BAL_PD	26660
NOM_VOL_URINE_COL	26672
NOM_VOL_INFUS_ACTUAL_TOTAL	26876
NOM_CONC_PH_ART	28676
NOM_CONC_PCO2_ART	28680
NOM_CONC_PO2_ART	28684
NOM_CONC_HB_ART	28692
NOM_CONC_HB_O2_ART	28696
NOM_CONC_PO2_VEN	28732
NOM_CONC_PH_VEN	28724
NOM_CONC_PCO2_VEN	28728
NOM_CONC_HB_O2_VEN	28744
NOM_CONC_PH_URINE	28772
NOM_CONC_NA_URINE	28780
NOM_CONC_NA_SERUM	28888
NOM_CONC_PH_GEN	28932
NOM_CONC_HCO3_GEN	28936
NOM_CONC_NA_GEN	28940
NOM_CONC_K_GEN	28944
NOM_CONC_GLU_GEN	28948
NOM_CONC_CA_GEN	28952
NOM_CONC_PCO2_GEN	28992
NOM_CONC_CHLORIDE_GEN	29032
NOM_BASE_EXCESS_BLD_ART	29036

NOM_CONC_PO2_GEN	29044
NOM_CONC_HCT_GEN	29060
NOM_VENT_MODE_MAND_INTERMIT	53290
NOM_TEMP_RECT	57348
NOM_TEMP_BLD	57364
NOM_TEMP_DIFF	57368
NOM_METRIC_NOS	61439
NOM_ECG_AMPL_ST_INDEX	61501
NOM_TIME_TCUT_SENSOR	61502
NOM_TEMP_TCUT_SENSOR	61503
NOM_VOL_BLD_INTRA_THOR	61504
NOM_VOL_BLD_INTRA_THOR_INDEX	61505
NOM_VOL_LUNG_WATER_EXTRA_VASC	61506
NOM_VOL_LUNG_WATER_EXTRA_VASC_INDEX	61507
NOM_VOL_GLOBAL_END_DIA	61508
NOM_VOL_GLOBAL_END_DIA_INDEX	61509
NOM_CARD_FUNC_INDEX	61510
NOM_OUTPUT_CARD_INDEX_CTS	61511
NOM_VOL_BLD_STROKE_INDEX	61512
NOM_VOL_BLD_STROKE_VAR	61513
NOM_EEG_RATIO_SUPPRN	61514
NOM_ELECTRODE_IMPED	61515
NOM_EEG_BIS_SIG_QUAL_INDEX	61517
NOM_EEG_BISPECTRAL_INDEX	61518
NOM_EEG_AMPL_INTEGR	61530
NOM_CONC_AWAY_SUM_MAC	61533
NOM_CONC_AWAY_SUM_MAC_ET	61534
NOM_CONC_AWAY_SUM_MAC_INSP	61535
NOM_GAS_TCUT	61521
NOM_CONC_AWAY_SUM_MAC	61533
NOM_CONC_AWAY_SUM_MAC_ET	61534
NOM_CONC_AWAY_SUM_MAC_INSP	61535
NOM_RES_VASC_PULM_INDEX	61543
NOM_WK_CARD_LEFT_INDEX	61544
NOM_WK_CARD_RIGHT_INDEX	61545
NOM_SAT_O2_CONSUMP_INDEX	61546
NOM_PRESS_AIR_AMBIENT	61547
NOM_SAT_DIFF_O2_ART_VEN	61548
NOM_SAT_O2_DELIVER	61549
NOM_SAT_O2_DELIVER_INDEX	61550
NOM_RATIO_SAT_O2_CONSUMP_DELIVER	61551
NOM_RATIO_ART_VEN_SHUNT	61552
NOM_AREA_BODY_SURFACE	61553
NOM_INTENS_LIGHT	61554
NOM_HEATING_PWR_TCUT_SENSOR	61558
NOM_RATE_DIFF_CARD_BEAT_PULSE	61560
NOM_VOL_INJ	61561
NOM_VOL_THERMO_EXTRA_VASC_INDEX	61562
NOM_NUM_CATHETER_CONST	61564
NOM_PULS_OXIM_PERF_REL_LEFT	61578
NOM_PULS_OXIM_PERF_REL_RIGHT	61579
NOM_PULS_OXIM_PLETH_RIGHT	61580
NOM_PULS_OXIM_PLETH_LEFT	61581
NOM_CONC_BLD_UREA_NITROGEN	61583
NOM_CONC_BASE_EXCESS_ECF	61584
NOM_VENT_VOL_MINUTE_AWAY_SPONT	61585

NOM_CONC_DIFF_HB_O2_ATR_VEN	61586
NOM_PAT_WEIGHT	61587
NOM_PAT_HEIGHT	61588
NOM_CONC_AWAY_MAC	61593
NOM_PULS_OXIM_PLETH_TELE	61595
NOM_PULS_OXIM_SAT_O2_TELE	61596
NOM_PULS_OXIM_PULS_RATE_TELE	61597
NOM_PRESS_BLD_NONINV_TELE	61600
NOM_PRESS_BLD_NONINV_TELE_SYS	61601
NOM_PRESS_BLD_NONINV_TELE_DIA	61602
NOM_PRESS_BLD_NONINV_TELE_MEAN	61603
NOM_PRESS_GEN_1	61604
NOM_PRESS_GEN_1_SYS	61605
NOM_PRESS_GEN_1_DIA	61606
NOM_PRESS_GEN_1_MEAN	61607
NOM_PRESS_GEN_2	61608
NOM_PRESS_GEN_2_SYS	61609
NOM_PRESS_GEN_2_DIA	61610
NOM_PRESS_GEN_2_MEAN	61611
NOM_PRESS_GEN_3	61612
NOM_PRESS_GEN_3_SYS	61613
NOM_PRESS_GEN_3_DIA	61614
NOM_PRESS_GEN_3_MEAN	61615
NOM_PRESS_GEN_4	61616
NOM_PRESS_GEN_4_SYS	61617
NOM_PRESS_GEN_4_DIA	61618
NOM_PRESS_GEN_4_MEAN	61619
NOM_PRESS_INTRA_CRAN_1	61620
NOM_PRESS_INTRA_CRAN_1_SYS	61621
NOM_PRESS_INTRA_CRAN_1_DIA	61622
NOM_PRESS_INTRA_CRAN_1_MEAN	61623
NOM_PRESS_INTRA_CRAN_2	61624
NOM_PRESS_INTRA_CRAN_2_SYS	61625
NOM_PRESS_INTRA_CRAN_2_DIA	61626
NOM_PRESS_INTRA_CRAN_2_MEAN	61627
NOM_PRESS_BLD_ART_FEMORAL	61628
NOM_PRESS_BLD_ART_FEMORAL_SYS	61629
NOM_PRESS_BLD_ART_FEMORAL_DIA	61630
NOM_PRESS_BLD_ART_FEMORAL_MEAN	61631
NOM_PRESS_BLD_ART_BRACHIAL	61632
NOM_PRESS_BLD_ART_BRACHIAL_SYS	61633
NOM_PRESS_BLD_ART_BRACHIAL_DIA	61634
NOM_PRESS_BLD_ART_BRACHIAL_MEAN	61635
NOM_TEMP_VESICAL	61636
NOM_TEMP_CEREBRAL	61637
NOM_TEMP_AMBIENT	61638
NOM_TEMP_GEN_1	61639
NOM_TEMP_GEN_2	61640
NOM_TEMP_GEN_3	61641
NOM_TEMP_GEN_4	61642
NOM_USOUND_CARD_BEAT_RATE_FETAL	61643
NOM_USOUND_CARD_BEAT_RATE_FETAL_BTB	61644
NOM_USOUND_CARD_BEAT_FETAL_SIG_QUAL_INDEX	
	61645
NOM_ECG_CARD_BEAT_FETAL	61646
NOM_ECG_CARD_BEAT_RATE_FETAL	61647

NOM_ECG_CARD_BEAT_RATE_FETAL_BTB	61648
NOM_ECG_CARD_BEAT_FETAL_SIG_QUAL_INDEX	61649
NOM_TRIG_BEAT_FETAL	61650
NOM_ECG_ELEC_POTL_FETAL	61651
NOM_TOCO	61652
NOM_STAT_COINCIDENCE	61653
NOM_PRESS_INTRA_UTERAL	61656
NOM_VOL_AWAY	61663
NOM_VOL_AWAY_INSP_TIDAL	61664
NOM_VOL_AWAY_EXP_TIDAL	61665
NOM_AWAY_RESP_RATE_SPIRO	61666
NOM_PULS_PRESS_VAR	61667
NOM_PRESS_BLD_NONINV_PULS_RATE	61669
NOM_RATIO_FETAL_MVMT_TOTAL	61680
NOM_VENT_RESP_RATE_MAND	61681
NOM_VENT_VOL_TIDAL_MAND	61682
NOM_VENT_VOL_TIDAL_SPONT	61683
NOM_CARDIAC_TROPONIN_I	61684
NOM_CARDIO_PULMONARY_BYPASS_MODE	61685
NOM_BNP	61686
NOM_TIME_PD_RESP_PLAT	61695
NOM_SAT_O2_VEN_CENT	61696
NOM_SNR	61697
NOM_HUMID	61699
NOM_FRACT_EJECT	61701
NOM_PERM_VASC_PULM_INDEX	61702
NOM_TEMP_ORAL	61704
NOM_TEMP_AXIL	61708
NOM_TEMP_ORAL_PRED	61712
NOM_TEMP_RECT_PRED	61716
NOM_TEMP_AXIL_PRED	61720
NOM_TEMP_AIR_INCUB	61738
NOM_PULS_OXIM_PERF_REL_TELE	61740
NOM_TEMP_PRED	61760
NOM_SHUNT_RIGHT_LEFT	61770
NOM_ECG_TIME_PD_QT_HEART_RATE	61780
NOM_ECG_TIME_PD_QT_BASELINE	61781
NOM_ECG_TIME_PD_QTc_DELTA	61782
NOM_ECG_TIME_PD_QT_BASELINE_HEART_RATE	61783
NOM_CONC_PH_CAP	61784
NOM_CONC_PCO2_CAP	61785
NOM_CONC_PO2_CAP	61786
NOM_SAT_O2_CAP	61793
NOM_CONC_MG_ION	61787
NOM_CONC_MG_SER	61788
NOM_CONC_tCA_SER	61789
NOM_CONC_P_SER	61790
NOM_CONC_CHLOR_SER	61791
NOM_CONC_FE_GEN	61792
NOM_CONC_AN_GAP	61794
NOM_CONC_AN_GAP_CALC	61857
NOM_CONC_ALB_SER	61795
NOM_SAT_O2_ART_CALC	61796
NOM_SAT_O2_VEN_CALC	61798
NOM_SAT_O2_CAP_CALC	61856
NOM_CONC_HB_CO_GEN	29056

NOM_CONC_HB_FETAL	61797
NOM_CONC_HB_MET_GEN	29052
NOM_PLTS_CNT	61799
NOM_WB_CNT	61800
NOM_RB_CNT	61801
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NOM_NSLOSS	61805
NOM_CONC_CHOLESTEROL	61806
NOM_CONC_TGL	61807
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NOM_CONC_LDL	61809
NOM_CONC_UREA_GEN	61810
NOM_CONC_CREA	61811
NOM_CONC_LACT	61812
NOM_CONC_BILI_TOT	61815
NOM_CONC_PROT_SER	61816
NOM_CONC_PROT_TOT	61817
NOM_CONC_BILI_DIRECT	61818
NOM_CONC_LDH	61819
NOM_ES_RATE	61820
NOM_CONC_PCT	61821
NOM_CONC_CREA_KIN_MM	61823
NOM_CONC_CREA_KIN_SER	61824
NOM_CONC_CREA_KIN_MB	61825
NOM_CONC_CHE	61826
NOM_CONC_CRP	61827
NOM_CONC_AST	61828
NOM_CONC_AP	61829
NOM_CONC_ALPHA_AMYLASE	61830
NOM_CONC_GPT	61831
NOM_CONC_GOT	61832
NOM_CONC_GGT	61833
NOM_TIME_PD_ACT	61834
NOM_TIME_PD_PT	61835
NOM_PT_INTL_NORM_RATIO	61836
NOM_TIME_PD_aPTT_WB	61837
NOM_TIME_PD_aPTT_PE	61838
NOM_TIME_PD_PT_WB	61839
NOM_TIME_PD_PT_PE	61840
NOM_TIME_PD_THROMBIN	61841
NOM_TIME_PD_COAGULATION	61842
NOM_TIME_PD_THROMBOPLAS	61843
NOM_FRACT_EXCR_NA	61844
NOM_CONC_UREA_URINE	61845
NOM_CONC_CREA_URINE	61846
NOM_CONC_K_URINE	61847
NOM_CONC_K_URINE_EXCR	61848
NOM_CONC_OSM_URINE	61849
NOM_CONC_GLU_URINE	61855
NOM_CONC_CHLOR_URINE	61850
NOM_CONC_PRO_URINE	61851
NOM_CONC_CA_URINE	61852
NOM_FLUID_DENS_URINE	61853
NOM_CONC_HB_URINE	61854

NOM_ENERGY_BAL	61861
NOM_PULS_OXIM_SAT_O2_PRE_DUCTAL	61888
NOM_PULS_OXIM_PERF_REL_PRE_DUCTAL	61996
NOM_PULS_OXIM_SAT_O2_POST_DUCTAL	61908
NOM_PULS_OXIM_PERF_REL_POST_DUCTAL	61916
NOM_PRESS_GEN_5	62452
NOM_PRESS_GEN_5_SYS	62453
NOM_PRESS_GEN_5_DIA	62454
NOM_PRESS_GEN_5_MEAN	62455
NOM_PRESS_GEN_6	62456
NOM_PRESS_GEN_6_SYS	62457
NOM_PRESS_GEN_6_DIA	62458
NOM_PRESS_GEN_6_MEAN	62459
NOM_PRESS_GEN_7	62460
NOM_PRESS_GEN_7_SYS	62461
NOM_PRESS_GEN_7_DIA	62462
NOM_PRESS_GEN_7_MEAN	62463
NOM_PRESS_GEN_8	62464
NOM_PRESS_GEN_8_SYS	62465
NOM_PRESS_GEN_8_DIA	62466
NOM_PRESS_GEN_8_MEAN	62467
NOM_ECG_AMPL_ST_BASELINE_I	62481
NOM_ECG_AMPL_ST_BASELINE_II	62482
NOM_ECG_AMPL_ST_BASELINE_V1	62483
NOM_ECG_AMPL_ST_BASELINE_V2	62484
NOM_ECG_AMPL_ST_BASELINE_V3	62485
NOM_ECG_AMPL_ST_BASELINE_V4	62486
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NOM_ECG_AMPL_ST_BASELINE_V6	62488
NOM_ECG_AMPL_ST_BASELINE_III	62541
NOM_ECG_AMPL_ST_BASELINE_AVR	62542
NOM_ECG_AMPL_ST_BASELINE_AVL	62543
NOM_ECG_AMPL_ST_BASELINE_AVF	62544
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NOM_AGE_GEST	63505
NOM_AWAY_CORR_COEF	63508
NOM_AWAY_RESP_RATE_SPONT	63509
NOM_AWAY_TC	63510
NOM_BIRTH_LENGTH	63512
NOM_BREATH_RAPID_SHALLOW_INDEX	63513
NOM_C20_PER_C_INDEX	63514
NOM_CARD_CONTRACT_HEATHER_INDEX	63516
NOM_CONC_ALP	63517
NOM_CONC_CA_GEN_NORM	63522
NOM_CONC_CA_SER	63524
NOM_CONC_CO2_TOT	63525
NOM_CONC_CO2_TOT_CALC	63526
NOM_CONC_CREA_SER	63527
NOM_RESP_RATE_SPONT	63528
NOM_CONC_GLO_SER	63529
NOM_CONC_GLU_SER	63530
NOM_CONC_HB_CORP_MEAN	63532
NOM_CONC_K_SER	63535
NOM_CONC_NA_EXCR	63536
NOM_CONC_PCO2_ART_ADJ	63538
NOM_CONC_PCO2_CAP_ADJ	63539

NOM_CONC_PH_CAP_ADJ	63543
NOM_CONC_PH_GEN_ADJ	63544
NOM_CONC_PO2_ART_ADJ	63547
NOM_CONC_PO2_CAP_ADJ	63548
NOM_CREA_OSM	63551
NOM_EEG_BURST_SUPPRN_INDEX	63552
NOM_EEG_ELEC_POTL_CRTX_GAIN_LEFT	63553
NOM_EEG_ELEC_POTL_CRTX_GAIN_RIGHT	63554
NOM_EEG_FREQ_PWR_SPEC_CRTX_MEDIAN_LEFT	
	63563
NOM_EEG_FREQ_PWR_SPEC_CRTX_MEDIAN_RIGHT	
	63564
NOM_EEG_PWR_SPEC_ALPHA_ABS_LEFT	63573
NOM_EEG_PWR_SPEC_ALPHA_ABS_RIGHT	63574
NOM_EEG_PWR_SPEC_BETA_ABS_LEFT	63579
NOM_EEG_PWR_SPEC_BETA_ABS_RIGHT	63580
NOM_EEG_PWR_SPEC_DELTA_ABS_LEFT	63587
NOM_EEG_PWR_SPEC_DELTA_ABS_RIGHT	63588
NOM_EEG_PWR_SPEC_THETA_ABS_LEFT	63593
NOM_EEG_PWR_SPEC_THETA_ABS_RIGHT	63594
NOM_ELEC_EVOK_POTL_CRTX_ACOUSTIC_AAI	63603
NOM_EXTRACT_O2_INDEX	63605
NOM_FLOW_AWAY_AIR	63607
NOM_FLOW_AWAY_EXP_ET	63610
NOM_FLOW_AWAY_MAX_SPONT	63613
NOM_FLOW_AWAY_TOT	63617
NOM_FLOW_CO2_PROD_RESP_TIDAL	63618
NOM_FLOW_URINE_PREV_24HR	63619
NOM_FREE_WATER_CLR	63620
NOM_HB_CORP_MEAN	63621
NOM_HEATING_PWR_INCUBATOR	63622
NOM_OUTPUT_CARD_INDEX_ACCEL	63625
NOM_PTC_CNT	63627
NOM_PULS_OXIM_PLETH_GAIN	63629
NOM_RATIO_AWAY_RATE_VOL_AWAY	63630
NOM_RATIO_BUN_CREA	63631
NOM_RATIO_CONC_BLD_UREA_NITROGEN_CREA_CALC	
	63632
NOM_RATIO_CONC_URINE_CREA_CALC	63633
NOM_RATIO_CONC_URINE_CREA_SER	63634
NOM_RATIO_CONC_URINE_NA_K	63635
NOM_RATIO_PaO2_FIO2	63636
NOM_RATIO_TIME_PD_PT	63637
NOM_RATIO_TIME_PD_PTT	63638
NOM_RATIO_TRAIN_OF_FOUR	63639
NOM_RATIO_URINE_SER_OSM	63640
NOM_RES_AWAY_DYN	63641
NOM_RESP_BREATH_ASSIST_CNT	63642
NOM_RIGHT_HEART_FRACT_EJECT	63643
NOM_TIME_PD_EVOK_REMAIN	63648
NOM_TIME_PD_EXP	63649
NOM_TIME_PD_FROM_LAST_MSMT	63650
NOM_TIME_PD_INSP	63651
NOM_TIME_PD_KAOLIN_CEPHALINE	63652
NOM_TIME_PD_PTT	63653
NOM_TRAIN_OF_FOUR_1	63655

NOM_TRAIN_OF_FOUR_2	63656
NOM_TRAIN_OF_FOUR_3	63657
NOM_TRAIN_OF_FOUR_4	63658
NOM_TRAIN_OF_FOUR_CNT	63659
NOM_TWITCH_AMPL	63660
NOM_UREA_SER	63661
NOM_VENT_ACTIVE	63664
NOM_VENT_AMPL_HFV	63665
NOM_VENT_CONC_AWAY_AGENT_DELTA	63666
NOM_VENT_CONC_AWAY_DESFL_DELTA	63667
NOM_VENT_CONC_AWAY_ENFL_DELTA	63668
NOM_VENT_CONC_AWAY_HALOTH_DELTA	63669
NOM_VENT_CONC_AWAY_ISOFL_DELTA	63670
NOM_VENT_CONC_AWAY_N2O_DELTA	63671
NOM_VENT_CONC_AWAY_O2_CIRCUIT	63672
NOM_VENT_CONC_AWAY_SEVOFL_DELTA	63673
NOM_VENT_PRESS_AWAY_END_EXP_POS_LIMIT_LO	
	63674
NOM_VENT_PRESS_AWAY_PV	63676
NOM_VENT_TIME_PD_RAMP	63677
NOM_VENT_VOL_AWAY_INSP_TIDAL_HFV	63678
NOM_VENT_VOL_TIDAL_HFV	63679
NOM_VOL_AWAY_EXP_TIDAL_SPONT	63682
NOM_VOL_AWAY_TIDAL_PSV	63683
NOM_VOL_CORP_MEAN	63684
NOM_VOL_FLUID_THORAC	63685
NOM_VOL_FLUID_THORAC_INDEX	63686
NOM_VOL_LVL_LIQUID_BOTTLE_AGENT	63687
NOM_VOL_LVL_LIQUID_BOTTLE_DESFL	63688
NOM_VOL_LVL_LIQUID_BOTTLE_ENFL	63689
NOM_VOL_LVL_LIQUID_BOTTLE_HALOTH	63690
NOM_VOL_LVL_LIQUID_BOTTLE_ISOFL	63691
NOM_VOL_LVL_LIQUID_BOTTLE_SEVOFL	63692
NOM_VOL_MINUTE_AWAY_INSP_HFV	63693
NOM_VOL_URINE_BAL_PD_INSTANT	63694
NOM_VOL_URINE_SHIFT	63695
NOM_VOL_VENT_L_END_SYS_INDEX	63697
NOM_WEIGHT_URINE_COL	63699
NOM_SAT_O2_TISSUE	63840
NOM_CEREB_STATE_INDEX	63841
NOM_SAT_O2_GEN_1	63842
NOM_SAT_O2_GEN_2	63843
NOM_SAT_O2_GEN_3	63844
NOM_SAT_O2_GEN_4	63845
NOM_TEMP_CORE_GEN_1	63846
NOM_TEMP_CORE_GEN_2	63847
NOM_PRESS_BLD_DIFF	63848
NOM_PRESS_BLD_DIFF_GEN_1	63852
NOM_PRESS_BLD_DIFF_GEN_2	63856
NOM_FLOW_PUMP_HEART_LUNG_MAIN	63860
NOM_FLOW_PUMP_HEART_LUNG_SLAVE	63861
NOM_FLOW_PUMP_HEART_LUNG_SUCTION	63862
NOM_FLOW_PUMP_HEART_LUNG_AUX	63863
NOM_FLOW_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN	
	63864

NOM_FLOW_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE
63865
NOM_TIME_PD_PUMP_HEART_LUNG_AUX_SINCE_START
63866
NOM_TIME_PD_PUMP_HEART_LUNG_AUX_SINCE_STOP
63867
NOM_VOL_DELIV_PUMP_HEART_LUNG_AUX   63868
NOM_VOL_DELIV_TOTAL_PUMP_HEART_LUNG_AUX
63869
NOM_TIME_PD_PLEGIA_PUMP_HEART_LUNG_AUX
63870
NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN_SINCE_START
63871
NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN_SINCE_STOP
63872
NOM_VOL_DELIV_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN
63873
NOM_VOL_DELIV_TOTAL_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN
63874
NOM_TIME_PD_PLEGIA_PUMP_HEART_LUNG_CARDIOPLEGIA_MAIN
63875
NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE_SINCE_START
63876
NOM_TIME_PD_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE_SINCE_STOP
63877
NOM_VOL_DELIV_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE
63878
NOM_VOL_DELIV_TOTAL_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE
63879
NOM_TIME_PD_PLEGIA_PUMP_HEART_LUNG_CARDIOPLEGIA_SLAVE
63880
NOM_RATIO_INSP_TOTAL_BREATH_SPONT   63888
NOM_VENT_PRESS_AWAY_END_EXP_POS_TOTAL 63889
NOM_COMPL_LUNG_PAV   63890
NOM_RES_AWAY_PAV   63891
NOM_RES_AWAY_EXP_TOTAL   63892
NOM_ELAS_LUNG_PAV   63893
NOM_BREATH_RAPID_SHALLOW_INDEX_NORM   63894
NOM_RESP_CM   64184
NOM_RESP_RATE_CM   64185
NOM_TEMP_INFRARED   64330
NOM_TEMP_TYMP_INFRARED   64331
NOM_TEMP_ORAL_INFRARED   64332
NOM_TEMP_AXIL_INFRARED   64333
NOM_TEMP_RECT_INFRARED   64334
NOM_TEMP_CORE_INFRARED   64335
NOM_ACOUSTIC_RESP_RATE   64351
NOM_ELEC_EVOK_POTL_CRTX_ACOUSTIC_AAI   63603
NOM_PTC_CNT   63627
NOM_RATIO_TRAIN_OF_FOUR   63639
NOM_TIME_PD_EVOK_REMAIN   63648
NOM_TRAIN_OF_FOUR_1   63655
NOM_TRAIN_OF_FOUR_2   63656
NOM_TRAIN_OF_FOUR_3   63657
NOM_TRAIN_OF_FOUR_4   63658
NOM_TRAIN_OF_FOUR_CNT   63659

NOM_TWITCH_AMPL	63660
NOM_PLETH_PULS_RATE_ABDOM	63908
NOM_PAT_AGE	64182
NOM_TEMP_INFRARED	64330
NOM_TEMP_TYMP_INFRARED	64331
NOM_TEMP_ORAL_INFRARED	64332
NOM_TEMP_AXIL_INFRARED	64333
NOM_TEMP_RECT_INFRARED	64334
NOM_TEMP_CORE_INFRARED	64335
NOM_SIG_QUAL_UNKNOWN	64361

The following code from the object oriented partition are used for the alert source:

NOM_MOC_VMO	1
NOM_MOC_VMO_METRIC_NU	6
NOM_MOC_VMO_METRIC_SA_RT	9
NOM_MOC_VMS_MDS	33
NOM_MOC_VMS_MDS_COMPOS_SINGLE_BED	35
NOM_MOC_VMS_MDS_SIMP	37
NOM_MOC_BATT	41
NOM_MOC_PT_DEMOG	42
NOM_MOC_VMO_AL_MON	54
NOM_ATTR_GRP_AL_MON	2049
NOM_ATTR_GRP_METRIC_VAL_OBS	2051
NOM_ATTR_GRP_PT_DEMOG	2055
NOM_ATTR_GRP_SYS_APPL	2058
NOM_ATTR_GRP_SYS_ID	2059
NOM_ATTR_GRP_SYS_PROD	2060
NOM_ATTR_GRP_VMO_DYN	2064
NOM_ATTR_GRP_VMO_STATIC	2065
NOM_ATTR_AL_MON_P_AL_LIST	2306
NOM_ATTR_AL_MON_T_AL_LIST	2308
NOM_ATTR_ALTITUDE	2316
NOM_ATTR_AREA_APPL	2317
NOM_ATTR_COLOR	2321
NOM_ATTR_DEV_AL_COND	2326
NOM_ATTR_DISP_RES	2327
NOM_ATTR_GRID_VIS_I16	2330
NOM_ATTR_ID_ASSOC_NO	2333
NOM_ATTR_ID_BED_LABEL	2334
NOM_ATTR_ID_HANDLE	2337
NOM_ATTR_ID_LABEL	2340
NOM_ATTR_ID_LABEL_STRING	2343
NOM_ATTR_ID_MODEL	2344
NOM_ATTR_ID_PROD_SPECN	2349
NOM_ATTR_ID_TYPE	2351
NOM_ATTR_LINE_FREQ	2357
NOM_ATTR_LOCALIZN	2359
NOM_ATTR_METRIC_INFO_LABEL	2364
NOM_ATTR_METRIC_INFO_LABEL_STR	2365
NOM_ATTR_METRIC_SPECN	2367
NOM_ATTR_METRIC_STAT	2368
NOM_ATTR_MODE_MSMT	2373
NOM_ATTR_MODE_OP	2374
NOM_ATTR_NOM_VERS	2376
NOM_ATTR_NU_CMPD_VAL_OBS	2379
NOM_ATTR_NU_VAL_OBS	2384

NOM_ATTR_PT_BSA	2390
NOM_ATTR_PT_DEMOG_ST	2391
NOM_ATTR_PT_DOB	2392
NOM_ATTR_PT_ID	2394
NOM_ATTR_PT_NAME_FAMILY	2396
NOM_ATTR_PT_NAME_GIVEN	2397
NOM_ATTR_PT_SEX	2401
NOM_ATTR_PT_TYPE	2402
NOM_ATTR_SA_CALIB_I16	2404
NOM_ATTR_SA_CMPD_VAL_OBS	2407
NOM_ATTR_SA_RANGE_PHYS_I16	2410
NOM_ATTR_SA_SPECN	2413
NOM_ATTR_SA_VAL_OBS	2414
NOM_ATTR_SCALE_SPECN_I16	2415
NOM_ATTR_STD_SAFETY	2434
NOM_ATTR_SYS_ID	2436
NOM_ATTR_SYS_SPECN	2437
NOM_ATTR_SYS_TYPE	2438
NOM_ATTR_TIME_ABS	2439
NOM_ATTR_TIME_PD_SAMP	2445
NOM_ATTR_TIME_REL	2447
NOM_ATTR_TIME_STAMP_ABS	2448
NOM_ATTR_TIME_STAMP_REL	2449
NOM_ATTR_UNIT_CODE	2454
NOM_ATTR_VMS_MDS_STAT	2471
NOM_ATTR_PT_AGE	2520
NOM_ATTR_PT_HEIGHT	2524
NOM_ATTR_PT_WEIGHT	2527
NOM_ATTR_SA_FIXED_VAL_SPECN	2582
NOM_ATTR_SYS_ADT_ST	2586
NOM_ATTR_PT_PACED_MODE	2590
NOM_ACT_POLL_MDIB_DATA	3094
NOM_NOTI_MDS_CREAT	3334
NOM_NOTI_CONN_INDIC	3351
NOM_DEV_METER_CONC_SKIN_GAS	4264
NOM_DEV_METER_FLOW_BLD	4284
NOM_DEV_ANALY_CONC_GAS_MULTI_PARAM_MDS	4113
NOM_DEV_METER_CONC_SKIN_GAS_MDS	4265
NOM_DEV_MON_PHYSIO_MULTI_PARAM_MDS	4429
NOM_DEV_PUMP_INFUS_MDS	4449
NOM_DEV_SYS_PT_VENT_MDS	4465
NOM_DEV_SYS_MULTI_MODAL_MDS	4493
NOM_DEV_SYS_VS_CONFIG_MDS	5209
NOM_DEV_SYS_VS_UNCONFIG_MDS	5213
NOM_DEV_ANALY_SAT_O2_VMD	4106
NOM_DEV_ANALY_CONC_GAS_MULTI_PARAM_VMD	4114
NOM_DEV_ANALY_FLOW_AWAY_VMD	4130
NOM_DEV_ANALY_CARD_OUTPUT_VMD	4134
NOM_DEV_ANALY_PRESS_BLD_VMD	4174
NOM_DEV_ANALY_RESP_RATE_VMD	4186
NOM_DEV_CALC_VMD	4206
NOM_DEV_ECG_VMD	4262
NOM_DEV_METER_CONC_SKIN_GAS_VMD	4266
NOM_DEV_EEG_VMD	4274
NOM_DEV_METER_TEMP_BLD_VMD	4350
NOM_DEV_METER_TEMP_VMD	4366

NOM_DEV_MON_BLD_CHEM_MULTI_PARAM_VMD	4398
NOM_DEV_SYS_PT_VENT_VMD	4466
NOM_DEV_SYS_MULTI_MODAL_VMD	4494
NOM_DEV_SYS_ANESTH_VMD	4506
NOM_DEV_GENERAL_VMD	5122
NOM_DEV_ECG_RESP_VMD	5130
NOM_DEV_ARRHY_VMD	5134
NOM_DEV_PULS_VMD	5138
NOM_DEV_ST_VMD	5142
NOM_DEV_CO2_VMD	5146
NOM_DEV_PRESS_BLD_NONINV_VMD	5150
NOM_DEV_CEREB_PERF_VMD	5154
NOM_DEV_CO2_CTS_VMD	5158
NOM_DEV_CO2_TCUT_VMD	5162
NOM_DEV_O2_VMD	5166
NOM_DEV_O2_CTS_VMD	5170
NOM_DEV_O2_TCUT_VMD	5174
NOM_DEV_TEMP_DIFF_VMD	5178
NOM_DEV_CNTRL_VMD	5182
NOM_DEV_WEDGE_VMD	5190
NOM_DEV_O2_VEN_SAT_VMD	5194
NOM_DEV_CARD_RATE_VMD	5202
NOM_DEV_PLETH_VMD	5238
NOM_ATTR_PT_ID_INT	61441
NOM_SAT_O2_TONE_FREQ	61448
NOM_ATTR_CMPD_REF_LIST	61449
NOM_OBJ_HIF_KEY	61584
NOM_OBJ_DISP	61616
NOM_OBJ_SOUND_GEN	61648
NOM_OBJ_SETTING	61649
NOM_OBJ_PRINTER	61650
NOM_OBJ_EVENT	61683
NOM_OBJ_BATT_CHARGER	61690
NOM_OBJ_ECG_OUT	61691
NOM_OBJ_INPUT_DEV	61692
NOM_OBJ_NETWORK	61693
NOM_OBJ_QUICKLINK	61694
NOM_OBJ_SPEAKER	61695
NOM_ATTR_NET_ADDR_INFO	61696
NOM_ATTR_PCOL_SUPPORT	61697
NOM_OBJ_PUMP	61716
NOM_OBJ_IR	61717
NOM_ATTR_PT_NOTES1	61737
NOM_ATTR_PT_NOTES2	61738
NOM_ACT_POLL_MDIB_DATA_EXT	61755
NOM_ATTR_TIME_PD_POLL	61758
NOM_DEV_ANALY_PULS_CONT	61800
NOM_DEV_ANALY_BISPECTRAL_INDEX_VMD	61806
NOM_DEV_HIRES_TREND	61820
NOM_DEV_HIRES_TREND_MDS	61821
NOM_DEV_HIRES_TREND_VMD	61822
NOM_DEV_MON_PT_EVENT_VMD	61826
NOM_DEV_DERIVED_MSMT	61828
NOM_DEV_DERIVED_MSMT_MDS	61829
NOM_DEV_DERIVED_MSMT_VMD	61830
NOM_OBJ_SENSOR	61902

NOM_OBJ_XDUCR	61903
NOM_OBJ_CHAN_1	61916
NOM_OBJ_CHAN_2	61917
NOM_OBJ_AWAY_AGENT_1	61918
NOM_OBJ_AWAY_AGENT_2	61919
NOM_ATTR_PT_BSA_FORMULA	61932
NOM_ATTR_MDS_GEN_INFO	61946
NOM_OBJ_HIF_MOUSE	61983
NOM_OBJ_HIF_TOUCH	61984
NOM_OBJ_HIF_SPEEDPOINT	61985
NOM_OBJ_HIF_ALARMBOX	61986
NOM_OBJ_BUS_I2C	61987
NOM_OBJ_CPU_SEC	61988
NOM_OBJ_LED	61990
NOM_OBJ_RELAY	61991
NOM_ATTR_POLL_OBJ_PRIO_NUM	61992
NOM_OBJ_BATT_1	61996
NOM_OBJ_BATT_2	61997
NOM_OBJ_DISP_SEC	61998
NOM_OBJ_AGM	61999
NOM_ATTR_POLL_NU_PRIO_LIST	62009
NOM_ATTR_POLL_RTSA_PRIO_LIST	62010
NOM_OBJ_CABLE	62016
NOM_DEV_NMT	62400
NOM_DEV_NMT_MDS	62401
NOM_DEV_NMT_VMD	62402

The following codes from the event partition are used for the alert code:

NOM_EVT_ABSENT	4
NOM_EVT_CONTAM	14
NOM_EVT_DISCONN	22
NOM_EVT_DISTURB	24
NOM_EVT_EMPTY	26
NOM_EVT_ERRATIC	32
NOM_EVT_EXH	36
NOM_EVT_FAIL	38
NOM_EVT_HI	40
NOM_EVT_IRREG	58
NOM_EVT_LO	62
NOM_EVT_MALF	70
NOM_EVT_NOISY	74
NOM_EVT_OBSTRUC	80
NOM_EVT_REVERSED	96
NOM_EVT_SUST	106
NOM_EVT_UNAVAIL	110
NOM_EVT_UNDEF	112
NOM_EVT_WARMING	124
NOM_EVT_WEAK	128
NOM_EVT_BREATH_ABSENT	136
NOM_EVT_CALIB_FAIL	138
NOM_EVT_CONFIG_ERR	142
NOM_EVT_RANGE_ERR	164
NOM_EVT_RANGE_OVER	166
NOM_EVT_SRC_ABSENT	174
NOM_EVT_SYNCH_ERR	182
NOM_EVT_BATT_LO	194

NOM_EVT_BATT_PROB	198
NOM_EVT_CUFF_NOT_DEFLATED	230
NOM_EVT_CUFF_INFLAT_OVER	232
NOM_EVT_DOOR_OR_HANDLE_POSN_PROB	234
NOM_EVT_EQUIP_MALF	242
NOM_EVT_TUBE_OCCL	250
NOM_EVT_GAS_AGENT_IDENT_MALF	258
NOM_EVT_LEAD_DISCONN	268
NOM_EVT_LEADS_OFF	274
NOM_EVT_O2_SUPPLY_LO	296
NOM_EVT_OPTIC_MODULE_ABSENT	298
NOM_EVT_OPTIC_MODULE_DEFECT	300
NOM_EVT_PAPER_PROB	302
NOM_EVT_SENSOR_DISCONN	308
NOM_EVT_SENSOR_MALF	310
NOM_EVT_SENSOR_PROB	312
NOM_EVT_SW_VER_UNK	322
NOM_EVT_TUBE_DISCONN	326
NOM_EVT_TUBE_OBSTRUC	330
NOM_EVT_XDUCR_DISCONN	336
NOM_EVT_XDUCR_MALF	338
NOM_EVT_INTENS_LIGHT_ERR	350
NOM_EVT_MSMT_DISCONN	352
NOM_EVT_MSMT_ERR	354
NOM_EVT_MSMT_FAIL	356
NOM_EVT_MSMT_INOP	358
NOM_EVT_MSMT_INTERRUP	362
NOM_EVT_MSMT_RANGE_OVER	364
NOM_EVT_MSMT_RANGE_UNDER	366
NOM_EVT_SIG_LO	380
NOM_EVT_SIG_UNANALYZEABLE	384
NOM_EVT_TEMP_HI_GT_LIM	394
NOM_EVT_UNSUPPORTED	400
NOM_EVT_WAVE_ARTIF_ERR	432
NOM_EVT_WAVE_SIG_QUAL_ERR	434
NOM_EVT_MSMT_INTERF_ERR	436
NOM_EVT_WAVE_OSCIL_ABSENT	442
NOM_EVT_VOLTAGE_OUT_OF_RANGE	460
NOM_EVT_INCOMPAT	600
NOM_EVT_ADVIS_CHK	6658
NOM_EVT_ADVIS_CALIB_AND_ZERO_CHK	6664
NOM_EVT_ADVIS_CONFIG_CHK	6666
NOM_EVT_ADVIS_SETTINGS_CHK	6668
NOM_EVT_ADVIS_SETUP_CHK	6670
NOM_EVT_ADVIS_SRC_CHK	6672
NOM_EVT_BATT_COND	6676
NOM_EVT_BATT_REPLACE	6678
NOM_EVT_ADVIS_CABLE_CHK	6680
NOM_EVT_ADVIS_GAS_AGENT_CHK	6688
NOM_EVT_ADVIS_LEAD_CHK	6690
NOM_EVT_ADVIS_REC_PAPER_REPLACE	6694
NOM_EVT_ADVIS_SENSOR_CHK	6696
NOM_EVT_ADVIS_GAIN_DECR	6704
NOM_EVT_ADVIS_GAIN_INCR	6706
NOM_EVT_ADVIS_UNIT_CHK	6710
NOM_EVT_APNEA	3072

NOM_EVT_ECG_ASYSTOLE	3076
NOM_EVT_ECG_BEAT_MISSED	3078
NOM_EVT_ECG_BIGEM	3082
NOM_EVT_ECG_BRADY_EXTREME	3086
NOM_EVT_ECG_PACING_NON_CAPT	3102
NOM_EVT_ECG_PAUSE	3108
NOM_EVT_ECG_TACHY_EXTREME	3122
NOM_EVT_ECG_CARD_BEAT_RATE_IRREG	3158
NOM_EVT_ECG_PACER_NOT_PACING	3182
NOM_EVT_ECG_SV_TACHY	3192
NOM_EVT_ECG_V_P_C_RonT	3206
NOM_EVT_ECG_V_P_C_MULTIFORM	3208
NOM_EVT_ECG_V_P_C_PAIR	3210
NOM_EVT_ECG_V_P_C_RUN	3212
NOM_EVT_ECG_V_RHY	3220
NOM_EVT_ECG_V_TACHY	3224
NOM_EVT_ECG_V_TACHY_NON_SUST	3226
NOM_EVT_ECG_V_TRIGEM	3236
NOM_EVT_DESAT	3246
NOM_EVT_ECG_V_P_C_RATE	3252
NOM_EVT_STAT_AL_OFF	6144
NOM_EVT_STAT_BATT_CHARGING	6150
NOM_EVT_STAT_CALIB_MODE	6152
NOM_EVT_STAT_CALIB_RUNNING	6154
NOM_EVT_STAT_CALIB_INVIVO_RUNNING	6156
NOM_EVT_STAT_CALIB_LIGHT_RUNNING	6158
NOM_EVT_STAT_CALIB_PREINS_RUNNING	6160
NOM_EVT_STAT_SELFTEST_RUNNING	6164
NOM_EVT_STAT_ZERO_RUNNING	6170
NOM_EVT_STAT_OPT_MOD_SENSOR_CONN	6172
NOM_EVT_STAT_OPT_MOD_SENSOR_WARMING	6174
NOM_EVT_STAT_SENSOR_WARMING	6176
NOM_EVT_STAT_WARMING	6178
NOM_EVT_STAT_ECG_AL_ALL_OFF	6182
NOM_EVT_STAT_ECG_AL_SOME_OFF	6184
NOM_EVT_STAT_LEARN	6224
NOM_EVT_STAT_OFF	6226
NOM_EVT_STAT_STANDBY	6228
NOM_EVT_STAT_DISCONN	6256
NOM_EVT_ADVIS_CALIB_REQD	6662
NOM_EVT_ECG_V_FIB_TACHY	61444
NOM_EVT_WAIT_CAL	61678
NOM_EVT_ADVIS_CHANGE_SITE	61682
NOM_EVT_ADVIS_CHECK_SITE_TIME	61684
NOM_EVT_STAT_FW_UPDATE_IN_PROGRESS	61688
NOM_EVT_EXT_DEV_AL_CODE_1	61690
NOM_EVT_EXT_DEV_AL_CODE_2	61692
NOM_EVT_EXT_DEV_AL_CODE_3	61694
NOM_EVT_EXT_DEV_AL_CODE_4	61696
NOM_EVT_EXT_DEV_AL_CODE_5	61698
NOM_EVT_EXT_DEV_AL_CODE_6	61700
NOM_EVT_EXT_DEV_AL_CODE_7	61702
NOM_EVT_EXT_DEV_AL_CODE_8	61704
NOM_EVT_EXT_DEV_AL_CODE_9	61706
NOM_EVT_EXT_DEV_AL_CODE_10	61708
NOM_EVT_EXT_DEV_AL_CODE_11	61710

NOM_EVT_EXT_DEV_AL_CODE_12	61712
NOM_EVT_EXT_DEV_AL_CODE_13	61714
NOM_EVT_EXT_DEV_AL_CODE_14	61716
NOM_EVT_EXT_DEV_AL_CODE_15	61718
NOM_EVT_EXT_DEV_AL_CODE_16	61720
NOM_EVT_EXT_DEV_AL_CODE_17	61722
NOM_EVT_EXT_DEV_AL_CODE_18	61724
NOM_EVT_EXT_DEV_AL_CODE_19	61726
NOM_EVT_EXT_DEV_AL_CODE_20	61728
NOM_EVT_EXT_DEV_AL_CODE_21	61730
NOM_EVT_EXT_DEV_AL_CODE_22	61732
NOM_EVT_EXT_DEV_AL_CODE_23	61734
NOM_EVT_EXT_DEV_AL_CODE_24	61736
NOM_EVT_EXT_DEV_AL_CODE_25	61738
NOM_EVT_EXT_DEV_AL_CODE_26	61740
NOM_EVT_EXT_DEV_AL_CODE_27	61742
NOM_EVT_EXT_DEV_AL_CODE_28	61744
NOM_EVT_EXT_DEV_AL_CODE_29	61746
NOM_EVT_EXT_DEV_AL_CODE_30	61748
NOM_EVT_EXT_DEV_AL_CODE_31	61750
NOM_EVT_EXT_DEV_AL_CODE_32	61752
NOM_EVT_EXT_DEV_AL_CODE_33	61754
NOM_EVT_ST_MULTI	61756
NOM_EVT_ADVIS_BSA_REQD	61760
NOM_EVT_ADVIS_PRESUMED_CVP	61762
NOM_EVT_MSMT_UNSUPPORTED	61764
NOM_EVT_BRADY	61766
NOM_EVT_TACHY	61768
NOM_EVT_ADVIS_CHANGE_SCALE	61770
NOM_EVT_MSMT_RESTART	61772
NOM_EVT_TOO_MANY_AGENTS	61774
NOM_EVT_STAT_PULSE_SRC_RANGE_OVER	61778
NOM_EVT_STAT_PRESS_SRC_RANGE_OVER	61780
NOM_EVT_MUSCLE_NOISE	61782
NOM_EVT_LINE_NOISE	61784
NOM_EVT_IMPED_HI	61786
NOM_EVT_AGENT_MIX	61788
NOM_EVT_IMPEDS_HI	61790
NOM_EVT_ADVIS_PWR_HI	61792
NOM_EVT_ADVIS_PWR_OFF	61794
NOM_EVT_ADVIS_PWR_OVER	61796
NOM_EVT_ADVIS_DEACT	61798
NOM_EVT_CO_WARNING	61800
NOM_EVT_ADVIS_NURSE_CALL	61802
NOM_EVT_COMP_MALF	61804
NOM_EVT_AGENT_MEAS_MALF	61806
NOM_EVT_ADVIS_WATER_TRAP_CHK	61808
NOM_EVT_STAT_AGENT_CALC_RUNNING	61810
NOM_EVT_ADVIS_ADAPTER_CHK	61814
NOM_EVT_ADVIS_PUMP_OFF	61816
NOM_EVT_ZERO_FAIL	61818
NOM_EVT_ADVIS_ZERO_REQD	61820
NOM_EVT_ADVIS_REC_PAPER_SIZE	61822
NOM_EVT_ADVIS_SIG_LOST	61824
NOM_EVT_REC_HEAD_TEMP_HI	61826
NOM_EVT_EXTR_HI	61830

NOM_EVT_EXTR_LO	61832
NOM_EVT_LEAD_DISCONN_YELLOW	61833
NOM_EVT_LEAD_DISCONN_RED	61834
NOM_EVT_CUFF_INFLAT_OVER_YELLOW	61835
NOM_EVT_CUFF_INFLAT_OVER_RED	61836
NOM_EVT_CUFF_NOT_DEFLATED_YELLOW	61837
NOM_EVT_CUFF_NOT_DEFLATED_RED	61838
NOM_EVT_ADVIS_ACTION_REQD	61840
NOM_EVT_OUT_OF_AREA	61842
NOM_EVT_LEADS_DISCONN	61844
NOM_EVT_DEV_ASSOC_CHK	61846
NOM_EVT_SYNCH_UNSUPPORTED	61848
NOM_EVT_ECG_ADVIS_SRC_CHK	61850
NOM_EVT_ALARM_TECH	61852
NOM_EVT_ALARM_TECH_YELLOW	61854
NOM_EVT_ALARM_TECH_RED	61856
NOM_EVT_ALARM_MED_YELLOW_SHORT	61858
NOM_EVT_ALARM_MED_YELLOW	61860
NOM_EVT_ALARM_MED_RED	61862
NOM_EVT_SHUTDOWN	61872
NOM_EVT_TELE_EQUIP_MALF	61874
NOM_EVT_SYNCH_ERR_ECG	61876
NOM_EVT_SYNCH_ERR_SPO2T	61878
NOM_EVT_ADVIS_ACTION_REQD_YELLOW	61880
NOM_EVT_ADVIS_NBP_SEQ_COMPLETED	61882
NOM_EVT_PACER_OUTPUT_LO	61884
NOM_EVT_ALARM_MORE_TECH	61886
NOM_EVT_ALARM_MORE_TECH_YELLOW	61888
NOM_EVT_ALARM_MORE_TECH_RED	61890
NOM_EVT_ADVIS_PATIENT_CONFLICT	61892
NOM_EVT_SENSOR_REPLACE	61894
NOM_EVT_ECG_ATR_FIB	61896
NOM_EVT_LIMITED_CONNECTIVITY	61900
NOM_EVT_DISABLED	61924
NOM_EVT_ECG_ABSENT	61926
NOM_EVT_SRR_INTERF	61928
NOM_EVT_SRR_INVALID_CHAN	61930
NOM_EVT_EXT_DEV_DEMO	62032
NOM_EVT_EXT_DEV_MONITORING	62034
NOM_EVT_PAT_TYPE_UNSUPPORTED	62042
NOM_EVT_ST_ELEVATION	62060
NOM_EVT_ADVIS_PAT_AGE_CHK	62082
NOM_EVT_ADVIS_SERVICE_REQD	62114
NOM_EVT_ADVIS_SW_LICENSE_REQD	62116

Private Unicode Characters

The monitor may use the following private codes for UNICODE characters:

```
#define SUBSCRIPT_CAPITAL_E_CHAR        0xE145
        /* SUBSCRIPT CAPITAL E                     */
#define SUBSCRIPT_CAPITAL_L_CHAR        0xE14C
        /* SUBSCRIPT CAPITAL L                     */
#define LITER_PER_CHAR                  0xE400
        /* LITER PER - used in 4 char unit "l/min"    */
#define HYDROGEN_CHAR                   0xE401
        /* HYDROGEN - Used in 4 char unit "cmH2O"     */
#define ALARM_STAR_CHAR                 0xE40D
        /* ALARM STAR                              */
#define CAPITAL_V_WITH_DOT_ABOVE_CHAR   0xE425
        /* CAPITAL_V_WITH_DOT_ABOVE (V with dot)      */
#define ZERO_WIDTH_NO_BREAK_SPACE_CHAR  0xFEFF
        /* The character 0xFEFF is used as FILL character.
        For each wide asian character, a FILL character is
        appended for size calculations. */
```

List of Constants Used Within the Protocol Definition

RO Types

```
#define ROIV_APDU               1
#define RORS_APDU               2
#define ROER_APDU               3
#define ROLRS_APDU              5
```

ROLRS Identifier

```
#define RORLS_FIRST         1   /* set in the first message */
#define RORLS_NOT_FIRST_NOT_LAST 2
#define RORLS_LAST          3   /* last RORLSapdu, one RORSapdu
                                    to follow */
```

ROSE Commands

```
typedef u_16            CMDType;
#define CMD_EVENT_REPORT                0
#define CMD_CONFIRMED_EVENT_REPORT      1
#define CMD_GET                         3
#define CMD_SET                         4
#define CMD_CONFIRMED_SET               5
#define CMD_CONFIRMED_ACTION            7
```

ROER Error Values

```
#define NO_SUCH_OBJECT_CLASS          0
#define NO_SUCH_OBJECT_INSTANCE       1
#define ACCESS_DENIED                 2
#define GET_LIST_ERROR                7
#define SET_LIST_ERROR                8
#define NO_SUCH_ACTION                9
#define PROCESSING_FAILURE            10
#define INVALID_ARGUMENT_VALUE        15
#define INVALID_SCOPE                 16
#define INVALID_OBJECT_INSTANCE       17
```

Action and Event Types

The Action and Event Types are defined in the Object Oriented Elements partition of the nomenclature.

```
#define NOM_NOTI_MDS_CREAT            3334
   /* MDS Create Notification */
#define NOM_NOTI_CONN_INDIC           3351
   /* connect indication event type */
#define NOM_ACT_POLL_MDIB_DATA        3094
   /* poll data action */
#define NOM_ACT_POLL_MDIB_DATA_EXT    61755
   /* extended poll data action */
```

Protocol Identification

The IDs for the protocol identification are from the Infrastructure nomenclature partition.

```
#define NOM_POLL_PROFILE_SUPPORT      1
   /* id for polling profile */
#define NOM_MDIB_OBJ_SUPPORT          258
   /* supported objects for the active profile */
#define NOM_ATTR_POLL_PROFILE_EXT     61441
   /* id for poll profile extensions opt. package */
```

Association Control

```
#define MDDL_VERSION1                  0x80000000
    /* Data Export Protocol Version */
#define NOMEN_VERSION                  0x40000000
    /* Nomenclature Version */
#define SYST_CLIENT                    0x80000000
    /* System Type Client */
#define SYST_SERVER                    0x00800000
    /* System Type Server */
#define HOT_START                      0x80000000
    /* Startup Mode Hotstart */
#define WARM_START                     0x40000000
    /* Startup Mode Warmstart */
#define COLD_START                     0x20000000
    /* Startup Mode Coldstart */
#define POLL_PROFILE_REV_0             0x80000000
    /* Poll Profile Revision */
#define P_OPT_DYN_CREATE_OBJECTS       0x40000000
    /* option dynamic object creation */
#define P_OPT_DYN_DELETE_OBJECTS       0x20000000
    /* option dynamic object deletion */
#define POLL_EXT_PERIOD_NU_1SEC        0x80000000
    /* 1 sec Real-time Numerics */
#define POLL_EXT_PERIOD_NU_AVG_12SEC   0x40000000
    /* 12 sec averaged Numerics */
#define POLL_EXT_PERIOD_NU_AVG_60SEC   0x20000000
    /* 1 min. averaged Numerics */
#define POLL_EXT_PERIOD_NU_AVG_300SEC  0x10000000
    /* 5 min. averaged Numerics */
#define POLL_EXT_PERIOD_RTSA           0x08000000
    /* allow enumeration objects */
#define POLL_EXT_ENUM                  0x04000000
    /* allow numeric priority list to be set */
#define POLL_EXT_NU_PRIO_LIST          0x02000000
    /* send timestamps for numerics with dynamic modalities */
#define POLL_EXT_DYN_MODALITIES        0x01000000
```

Label Mapping Table

With IntelliVue release G the nomenclature of some numeric and wave labels have been changed. The labels that previously resided in the namespace NOM_EMFC mainly used by VueLink devices have been moved into the NOM_SCADA namespace partition and the new defined NOM_SETTING namespace partition.

If your want to integrate support for the new nomenclature definitions in your existing client application you have to accept both label ids.

To guide you trough the transition of the nomenclature changes introduced in release G, you may find the following table useful. The revision F label is given first followed by the new label. For further descriptions of the old labels see the Revision F of the Data Export Programmers Guide.

```
Label Definition                                         Label Id

NLS_NOM_EMFC_sAVDel                                      (0x040180CC)
NLS_NOM_SETT_APNEA_ALARM_DELAY                          (0x0402F8D9)

NLS_NOM_EMFC_C20_PER_C                                   (0x04010E78)
NLS_NOM_C20_PER_C_INDEX                                  (0x0002F81A)

NLS_NOM_EMFC_Rf_V5                                       (0x0401075C)
NLS_NOM_ECG_AMPL_ST_BASELINE_V5                          (0x0002F417)

NLS_NOM_EMFC_Urine                                       (0x04010BD8)
NLS_NOM_FLOW_URINE_PREV_24HR                             (0x0002F883)

NLS_NOM_EMFC_PT                                          (0x040105E4)
NLS_NOM_TIME_PD_PT                                       (0x0002F18B)

NLS_NOM_EMFC_SerCa                                       (0x0401059C)
NLS_NOM_CONC_CA_SER                                      (0x0002F824)

NLS_NOM_EMFC_sBPAl                                       (0x0401A024)
NLS_NOM_SETT_PRESS_AL_ONOFF                              (0x0402F8F7)

NLS_NOM_EMFC_SetTmp                                      (0x04010AD8)
NLS_NOM_TEMP_BODY                                        (0x00024B5C)

NLS_NOM_EMFC_sCO2Wm                                      (0x0401815C)
NLS_NOM_SETT_VENT_CO2_WARMING_MONITOR_ONOFF             (0x0402F915)

NLS_NOM_EMFC_sAPkFl                                      (0x04018030)
NLS_NOM_SETT_FLOW_AWAY_INSP_APNEA                        (0x0402F8ED)

NLS_NOM_EMFC_SerGlc                                      (0x04010590)
NLS_NOM_CONC_GLU_SER                                     (0x0002F82A)

NLS_NOM_EMFC_RT_PCT_BE                                   (0x04010810)
NLS_NOM_EEG_PWR_SPEC_BETA_REL_RIGHT                      (0x0002F860)

NLS_NOM_EMFC_T4                                          (0x04010414)
NLS_NOM_TEMP_GEN_4                                       (0x0002F0CA)

NLS_NOM_EMFC_GOT                                         (0x0401060C)
NLS_NOM_CONC_GOT                                         (0x0002F188)

NLS_NOM_EMFC_highO2                                      (0x0401A020)
NLS_NOM_SETT_VENT_CONC_AWAY_O2_LIMIT_HI                  (0x0402F919)

NLS_NOM_EMFC_MCV                                         (0x040105D4)
NLS_NOM_VOL_CORP_MEAN                                    (0x0002F8C4)
```

```
NLS_NOM_EMFC_sEnTrg                                        (0x040180B4)
NLS_NOM_SETT_TRIG_ONOFF                                    (0x0402F90C)

NLS_NOM_EMFC_Plts                                          (0x040105D0)
NLS_NOM_PLTS_CNT                                           (0x0002F167)

NLS_NOM_EMFC_sLInPr                                        (0x04018100)
NLS_NOM_SETT_PRESS_AWAY_MIN                                (0x040250F2)

NLS_NOM_EMFC_GGT                                           (0x04010608)
NLS_NOM_CONC_GGT                                           (0x0002F189)

NLS_NOM_EMFC_sAGTWm                                        (0x0401816C)
NLS_NOM_SETT_VENT_AGENT_WARMING_MONITOR_ONOFF             (0x0402F90D)

NLS_NOM_EMFC_sAPVhP                                        (0x0401807C)
NLS_NOM_SETT_VENT_PRESS_AWAY_MAX_PV_APNEA                 (0x0402F931)

NLS_NOM_EMFC_sfgSEV                                        (0x040181AC)
NLS_NOM_SETT_CONC_AWAY_SEVOFL                             (0x040251E4)

NLS_NOM_EMFC_highMV                                        (0x0401A02C)
NLS_NOM_SETT_VENT_VOL_MINUTE_AWAY_LIMIT_HI                (0x0402F94B)

NLS_NOM_EMFC_P6_MEAN                                       (0x04010407)
NLS_NOM_PRESS_GEN_6_MEAN                                   (0x0002F3FB)

NLS_NOM_EMFC_SpRR                                          (0x04010BF4)
NLS_NOM_RESP_RATE_SPONT                                    (0x0002F828)

NLS_NOM_EMFC_Sample                                        (0x04010AAC)
NLS_NOM_SETT_SAMPLE                                        (0x0402F956)

NLS_NOM_EMFC_CK_MM                                         (0x04010604)
NLS_NOM_CONC_CREA_KIN_MM                                   (0x0002F17F)

NLS_NOM_EMFC_sFlas                                         (0x040181F8)
NLS_NOM_SETT_VENT_FLOW_AWAY_ASSIST                        (0x0402F91C)

NLS_NOM_EMFC_RBC                                           (0x040105CC)
NLS_NOM_RB_CNT                                             (0x0002F169)

NLS_NOM_EMFC_TOF4                                          (0x04010DCC)
NLS_NOM_TRAIN_OF_FOUR_4                                    (0x0002F8AA)

NLS_NOM_EMFC_sSens                                         (0x04018188)
NLS_NOM_SETT_SENS_LEVEL                                    (0x0402F904)

NLS_NOM_EMFC_sSIMV                                         (0x04018118)
NLS_NOM_SETT_VENT_MODE_SYNC_MAND_INTERMIT                 (0x0402F924)

NLS_NOM_EMFC_UrCa                                          (0x04010624)
NLS_NOM_CONC_CA_URINE                                      (0x0002F19C)

NLS_NOM_EMFC_vECG                                          (0x0401119C)
NLS_NOM_ELEC_POTL_VECT                                     (0x0002F874)

NLS_NOM_EMFC_PCO2_ADJ                                      (0x04010A7C)
NLS_NOM_CONC_PCO2_GEN_ADJ                                  (0x0002F834)

NLS_NOM_EMFC_BLANK                                         (0x04010960)
NLS_NOM_METRIC_NOS                                         (0x0002EFFF)

NLS_NOM_EMFC_sPIP                                          (0x040180FC)
NLS_NOM_SETT_PRESS_AWAY_INSP_MAX                          (0x04025109)
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NLS_NOM_EMFC_sALMRT                                  (0x040180F0)
NLS_NOM_SETT_VENT_TIME_PD_RAMP_AL                   (0x0402F946)

NLS_NOM_EMFC_sfgO2                                   (0x040181B4)
NLS_NOM_SETT_FLOW_AWAY_O2                            (0x0402F87F)

NLS_NOM_EMFC_UrNaEx                                  (0x040101B4)
NLS_NOM_CONC_NA_EXCR                                 (0x0002F830)

NLS_NOM_EMFC_P1_SYS                                  (0x04010031)
NLS_NOM_PRESS_GEN_1_SYS                             (0x0002F0A5)

NLS_NOM_EMFC_LT_MPF                                  (0x040107F8)
NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_MEDIAN_LEFT          (0x0002F84B)

NLS_NOM_EMFC_extHR                                   (0x04010700)
NLS_NOM_CARD_BEAT_RATE_EXT                           (0x0002F81B)

NLS_NOM_EMFC_TOF1                                    (0x04010DC0)
NLS_NOM_TRAIN_OF_FOUR_1                             (0x0002F8A7)

NLS_NOM_EMFC_L_V4                                    (0x04010770)
NLS_NOM_ECG_ELEC_POTL_V4                             (0x00020106)

NLS_NOM_EMFC_PPV                                     (0x040111E0)
NLS_NOM_PULS_PRESS_VAR                               (0x0002F0E3)

NLS_NOM_EMFC_SO2_CALC                               (0x04010A90)
NLS_NOM_SAT_O2_CALC                                 (0x0002F89C)

NLS_NOM_EMFC_TGL                                     (0x0401061C)
NLS_NOM_CONC_TGL                                     (0x0002F16F)

NLS_NOM_EMFC_P5                                      (0x04010400)
NLS_NOM_PRESS_GEN_5                                  (0x0002F3F4)

NLS_NOM_EMFC_PcCO2                                   (0x04010A78)
NLS_NOM_CONC_PCO2_CAP                                (0x0002F159)

NLS_NOM_EMFC_Fe                                      (0x04010614)
NLS_NOM_CONC_FE_GEN                                  (0x0002F160)

NLS_NOM_EMFC_O2EI                                    (0x0401052C)
NLS_NOM_EXTRACT_O2_INDEX                             (0x0002F875)

NLS_NOM_EMFC_sFIO2                                   (0x04018010)
NLS_NOM_SETT_VENT_CONC_AWAY_O2_INSP                 (0x04027498)

NLS_NOM_EMFC_sAgent                                  (0x04018178)
NLS_NOM_SETT_CONC_AWAY_AGENT_TYPE                   (0x0402F8E0)

NLS_NOM_EMFC_TFI                                     (0x040111A8)
NLS_NOM_VOL_FLUID_THORAC_INDEX                       (0x0002F8C6)

NLS_NOM_EMFC_LT_AL                                   (0x040107E0)
NLS_NOM_EEG_PWR_SPEC_ALPHA_ABS_LEFT                 (0x0002F855)

NLS_NOM_EMFC_Rf_aVF                                  (0x04010748)
NLS_NOM_ECG_AMPL_ST_BASELINE_AVF                    (0x0002F450)

NLS_NOM_EMFC_RRmech                                  (0x04010850)
NLS_NOM_VENT_RESP_RATE                               (0x00025022)

NLS_NOM_EMFC_ESR                                     (0x0401064C)
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NLS_NOM_ES_RATE                                        (0x0002F17C)

NLS_NOM_EMFC_Rf_aVL                                    (0x04010744)
NLS_NOM_ECG_AMPL_ST_BASELINE_AVL                       (0x0002F44F)

NLS_NOM_EMFC_BPAPPL                                    (0x040180BC)
NLS_NOM_SETT_VENT_PRESS_AWAY_BIPAP_LOW                 (0x0402F92A)

NLS_NOM_EMFC_sO2Cal                                    (0x040180D8)
NLS_NOM_SETT_VENT_O2_CAL_MODE                          (0x0402F926)

NLS_NOM_EMFC_aPTTWB                                    (0x04010E14)
NLS_NOM_TIME_PD_aPTT_WB                                (0x0002F18D)

NLS_NOM_EMFC_HALLev                                    (0x0401087C)
NLS_NOM_VOL_LVL_LIQUID_BOTTLE_HALOTH                   (0x0002F8CA)

NLS_NOM_EMFC_RT_PCT_DL                                 (0x04010814)
NLS_NOM_EEG_PWR_SPEC_DELTA_REL_RIGHT                   (0x0002F868)

NLS_NOM_EMFC_Pat_T                                     (0x04010B54)
NLS_NOM_TEMP_BODY                                      (0x00024B5C)

NLS_NOM_EMFC_sEnSgh                                    (0x04018040)
NLS_NOM_SETT_VENT_MODE_SIGH                            (0x0402F923)

NLS_NOM_EMFC_sPStat                                    (0x0401A028)
NLS_NOM_SETT_PUMP_STATUS                               (0x0402F8FE)

NLS_NOM_EMFC_BSA_D                                     (0x04010440)
NLS_NOM_AREA_BODY_SURFACE_ACTUAL_DUBOIS                (0x0002F813)

NLS_NOM_EMFC_Field3                                    (0x04010AD0)
NLS_NOM_SETT_FIELD3                                    (0x0402F95B)

NLS_NOM_EMFC_VCO2ti                                    (0x040111C4)
NLS_NOM_FLOW_CO2_PROD_RESP_TIDAL                       (0x0002F882)

NLS_NOM_EMFC_EDV                                       (0x04010534)
NLS_NOM_VOL_VENT_L_END_DIA                             (0x00024C00)

NLS_NOM_EMFC_highTV                                    (0x0401A034)
NLS_NOM_SETT_VENT_VOL_TIDAL_LIMIT_HI                   (0x0402F94D)

NLS_NOM_EMFC_PVcP                                      (0x0401046C)
NLS_NOM_VENT_PRESS_AWAY_PV                             (0x0002F8BC)

NLS_NOM_EMFC_Tpat                                      (0x04010A38)
NLS_NOM_TEMP_BODY                                      (0x00024B5C)

NLS_NOM_EMFC_sRisTi                                    (0x04018284)
NLS_NOM_SETT_VENT_TIME_PD_RAMP                         (0x0402F8BD)

NLS_NOM_EMFC_U_PER_SCr                                 (0x0401019C)
NLS_NOM_RATIO_CONC_URINE_CREA_SER                      (0x0002F892)

NLS_NOM_EMFC_BSI                                       (0x04011198)
NLS_NOM_EEG_BURST_SUPPRN_INDEX                         (0x0002F840)

NLS_NOM_EMFC_P4_SYS                                    (0x0401003D)
NLS_NOM_PRESS_GEN_4_SYS                                (0x0002F0B1)

NLS_NOM_EMFC_sPin                                      (0x04018128)
NLS_NOM_SETT_PRESS_AWAY_INSP                           (0x04025108)
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NLS_NOM_EMFC_BE_B_CALC                              (0x04010AC0)
NLS_NOM_BASE_EXCESS_BLD_ART_CALC                    (0x0002F817)

NLS_NOM_EMFC_i_eAGT                                 (0x040106A0)
NLS_NOM_VENT_CONC_AWAY_AGENT_DELTA                  (0x0002F8B2)

NLS_NOM_EMFC_UrDens                                 (0x04010BC0)
NLS_NOM_FLUID_DENS_URINE                            (0x0002F19D)

NLS_NOM_EMFC_U_PER_Cre_CALC                         (0x04010AE4)
NLS_NOM_RATIO_CONC_URINE_CREA_CALC                  (0x0002F891)

NLS_NOM_EMFC_TVex                                   (0x040106B4)
NLS_NOM_VOL_AWAY_EXP_TIDAL                          (0x0002F0E1)

NLS_NOM_EMFC_MCH                                    (0x040105D8)
NLS_NOM_HB_CORP_MEAN                                (0x0002F885)

NLS_NOM_EMFC_Cartrg                                 (0x04010AB0)
NLS_NOM_SETT_CARTRG                                 (0x0402F957)

NLS_NOM_EMFC_SaO2                                   (0x04010548)
NLS_NOM_SAT_O2_ART                                  (0x00024B34)

NLS_NOM_EMFC_P8_DIA                                 (0x0401040E)
NLS_NOM_PRESS_GEN_8_DIA                             (0x0002F402)

NLS_NOM_EMFC_SO2_r                                  (0x040111B8)
NLS_NOM_SAT_O2_RIGHT                                (0x0002F89E)

NLS_NOM_EMFC_RT_MDF                                 (0x04010830)
NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN_RIGHT       (0x0002F84A)

NLS_NOM_EMFC_Lact                                   (0x04010AE8)
NLS_NOM_CONC_LACT                                   (0x0002F174)

NLS_NOM_EMFC_GasCar                                 (0x040181DC)
NLS_NOM_SETT_VENT_GAS_CARRIER                       (0x0402F91F)

NLS_NOM_EMFC_sVolAl                                 (0x04018158)
NLS_NOM_SETT_VENT_VOL_AWAY_AL_ONOFF                 (0x0402F947)

NLS_NOM_EMFC_dBili                                  (0x04010598)
NLS_NOM_CONC_BILI_DIRECT                            (0x0002F17A)

NLS_NOM_EMFC_fgAGT                                  (0x04010520)
NLS_NOM_FLOW_AWAY_AGENT                             (0x0002F876)

NLS_NOM_EMFC_sTrig                                  (0x04018014)
NLS_NOM_SETT_TRIG_LEVEL                             (0x00000000)

NLS_NOM_EMFC_sVmax                                  (0x04018150)
NLS_NOM_SETT_VENT_VOL_LIMIT_AL_HI_ONOFF             (0x0402F949)

NLS_NOM_EMFC_P3                                     (0x04010038)
NLS_NOM_PRESS_GEN_3                                 (0x0002F0AC)

NLS_NOM_EMFC_BagVol                                 (0x04010CFC)
NLS_NOM_VOL_URINE_COL                               (0x00026830)

NLS_NOM_EMFC_PvO2_ADJ                               (0x04010A68)
NLS_NOM_CONC_PO2_VEN_ADJ                            (0x0002F83E)

NLS_NOM_EMFC_ALT                                    (0x04010BF0)
NLS_NOM_CONC_GPT                                    (0x0002F187)
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NLS_NOM_EMFC_BP_SYS                                     (0x04010889)
NLS_NOM_PRESS_BLD_SYS                                   (0x00024A01)

NLS_NOM_EMFC_P7_DIA                                     (0x0401040A)
NLS_NOM_PRESS_GEN_7_DIA                                 (0x0002F3FE)

NLS_NOM_EMFC_liPVAT                                     (0x0401A010)
NLS_NOM_SETT_APNEA_ALARM_DELAY_PV                       (0x0402F8DA)

NLS_NOM_EMFC_T1                                         (0x04010064)
NLS_NOM_TEMP_GEN_1                                      (0x0002F0C7)

NLS_NOM_EMFC_CH2O                                       (0x04010118)
NLS_NOM_FREE_WATER_CLR                                  (0x0002F884)

NLS_NOM_EMFC_r                                          (0x04010E80)
NLS_NOM_AWAY_CORR_COEF                                  (0x0002F814)

NLS_NOM_EMFC_RC                                         (0x04010644)
NLS_NOM_RET_CNT                                         (0x0002F16A)

NLS_NOM_EMFC_SpAWRR                                     (0x04010510)
NLS_NOM_AWAY_RESP_RATE_SPONT                            (0x0002F815)

NLS_NOM_EMFC_sMV                                        (0x040180B0)
NLS_NOM_SETT_VOL_MINUTE_AWAY                            (0x04025148)

NLS_NOM_EMFC_sPincR                                     (0x0401814C)
NLS_NOM_SETT_VENT_AWAY_PRESS_RATE_INCREASE              (0x0402F912)

NLS_NOM_EMFC_MCHC                                       (0x040105DC)
NLS_NOM_CONC_HB_CORP_MEAN                               (0x0002F82C)

NLS_NOM_EMFC_CHE                                        (0x040105F8)
NLS_NOM_CONC_CHE                                        (0x0002F182)

NLS_NOM_EMFC_P4                                         (0x0401003C)
NLS_NOM_PRESS_GEN_4                                     (0x0002F0B0)

NLS_NOM_EMFC_WBC                                        (0x040105C8)
NLS_NOM_WB_CNT                                          (0x0002F168)

NLS_NOM_EMFC_TOFcnt                                     (0x04010DAC)
NLS_NOM_TRAIN_OF_FOUR_CNT                               (0x0002F8AB)

NLS_NOM_EMFC_HGB_CALC                                   (0x04010A34)
NLS_NOM_CONC_HB_ART_CALC                                (0x0002F82B)

NLS_NOM_EMFC_CO_Hb                                      (0x04010628)
NLS_NOM_CONC_HB_CO_GEN                                  (0x00027180)

NLS_NOM_EMFC_GEF                                        (0x040111E4)
NLS_NOM_FRACT_EJECT                                     (0x0002F105)

NLS_NOM_EMFC_sExpTi                                     (0x040180E8)
NLS_NOM_SETT_VENT_TIME_PD_EXP                           (0x0402F93F)

NLS_NOM_EMFC_sfgFl                                      (0x040181B8)
NLS_NOM_SETT_FLOW_AWAY_TOT                              (0x0402F881)

NLS_NOM_EMFC_SerGlo                                     (0x040105BC)
NLS_NOM_CONC_GLO_SER                                    (0x0002F829)

NLS_NOM_EMFC_AnGap_CALC                                 (0x04010AA8)
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NLS_NOM_CONC_AN_GAP_CALC                          (0x0002F1A1)

NLS_NOM_EMFC_cktO2                                (0x040106A8)
NLS_NOM_VENT_CONC_AWAY_O2_CIRCUIT                 (0x0002F8B8)

NLS_NOM_EMFC_IUP_SYS                              (0x04010055)
NLS_NOM_PRESS_INTRA_UTERAL_SYS                    (0x0002F0D9)

NLS_NOM_EMFC_Field2                               (0x04010ACC)
NLS_NOM_SETT_FIELD2                               (0x0402F95A)

NLS_NOM_EMFC_AWV                                  (0x04010668)
NLS_NOM_VOL_AWAY                                  (0x0002F0DF)

NLS_NOM_EMFC_P3_MEAN                              (0x0401003B)
NLS_NOM_PRESS_GEN_3_MEAN                          (0x0002F0AF)

NLS_NOM_EMFC_BagWgt                               (0x04010BB8)
NLS_NOM_WEIGHT_URINE_COL                          (0x0002F8D3)

NLS_NOM_EMFC_O2_MANUAL                            (0x04010AD4)
NLS_NOM_CONC_AWAY_O2                              (0x00025164)

NLS_NOM_EMFC_i_eISO                               (0x04010694)
NLS_NOM_VENT_CONC_AWAY_ISOFL_DELTA                (0x0002F8B6)

NLS_NOM_EMFC_P6_DIA                               (0x04010406)
NLS_NOM_PRESS_GEN_6_DIA                           (0x0002F3FA)

NLS_NOM_EMFC_iCa_N_CALC                           (0x04011114)
NLS_NOM_CONC_CA_GEN_NORM_CALC                     (0x0002F823)

NLS_NOM_EMFC_BEecf_CALC                           (0x04010AA4)
NLS_NOM_CONC_BASE_EXCESS_ECF_CALC                 (0x0002F821)

NLS_NOM_EMFC_sATV                                 (0x04018028)
NLS_NOM_SETT_VOL_AWAY_TIDAL_APNEA                 (0x0402F951)

NLS_NOM_EMFC_pH_ADJ                               (0x04010A48)
NLS_NOM_CONC_PH_GEN_ADJ                           (0x0002F838)

NLS_NOM_EMFC_P2_DIA                               (0x04010036)
NLS_NOM_PRESS_GEN_2_DIA                           (0x0002F0AA)

NLS_NOM_EMFC_sSghNr                               (0x04018024)
NLS_NOM_SETT_VENT_SIGH_MULT_RATE                  (0x0402F93B)

NLS_NOM_EMFC_RT_TH                                (0x04010828)
NLS_NOM_EEG_PWR_SPEC_THETA_ABS_RIGHT              (0x0002F86A)

NLS_NOM_EMFC_sfmax                                (0x0401820C)
NLS_NOM_SETT_VENT_RESP_RATE_LIMIT_HI_PANT         (0x0402F937)

NLS_NOM_EMFC_UrGlc                                (0x04010594)
NLS_NOM_CONC_GLU_URINE                            (0x0002F19F)

NLS_NOM_EMFC_PTTrat                               (0x04010E1C)
NLS_NOM_RATIO_TIME_PD_PTT                         (0x0002F896)

NLS_NOM_EMFC_sfgHAL                               (0x040181A4)
NLS_NOM_SETT_CONC_AWAY_HALOTH                     (0x040251E0)

NLS_NOM_EMFC_sAPVI                                (0x0401808C)
NLS_NOM_SETT_RATIO_IE_INSP_PV_APNEA               (0x0402F903)
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NLS_NOM_EMFC_PO2_ADJ                                (0x04010A60)
NLS_NOM_CONC_PO2_GEN_ADJ                            (0x0002F83D)

NLS_NOM_EMFC_PcO2                                   (0x04010A5C)
NLS_NOM_CONC_PO2_CAP                                (0x0002F15A)

NLS_NOM_EMFC_SerCl                                  (0x040105B0)
NLS_NOM_CONC_CHLOR_SER                              (0x0002F15F)

NLS_NOM_EMFC_UrVol                                  (0x040101BC)
NLS_NOM_VOL_URINE_BAL_PD                            (0x00026824)

NLS_NOM_EMFC_BP_DIA                                 (0x0401088A)
NLS_NOM_PRESS_BLD_DIA                               (0x00024A02)

NLS_NOM_EMFC_L_II                                   (0x04010780)
NLS_NOM_ECG_ELEC_POTL_II                            (0x00020102)

NLS_NOM_EMFC_DET                                    (0x04010B60)
NLS_NOM_SETT_TEMP                                   (0x04024B48)

NLS_NOM_EMFC_SerK                                   (0x040105AC)
NLS_NOM_CONC_K_SER                                  (0x0002F82F)

NLS_NOM_EMFC_FeNa                                   (0x0401012C)
NLS_NOM_FRACT_EXCR_NA                               (0x0002F194)

NLS_NOM_EMFC_sPmax                                  (0x040180E0)
NLS_NOM_SETT_VENT_PRESS_AWAY_INSP_MAX               (0x0402F8BB)

NLS_NOM_EMFC_BPAPTL                                 (0x040180C4)
NLS_NOM_SETT_VENT_TIME_PD_BIPAP_LOW                 (0x0402F93E)

NLS_NOM_EMFC_PT_WB                                  (0x04010E20)
NLS_NOM_TIME_PD_PT_WB                               (0x0002F18F)

NLS_NOM_EMFC_sCircl                                 (0x040181C8)
NLS_NOM_SETT_VENT_CIRCUIT_TYPE                      (0x0402F913)

NLS_NOM_EMFC_LSCALE                                 (0x04010808)
NLS_NOM_EEG_ELEC_POTL_CRTX_GAIN_LEFT                (0x0002F841)

NLS_NOM_EMFC_AccVol                                 (0x04010680)
NLS_NOM_VOL_INFUS_ACTUAL_TOTAL                      (0x000268FC)

NLS_NOM_EMFC_sBkgFl                                 (0x04018190)
NLS_NOM_SETT_VENT_AWAY_FLOW_BACKGROUND              (0x0402F90F)

NLS_NOM_EMFC_RT_DL                                  (0x04010824)
NLS_NOM_EEG_PWR_SPEC_DELTA_ABS_RIGHT                (0x0002F864)

NLS_NOM_EMFC_fgDES                                  (0x04010854)
NLS_NOM_FLOW_AWAY_DESFL                             (0x0002F878)

NLS_NOM_EMFC_SerMg                                  (0x040105A4)
NLS_NOM_CONC_MG_SER                                 (0x0002F15C)

NLS_NOM_EMFC_AWVex                                  (0x04010794)
NLS_NOM_VOL_AWAY_EXP                                (0x0002F8C1)

NLS_NOM_EMFC_sPltTi                                 (0x04018018)
NLS_NOM_SETT_TIME_PD_RESP_PLAT                      (0x0402F0FF)

NLS_NOM_EMFC_RT_BE                                  (0x04010820)
NLS_NOM_EEG_PWR_SPEC_BETA_ABS_RIGHT                 (0x0002F85C)
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NLS_NOM_EMFC_UrpH                                   (0x04010584)
NLS_NOM_CONC_PH_URINE                               (0x00027064)


NLS_NOM_EMFC_T1_T2                                  (0x040100AC)
NLS_NOM_TEMP_DIFF                                   (0x0002E018)


NLS_NOM_EMFC_Patm                                   (0x040106AC)
NLS_NOM_PRESS_AIR_AMBIENT                           (0x0002F06B)


NLS_NOM_EMFC_sPVcP                                  (0x04018064)
NLS_NOM_SETT_PRESS_AWAY_INSP                        (0x04025108)


NLS_NOM_EMFC_sARR                                   (0x0401802C)
NLS_NOM_SETT_AWAY_RESP_RATE_APNEA                   (0x0402F8DE)


NLS_NOM_EMFC_BUN_PER_cr                             (0x04010110)
NLS_NOM_RATIO_BUN_CREA                              (0x0002F88F)


NLS_NOM_EMFC_SerPro                                 (0x040105C0)
NLS_NOM_CONC_PROT_SER                               (0x0002F178)


NLS_NOM_EMFC_HbF                                    (0x0401062C)
NLS_NOM_CONC_HB_FETAL                               (0x0002F165)


NLS_NOM_EMFC_i_eDES                                 (0x0401069C)
NLS_NOM_VENT_CONC_AWAY_DESFL_DELTA                  (0x0002F8B3)


NLS_NOM_EMFC_T2                                     (0x04010068)
NLS_NOM_TEMP_GEN_2                                  (0x0002F0C8)


NLS_NOM_EMFC_loPEEP                                 (0x0401A004)
NLS_NOM_VENT_PRESS_AWAY_END_EXP_POS_LIMIT_LO        (0x0002F8BA)


NLS_NOM_EMFC_TFC                                    (0x040111A4)
NLS_NOM_VOL_FLUID_THORAC                            (0x0002F8C5)


NLS_NOM_EMFC_Length                                 (0x04010420)
NLS_NOM_BIRTH_LENGTH                                (0x0002F818)


NLS_NOM_EMFC_sfgISO                                 (0x0401819C)
NLS_NOM_SETT_CONC_AWAY_ISOFL                        (0x040251E8)


NLS_NOM_EMFC_i_eSEV                                 (0x04010698)
NLS_NOM_VENT_CONC_AWAY_SEVOFL_DELTA                 (0x0002F8B9)


NLS_NOM_EMFC_RVrat                                  (0x04010E84)
NLS_NOM_RATIO_AWAY_RATE_VOL_AWAY                    (0x0002F88E)


NLS_NOM_EMFC_FIO2_MANUAL                            (0x04010ABC)
NLS_NOM_VENT_CONC_AWAY_O2_INSP                      (0x00027498)


NLS_NOM_EMFC_tCO2                                   (0x04010588)
NLS_NOM_CONC_CO2_TOT                                (0x0002F825)


NLS_NOM_EMFC_sVolas                                 (0x040181F4)
NLS_NOM_SETT_VENT_VOL_AWAY_ASSIST                   (0x0402F948)


NLS_NOM_EMFC_REF                                    (0x04010530)
NLS_NOM_RIGHT_HEART_FRACT_EJECT                     (0x0002F89B)


NLS_NOM_EMFC_RiseTi                                 (0x04010550)
NLS_NOM_VENT_TIME_PD_RAMP                           (0x0002F8BD)


NLS_NOM_EMFC_sSghTV                                 (0x04018020)
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NLS_NOM_SETT_VENT_VOL_TIDAL_SIGH                         (0x0402F8C0)

NLS_NOM_EMFC_RemTi                                       (0x04010DBC)
NLS_NOM_TIME_PD_EVOK_REMAIN                              (0x0002F8A0)

NLS_NOM_EMFC_RT_EEG                                      (0x0401082C)
NLS_NOM_EEG_ELEC_POTL_CRTX_RIGHT                         (0x0002F846)

NLS_NOM_EMFC_TT                                          (0x040105E8)
NLS_NOM_TIME_PD_THROMBIN                                 (0x0002F191)

NLS_NOM_EMFC_inPkFl                                      (0x04010674)
NLS_NOM_FLOW_AWAY_INSP_MAX                               (0x000250DD)

NLS_NOM_EMFC_PaCO2_ADJ                                   (0x04010A80)
NLS_NOM_CONC_PCO2_ART_ADJ                                (0x0002F832)

NLS_NOM_EMFC_sMMV                                        (0x0401811C)
NLS_NOM_SETT_VENT_VOL_MINUTE_AWAY_MAND                   (0x040251CC)

NLS_NOM_EMFC_RT_PCT_TH                                   (0x04010818)
NLS_NOM_EEG_PWR_SPEC_THETA_REL_RIGHT                     (0x0002F86E)

NLS_NOM_EMFC_sPVE                                        (0x04018088)
NLS_NOM_SETT_RATIO_IE_EXP_PV                             (0x0402F900)

NLS_NOM_EMFC_LT_BE                                       (0x040107E4)
NLS_NOM_EEG_PWR_SPEC_BETA_ABS_LEFT                       (0x0002F85B)

NLS_NOM_EMFC_sAADel                                      (0x0401813C)
NLS_NOM_SETT_APNEA_ALARM_DELAY                           (0x0402F8D9)

NLS_NOM_EMFC_aPTTPE                                      (0x04010E18)
NLS_NOM_TIME_PD_aPTT_PE                                  (0x0002F18E)

NLS_NOM_EMFC_sIPPV                                       (0x040180A0)
NLS_NOM_SETT_VENT_RESP_RATE_MODE_PPV_INTERMIT_PAP        (0x0402F939)

NLS_NOM_EMFC_P2_MEAN                                     (0x04010037)
NLS_NOM_PRESS_GEN_2_MEAN                                 (0x0002F0AB)

NLS_NOM_EMFC_iCa_N                                       (0x04010E88)
NLS_NOM_CONC_CA_GEN_NORM                                 (0x0002F822)

NLS_NOM_EMFC_sO2Mon                                      (0x040180D4)
NLS_NOM_SETT_VENT_ANALY_CONC_GAS_O2_MODE                 (0x0402F90E)

NLS_NOM_EMFC_P6_SYS                                      (0x04010405)
NLS_NOM_PRESS_GEN_6_SYS                                  (0x0002F3F9)

NLS_NOM_EMFC_DESLev                                      (0x04010880)
NLS_NOM_VOL_LVL_LIQUID_BOTTLE_DESFL                      (0x0002F8C8)

NLS_NOM_EMFC_U_PER_POsm                                  (0x04010198)
NLS_NOM_RATIO_URINE_SER_OSM                              (0x0002F898)

NLS_NOM_EMFC_RT_TP                                       (0x04010840)
NLS_NOM_EEG_PWR_SPEC_TOT_RIGHT                           (0x0002F872)

NLS_NOM_EMFC_NsLoss                                      (0x040101D4)
NLS_NOM_NSLOSS                                           (0x0002F16D)

NLS_NOM_EMFC_lowMV                                       (0x0401A018)
NLS_NOM_SETT_VENT_VOL_MINUTE_AWAY_LIMIT_LO               (0x0402F94C)
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NLS_NOM_EMFC_PTC                                    (0x04010DB8)
NLS_NOM_PTC_CNT                                     (0x0002F88B)

NLS_NOM_EMFC_sCMV                                   (0x04018114)
NLS_NOM_SETT_VENT_MODE_MAND_CTS_ONOFF              (0x0402F922)

NLS_NOM_EMFC_BP                                     (0x04010888)
NLS_NOM_PRESS_BLD                                   (0x00024A00)

NLS_NOM_EMFC_sChrge                                 (0x04018200)
NLS_NOM_SETT_EVOK_CHARGE                           (0x0402F8E6)

NLS_NOM_EMFC_ESV                                    (0x04010538)
NLS_NOM_VOL_VENT_L_END_SYS                          (0x00024C04)

NLS_NOM_EMFC_sNeblr                                 (0x04018044)
NLS_NOM_SETT_VENT_NEBULIZER_MODE                   (0x0402F925)

NLS_NOM_EMFC_L_III                                  (0x04010784)
NLS_NOM_ECG_ELEC_POTL_III                          (0x0002013D)

NLS_NOM_EMFC_i_eENF                                 (0x04010690)
NLS_NOM_VENT_CONC_AWAY_ENFL_DELTA                  (0x0002F8B4)

NLS_NOM_EMFC_EDVI                                   (0x0401053C)
NLS_NOM_VOL_VENT_L_END_DIA_INDEX                   (0x0002F8D0)

NLS_NOM_EMFC_RSBI                                   (0x04010EA0)
NLS_NOM_BREATH_RAPID_SHALLOW_INDEX                 (0x0002F819)

NLS_NOM_EMFC_UrKEx                                  (0x040101A8)
NLS_NOM_CONC_K_URINE_EXCR                          (0x0002F198)

NLS_NOM_EMFC_Twitch                                 (0x04010DB4)
NLS_NOM_TWITCH_AMPL                                 (0x0002F8AC)

NLS_NOM_EMFC_IUP_MEAN                               (0x04010057)
NLS_NOM_PRESS_INTRA_UTERAL_MEAN                    (0x0002F0DB)

NLS_NOM_EMFC_SerCK                                  (0x040105FC)
NLS_NOM_CONC_CREA_KIN_SER                          (0x0002F180)

NLS_NOM_EMFC_alphaA                                 (0x040105F4)
NLS_NOM_CONC_ALPHA_AMYLASE                         (0x0002F186)

NLS_NOM_EMFC_PT_PE                                  (0x04010E24)
NLS_NOM_TIME_PD_PT_PE                              (0x0002F190)

NLS_NOM_EMFC_ExpTi                                  (0x0401066C)
NLS_NOM_TIME_PD_EXP                                (0x0002F8A1)

NLS_NOM_EMFC_sPtCat                                 (0x04018164)
NLS_NOM_SETT_PAT_TYPE                              (0x0402F8F6)

NLS_NOM_EMFC_fgENF                                  (0x04010860)
NLS_NOM_FLOW_AWAY_ENFL                             (0x0002F879)

NLS_NOM_EMFC_tBili                                  (0x0401058C)
NLS_NOM_CONC_BILI_TOT                              (0x0002F177)

NLS_NOM_EMFC_UrUrea                                 (0x04010580)
NLS_NOM_CONC_UREA_URINE                           (0x0002F195)

NLS_NOM_EMFC_L_aVR                                  (0x04010788)
NLS_NOM_ECG_ELEC_POTL_AVR                          (0x0002013E)
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NLS_NOM_EMFC_P2                                       (0x04010034)
NLS_NOM_PRESS_GEN_2                                   (0x0002F0A8)

NLS_NOM_EMFC_LDH                                      (0x04010638)
NLS_NOM_CONC_LDH                                      (0x0002F17B)

NLS_NOM_EMFC_sTrVol                                   (0x04018138)
NLS_NOM_SETT_VENT_VOL_LUNG_TRAPD                      (0x040251B8)

NLS_NOM_EMFC_tProt                                    (0x04010634)
NLS_NOM_CONC_PROT_TOT                                 (0x0002F179)

NLS_NOM_EMFC_sOxiAl                                   (0x04018168)
NLS_NOM_SETT_PULS_OXIM_SAT_O2_AL_ONOFF                (0x0402F8FD)

NLS_NOM_EMFC_B_PER_Cre_CALC                           (0x04010AE0)
NLS_NOM_RATIO_CONC_BLD_UREA_NITROGEN_CREA_CALC        (0x0002F890)

NLS_NOM_EMFC_HFMVin                                   (0x040106D8)
NLS_NOM_VOL_MINUTE_AWAY_INSP_HFV                      (0x0002F8CD)

NLS_NOM_EMFC_sTlow                                    (0x040181E4)
NLS_NOM_SETT_VENT_TIME_PD_EXP_APRV                    (0x0402F940)

NLS_NOM_EMFC_TOF2                                     (0x04010DC4)
NLS_NOM_TRAIN_OF_FOUR_2                               (0x0002F8A8)

NLS_NOM_EMFC_Rf_III                                   (0x0401073C)
NLS_NOM_ECG_AMPL_ST_BASELINE_III                      (0x0002F44D)

NLS_NOM_EMFC_sGasPr                                   (0x040181C0)
NLS_NOM_SETT_VENT_GAS_PROBE_POSN                      (0x0402F920)

NLS_NOM_EMFC_Met_Hb                                   (0x04010630)
NLS_NOM_CONC_HB_MET_GEN                               (0x0002717C)

NLS_NOM_EMFC_P7_SYS                                   (0x04010409)
NLS_NOM_PRESS_GEN_7_SYS                               (0x0002F3FD)

NLS_NOM_EMFC_L_V5                                     (0x04010774)
NLS_NOM_ECG_ELEC_POTL_V5                              (0x00020107)

NLS_NOM_EMFC_T3                                       (0x04010410)
NLS_NOM_TEMP_GEN_3                                    (0x0002F0C9)

NLS_NOM_EMFC_AGTs                                     (0x04010CE4)
NLS_NOM_CONC_AWAY_AGENT_SEC                           (0x0002F820)

NLS_NOM_EMFC_sPVinT                                   (0x04018068)
NLS_NOM_SETT_VENT_TIME_PD_INSP_PV                     (0x0402F943)

NLS_NOM_EMFC_PatID                                    (0x04010B68)
NLS_NOM_PAT_ID                                        (0x0002F88A)

NLS_NOM_EMFC_Rf_V2                                    (0x04010750)
NLS_NOM_ECG_AMPL_ST_BASELINE_V2                       (0x0002F414)

NLS_NOM_EMFC_Model                                    (0x04018110)
NLS_NOM_ID_MODEL                                      (0x0002F887)

NLS_NOM_EMFC_MinAwP                                   (0x0401050C)
NLS_NOM_PRESS_AWAY_MIN                                (0x000250F2)

NLS_NOM_EMFC_LT_DL                                    (0x040107E8)
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NLS_NOM_EEG_PWR_SPEC_DELTA_ABS_LEFT                      (0x0002F863)

NLS_NOM_EMFC_tSerCa                                      (0x040105A0)
NLS_NOM_CONC_tCA_SER                                     (0x0002F15D)

NLS_NOM_EMFC_ScO2_CALC                                   (0x04010A9C)
NLS_NOM_SAT_O2_CAP_CALC                                  (0x0002F1A0)

NLS_NOM_EMFC_ECTOP                                       (0x04010090)
NLS_NOM_ECG_STAT_ECT                                     (0x0002D006)

NLS_NOM_EMFC_sFlCal                                      (0x04018154)
NLS_NOM_SETT_FLOW_CAL_MODE                               (0x0402F8F1)

NLS_NOM_EMFC_L_V3                                        (0x0401076C)
NLS_NOM_ECG_ELEC_POTL_V3                                 (0x00020105)

NLS_NOM_EMFC_RHYTHM                                      (0x0401008C)
NLS_NOM_ECG_STAT_RHY                                     (0x0002D007)

NLS_NOM_EMFC_ACI                                         (0x040111AC)
NLS_NOM_OUTPUT_CARD_INDEX_ACCEL                          (0x0002F889)

NLS_NOM_EMFC_P7_MEAN                                     (0x0401040B)
NLS_NOM_PRESS_GEN_7_MEAN                                 (0x0002F3FF)

NLS_NOM_EMFC_sIMV                                        (0x040180A4)
NLS_NOM_SETT_VENT_RESP_RATE_MODE_MAND_INTERMITT          (0x0402F938)

NLS_NOM_EMFC_SerAlb                                      (0x040105B4)
NLS_NOM_CONC_ALB_SER                                     (0x0002F163)

NLS_NOM_EMFC_Pmin                                        (0x0401067C)
NLS_NOM_PRESS_AWAY_MIN                                   (0x000250F2)

NLS_NOM_EMFC_pHa_ADJ                                     (0x04010A4C)
NLS_NOM_CONC_PH_ART_ADJ                                  (0x0002F836)

NLS_NOM_EMFC_sHFVRR                                      (0x04018108)
NLS_NOM_SETT_AWAY_RESP_RATE_HFV                          (0x0402F8DF)

NLS_NOM_EMFC_sPWave                                      (0x0401803C)
NLS_NOM_SETT_AWAY_PRESS_PATTERN                          (0x0402F8DC)

NLS_NOM_EMFC_sfgAGT                                      (0x04018198)
NLS_NOM_SETT_FLOW_AWAY_AGENT                             (0x0402F876)

NLS_NOM_EMFC_BPAPPH                                      (0x040180C0)
NLS_NOM_SETT_VENT_PRESS_AWAY_BIPAP_HIGH                  (0x0402F929)

NLS_NOM_EMFC_sAFIO2                                      (0x04018034)
NLS_NOM_SETT_VENT_CONC_AWAY_O2_INSP_APNEA                (0x0402F917)

NLS_NOM_EMFC_P6                                          (0x04010404)
NLS_NOM_PRESS_GEN_6                                      (0x0002F3F8)

NLS_NOM_EMFC_PTrat                                       (0x04010E28)
NLS_NOM_RATIO_TIME_PD_PT                                 (0x0002F895)

NLS_NOM_EMFC_IUP_DIA                                     (0x04010056)
NLS_NOM_PRESS_INTRA_UTERAL_DIA                           (0x0002F0DA)

NLS_NOM_EMFC_TVin                                        (0x040106B0)
NLS_NOM_VOL_AWAY_INSP_TIDAL                              (0x0002F0E0)
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NLS_NOM_EMFC_PtVent                             (0x04010BDC)
NLS_NOM_VENT_ACTIVE                             (0x0002F8B0)

NLS_NOM_EMFC_LT_PCT_AL                          (0x040107D0)
NLS_NOM_EEG_PWR_SPEC_ALPHA_REL_LEFT            (0x0002F859)

NLS_NOM_EMFC_Rdyn                               (0x04010480)
NLS_NOM_RES_AWAY_DYN                            (0x0002F899)

NLS_NOM_EMFC_sVMode                             (0x04018000)
NLS_NOM_SETT_VENT_MODE                          (0x0402F921)

NLS_NOM_EMFC_etAGTs                             (0x04010CF0)
NLS_NOM_CONC_AWAY_AGENT_ET_SEC                 (0x0002F81E)

NLS_NOM_EMFC_pHv_ADJ                            (0x04010A50)
NLS_NOM_CONC_PH_VEN_ADJ                         (0x0002F839)

NLS_NOM_EMFC_sHum                               (0x04018288)
NLS_NOM_SETT_HUMID                              (0x0402F103)

NLS_NOM_EMFC_highP                              (0x0401A000)
NLS_NOM_SETT_VENT_PRESS_AWAY_LIMIT_HI          (0x0402F930)

NLS_NOM_EMFC_LT_TP                              (0x04010804)
NLS_NOM_EEG_PWR_SPEC_TOT_LEFT                  (0x0002F871)

NLS_NOM_EMFC_SCreat                             (0x04010180)
NLS_NOM_CONC_CREA_SER                          (0x0002F827)

NLS_NOM_EMFC_sExpFl                             (0x04018134)
NLS_NOM_SETT_FLOW_AWAY_EXP                     (0x0402F8EA)

NLS_NOM_EMFC_HFVTV                              (0x040106E8)
NLS_NOM_VENT_VOL_TIDAL_HFV                     (0x0002F8BF)

NLS_NOM_EMFC_UrCl                               (0x040105B8)
NLS_NOM_CONC_CHLOR_URINE                       (0x0002F19A)

NLS_NOM_EMFC_fgSEV                              (0x04010858)
NLS_NOM_FLOW_AWAY_SEVOFL                       (0x0002F880)

NLS_NOM_EMFC_sPlow                              (0x040181EC)
NLS_NOM_SETT_VENT_PRESS_AWAY_EXP_APRV          (0x0402F92D)

NLS_NOM_EMFC_LT_PCT_DL                          (0x040107D8)
NLS_NOM_EEG_PWR_SPEC_DELTA_REL_LEFT            (0x0002F867)

NLS_NOM_EMFC_Turine                             (0x04010BC4)
NLS_NOM_TEMP_VESICAL                           (0x0002F0C4)

NLS_NOM_EMFC_Rf_V1                              (0x0401074C)
NLS_NOM_ECG_AMPL_ST_BASELINE_V1                (0x0002F413)

NLS_NOM_EMFC_ENFLev                             (0x04010878)
NLS_NOM_VOL_LVL_LIQUID_BOTTLE_ENFL             (0x0002F8C9)

NLS_NOM_EMFC_liATi                              (0x0401A00C)
NLS_NOM_SETT_APNEA_ALARM_DELAY                 (0x0402F8D9)

NLS_NOM_EMFC_fgHAL                              (0x0401085C)
NLS_NOM_FLOW_AWAY_HALOTH                       (0x0002F87B)

NLS_NOM_EMFC_AP                                 (0x040105F0)
NLS_NOM_CONC_AP                                 (0x0002F185)
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NLS_NOM_EMFC_sInsTi                                        (0x040180E4)
NLS_NOM_SETT_VENT_TIME_PD_INSP                             (0x0402F941)


NLS_NOM_EMFC_sThigh                                        (0x040181E8)
NLS_NOM_SETT_VENT_TIME_PD_INSP_APRV                        (0x0402F942)


NLS_NOM_EMFC_sCPAP                                         (0x040180F4)
NLS_NOM_SETT_PRESS_AWAY_CTS_POS                            (0x040250F4)


NLS_NOM_EMFC_sO2Pr                                         (0x040181C4)
NLS_NOM_SETT_VENT_O2_PROBE_POSN                            (0x0402F927)


NLS_NOM_EMFC_loPmax                                        (0x04018174)
NLS_NOM_SETT_PRESS_AWAY_INSP_MAX_LIMIT_LO                  (0x0402F8FB)


NLS_NOM_EMFC_IUP                                           (0x04010054)
NLS_NOM_PRESS_INTRA_UTERAL                                 (0x0002F0D8)


NLS_NOM_EMFC_IMV                                           (0x04010138)
NLS_NOM_VENT_MODE_MAND_INTERMIT                            (0x0002D02A)


NLS_NOM_EMFC_sTVap                                         (0x04018184)
NLS_NOM_SETT_VOL_AWAY_TIDAL_APPLIED                        (0x0402F952)


NLS_NOM_EMFC_PVPI                                          (0x040111F0)
NLS_NOM_PERM_VASC_PULM_INDEX                               (0x0002F106)


NLS_NOM_EMFC_OperID                                        (0x04010AB4)
NLS_NOM_SETT_OPERID                                        (0x0402F958)


NLS_NOM_EMFC_Ppeak                                         (0x040106CC)
NLS_NOM_PRESS_AWAY_INSP_MAX                                (0x00025109)


NLS_NOM_EMFC_P5_DIA                                        (0x04010402)
NLS_NOM_PRESS_GEN_5_DIA                                    (0x0002F3F6)


NLS_NOM_EMFC_sADel                                         (0x0401817C)
NLS_NOM_SETT_APNEA_ALARM_DELAY                             (0x0402F8D9)


NLS_NOM_EMFC_NIF                                           (0x04010E9C)
NLS_NOM_PRESS_AWAY_NEG_MAX                                 (0x000250F9)


NLS_NOM_EMFC_SpO2_APER                                     (0x040100E0)
NLS_NOM_PULS_OXIM_SAT_O2                                   (0x00024BB8)


NLS_NOM_EMFC_sTVin                                         (0x040181CC)
NLS_NOM_SETT_VOL_AWAY_INSP_TIDAL                           (0x0402F0E0)


NLS_NOM_EMFC_RT_MPF                                        (0x04010834)
NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_MEDIAN_RIGHT                (0x0002F84C)


NLS_NOM_EMFC_RT_PPF                                        (0x04010838)
NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK_RIGHT                  (0x0002F850)


NLS_NOM_EMFC_ALP                                           (0x04010640)
NLS_NOM_CONC_ALP                                           (0x0002F81D)


NLS_NOM_EMFC_CO2Cal                                        (0x040181E0)
NLS_NOM_SETT_VENT_CO2_CAL_MODE                             (0x0402F914)


NLS_NOM_EMFC_sFlow                                         (0x040180F8)
NLS_NOM_SETT_VENT_FLOW                                     (0x0402F91B)


NLS_NOM_EMFC_sAWRR                                         (0x04018004)
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NLS_NOM_SETT_AWAY_RESP_RATE                              (0x04025012)

NLS_NOM_EMFC_sHInPr                                      (0x0401818C)
NLS_NOM_SETT_PRESS_AWAY_INSP_MAX                         (0x04025109)

NLS_NOM_EMFC_set_T                                       (0x040181D0)
NLS_NOM_SETT_TEMP                                        (0x04024B48)

NLS_NOM_EMFC_BasePr                                      (0x04010554)
NLS_NOM_VENT_PRESS_AWAY_END_EXP_POS                      (0x000251A8)

NLS_NOM_EMFC_SO2_l                                       (0x040111B4)
NLS_NOM_SAT_O2_LEFT                                      (0x0002F89D)

NLS_NOM_EMFC_Age                                         (0x04010BC8)
NLS_NOM_AGE                                              (0x0002F810)

NLS_NOM_EMFC_CT                                          (0x04010648)
NLS_NOM_TIME_PD_COAGULATION                              (0x0002F192)

NLS_NOM_EMFC_L_V2                                        (0x04010768)
NLS_NOM_ECG_ELEC_POTL_V2                                 (0x00020104)

NLS_NOM_EMFC_sO2Suc                                      (0x04018048)
NLS_NOM_SETT_VENT_O2_SUCTION_MODE                        (0x0402F928)

NLS_NOM_EMFC_sTPDel                                      (0x040180D0)
NLS_NOM_SETT_TACHY_APNEA_DELAY                           (0x0402F906)

NLS_NOM_EMFC_Crea                                        (0x04010ADC)
NLS_NOM_CONC_CREA                                        (0x0002F173)

NLS_NOM_EMFC_NgInsP                                      (0x04010484)
NLS_NOM_PRESS_AWAY_NEG_MAX                               (0x000250F9)

NLS_NOM_EMFC_P7                                          (0x04010408)
NLS_NOM_PRESS_GEN_7                                      (0x0002F3FC)

NLS_NOM_EMFC_MV                                          (0x040106B8)
NLS_NOM_VOL_MINUTE_AWAY                                  (0x00025148)

NLS_NOM_EMFC_SEVLev                                      (0x04010884)
NLS_NOM_VOL_LVL_LIQUID_BOTTLE_SEVOFL                     (0x0002F8CC)

NLS_NOM_EMFC_Quick                                       (0x040105EC)
NLS_NOM_TIME_PD_THROMBOPLAS                              (0x0002F193)

NLS_NOM_EMFC_PaFIO2                                      (0x04010BE0)
NLS_NOM_RATIO_PaO2_FIO2                                  (0x0002F894)

NLS_NOM_EMFC_pHc                                         (0x04010A44)
NLS_NOM_CONC_PH_CAP                                      (0x0002F158)

NLS_NOM_EMFC_ESVI                                        (0x04010540)
NLS_NOM_VOL_VENT_L_END_SYS_INDEX                         (0x0002F8D1)

NLS_NOM_EMFC_Rinsp                                       (0x04010670)
NLS_NOM_RES_AWAY_INSP                                    (0x00025128)

NLS_NOM_EMFC_i_eN2O                                      (0x04010688)
NLS_NOM_VENT_CONC_AWAY_N2O_DELTA                         (0x0002F8B7)

NLS_NOM_EMFC_Rf_aVR                                      (0x04010740)
NLS_NOM_ECG_AMPL_ST_BASELINE_AVR                         (0x0002F44E)
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NLS_NOM_EMFC_LT_TH                                      (0x040107EC)
NLS_NOM_EEG_PWR_SPEC_THETA_ABS_LEFT                     (0x0002F869)

NLS_NOM_EMFC_RT_SEF                                     (0x0401083C)
NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE_RIGHT      (0x0002F854)

NLS_NOM_EMFC_RT_PCT_AL                                  (0x0401080C)
NLS_NOM_EEG_PWR_SPEC_ALPHA_REL_RIGHT                    (0x0002F85A)

NLS_NOM_EMFC_Rexp                                       (0x04010664)
NLS_NOM_RES_AWAY_EXP                                    (0x00025124)

NLS_NOM_EMFC_P4_MEAN                                    (0x0401003F)
NLS_NOM_PRESS_GEN_4_MEAN                                (0x0002F0B3)

NLS_NOM_EMFC_i_eO2                                      (0x040106A4)
NLS_NOM_VENT_CONC_AWAY_O2_DELTA                         (0x00025168)

NLS_NOM_EMFC_Rf_V4                                      (0x04010758)
NLS_NOM_ECG_AMPL_ST_BASELINE_V4                         (0x0002F416)

NLS_NOM_EMFC_P5_SYS                                     (0x04010401)
NLS_NOM_PRESS_GEN_5_SYS                                 (0x0002F3F5)

NLS_NOM_EMFC_PT_INR                                     (0x04010E2C)
NLS_NOM_PT_INTL_NORM_RATIO                              (0x0002F18C)

NLS_NOM_EMFC_Elapse                                     (0x04010B34)
NLS_NOM_TIME_PD_FROM_LAST_MSMT                          (0x0002F8A2)

NLS_NOM_EMFC_ACT                                        (0x04010E10)
NLS_NOM_TIME_PD_ACT                                     (0x0002F18A)

NLS_NOM_EMFC_sfgAir                                     (0x040181B0)
NLS_NOM_SETT_FLOW_AWAY_AIR                              (0x0402F877)

NLS_NOM_EMFC_sSilnc                                     (0x04018080)
NLS_NOM_SETT_AL_SILENCE_ONOFF                           (0x0402F8D8)

NLS_NOM_EMFC_TOFrat                                     (0x04010DB0)
NLS_NOM_RATIO_TRAIN_OF_FOUR                             (0x0002F897)

NLS_NOM_EMFC_L_aVL                                      (0x0401078C)
NLS_NOM_ECG_ELEC_POTL_AVL                               (0x0002013F)

NLS_NOM_EMFC_Field1                                     (0x04010AC8)
NLS_NOM_SETT_FIELD1                                     (0x0402F959)

NLS_NOM_EMFC_HFTVin                                     (0x040106E4)
NLS_NOM_VENT_VOL_AWAY_INSP_TIDAL_HFV                    (0x0002F8BE)

NLS_NOM_EMFC_SvO2_CALC                                  (0x04010A98)
NLS_NOM_SAT_O2_VEN_CALC                                 (0x0002F166)

NLS_NOM_EMFC_AAI                                        (0x04011194)
NLS_NOM_ELEC_EVOK_POTL_CRTX_ACOUSTIC_AAI                (0x0002F873)

NLS_NOM_EMFC_TVPSV                                      (0x04010E98)
NLS_NOM_VOL_AWAY_TIDAL_PSV                              (0x0002F8C3)

NLS_NOM_EMFC_VPB                                        (0x04010088)
NLS_NOM_ECG_V_P_C_CNT                                   (0x00024261)

NLS_NOM_EMFC_sMVDel                                     (0x04018144)
NLS_NOM_SETT_VOL_MINUTE_ALARM_DELAY                     (0x0402F953)
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NLS_NOM_EMFC_sCO2Al                         (0x04018160)
NLS_NOM_SETT_AWAY_CO2_AL_ONOFF              (0x0402F8DB)

NLS_NOM_EMFC_HFVAmp                         (0x0401055C)
NLS_NOM_VENT_AMPL_HFV                       (0x0002F8B1)

NLS_NOM_EMFC_lowO2                          (0x0401A01C)
NLS_NOM_SETT_VENT_CONC_AWAY_O2_LIMIT_LO     (0x0402F91A)

NLS_NOM_EMFC_BP_MEAN                        (0x0401088B)
NLS_NOM_PRESS_BLD_MEAN                      (0x00024A03)

NLS_NOM_EMFC_sSenFl                         (0x0401805C)
NLS_NOM_SETT_VENT_AWAY_FLOW_SENSE           (0x0402F911)

NLS_NOM_EMFC_sDRate                         (0x04018124)
NLS_NOM_SETT_FLOW_FLUID_PUMP                (0x04026858)

NLS_NOM_EMFC_fgISO                          (0x04010864)
NLS_NOM_FLOW_AWAY_ISOFL                     (0x0002F87C)

NLS_NOM_EMFC_fgAir                          (0x040111BC)
NLS_NOM_FLOW_AWAY_AIR                       (0x0002F877)

NLS_NOM_EMFC_SaO2_CALC                      (0x04010A94)
NLS_NOM_SAT_O2_ART_CALC                     (0x0002F164)

NLS_NOM_EMFC_sPVI                           (0x04018084)
NLS_NOM_SETT_RATIO_IE_INSP_PV               (0x0402F902)

NLS_NOM_EMFC_Power                          (0x04010B5C)
NLS_NOM_HEATING_PWR_INCUBATOR               (0x0002F886)

NLS_NOM_EMFC_sfgDES                         (0x040181A8)
NLS_NOM_SETT_CONC_AWAY_DESFL                (0x040251D8)

NLS_NOM_EMFC_i_eHAL                         (0x0401068C)
NLS_NOM_VENT_CONC_AWAY_HALOTH_DELTA         (0x0002F8B5)

NLS_NOM_EMFC_sTrgFl                         (0x04018148)
NLS_NOM_SETT_VENT_FLOW_INSP_TRIG            (0x0402F91D)

NLS_NOM_EMFC_InsTi                          (0x04010E74)
NLS_NOM_TIME_PD_INSP                        (0x0002F8A3)

NLS_NOM_EMFC_CrCl                           (0x04010124)
NLS_NOM_CONC_CREA_CLR                       (0x0002F16C)

NLS_NOM_EMFC_UrNa_PER_K                     (0x040101B0)
NLS_NOM_RATIO_CONC_URINE_NA_K               (0x0002F893)

NLS_NOM_EMFC_sCurnt                         (0x040181FC)
NLS_NOM_SETT_EVOK_CURR                      (0x0402F8E7)

NLS_NOM_EMFC_P3_SYS                         (0x04010039)
NLS_NOM_PRESS_GEN_3_SYS                     (0x0002F0AD)

NLS_NOM_EMFC_Rf_I                           (0x04010734)
NLS_NOM_ECG_AMPL_ST_BASELINE_I              (0x0002F411)

NLS_NOM_EMFC_KCT                            (0x04010654)
NLS_NOM_TIME_PD_KAOLIN_CEPHALINE            (0x0002F8A4)

NLS_NOM_EMFC_sPSVrp                         (0x04018180)
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NLS_NOM_SETT_VENT_TIME_PD_RAMP                    (0x0402F8BD)

NLS_NOM_EMFC_P8                                   (0x0401040C)
NLS_NOM_PRESS_GEN_8                               (0x0002F400)

NLS_NOM_EMFC_P2_SYS                               (0x04010035)
NLS_NOM_PRESS_GEN_2_SYS                           (0x0002F0A9)

NLS_NOM_EMFC_Air_T                                (0x04010B58)
NLS_NOM_TEMP_AMBIENT                              (0x0002F0C6)

NLS_NOM_EMFC_GPT                                  (0x04010610)
NLS_NOM_CONC_GPT                                  (0x0002F187)

NLS_NOM_EMFC_CK_MB                                (0x04010600)
NLS_NOM_CONC_CREA_KIN_MB                          (0x0002F181)

NLS_NOM_EMFC_P1_DIA                               (0x04010032)
NLS_NOM_PRESS_GEN_1_DIA                           (0x0002F0A6)

NLS_NOM_EMFC_fgFlow                               (0x040111C0)
NLS_NOM_FLOW_AWAY_TOT                             (0x0002F881)

NLS_NOM_EMFC_sBasFl                               (0x04018058)
NLS_NOM_SETT_VENT_AWAY_FLOW_BASE                  (0x0402F910)

NLS_NOM_EMFC_PTT                                  (0x040105E0)
NLS_NOM_TIME_PD_PTT                               (0x0002F8A5)

NLS_NOM_EMFC_sAPVE                                (0x04018090)
NLS_NOM_SETT_RATIO_IE_EXP_PV_APNEA                (0x0402F901)

NLS_NOM_EMFC_UrPro                                (0x04010620)
NLS_NOM_CONC_PRO_URINE                            (0x0002F19B)

NLS_NOM_EMFC_UCreat                               (0x040101A0)
NLS_NOM_CONC_CREA_URINE                           (0x0002F196)

NLS_NOM_EMFC_sfgENF                               (0x040181A0)
NLS_NOM_SETT_CONC_AWAY_ENFL                       (0x040251DC)

NLS_NOM_EMFC_SrUrea                               (0x040105C4)
NLS_NOM_UREA_SER                                  (0x0002F8AD)

NLS_NOM_EMFC_PlGain                               (0x04010514)
NLS_NOM_PULS_OXIM_PLETH_GAIN                      (0x0002F88D)

NLS_NOM_EMFC_pHc_ADJ                              (0x04010A54)
NLS_NOM_CONC_PH_CAP_ADJ                           (0x0002F837)

NLS_NOM_EMFC_TOF3                                 (0x04010DC8)
NLS_NOM_TRAIN_OF_FOUR_3                           (0x0002F8A9)

NLS_NOM_EMFC_exPkFl                               (0x040111CC)
NLS_NOM_FLOW_AWAY_EXP_MAX                         (0x000250D9)

NLS_NOM_EMFC_Rf_V3                                (0x04010754)
NLS_NOM_ECG_AMPL_ST_BASELINE_V3                   (0x0002F415)

NLS_NOM_EMFC_KPLUS                                (0x0401065C)
NLS_NOM_CONC_K_GEN                                (0x00027110)

NLS_NOM_EMFC_L_I                                  (0x0401077C)
NLS_NOM_ECG_ELEC_POTL_I                           (0x00020101)
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NLS_NOM_EMFC_sSghR                                   (0x0401801C)
NLS_NOM_SETT_VENT_SIGH_RATE                          (0x0402F93C)

NLS_NOM_EMFC_BSA_B                                   (0x0401043C)
NLS_NOM_AREA_BODY_SURFACE_ACTUAL_BOYD                (0x0002F812)

NLS_NOM_EMFC_G_Age                                   (0x04010428)
NLS_NOM_AGE_GEST                                     (0x0002F811)

NLS_NOM_EMFC_PlOsm                                   (0x04010164)
NLS_NOM_PLASMA_OSM                                   (0x0002F16B)

NLS_NOM_EMFC_fgO2                                    (0x0401086C)
NLS_NOM_FLOW_AWAY_O2                                 (0x0002F87F)

NLS_NOM_EMFC_PcO2_ADJ                                (0x04010A6C)
NLS_NOM_CONC_PO2_CAP_ADJ                             (0x0002F83C)

NLS_NOM_EMFC_DABP                                    (0x0401054C)
NLS_NOM_VENT_TIME_PD_PPV                             (0x00025360)

NLS_NOM_EMFC_sAPVcP                                  (0x0401806C)
NLS_NOM_SETT_VENT_PRESS_AWAY_PV_APNEA                (0x0402F933)

NLS_NOM_EMFC_sUrTi                                   (0x040181D4)
NLS_NOM_SETT_URINE_BAL_PD                            (0x0402F8AF)

NLS_NOM_EMFC_sEnTP                                   (0x040180B8)
NLS_NOM_SETT_TACHAPNEA_AL_ONOFF                      (0x0402F905)

NLS_NOM_EMFC_DPosP                                   (0x04010848)
NLS_NOM_VENT_TIME_PD_PPV                             (0x00025360)

NLS_NOM_EMFC_sustP                                   (0x0401A014)
NLS_NOM_SETT_VENT_PRESS_AWAY_SUST_LIMIT_HI           (0x0402F935)

NLS_NOM_EMFC_RRsync                                  (0x0401084C)
NLS_NOM_RESP_BREATH_ASSIST_CNT                       (0x0002F89A)

NLS_NOM_EMFC_sHFVFl                                  (0x04018104)
NLS_NOM_SETT_FLOW_AWAY_HFV                           (0x0402F8EB)

NLS_NOM_EMFC_L_aVF                                   (0x04010790)
NLS_NOM_ECG_ELEC_POTL_AVF                            (0x00020140)

NLS_NOM_EMFC_RT_AL                                   (0x0401081C)
NLS_NOM_EEG_PWR_SPEC_ALPHA_ABS_RIGHT                 (0x0002F856)

NLS_NOM_EMFC_sMode                                   (0x04018098)
NLS_NOM_SETT_MODE_MSMT                               (0x0402F8F5)

NLS_NOM_EMFC_sSPEEP                                  (0x040180AC)
NLS_NOM_SETT_VENT_PRESS_AWAY_END_EXP_POS_INTERMIT    (0x0402F92C)

NLS_NOM_EMFC_sPhigh                                  (0x040181F0)
NLS_NOM_SETT_VENT_PRESS_AWAY_INSP_APRV               (0x0402F92E)

NLS_NOM_EMFC_LT_PCT_TH                               (0x040107DC)
NLS_NOM_EEG_PWR_SPEC_THETA_REL_LEFT                  (0x0002F86D)

NLS_NOM_EMFC_sCycTi                                  (0x0401809C)
NLS_NOM_SETT_TIME_PD_MSMT                            (0x0402F909)

NLS_NOM_EMFC_fgN2O                                   (0x04010868)
NLS_NOM_FLOW_AWAY_N2O                                (0x0002F87E)
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NLS_NOM_EMFC_AST                                        (0x0401063C)
NLS_NOM_CONC_AST                                        (0x0002F184)


NLS_NOM_EMFC_SpTVex                                     (0x040106E0)
NLS_NOM_VOL_AWAY_EXP_TIDAL_SPONT                        (0x0002F8C2)


NLS_NOM_EMFC_sIE_1                                      (0x040180EC)
NLS_NOM_SETT_RATIO_IE                                   (0x04025118)


NLS_NOM_EMFC_P1_MEAN                                    (0x04010033)
NLS_NOM_PRESS_GEN_1_MEAN                                (0x0002F0A7)


NLS_NOM_EMFC_PvCO2_ADJ                                  (0x04010A84)
NLS_NOM_CONC_PCO2_VEN_ADJ                               (0x0002F835)


NLS_NOM_EMFC_TC                                         (0x04010E7C)
NLS_NOM_AWAY_TC                                         (0x0002F816)


NLS_NOM_EMFC_P4_DIA                                     (0x0401003E)
NLS_NOM_PRESS_GEN_4_DIA                                 (0x0002F0B2)


NLS_NOM_EMFC_P1                                         (0x04010030)
NLS_NOM_PRESS_GEN_1                                     (0x0002F0A4)


NLS_NOM_EMFC_hiSghP                                     (0x0401A008)
NLS_NOM_SETT_VENT_PRESS_AWAY_SIGH_LIMIT_HI              (0x0402F934)


NLS_NOM_EMFC_Rf_V6                                      (0x04010760)
NLS_NOM_ECG_AMPL_ST_BASELINE_V6                         (0x0002F418)


NLS_NOM_EMFC_Diff_X                                     (0x04010224)
NLS_NOM_TEMP_DIFF                                       (0x0002E018)


NLS_NOM_EMFC_sMVAl                                      (0x040180DC)
NLS_NOM_SETT_VOL_MINUTE_AWAY_AL_ONOFF                   (0x0402F955)


NLS_NOM_EMFC_P5_MEAN                                    (0x04010403)
NLS_NOM_PRESS_GEN_5_MEAN                                (0x0002F3F7)


NLS_NOM_EMFC_sAPVO2                                     (0x04018078)
NLS_NOM_SETT_VENT_CONC_AWAY_O2_INSP_PV_APNEA            (0x0402F918)


NLS_NOM_EMFC_Wave                                       (0x04018170)
NLS_NOM_WAVE_LBL                                        (0x0002F8D2)


NLS_NOM_EMFC_UrK                                        (0x040101A4)
NLS_NOM_CONC_K_URINE                                    (0x0002F197)


NLS_NOM_EMFC_LT_MDF                                     (0x040107F4)
NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_DOM_MEAN_LEFT            (0x0002F849)


NLS_NOM_EMFC_RRaw                                       (0x040106C4)
NLS_NOM_VENT_RESP_RATE                                  (0x00025022)


NLS_NOM_EMFC_sAPVTi                                     (0x04018074)
NLS_NOM_SETT_VENT_TIME_PD_INSP_PV_APNEA                 (0x0402F944)


NLS_NOM_EMFC_HI                                         (0x040111B0)
NLS_NOM_CARD_CONTRACT_HEATHER_INDEX                     (0x0002F81C)


NLS_NOM_EMFC_sPEEP                                      (0x040180A8)
NLS_NOM_SETT_VENT_PRESS_AWAY_END_EXP_POS                (0x040251A8)


NLS_NOM_EMFC_L_V6                                       (0x04010778)
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NLS_NOM_ECG_ELEC_POTL_V6                                  (0x00020108)

NLS_NOM_EMFC_COsm                                        (0x04010120)
NLS_NOM_CREA_OSM                                         (0x0002F83F)

NLS_NOM_EMFC_ISOLev                                      (0x04010874)
NLS_NOM_VOL_LVL_LIQUID_BOTTLE_ISOFL                      (0x0002F8CB)

NLS_NOM_EMFC_Rf_II                                       (0x04010738)
NLS_NOM_ECG_AMPL_ST_BASELINE_II                          (0x0002F412)

NLS_NOM_EMFC_tUrVol                                      (0x04010BBC)
NLS_NOM_VOL_URINE_BAL_PD_INSTANT                         (0x0002F8CE)

NLS_NOM_EMFC_PcCO2_ADJ                                   (0x04010A88)
NLS_NOM_CONC_PCO2_CAP_ADJ                                (0x0002F833)

NLS_NOM_EMFC_sfgN2O                                      (0x040181BC)
NLS_NOM_SETT_FLOW_AWAY_N2O                               (0x0402F87E)

NLS_NOM_EMFC_UrFl                                        (0x04010890)
NLS_NOM_FLOW_URINE_INSTANT                               (0x0002680C)

NLS_NOM_EMFC_sAPVRR                                      (0x04018070)
NLS_NOM_SETT_VENT_RESP_RATE_PV_APNEA                     (0x0402F93A)

NLS_NOM_EMFC_LT_SEF                                      (0x04010800)
NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_SPECTRAL_EDGE_LEFT        (0x0002F853)

NLS_NOM_EMFC_Chol                                        (0x04010618)
NLS_NOM_CONC_CHOLESTEROL                                 (0x0002F16E)

NLS_NOM_EMFC_L_V1                                        (0x04010764)
NLS_NOM_ECG_ELEC_POTL_V1                                 (0x00020103)

NLS_NOM_EMFC_AwN2O                                       (0x04010518)
NLS_NOM_CONC_AWAY_N2O                                    (0x000251F0)

NLS_NOM_EMFC_P8_SYS                                      (0x0401040D)
NLS_NOM_PRESS_GEN_8_SYS                                  (0x0002F401)

NLS_NOM_EMFC_ICG                                         (0x040111A0)
NLS_NOM_IMPED_TTHOR_ECG                                  (0x0002F888)

NLS_NOM_EMFC_HCO3_CALC                                   (0x04010AA0)
NLS_NOM_CONC_HCO3_GEN_CALC                               (0x0002F82E)

NLS_NOM_EMFC_sRRaw                                       (0x0401812C)
NLS_NOM_SETT_VENT_RESP_RATE                              (0x04025022)

NLS_NOM_EMFC_sO2                                         (0x0401810C)
NLS_NOM_SETT_CONC_AWAY_O2                                (0x04025164)

NLS_NOM_EMFC_sTV                                         (0x04018008)
NLS_NOM_SETT_VOL_AWAY_TIDAL                              (0x0402513C)

NLS_NOM_EMFC_PCV                                         (0x04010650)
NLS_NOM_CONC_HCT_GEN                                     (0x00027184)

NLS_NOM_EMFC_Pmax                                        (0x04010678)
NLS_NOM_VENT_PRESS_AWAY_INSP_MAX                         (0x0002F8BB)

NLS_NOM_EMFC_LT_PCT_BE                                   (0x040107D4)
NLS_NOM_EEG_PWR_SPEC_BETA_REL_LEFT                       (0x0002F85F)
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NLS_NOM_EMFC_sInsFl                                    (0x04018130)
NLS_NOM_SETT_FLOW_AWAY_INSP                            (0x0402F8EC)

NLS_NOM_EMFC_UrVSht                                    (0x0401088C)
NLS_NOM_VOL_URINE_SHIFT                                (0x0002F8CF)

NLS_NOM_EMFC_AGTLev                                    (0x04010870)
NLS_NOM_VOL_LVL_LIQUID_BOTTLE_AGENT                    (0x0002F8C7)

NLS_NOM_EMFC_sPSV                                      (0x04018038)
NLS_NOM_SETT_VENT_PRESS_AWAY_PV                        (0x0402F8BC)

NLS_NOM_EMFC_Urea                                      (0x04010AB8)
NLS_NOM_CONC_UREA_GEN                                  (0x0002F172)

NLS_NOM_EMFC_P8_MEAN                                   (0x0401040F)
NLS_NOM_PRESS_GEN_8_MEAN                               (0x0002F403)

NLS_NOM_EMFC_RSCALE                                    (0x04010844)
NLS_NOM_EEG_ELEC_POTL_CRTX_GAIN_RIGHT                  (0x0002F842)

NLS_NOM_EMFC_sRepTi                                    (0x04018208)
NLS_NOM_SETT_TIME_PD_TRAIN_OF_FOUR                     (0x0402F8A6)

NLS_NOM_EMFC_LT_EEG                                    (0x040107F0)
NLS_NOM_EEG_ELEC_POTL_CRTX_LEFT                        (0x0002F845)

NLS_NOM_EMFC_P3_DIA                                    (0x0401003A)
NLS_NOM_PRESS_GEN_3_DIA                                (0x0002F0AE)

NLS_NOM_EMFC_SerPho                                    (0x040105A8)
NLS_NOM_CONC_P_SER                                     (0x0002F15E)

NLS_NOM_EMFC_eeFlow                                    (0x040111D0)
NLS_NOM_FLOW_AWAY_EXP_ET                               (0x0002F87A)

NLS_NOM_EMFC_inAGTs                                    (0x04010CEC)
NLS_NOM_CONC_AWAY_AGENT_INSP_SEC                       (0x0002F81F)

NLS_NOM_EMFC_iMg                                       (0x04010AC4)
NLS_NOM_CONC_MG_ION                                    (0x0002F15B)

NLS_NOM_EMFC_sFWave                                    (0x04018120)
NLS_NOM_SETT_VENT_FLOW_PATTERN                         (0x0402F91E)

NLS_NOM_EMFC_UrOsm                                     (0x040101B8)
NLS_NOM_CONC_OSM_URINE                                 (0x0002F199)

NLS_NOM_EMFC_Paw                                       (0x040106BC)
NLS_NOM_PRESS_AWAY                                     (0x000250F0)

NLS_NOM_EMFC_DCO2                                      (0x040106DC)
NLS_NOM_COEF_GAS_TRAN                                  (0x000251D4)

NLS_NOM_EMFC_Pmean                                     (0x040106C0)
NLS_NOM_PRESS_AWAY_INSP_MEAN                           (0x0002510B)

NLS_NOM_EMFC_LT_PPF                                    (0x040107FC)
NLS_NOM_EEG_FREQ_PWR_SPEC_CRTX_PEAK_LEFT               (0x0002F84F)

NLS_NOM_EMFC_lowTV                                     (0x0401A030)
NLS_NOM_SETT_VENT_VOL_TIDAL_LIMIT_LO                   (0x0402F94E)

NLS_NOM_EMFC_PaO2_ADJ                                  (0x04010A64)
NLS_NOM_CONC_PO2_ART_ADJ                               (0x0002F83B)
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NLS_NOM_EMFC_sPkFl                                    (0x0401800C)
NLS_NOM_SETT_FLOW_AWAY_INSP_MAX                       (0x040250DD)


NLS_NOM_EMFC_SpPkFl                                   (0x0401048C)
NLS_NOM_FLOW_AWAY_MAX_SPONT                           (0x0002F87D)


NLS_NOM_EMFC_sPulsD                                   (0x04018204)
NLS_NOM_SETT_TIME_PD_EVOK                             (0x0402F908)


NLS_NOM_EMFC_BPAPTH                                   (0x040180C8)
NLS_NOM_SETT_VENT_TIME_PD_BIPAP_HIGH                  (0x0402F93D)


NLS_NOM_EMFC_iCa                                      (0x04010A2C)
NLS_NOM_CONC_CA_GEN                                   (0x00027118)


NLS_NOM_EMFC_tCO2_CALC                                (0x04010A8C)
NLS_NOM_CONC_CO2_TOT_CALC                             (0x0002F826)


NLS_NOM_EMFC_sHFVAm                                   (0x04018140)
NLS_NOM_SETT_HFV_AMPL                                 (0x0402F8F3)
```

Building a Computer Client

Interfacing the LAN interface with UDP/IP

When setting up a Computer Client, a network traffic analyzing tool can be useful to verify the success of each step. A widely used tool is Wireshark.

Setting Up the BootP Server

Step 1: Connect the Computer Client to the monitor.

The Computer Client and the monitor should be connected with a crossover LAN cable. If you need a dedicated system to run the BootP server, use a hub/switch to connect the devices. It is strongly recommended that a dedicated network is used for the data export. Do not connect any additional devices.

Step 2: Start the BootP server.

Please refer to the documentation of your BootP/DHCP server for installation guidelines.

Step 3: Verify that the monitor receives a valid IP address.

Use a network monitor to verify that the monitor receives the correct IP address. If the monitor shows an **Unsupported LAN** INOP, it has not received a valid IP address.

If the monitor does not receive an IP address,

- make sure that there is no IP address conflict on the network

- try to reboot the monitor.

Parsing the Connect Indication Message

Step1: Verify that the Connect Indication message is sent.

Use a networked monitor and check that the monitor sends a subnet broadcast message to the Connect Indication port (24005). If the monitor does not send the message, verify that the monitor received a valid IP address from the BootP/DHCP server (see "Setting Up the BootP Server" on page 315).

Step 2: Receive the Connect Indication message on the Computer Client.

Open a socket on the Computer Client that receives the subnet broadcast message. If the Computer Client does not receive the Connect Indication message, verify the correct network connection, use an ICMP echo (ping) to check connectivity of the monitor.

Step 3: Parse the Data Export Protocol Command.

The Computer Client must parse the Connect Indication message to determine the port for the Data Export Protocol. The message also contains the IP address of the monitor.

The Computer Client should check that all length and type fields in the message are set correctly, otherwise the message must be discarded.

Then the Computer Client should parse the appended *AttributeList* and extract the IP address and port information (refer to "Connect Indication Attributes" on page 107 for the specification of these attributes).

Interfacing the MIB/RS232 Interface with the Fixed Baudrate Protocol

Step 1: Connect the Computer Client to the IntelliVue monitor.

It may be useful to try out the Association Request/Response mechanism on the LAN interface before working with the MIB/RS232 interface. This might help to find out whether an error is related to a ill-formatted Data Export message or if it is related to a transport layer problem.

Step 2: Implement the framing algorithm.

The section "The Fixed Baudrate Protocol, RS232 Port Settings" on page 30 contains some examples which can be used to check if your framing algorithm works correctly. Remember to apply the framing algorithm to both the *Hdr* and *User Data* part of the message.

If you have tried out the Association Request message on the LAN interface, you can try to send the message within the Fixed Baudrate protocol. Just add the *Hdr* information and apply the framing algorithm.

You should keep the following points in mind when implementing the the Fixed Baudrate protocol:

- Verify that the checksum algorithm works correctly for received messages, i.e., make sure that received messages with a corrupt checksum are discarded.

- Make sure that you implement an exception handling in case the received message grows larger than your receive buffer (e.g., if an end of frame character is lost somewhere during communication).

- The Fixed Baudrate Protocol is not connection oriented. After starting your application, there may be an existing Data Export Association (either from running your own application previously or from another system which has been connected to the MIB/RS232 Interface before). This may have some unexpected consequences for your application.

Interfacing the MIB/RS232 Interface with the AutoSpeed Protocol

Step 1: Connect the Computer Client and the IntelliVue monitor.

If your operating system comes with an IrDA stack, please refer to the documentation of your operating system. The operating system will cover most of the steps below automatically.

It may be useful to try out the Association Request/Response mechanism on the LAN interface before working with the MIB/RS232 interface. This may help you to find out whether an error is related to a wrongly-formatted Data Export message or if it is related to a transport layer problem.

Step 2: Establish an IrDA connection

The IrDA protocol supports a device detection procedure. If the detection is successful, it will return information about the detected device. This information contains a device nickname and a service hints field which indicates that the device supports the IEEE 1073 standard.

After this the Computer Client can establish an IrLAP connection with the device. This involves the negotiation of the baudrate and packet size for the lower layers. Refer to the Serial Infrared Link Access Protocol (IrLAP) specification (see page 32) for more information on this topic.

Step 3: Query the IAS database

The IAS database contains the object "IEEE:1073:3:2:MDDL" with the attribute "IrDA:TinyTP:LsapSel". This attribute contains the number of the TinyTP Service Access point for the Data Export protocol. The value type of the attribute is an *integer*. The value should be equal to 1 if the MIB/RS232 Interface is used for Data Export.

The database also contains an object named "IEEE:1073:3:2" with the attribute "NodeType". This attribute is of type integer and specifies the type of driver which resides on the interface. A value of 1 indicates that it is a data source, i.e. it is used to export data from the monitor.

After finishing the IAS query, the Computer Client should close the IAS connection before connecting to the TinyTP Service Access Point.

Step 4: Connect to the IEEE:1073:3:2:MDDL TinyTP Service Access Point

After connecting to the TinyTP Service Access Point, the connection can be used to send Association Control and Data Export Protocol messages within TinyTP data packets.

You should check the following points for your IrDA protocol stack:

- The connection may be interrupted or reset due to communication problems (e.g., if the cable is disconnected, or the monitor is rebooted). The Computer Client should be able to recover from such problems and initiate a new connection. Note: when a disconnect occurs on the IrDA protocol layer, an Association on the Data Export protocol layer will be terminated automatically.

- The Data Export protocol is packet oriented, this means that data is exchanged as a sequence of packets. Your IrDA stack may or may not provide a packet oriented interface to the TinyTP layer. The Data Export software requires that a received IrDA packet contains only one Data Export Protocol message.

Establishing an Association

Step 1: Send an Association Request message to the monitor.

Format an Association Request message as described in the section "Association Request Message" on page 67. Make sure that all length fields are set correctly, the right byte order is used, and the compiler does not insert extra bytes for structure alignment.

Step 2: Parse the Association Response message sent by the monitor.

Verify that the monitor sends an Association Response message.

If the monitor does not send a Response message, this can have the following reasons:

- The Association Request message has been sent to the wrong port.

- The monitor is connected to a central station or has been connected to one (reboot the monitor).

- The Association Request message was not formatted correctly.

If the monitor sends a Refuse message, this can have the following reasons:

- The Association Request message was not formatted correctly or requested a protocol that is not supported by the monitor.

- The monitor already has an association with a different Computer Client on the same interface.

- The monitor already has an association with a different Computer Client on another interface and the active association uses a different source for the numeric data (only one source for numeric data may be active at a time). Please refer to "Association Request Message" on page 67 for more information on the different sources for numeric data.

If the Computer Client has an association with the monitor and sends a second Association Request from the same source port, the message is discarded.

Look for the byte sequence described in "Association Response Message" on page 73 to find the beginning of the User Data. Parse the User Data and make sure that the monitor sets the protocol versions and options as expected. Check that the requested optional packages are present.

Step 3: Parse the MDS Create Event message.

The monitor will send the MDS Create Event message shortly after the Association Response message. The Computer Client should parse the message and extract all necessary information. Refer to the section "Wave Objects" on page 82 for a description of the available attributes.

Step 4: Send an MDS Create Result message.

The Computer Client must send an MDS Create Result message to confirm the MDS Create Event message. Refer to "MDS CREATE EVENT RESULT" on page 55 to see how the message is formatted.

Make sure that the message uses the correct presentation context ID.

It is important that the result message has the same invoke ID as the MDS Create Event message.

If the monitor receives a correct MDS Create Result message, it stops re-sending MDS Create Event messages. Use a network monitor to verify this.

Step 5: Send a Release Request message.

Use the building blocks from the section "RELEASE REQUEST" on page 335 to build a Release Request message and send it to the monitor.

The monitor identifies a Computer Client based on its IP address and the source port of the messages. The Computer Client must use the same source port as in the Association Request for all communication during the association. If a message is sent from another source port, it will be treated as a message from a different Computer Client.

Step 6: Parse the Release Response message

The monitor sends the Release Response message to confirm that the association has been terminated. For the Computer Client it is sufficient to check the session header of the response and verify that it is indeed a Release Response message (see "Release Response" on page 73).

If the Computer Client does not receive the response message, it should try to resend the Release Request message.

To identify the Monitor software revision, poll the MDS objects system production attribute group and read the ProductSpecification attribute. (see "Attribute: Production Specification" on page 95)

Accessing Data

Step 1: Establish an association as described above.

Step 2: Send a Poll Data Request message to the monitor.

Message Frequencies

If the Computer Client sends Protocol Messages with a high frequency, the monitor is not able to process all the requests. Some of the messages will be discarded. The Computer Client can detect discarded Poll Data Request messages by checking the poll number in the response. The Computer Client must set the poll number so that it will be able to detect loss of messages.

Single and Extended Polling

If the Computer Client needs to access real-time numeric or wave data, it should use Poll Profile Extensions (see "EXTENDED POLL DATA REQUEST" on page 58). This avoids sending poll requests with a high frequency and reduces the communication overhead.

The Computer Client can use an Extended Poll Request only to access Numerics, Waves and Alarms. It must use Single Poll Data Requests to access data from Patient Demographics or from the Medical Device System object.

Receive the Poll Data Response message and parse it.

The monitor sends a Single or Extended Poll Data Result message if the Poll Request message was parsed correctly.

Availability of Data

Not all of the data is available right after a new association has been established. The time span until all data is collected depends on the internal update frequency of the data. Typical times are listed in the table below.

Object Type	Max. Time (Typical)
Numerics (real-time)	< 2 s
Numerics (12 second averaged)	< 18 s
Numerics (1 minute averaged)	< 70 s
Numerics (5 minute averaged)	< 310 s
Alarms	< 2 s
Patient Demographics	< 10 s
Medical Device System Object	< 1 s

During the startup phase, Poll Data Request messages on the object will result in Poll Data Response messages, which

- do not contain all the objects which are present in the monitor.

- do not contain all the available attributes of an object.

Numeric data is only available if a Measurement Server is connected to the monitor and if the system is not in stand-by mode. If a Measurement Server is connected to a running system, it may take several seconds until the data from the Measurement Server is available.

Parsing the Poll Result

The Poll Data Result message contains a checksum in the transport layer message. The Computer Client should verify that this checksum is correct. In the case of a corrupted checksum, the Computer Client must discard the message.

The Computer Client should check the poll number in the Poll Data Result message if it needs to detect lost messages. The Computer Client should check the *rel_time_stamp* which indicates the system time when the data was internally generated.

If the Computer Client needs to acquire a specific Numeric label (e.g., ABP), the preferred method is to use the *PhysioId* which is part of the Numeric Observed Value attribute (see "Numeric Objects" on page 75). The *physio_id* (physiological identifier) field contains a nomenclature code from the SCADA partition that identifies the represented value (typically a physiological measurement). It can be mapped to a label. However, for some numerics, the physio_id does not uniquely identify the measurement. E.g. all difference temperatures have the same physio_id, the numerics in the two channels of an EEG have the same physio_ids, the VueLink module may have numerics where the physio_id is not specified. However, if the label is derived by enumeration (e.g. the temperatures T1 and T2), the labels map to the same *PhysioId*. This ambiguity can be resolved if the user assigns other labels to the Numerics.

A Computer Client should not send Poll Requests for all attribute groups (polled_attr_grp = 0) when querying data with a high update frequency. Polling all attribute groups with a high frequency might lead to high system load and increased response latency. Future releases of the Data Export Protocol may support more attributes for each object.

If the monitor sends no response, check for the following causes:

- There is no association. Either the association was not established correctly or the monitor sent an Abort message (e.g., time-out) in the meantime.

- The Computer Client sent too many messages and messages were lost.

- The length of the transport layer message is corrupt.

- Length fields in the message are corrupt.

If the monitor sends a Remote Operation Error, this might have one of the following reasons:

- Wrong length field in the message.

- Wrong message type (*ro_type*, *command_type*, *action_type*).

- Wrong *managed_object* for the action (for Poll Requests, this must be the MDS object announced in the MDS Create Event).

- Wrong *polled_obj_type* (refer to "SINGLE POLL DATA REQUEST" on page 55 and "EXTENDED POLL DATA REQUEST" on page 58).

- Computer Client sent an Extended Poll Data Request, but the necessary optional package was not negotiated.

- Computer Client sent an Extended Poll Data Request with the wrong polled attribute group.

- Computer Client requested periodic Poll Data Result messages for too many objects. The Computer Client should at most send one request for Numerics (Metric Observed Value Attribute Group) and one for the AlertMonitor (Alert Monitor Attribute Group).

If the monitor sends a Poll Result message which does not contain all object/attributes check for the following problems:

- The Computer Client sent a Single Poll Data Request with the wrong polled attribute group. The Poll Result shows the objects with empty attribute lists (there are no attributes from the requested group).

- The association has been established and not all of the objects have been created. Wait until the objects are created.

Parsing AttributeLists

When parsing an *AttributeList*, the Computer Client should adhere to the following guidelines:

- Verify that the length fields in the *AttributeList* are consistent with other length fields in the message.

- Check both the count and length field of the *AttributeList* to detect the end of the list.

- Do not rely on the sequence of attributes in an *AttributeList*.

- Skip unknown attributes.

- Verify that the length field of each *AVAType* is consistent with its value.

If the Computer Client fails parsing the message, it is useful to compare the raw message (captured with a network monitor) with the Computer Client's interpretation of the data. Common problems are:

- The Computer Client uses a different byte order. Wrong interpretation of length and count fields in particular can lead to problems.

- The Computer Client uses a different alignment for structures. The offset for members of a structure will be wrong, because the compiler for the Computer Client inserted bytes for alignment.

- Length fields denote the length of data appended, excluding the size of the length field.

Interpreting Data from Numerics

- Do not rely on the sequence of values within a Compound Numeric Observed Value attribute. The physiological identifiers must be interpreted.

- A triple valued pressure parameter can change to single valued (mean only), whenever the diastolic and systolic values are close together. This commonly happens when a pressure is being zeroed or when a transducer is left exposed to air. The parameter is still sent as a Compound Numeric Observed Value, even if only one value is available.

- The text in the label strings is localized. If you have a monitor with chinese localization, the strings will contain chinese UNICODE characters.

Interpreting Data from the Alert Monitor

- If the Computer Client wants to display Alarm messages, it should check the strings for UNICODE characters from the private use area (see "Definitions Shared by Protocols" on page 35).

- The text in the alarm strings is localized. If you have a monitor with chinese localization, the strings will contain chinese UNICODE characters.

Interpreting Wave Data

- The IntelliVue patient monitor supports the following wave types, which are defined by sample period, sample and array size (Sample Array Specification), and update period (Metric Specification) in the static context.

Wave Type	Sample Period	Sample Size	Array Size	Update Period	Bandwidth Requirement[1]
500 samples/s (ECG)	2 ms	16 bits	128 samples	256 ms	1064 bytes/s
250 samples/s (Compound ECG)	4 ms	16 bits	3*64 samples	256 ms	1640 bytes/s
125 samples/s	8 ms	16 bits	32 samples	256 ms	296 bytes/s
62.5 samples/s	16 ms	16 bits	16 samples	256 ms	168 bytes/s

1. Observed values, not including context data.

- The Computer Client can poll the dynamic context to determine the available waves. Because of the high amount of data, the client should specify the required wave objects before requesting wave observed values in a periodic data poll.

- Up to three ECG waves (500 samples/s) can be polled simultaneously by selecting the appropriate lead labels in the Wave object priority list. The object handle is the same for all ECG waves. Waves can be identified by their physiological identifier.

- It is possible to select up to three individual ECG waves with 500 sps each or the single ECGcompound wave (containing three channels, 250 sps each). Additionally up to eight 125 sps or 62.5 sps waves may be chosen. Bandwidth restrictions need to be considered (see table above for bandwith usage of the individual wave types)

- In non-EASI mode, three ECG waves (250 samples/s, including the primary and secondary lead) can be polled by selecting the NLS_NOM_ECG_ELEC_POTL label in the Wave object priority list. The monitor sends poll results with a compound wave, containing three waves with common context. Waves can be identified by their physiological identifier.

- Up to eight non-ECG waves (125 or 62.5 samples/s) can be polled simultaneously by selecting the appropriate labels in the Wave object priority list.

- The Computer Client needs to keep track of the poll results time stamps to detect missing wave samples.

- Entries in the Wave object priority list are ignored if the label does not exist or the object is not available, or more than three ECG and/or more than eight non-ECG waves are specified.

The wave context can be polled separately or multiplexed with the wave observed values. If the *polled_attr_grp* is *0* in a periodic data poll request, the monitor reports one object's static and dynamic context per 1024 ms. Context attributes are included in the observation poll.

Troubleshooting

This chapter will help you identify and locate faults that may occur when using the Protocol. The procedure to locate faults uses a troubleshooting matrix.

When the fault has been identified, check the Possible Causes and corresponding Corrective Actions. Perform the corrective actions. Re-check the fault after each corrective action is performed until the fault has been cleared.It is assumed that you have a functioning Computer Client.

Fault	Possible Causes	Corrective Actions
Computer Client doesn't receive LAN messages	Cable connection is broken or wrong cable used.	• Verify that the monitor is correctly connected to the network. • Verify that the Computer Client is correctly connected to the network. Try to use an ICMP echo (ping) to check the monitor and Computer Client connections.
	Monitor failure	Re-boot the monitor and try to make a new connection. Refer to the Troubleshooting section in the *Service Guide* of your device.
Monitor shows an **Unsupported LAN** INOP	BootP server does not send a valid IP address.	Check the configuration of the BootP server. Check that the BootP server is correctly connected to the network.
	Cable connection is broken or wrong cable used.	Check the connection between the monitor and the BootP Server.
Monitor shows a **No Central Monitoring** INOP	**Central Monitoring Mandatory** is configured to **On** in the monitor	Data Export must not be used with a central station. Configure **Central Monitoring** to **Optional**.
	Central Monitoring Mandatory is configured to **On** in the monitor and the connection to the central station is interrupted	Data Export must not be used with a central station. Reboot the monitor and make sure it is not connected to a central station.

Fault	Possible Causes	Corrective Actions
Computer Client doesn't receive messages with the AutoSpeed protocol	Cable connection is broken or wrong cable used.	Check the connection between the IntelliVue monitor and the Computer Client.
	Wrong configuration of MIB/RS232 Interface	Check if the MIB/RS232 interface is configured for the desired protocol
	Monitor failure	Re-boot the monitor and try to make a new connection. Disconnect the MIB/RS232 cable for more than 60s, this will most likely reset the IrDA stack of the client system too. Refer to the Troubleshooting section in the *Service Guide* of your device.
Computer Client does not establish an association.	Another Computer Client Application is already associated with the monitor.	Make sure no other Computer Client Application is trying to connect to the monitor. Reboot the monitor or wait until the association is timed out.
Computer Client does not report data.	Measurement Server is disconnected.	Connect the measurement server to the monitor,
	Parameter is switched off.	If the Computer Client requires a specific measurement, the parameter must be switched on in the monitor.
	Wave label is not included in the Wave object priority list.	Specify the wave objects to be polled in the Set Priority List Request
Wave Samples are missing in a perioidic data poll	Too many Wave objects polled.	Reduce the number of entries in the Wave object priority list.

NOTE   The Data Export Interface cannot be accessed via the Local Area Network when the monitor is connected to the Philips LAN, e.g. to an Information Center (central station).

Communication via the MIB/RS232 Interface is always possible.

Further Troubleshooting

Further troubleshooting can be done using the Philips Data Export Test Tool (DETT).

DETT is used to test the communication interface protocol, which transfers data from the Philips IntelliVue Patient Monitor via the Local Area Network (LAN) Interface or Serial Interface (MIB/RS232) to an external Computer.

Complete DETT functionality information is available in the DETT "Instructions for Use".

Download DETT 453564212161_DETT.zip file from InCenter at: http://incenter.medical.philips.com

A personal InCenter login account is required to access DETT.

Customers or users without a personal InCenter login requiring the DETT, please contact your local Philips Response Center for further support.

The DETT "Instructions for Use" (453564254321.pdf) can be downloaded from InCenter. See the link listed above and its description.

DETT "Instruction for Use" Information is also available within the DETT program via "Help".

Protocol Examples

Data Export Protocol Examples

CONNECT INDICATION EVENT

The Connect Indication message contains the *ConnectIndInfo* which is of variable length. The length fields in the message depend on the length of the *ConnectIndInfo*. This message is only available on the LAN interface.

```
Nomenclature      u_32               : 1.0
                      {0x00 0x00 0x01 0x00}
ROapdus           ro_type            : ROIV_APDU
                  length             : <xx>
                      {0x00 0x01 0xXX 0xXX}
ROIVapdu          invoke_id          : 0
                  command_type       : CMD_EVENT_REPORT
                  length             : <xx>
                      {0x00 0x00 0x00 0x00 0xXX 0xXX}
EventReportArg.
ManagedObjectId   m_obj_class        :NOM_MOC_VMS_MDS_COMPOS_SINGLE_BED
                  context_id         : 0
                  handle             : 0
RelativeTime      event_time         : 39424
OIDType           event_type         : NOM_NOTI_MDS_CONNECT_INDIC
u_16              length             : <xx>
                      {0x00 0x23 0x00 0x00 0x00 0x00 0x00 0x00
                       0x9A 0x00 0x0D 0x17 0xXX 0xXX}
ConnectIndInfo    [...]
```

MDS CREATE EVENT

The MDS Create Event message contains an *AttributeList* which is of variable length. The length fields in the message depend on the length of the *AttributeList*.

```
SPpdu             session_id         : 0xE100
                  p_context_id       : 2
                      {0xE1 0x00 0x00 0x02}
ROapdus           ro_type            : ROIV_APDU
                  length             : <xx>
                      {0x00 0x01 0xXX 0xXX}
ROIVapdu          invoke_id          : 1
                  command_type       : CMD_CONFIRMED_EVENT_REPORT
                  length             : <xx>
                      {0x00 0x01 0x00 0x01 0xXX 0xXX}
EventReportArg.
ManagedObjectId   m_obj_class        : NOM_MOC_VMS_MDS
                  context_id         : 0
                  handle             : 0
RelativeTime      event_time         : 126976
OIDType           event_type         : NOM_NOTI_MDS_CREAT
u_16              length             : <xx>
                      {0x00 0x21 0x00 0x00 0x00 0x00 0x00 0x01
                       0xf0 0x00 0x0d0x06 0xXX 0xXX}
MDSCreateInfo
ManagedObjectId   m_obj_class        : NOM_MOC_VMS_MDS
```

```
                             context_id       : 0
                             handle           : 0
                                {0x00 0x21 0x00 0x00 0x00 0x00}
                AttributeList    [...]
```

MDS CREATE EVENT RESULT

```
SPpdu           session_id       : 0xE100
                p_context_id     : 2
                   {0xE1 0x00 0x00 0x02}
ROapdus         ro_type          : RORS_APDU
                length           : 20
                   {0x00 0x02 0x00 0x14}
RORSapdu        invoke_id        : 1
                command_type     : CMD_CONFIRMED_EVENT_REPORT
                length           : 14
                   {0x00 0x01 0x00 0x01 0x00 0x0e}
EventReportRes.
ManagedObjectId m_obj_class      : NOM_MOC_VMS_MDS
                context_id       : 0
                handle           : 0
RelativeTime    event_time       : 4736768
OIDType         event_type       : NOM_NOTI_MDS_CREAT
u_16            length           : 0
                   {0x00 0x21 0x00 0x00 0x00 0x00 0x00 0x48
                    0x47 0x00 0x0d 0x06 0x00 0x00}
```

SINGLE POLL DATA REQUEST

```
SPpdu           session_id       : 0xE100
                p_context_id     : 2
                   {0xE1 0x00 0x00 0x02}
ROapdus         ro_type          : ROIV_APDU
                length           : 28
                   {0x00 0x01 0x00 0x1c}
ROIVapdu        invoke_id        : 0
                command_type     : CMD_CONFIRMED_ACTION
                length           : 22
                   {0x00 0x01 0x00 0x07 0x00 0x16}
ActionArgument
ManagedObjectId m_obj_class      : NOM_MOC_VMS_MDS
                context_id       : 0
                handle           : 0
u_32            scope            : 0
OIDType         action_type      : NOM_ACT_POLL_MDIB_DATA
u_16            length           : 8
                   {0x00 0x21 0x00 0x00 0x00 0x00 0x00 0x00
                    0x00 0x00 0x0c 0x16 0x00 0x08}
PollMdibDataReq
u_16            poll_number      : 1
TYPE            partition        : NOM_PART_OBJ
                code             : NOM_MOC_VMO_METRIC_NU
OIDType         polled_attr_grp  : all attribute groups
                   {0x00 0x01 0x00 0x01 0x00 0x06 0x00 0x00}
```

SINGLE POLL DATA RESULT

The Single Poll Data Result message contains a *PollInfoList* which is of variable length. The length
fields in the message depend on the length of the *PollInfoList*.

```
SPpdu           session_id       : 0xE100
                p_context_id     : 2
                   {0xE1 0x00 0x00 0x02}
ROapdus         ro_type          : RORS_APDU
                length           : <xx>
                   {0x00 0x02 0xXX 0xXX}
RORSapdu        invoke_id        : 0
                command_type     : CMD_CONFIRMED_ACTION
                length           : <xx>
                   {0x00 0x00 0x00 0x07 0xXX 0xXX}
ActionResult
ManagedObjectId m_obj_class      : NOM_MOC_VMS_MDS
                context_id       : 0
                handle           : 0
OIDType         action_type      : NOM_ACT_POLL_MDIB_DATA
u_16            length           : <xx>
```

```
                              {0x00 0x21 0x00 0x00 0x00 0x00 0x0c 0x16
                               0xXX 0xXX}
              PollMdibDataReply
              u_16          poll_number      : 1
              RelativeTime  rel_time_stamp   : 4766464
              AbsoluteTime  abs_time_stamp   : 0xffffffff 0xffffffff
              TYPE          partition        : NOM_PART_OBJ
                            code             : NOM_MOC_VMO_METRIC_NU
              OIDType       polled_attr_grp  : all attribute groups
                              {0x00 0x01 0x00 0x48 0xbb 0x00 0xff 0xff
                               0xff 0xff 0xff 0xff 0xff 0xff 0x00 0x01
                               0x00 0x06 0x00 0x00}
              PollInfoList  [...]
```

SINGLE POLL DATA RESULT (LINKED)

It is assumed that the monitor needs two messages to encode all the data from a Poll Request.

The first message would have a linked result header:

```
              SPpdu         session_id       : 0xE100
                            p_context_id     : 2
                              {0xE1 0x00 0x00 0x02}
              ROapdus       ro_type          : ROLRS_APDU
                            length           : <xx>
                              {0x00 0x05 0xXX 0xXX}
              ROLRSapdu
              RorlsId       state            : RORLS_FIRST
                            count            : 1
              u_16          invoke_id        : 0
              CMDType       command_type     : CMD_CONFIRMED_ACTION
              u_16          length           : <xx>
                              {0x01 0x01 0x00 0x00 0x00 0x07 0xXX 0xXX}
              ActionResult[...]
```

The second message would contain the rest of the data:

```
              SPpdu         session_id       : 0xE100
                            p_context_id     : 2
                              {0xE1 0x00 0x00 0x02}
              ROapdus       ro_type          : ROLRS_APDU
                            length           : <xx>
                              {0x00 0x05 0xXX 0xXX}
              ROLRSapdu
              RorlsId       state            : RORLS_LAST
                            count            : 2
              u_16          invoke_id        : 0
              CMDType       command_type     : CMD_CONFIRMED_ACTION
              u_16          length           : <xx>
                              {0x03 0x02 0x00 0x00 0x00 0x07 0xXX 0xXX}
              ActionResult[...]
```

Finally, the monitor sends a Remote Operation Result message:

```
              SPpdu         session_id       : 0xE100
                            p_context_id     : 2
                              {0xE1 0x00 0x00 0x02}
              ROapdus       ro_type          : RORS_APDU
                            length           :<xx>
                              {0x00 0x02 0xXX 0xXX}
              RORSapdu      invoke_id        : 0
                            command_type     : CMD_CONFIRMED_ACTION
                            length           : <xx>
                              {0x00 0x00 0x00 0x07 0xXX 0xXX}
              ActionResult  [...]
```

Note that all messages contain a fully encoded *ActionResult* data structure. The last Remote Operation Result message, however, would contain a *PollInfoList* structure with the *count* and *length* field set to 0. A client system should not depend on the terminating Remote Operation Result to have an empty *PollInfoList*. The message should be parsed as any other message.

EXTENDED POLL DATA REQUEST

The next example shows a message which could be used to access averaged data. The message will only be accepted if the optional package for Poll Profile Extensions has been negotiated during the association phase.

```
SPpdu              session_id          : 0xE100
                   p_context_id        : 2
                   {0xE1 0x00 0x00 0x02}
ROapdus            ro_type             : ROIV_APDU
                   length              : 32
                   {0x00 0x01 0x00 0x20}
ROIVapdu           invoke_id           : 0
                   command_type        : CMD_CONFIRMED_ACTION
                   length              : 26
                   {0x00 0x01 0x00 0x07 0x00 0x1a}
ActionArgument
ManagedObjectId    m_obj_class         : NOM_MOC_VMS_MDS
                   context_id          : 0
                   handle              : 0
u_32               scope               : 0
OIDType            action_type         : NOM_ACT_POLL_MDIB_DATA_EXT
u_16               length              : 12
                   {0x00 0x21 0x00 0x00 0x00 0x00 0x00 0x00
                    0x00 0x00 0xf1 0x3b 0x00 0x0c}
PollMdibDataReqExt
u_16               poll_number         : 1
TYPE               partition           : NOM_PART_OBJ
                   code                : NOM_MOC_VMO_METRIC_NU
OIDType            polled_attr_grp     : all attribute groups
AttributeList
u_16               count               : 0
u_16               length              : 0
                   {0x00 0x01 0x00 0x01 0x00 0x06 0x00 0x00
                    0x00 0x00 0x00 0x00}
```

EXTENDED POLL DATA RESULT

The Extended Poll Data Result message contains an additional *sequence_no*, which is used if the client requests periodic replies.

```
SPpdu              session_id          : 0xE100
                   p_context_id        : 2
                   {0xE1 0x00 0x00 0x02}
ROapdus            ro_type             : RORS_APDU
                   length              : <xx>
                   {0x00 0x02 0xXX 0xXX}
RORSapdu           invoke_id           : 0
                   command_type        : CMD_CONFIRMED_ACTION
                   length              : <xx>
                   {0x00 0x00 0x00 0x07 0xXX 0xXX}
ActionResult
ManagedObjectId    m_obj_class         : NOM_MOC_VMS_MDS
                   context_id          : 0
                   handle              : 0
OIDType            action_type         : NOM_ACT_POLL_MDIB_DATA_EXT
u_16               length              : <xx>
                   {0x00 0x21 0x00 0x00 0x00 0x00 0xf1 0x3b
                    0xXX 0xXX}
PollMdibDataReplyExt
u_16               poll_number         : 1
u_16               sequence_no         : 0
RelativeTime       rel_time_stamp      : 4766464
AbsoluteTime       abs_time_stamp      : 0xffffffff 0xffffffff
TYPE               partition           : NOM_PART_OBJ
                   code                : NOM_MOC_VMO_METRIC_NU
OIDType            polled_attr_grp     : all attribute groups
                   {0x00 0x01 0x00 0x00 0x00 0x48 0xbb 0x00
                    0xff 0xff 0xff 0xff 0xff 0xff 0xff 0xff
                    0x00 0x01 0x00 0x06 0x00 0x00}
PollInfoList       [...]
```

GET PRIORITY LIST REQUEST

```
SPpdu                   session_id          : 0xE100
```

```
                                 p_context_id            : 2
                          {0xE1 0x00 0x00 0x02}
                 ROapdus                  ro_type                 : ROIV_APDU
                                          length                  : 22
                          {0x00 0x01 0x00 0x16}
                 ROIVapdu                 invoke_id               : 0
                                          command_type            : CMD_GET
                                          length                  : 16
                          {0x00 0x00 0x00 0x03 0x00 0x10}
                 GetArgument
                 ManagedObjectId          m_obj_class             : NOM_MOC_VMS_MDS
                                          context_id              : 0
                                          handle                  : 0
                 u_32                     scope                   : 0
                 AttributeIdList          count                   : 1
                                          length                  : 2
                                          OIDType                 : NOM_ATTR_POLL_RTSA_PRIO_LIST
                          {0x00 0x21 0x00 0x00 0x00 0x00 0x00 0x00
                           0x00 0x00 0x00 0x01 0x00 0x02 0xF2 0x3A}
```

GET PRIORITY LIST RESULT

```
                 SPpdu                    session_id              : 0xE100
                                          p_context_id            : 2
                          {0xE1 0x00 0x00 0x02}
                 ROapdus                  ro_type                 : RORS_APDU
                                          length                  : <xx>
                          {0x00 0x02 0xXX 0xXX}
                 RORSapdu                 invoke_id               : 0
                                          command_type            : CMD_GET
                                          length                  : <xx>
                          {0x00 0x00 0x00 0x03 0xXX 0xXX}
                 GetResult
                 ManagedObjectId          m_obj_class             : NOM_MOC_VMS_MDS
                                          context_id              : 0
                                          handle                  : 0
                          {0x00 0x21 0x00 0x00 0x00 0x00}
                 AttributeList            count                   : 1
                                          length                  : <xx>
                 AvaType                  attribute_id            : NOM_ATTR_POLL_RTSA_PRIO_LIST
                                          length                  : <xx>
                          {0x00 0x01 0xXX 0xXX 0xF2 0x3A 0xXX 0xXX}
                 TextIdList       [...]
```

SET PRIORITY LIST REQUEST

```
                 SPpdu                    session_id              : 0xE100
                                          p_context_id            : 2
                          {0xE1 0x00 0x00 0x02}
                 ROapdus                  ro_type                 : ROIV_APDU
                                          length                  : <xx>
                          {0x00 0x01 0xXX 0xXX}
                 ROIVapdu                 invoke_id               : 0
                                          command_type            : CMD_CONFIRMED_SET
                                          length                  : <xx>
                          {0x00 0x00 0x00 0x05 0xXX 0xXX}
                 SetArgument
                 ManagedObjectId          m_obj_class             : NOM_MOC_VMS_MDS
                                          context_id              : 0
                                          handle                  : 0
                 u_32                     scope                   : 0
                          {0x00 0x21 0x00 0x00 0x00 0x00 0x00 0x00
                           0x00 0x00}
                 ModificationList         count                   : 1
```

```
                                length              : <xx>
                AttributeModEntry    modifyOperator      : REPLACE
                AvaType              attribute_id        : NOM_ATTR_POLL_RTSA_PRIO_LIST
                                     length              : <xx>
                         {0x00 0x01 0xXX 0xXX 0x00 0x00 0xF2 0x3A
                          0xXX 0xXX}
                TextIdList           [...]
```

SET PRIORITY LIST RESULT

```
                SPpdu                session_id          : 0xE100
                                     p_context_id        : 2
                         {0xE1 0x00 0x00 0x02}
                ROapdus              ro_type             : RORS_APDU
                                     length              : <xx>
                         {0x00 0x02 0xXX 0xXX}
                RORSapdu             invoke_id           : 0
                                     command_type        : CMD_CONFIRMED_SET
                                     length              : <xx>
                         {0x00 0x00 0x00 0x05 0xXX 0xXX}
                SetResult
                ManagedObjectId      m_obj_class         : NOM_MOC_VMS_MDS
                                     context_id          : 0
                                     handle              : 0
                         {0x00 0x21 0x00 0x00 0x00 0x00}
                AttributeList        count               : 1
                                     length              : <xx>
                AvaType              attribute_id        : NOM_ATTR_POLL_RTSA_PRIO_LIST
                                     length              : <xx>
                         {0x00 0x01 0xXX 0xXX 0xF2 0x3A 0xXX 0xXX}
                TextIdList           [...]
```

AttributeList

This example shows an AttributeList which contains attributes from the Alert Monitor.

```
                AttributeList    count               : 5
                                 length              : 248
                                 {0x00 0x05 0x00 0xf8}
                AVAType          attribute_id        : NOM_ATTR_ID_HANDLE
                                 length              : 2
                                 attribute_val       : 0x835d
                                 {0x09 0x21 0x00 0x02 0x83 0x5d}
                AVAType          attribute_id        : NOM_ATTR_ID_TYPE
                                 length              : 4
                                 attribute_val       : 0x0001 0x0036
                                 {0x09 0x2f 0x00 0x04 0x00 0x01 0x00 0x36}
                AVAType          attribute_id        : NOM_ATTR_DEV_AL_COND
                                 length              : 10
                                 attribute_val       : 0x1000 0x091a 0x0000 0x0002
                                                       0x0000
                                 {0x09 0x16 0x00 0x0a 0x10 0x00 0x09 0x1a
                                  0x00 0x00 0x00 0x02 0x00 0x00}
                AVAType          attribute_id        : NOM_ATTR_AL_MON_P_AL_LIST
                                 length              : 4
                                 attribute_val       : 0x0000 0x0000
                                 {0x09 0x02 0x00 0x04 0x00 0x00 0x00 0x00}
                AVAType          attribute_id        : NOM_ATTR_AL_MON_T_AL_LIST
                                 length              : 208
                attribute_val    : [...]
                                 {0x09 0x04 0x00 0xd0 0x00 0x03 0x00 0xcc
                                  0x4b 0xb8 0x01 0xba 0x00 0x02 0x10 0x00
                                  0x00 0x02 0x00 0x00 0x83 0x3a 0x02 0x04
                                  0x00 0x32 0x00 0x01 0x80 0x15 0x04 0x02
                                  0x00 0x07 0x78 0x00 0x00 0x26 0x00 0x53
                                  0x00 0x70 0x00 0x4f 0x20 0x82 0x00 0x20
                                  0x00 0x4e 0x00 0x4f 0x00 0x4e 0x00 0x2d
                                  0x00 0x50 0x00 0x55 0x00 0x4c 0x00 0x53
                                  0x00 0x41 0x00 0x54 0x00 0x49 0x00 0x4c
                                  0x00 0x45 0x00 0x00 0x50 0x00 0x01 0x12
                                  0x00 0x02 0x10 0x00 0x00 0x09 0x00 0x00
                                  0x02 0x91 0x02 0x04 0x00 0x32 0x00 0x01
```

```
0x00  0x03  0x01  0x0c  0x00  0x00  0x78  0x00
0x00  0x26  0x00  0x52  0x00  0x65  0x00  0x73
0x00  0x70  0x00  0x20  0x00  0x20  0x00  0x20
0x00  0x4c  0x00  0x45  0x00  0x41  0x00  0x44
0x00  0x53  0x00  0x20  0x00  0x4f  0x00  0x46
0x00  0x46  0x00  0x20  0x00  0x20  0x00  0x00
0x4a  0x04  0x00  0xf2  0x00  0x02  0x10  0x00
0x00  0x02  0x00  0x00  0x82  0x63  0x02  0x04
0x00  0x32  0x00  0x01  0x00  0x03  0x00  0x46
0x00  0x02  0x78  0x00  0x00  0x26  0x00  0x4e
0x00  0x42  0x00  0x50  0x00  0x20  0x00  0x20
0x00  0x20  0x00  0x20  0x00  0x45  0x00  0x51
0x00  0x55  0x00  0x49  0x00  0x50  0x00  0x20
0x00  0x4d  0x00  0x41  0x00  0x4c  0x00  0x46
0x00  0x20  0x00  0x00}
```

Association Control Protocol Examples

ASSOCIATION REQUEST

The following building blocks can be used to format an Association Request message:

AssocReqSessionHeader

```
0x0D <LI>
```

AssocReqSessionData

```
0x05 0x08 0x13 0x01 0x00 0x16 0x01 0x02
0x80 0x00 0x14 0x02 0x00 0x02
```

AssocReqPresentationHeader

```
0xC1 <LI> 0x31 0x80 0xA0 0x80 0x80 0x01
0x01 0x00 0x00 0xA2 0x80 0xA0 0x03 0x00
0x00 0x01 0xA4 0x80 0x30 0x80 0x02 0x01
0x01 0x06 0x04 0x52 0x01 0x00 0x01 0x30
0x80 0x06 0x02 0x51 0x01 0x00 0x00 0x00
0x00 0x30 0x80 0x02 0x01 0x02 0x06 0x0C
0x2A 0x86 0x48 0xCE 0x14 0x02 0x01 0x00
0x00 0x00 0x01 0x01 0x30 0x80 0x06 0x0C
0x2A 0x86 0x48 0xCE 0x14 0x02 0x01 0x00
0x00 0x00 0x02 0x01 0x00 0x00 0x00 0x00
0x00 0x00 0x61 0x80 0x30 0x80 0x02 0x01
0x01 0xA0 0x80 0x60 0x80 0xA1 0x80 0x06
0x0C 0x2A 0x86 0x48 0xCE 0x14 0x02 0x01
0x00 0x00 0x00 0x03 0x01 0x00 0x00 0xBE
0x80 0x28 0x80 0x06 0x0C 0x2A 0x86 0x48
0xCE 0x14 0x02 0x01 0x00 0x00 0x00 0x01
0x01 0x02 0x01 0x02 0x81
```

AssocReqUserData

The *AssocReqUserData* contains variable data, see see "Protocol Commands" on page 65.

AssocReqPresentationTrailer

```
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
```

ASSOCIATION RESPONSE

The following building blocks can be used to format an Association Response message:

AssocRespSessionHeader

```
0x0E <LI>
```

AssocRespSessionData

```
0x05 0x08 0x13 0x01 0x00 0x16 0x01 0x02
0x80 0x00 0x14 0x02 0x00 0x02
```

AssocRespPresentationHeader

```
0xC1 <LI> 0x31 0x80 0xA0 0x80 0x80 0x01
0x01 0x00 0x00 0xA2 0x80 0xA0 0x03 0x00
0x00 0x01 0xA5 0x80 0x30 0x80 0x80 0x01
0x00 0x81 0x02 0x51 0x01 0x00 0x00 0x30
0x80 0x80 0x01 0x00 0x00 0x81 0x0C 0x2A 0x86
0x48 0xCE 0x14 0x02 0x01 0x00 0x00 0x00
0x02 0x01 0x00 0x00 0x00 0x00 0x61 0x80
0x30 0x80 0x02 0x01 0x01 0xA0 0x80 0x61
0x80 0xA1 0x80 0x06 0x0C 0x2A 0x86 0x48
0xCE 0x14 0x02 0x01 0x00 0x00 0x00 0x03
0x01 0x00 0x00 0xA2 0x03 0x02 0x01 0x00
0xA3 0x05 0xA1 0x03 0x02 0x01 0x00 0xBE
0x80 0x28 0x80 0x02 0x01 0x02 0x81
```

AssocRespUserData

The *AssocRespUserData* contains variable data, see "Protocol Commands" on page 65.

AssocRespPresentationTrailer

```
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
```

REFUSE

The following building blocks can be used to format a Refuse message:

RefuseSessionHeader

```
0x0C 0x03
```

RefuseSessionData

```
0x32 0x01 0x00
```

RefusePresentationHeader

This block is empty in the Refuse message.

RefuseUserData

This block is empty in the Refuse message.

RefusePresentationTrailer

This block is empty in the Refuse message.

RELEASE REQUEST

The following building blocks can be used to format a Release Request message:

ReleaseReqSessionHeader

```
0x09 0x18
```

ReleaseReqSessionData

This block is empty in the Release Request message.

ReleaseReqPresentationHeader

```
0xC1 0x16 0x61 0x80 0x30 0x80 0x02 0x01
0x01 0xA0 0x80 0x62 0x80 0x80 0x01 0x00
0x00 0x00 0x00 0x00
```

ReleaseReqUserData

This block is empty in the Release Request message.

ReleaseReqPresentationTrailer

```
0x00 0x00 0x00 0x00
```

RELEASE RESPONSE

The following building blocks can be used to format a Release Response message:

ReleaseRespSessionHeader

```
0x0A 0x18
```

ReleaseRespSessionData

This block is empty in the Release Response message.

ReleaseRespPresentationHeader

```
0xC1 0x16 0x61 0x80 0x30 0x80 0x02 0x01
0x01 0xA0 0x80 0x63 0x80 0x80 0x01 0x00
0x00 0x00 0x00 0x00
```

ReleaseRespUserData

This block is empty in the Release Response message.

ReleaseRespPresentationTrailer

```
0x00 0x00 0x00 0x00
```

ASSOCIATION ABORT

The following building blocks can be used to format a Association Abort message:

AbortSessionHeader

```
0x19 0x2E
```

AbortSessionData

```
0x11 0x01 0x03
```

AbortPresentationHeader

```
0xC1 0x29 0xA0 0x80 0xA0 0x80 0x30 0x80
0x02 0x01 0x01 0x06 0x02 0x51 0x01 0x00
0x00 0x00 0x00 0x61 0x80 0x30 0x80 0x02
0x01 0x01 0xA0 0x80 0x64 0x80 0x80 0x01
0x01 0x00 0x00 0x00 0x00 0x00 0x00
```

AbortUserData

This block is empty in the Abort message.

AbortPresentationTrailer

```
0x00 0x00 0x00 0x00
```

User Data

The following section contains an example for the User Data which is contained in an Association Request message.

```
UserData
ASNLength          length                : 72
                      {0x48}
MDSEUserInfoStd
ProtocolVersion    protocol_version      : MDDL_VERSION1
NomenclatureVers.nomenclature_version  : NOMEN_VERSION
FunctionalUnits    functional_units      : 0
SystemType         system_type           : SYST_CLIENT
StartupMode         startup_mode         : COLD_START
                      {0x80 0x00 0x00 0x00 0x40 0x00 0x00 0x00
                       0x00 0x00 0x00 0x00 0x80 0x00 0x00 0x00
                       0x20 0x00 0x00 0x00}
Option List
AttributeList      count                 : 0
                   length                : 0
                      {0x00 0x00 0x00 0x00}
Supported Profiles
AttributeList      count                 : 1
                   length                : 44
                      {0x00 0x01 0x00 0x2c}
AVAType
OIDType            attribute_id          : NOM_POLL_PROFILE_SUPPORT
u_16               length                : 40
                      {0x00 0x01 0x00 0x28}
PollProfileSupport (attribute_val)
PollProfileRev.    poll_profile_revision : POLL_PROFILE_REV_0
RelativeTime       min_poll_period       : 800000
u_32                max_mtu_rx           : 1000
u_32                max_mtu_tx           : 1000
u_32               max_bw_tx             : 0xffff 0xffff
PollProfileOpt.    options               : 0x6000 0x0000
                      {0x80 0x00 0x00 0x00 0x00 0x00 0x09 0xc4
                       0x00 0x00 0x09 0xc4 0x00 0x00 0x03 0xe8
                       0xff 0xff 0xff 0xff 0x60 0x00 0x00 0x00}
Optional Packages
AttributeList      count                 : 1
                   length                : 12
                      {0x00 0x01 0x00 0x0c}
AVAType
OIDType            attribute_id          : NOM_ATTR_POLL_PROFILE_EXT
u_16               length                : 8
                      {0xf0 0x01 0x00 0x08}
PollProfileExt (attribute_val)
PollProfileExtOpt.options               : POLL_EXT_PERIOD_NU_AVG_60SEC
AttributeList      count                 : 0
                   length                : 0
                      {0x20 0x00 0x00 0x00 0x00 0x00 0x00 0x00}
```

With this User Data, the length field of the Presentation Header must be set to 220 (0xDC) and the length field of the Session Header must be set to 236 (0xEC).