Dräger

Software Protocol

MEDIBUS for

Evita Infinity V500

Software 2.n

Babylog VN500

Software 2.n

WARNING
For a full understanding of this software protocol, the user should carefully read this document as well as the Instructions for Use of the basic device.

Contents

Trademarks

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What is new for Evita Infinity V500 SW 2.n

Airway-related measurements

- ***VT/kg BW***
- ***VTspon mean***
- ***VTispon mean***
- ***VTespon mean***

CO_2-related measurement

- Expiratory CO_2 concentration measurement in Vol%
- Serial dead space ***Vds***
- Dead space ventilation ***Vds/VTe***
- CO_2 production ***V'CO2***

Settings

- Pressure Variability
- Tlow max in APRV ventilation mode

SmartCare/PS

Settings

- SC-Body height
- SC-Upper limit PEEP ***PEEP max***
- SC-Upper limit inspiratory O_2 ***FiO2 max***
- SC-Upper limit respiratory rate in the guideline ***RRspon high***
- SC-Lower limit respiratory rate in the guideline ***RRspon low***
- SC-Lower limit tidal volume ***VT low***
- SC-Upper limit endtidal CO_2 in the guideline ***etCO2 high***

Text message

- If the function "Change guideline" is activated, the message Customizing is displayed.

Text message

- Patient category Neonates
- Display of the actual language
- Enable Variable PS
- Ventilation modes
  - Mode PC-PSV
  - Mode PC-PSV +VG

What is new for document 3rd edition

Settings

- I:E I part
- I:E E part
- Expiratory termination
- Mode PC-MMV +VG for Babylog VN500 (planned)

For Your Safety and that of Your Patients

Strictly follow the Instructions for Use

Any use of the Software Protocol requires full understanding and strict observation of the Instructions for Use of Evita Infinity V500 and Babylog VN500.

For a general description of the protocol, refer to "Dräger RS 232 MEDIBUS Protocol Definition" (order-no. 9028258, 10th edition – December 2007).

Port Specification

Connector	
Type	RS-232-C 9-pin Sub D (male)
COM1, 2, 3	
Pins:	
Pin 1	DCD
Pin 2	RXD
Pin 3	TXD
Pin 4	DTR
Pin 5	GND
Pin 6	DSR
Pin 7, 8	RTS/CTS
Pin 9	RI
Housing	SHLD
Galvanic Isolation	1.5 kV
Location	rear of Medical Cockpit Infinity C500, labeled: 
Cable Requirements	
Length	maximal 1.5 m
Port Configuration	
Baud rate	1200, 2400, 4800, 9600, 19200, 38400 baud
Data bits	8
Stop bits	1, 2
Parity	even, odd, none

Device identification

Only for Evita Infinity V500

Code	Name	Version	ID-Number
52H	V500	mm.nn	8270

Only for Babylog VN500

Code	Name	Version	ID-Number
52H	VN500	mm.nn	8272

mm.nn – current device software version (e.g. 01.00).

Medibus version: 04.03 for device version 01.00 and higher

Supported Commands and Data

Languages

Alarm phrases and text messages are supported in American English.

MEDIBUS commands

Transmitted and responded commands

Code	Command specification
30H	NOP do nothing
51H	ICC Initialise Communication
52H	RDI Request Device Identification
56H	Realtime configuration changed

Processed and responded commands

Code	Command specification
24H	Request current DATA
25H	Request current LOW ALARM LIMITS
26H	Request current HIGH ALARM LIMITS
27H	Request current ALARMS
28H	Request DATE & TIME
29H	Request current SETTINGS
2AH	Request current TEXT MESSAGES
2BH	Request current DATA Codepage 2
2CH	Request current LOW ALARM LIMITS Codepage 2
2DH	Request current HIGH ALARM LIMITS Codepage 2
2EH	Request current ALARMS Codepage 2
4AH	Configure DATA RESPONSE
53H	Request REAL-TIME CONFIGURATION
54H	Configure REAL-TIME TRANSMISSION
55H	STOP communication

Sync commands in realtime stream

Code	Command specification
C1H	Enable/Disable Datastream 1 to 4
C6H	Ventilator Inspiratory Cycle (Argument C0H)

Real-time data

For Evita Infinity V500 and Babylog VN500

Code	Data description	Unit	Scale
00H	Airway pressure Paw	mbar	minValue="-80" maxValue="120" resolution="0.05"
01H	Flow Patient (insp./exp.)	L/min	minValue="-180" maxValue="180" resolution="0.09"
03H	Volume since inspiration began	mL	minValue="0" maxValue="5500" resolution="1.35"
06H	Expiratory CO_2 concentration	mmHg	minValue="0" maxValue="100" resolution="0.025"
08H[1)]	Expiratory CO_2 concentration	Vol%	minValue="0" maxValue="15" resolution="0.004"
1CH	Ptrach	mbar	minValue="-80" maxValue="120" resolution="0.05"

1) not supported in future software versions

Measurements and Alarm Limits

The underscore character used in the format column is transmitted as an ASCII "space" character (20H).

M Measured data

LL Low alarm limit

HL High alarm limit

Airway related Measurements

Codepage 1 – for Evita Infinity V500 and Babylog VN500

Code	Data description	Unit	Format	M	LL	HL
07H	Compliance ***Cdyn***	L/bar	_XXX XX.X X.XX	x		
08H	Resistance ***R***	mbar/L/s	XXXX XX.X	x		
2AH	***r²***	–	X.XX	x		
6FH	***Tispon***	sec	XX.X X.XX	x		
71H	Minimum Airway Pressure ***Pmin***	mbar	_XXX _X.X	x		
73H	Mean Airway Pressure ***Pmean***	mbar	_XXX _X.X	x		
78H	PEEP Airway Pressure ***PEEP***	mbar	_XXX _X.X	x		
7BH	***RRmand***	1/min	XXX_	x		
7CH	***MVmand***	L/min	XX.X X.XX	x		
7DH	Peak Airway Pressure ***PIP***	mbar	_XXX _X.X	x		x
7EH	***VTmand***	L	X.XX	x		
7FH	***VTspon***	L	XXXX X.XX	x		

Code	Data description	Unit	Format	M	LL	HL
83H	***VTemand***	mL	XXXX XX.X	x		
84H	***VTespon***	mL	XXXX XX.X	x		
85H	Insp. mandatory Tidal Volume ***VTimand***	mL	XXXX XX.X	x		
88H	Tidal Volume ***VT***	mL	XXXX XX.X	x	x	x
8BH	Inspiratory spont. Tidal Volume ***VTispon***	mL	XXXX XX.X	x		
B2H	***MVleak***	L/min	XX.X X.XX	x		
B3H	Leakage rel. ***% leak***	%	_XXX	x		
B5H	Spont. Respiratory Rate ***RRspon***	1/min	XXX_	x		
B6H	Spontaneous Fraction Min. Vol. ***%MVspon*** (MVspon : MVtotal)	%	_XXX	x		
B7H	Spont. Minute Volume ***MVspon***	L/min	XX.X X.XX	x		
B9H	Minute Volume ***MV***	L/min	XX.X X.XX	x	x	x
C9H	Rapid Shallow Breathing Index ***RSB***	1/L x min	XXXX	x		
D6H	Respiratory Rate (RRtotal) ***RR***	1/min	XXX_	x		x
E7H	***I:E*** I part	–	XXXX XX.X	x		
E8H	***I:E*** E part	–	XXXX XX.X	x		

Codepage 1 – only for Evita Infinity V500

Code	Data description	Unit	Format	M	LL	HL
72H	Occlusion Pressure ***P0.1***	mbar	_XXX _X.X	x		
74H	Plateau Airway Pressure ***Pplat***	mbar	_XXX _X.X	x		
79H	Intrinsic PEEP ***PEEPi***	mbar	_XXX _X.X	x		
81H	Trapped Volume ***Vtrap***	mL	XXXX XX.X	x		

Code	Data description	Unit	Format	M	LL	HL
8DH	Negative Inspiratory Force ***NIF***	mbar	_XXX _X.X	x		

Codepage 1 – only for Babylog VN500

Code	Data description	Unit	Format	M	LL	HL
86H	Tidal Volume for HFO ***VThf***	mL	XXXX XX.X	x		

Codepage 2 – for Evita Infinity V500 and Babylog VN500

Code	Data description	Unit	Format	M	LL	HL
00H	***VTspon***	mL	XXXX XX.X	x		
04H	***I:Espon*** I part	–	XXXX XX.X	x		
05H	***I:Espon*** E part	–	XXXX XX.X	x		
06H	Elastance ***E***	mbar/L	XXXX XX.X	x		
07H	Tau	sec	XX.X X.XX	x		
0BH	***C20/Cdyn***	–	X.XX	x		
21H	Expiratory Tidal Volume ***VTe***	mL	XXXX XX.X	x		
22H	Inspiratory Tidal Volume ***VTi***	mL	XXXX XX.X	x		
23H	***EIP***	mbar	_XXX _X.X	x		
24H	***Tlow*** (resulting Tlow from expiratory flow cycling)	sec	XX.X X.XX	x		
31H	***Phigh***	mbar	_XXX _X.X	x		
32H	***Plow***	mbar	_XXX _X.X	x		
36H	***VT/kg BW***	mL/kg	XX.X XXXX	x		

Codepage 2 – only for Evita Infinity V500

Code	Data description	Unit	Format	M	LL	HL
0AH	Cstat (Low Flow) ***Cstat***	mL/mbar	_XXX XX.X X.XX	x		
33H	***VTspon mean***	mL	XX.X XXXX	x		
34H	***VTispon mean***	mL	XX.X XXXX	x		
35H	***VTespon mean***	mL	XX.X XXXX	x		

CO_2-related measurements

Codepage 1 – for Evita Infinity V500 and Babylog VN500

Code	Data description	Unit	Format	M	LL	HL
DBH	Entidal CO_2 ***$etCO_2$***	Vol%	XX.X	x	x	x
E6H	Entidal CO_2 ***$etCO_2$***	mmHg	_XXX	x	x	x

$etCO_2$ values and alarm limits are transmitted according to the configuration on the device screen (mmHg or Vol%).
If kPa is configured be aware that the Medibus alarm limits will be transmitted with mmHg.

Codepage 1 – only for Evita Infinity V500

Code	Data description	Unit	Format	M	LL	HL
89H	Serial dead space ***Vds***	mL	XXXX XX.X	x		
8AH	Dead space ventilation ***Vds/VTe***	%	_XXX	x		
09H	CO_2 production ***V'CO_2***	mL/min	XXXX	x		

O_2-related measurements

Codepage 1 – for Evita Infinity V500 and Babylog VN500

Code	Data description	Unit	Format	M	LL	HL
F0H	Insp. O_2 ***FiO_2***	%	XXX_	x		

SmartCare measurements

Codepage 2 – only for Evita Infinity V500

Code	Data description	Unit	Format	M	LL	HL
1AH	SC-Target ΔPsupp ***ΔPsupp goal***	mbar	_XX_	x		
1BH	SC-Rated ΔPsupp ***SC-ΔPsupp***	mbar	_XX_	x		
1CH	SC-Duration of patient session (Hours)	h	XXXX	x		
1DH	SC-Duration of patient session (Minutes)	min	XX__	x		
1EH	***SC-RRspon***	1/min	XX__	x		
1FH	***SC-VT***	mL	XXXX	x		
28H	***SC-$etCO_2$***	mmHg	XX__	x		

Settings

For Evita Infinity V500 and Babylog VN500

Code	Device Setting	Unit	Format
01H	Insp. O_2 ***FiO_2***	%	_XXX_
02H	Inspiratory Flow ***Flow***	L/min	XXX.X
04H	***VT***	L	X.XXX
40H	***VT***	mL	XXX.X
05H	Inspiratory Time ***Ti***	sec	XX.XX
07H	I:E I part		XXX.X
08H	I:E E part		XXX.X
09H	Respiratory Rate ***RR***	1/min	XXX.X
0BH	PEEP / CPAP ***PEEP***	mbar	_XX.X
0CH	Interm. PEEP ***ΔintPEEP***	mbar	_XX.X
0DH	APRV Low Pressure ***Plow***	mbar	__XX_
0EH	APRV High Pressure ***Phigh***	mbar	__XX_
0FH	APRV Low Time ***Tlow***	sec	XX.XX
10H	APRV High Time ***Thigh***	sec	_XX.X
11H	Apnea Time ***Tapn***	sec	_XX.X
12H	***ΔPsupp***	mbar	__XX_
13H	Max Pressure ***Pmax***	mbar	XXX.X
29H	***Flow trigger***	L/min	_XX.X
2EH	***Slope***	sec	_X.XX
3CH	***Flow Assist***	mbar*s/L/10	XXXXX
3DH	***Vol. Assist***	mbar/L/10	XXXXX
42H	***RRapn***	1/min	XXX.X
44H	VT Apnea ***VTapn***	L	X.XXX
6EH	VT Apnea ***VTapn***	mL	_XXXX XXX.X
45H	***Pinsp***	mbar	XXX.X
46H	ATC Compensation ***Compens.***	%	_XXX_
47H	ATC Tube Diameter ***Tube Ø***	mm	_XX.X
4EH	***Tdisconnect***	sec	__XX_
63H	***Timax***	sec	XX.XX

Code	Device Setting	Unit	Format
65H	Flow O_2 Therapy ***Flow***	L/min	_XX.X
73H	Expiratory termination	%	XXX.X
7DH	***Tlow max***	sec	XX.XX

Only for Evita Infinity V500

Code	Device Setting	Unit	Format
72H	Inspiratory termination	%	XXX.X
7BH	Pressure Variability	%	XXX.X

Only for Babylog VN500

Code	Device Setting	Unit	Format
2AH	Frequency of oscillation in HFO ***fhf***	Hz	__XX_
66H	Mean airway pressure in HFO ***MAPhf***	mbar	_XX.X
67H	I to E in HFO ***I:Ehf*** I part	–	__X__
68H	I to E in HFO ***I:Ehf*** E part	–	__X__
69H	Pressure amplitude in HFO ***Ampl hf***	mbar	_XX.X
6AH	Tidal volume in HFO ***VThf***	mL	XXX.X
6BH	Respiratory rate of sigh in HFO ***RRsigh***	1/min	XXX.X
6CH	Sigh inspiratory time in HFO ***Tisigh***	sec	XX.XX
6DH	Sigh pressure in HFO ***Psigh***	mbar	XXX.X

SmartCare/PS settings

Only for Evita Infinity V500

Code	Device Setting	Unit	Format
74H	SC-Body weight	kg	XXX.X
75H	SC-Start of night rest	h	__XX_
76H	SC-End of night rest	h	__XX_
79H	SC-Upper limit inspiratory O_2 ***FiO_2 max***	%	_XXX_
7AH	SC-Upper limit PEEP ***PEEP max***	mbar	_XX.X
7EH	SC-Lower limit respiratory rate in the guideline ***RRspon low***	1/min	_XXX_
7FH	SC-Upper limit respiratory rate in the guideline ***RRspon high***	1/min	_XXX_
80H	SC-Lower limit tidal volume ***VT low***	mL/kg	_XX.X
81H	SC-Upper limit endtidal CO_2 in the guideline ***$etCO_2$ high***	mmHg	_XX__
82H	SC-Body height	cm	__XXX

Text Messages

For Evita Infinity V500 and Babylog VN500

Code	Text message
Device modes	
12H	Mode DS
1EH	Ventilator STANDBY
Spontaneous ventilation modes	
0AH	Mode SPN-CPAP Mode SPN-CPAP +VS Mode SPN-CPAP +PS
Pressure controlled ventilation modes	
0EH	Mode PC-BIPAP Mode PC-BIPAP +PS
18H	Mode PC-SIMV Mode PC-SIMV +PS Mode PC-SIMV +VG Mode PC-SIMV +PS +VG
1AH	Mode PC-APRV Mode PC-APRV +AutoRelease
35H	Mode SPN-PPS
3EH	Mode PC-PSV Mode PC-PSV +VG
47H	Mode PC-AC Mode PC-AC +VG
6AH	Mode PC-CMV Mode PC-CMV +VG
6BH	Mode O_2 Therapy
Apnoe ventilation mode	
11H	Mode APNEA VENTILATION

Code	Text message
Ventilation additional settings	
5CH	+PS
74H	+VS
69H	+VG
5EH	+AF
75H	+AutoRelease
87H	+Sigh
Trigger	
6CH	Abdominal External Trigger
ATC	
6DH	ATC
68H	Endotracheal
70H	Tracheostoma
6EH	Expiratory ATC
6FH	Inspiratory ATC
71H	Apnea Ventilation enabled
72H	Apnea Ventilation Auto Return
Patient categories	
21H	Neonates
3AH	Pediatrics
Aditus	
48H	IV-Invasive Ventilation
49H	NIV-Non Invasive Ventilation
Humidifier	
76H	Active humid unheated
77H	Active humid heated
78H	HME / Filter

Code	Text message
CO_2 units	
22H	mmHg
23H	kPa
Actual language	
2CH	Actual language

Only for Evita Infinity V500

Code	Text message
Volume controlled ventilation modes	
01H	Mode VC-CMV Mode VC-CMV +AF
02H	Mode VC-AC Mode VC-AC +AF
06H	Mode VC-SIMV Mode VC-SIMV +PS Mode VC-SIMV +AF Mode VC-SIMV +PS +AF
0CH	Mode VC-MMV Mode VC-MMV +PS Mode VC-MMV +AF Mode VC-MMV +PS +AF
Ventilation additional settings	
5EH	+AF
8EH	Enable Variable PS
Patient categories	
20H	Adult

Code	Text message
SmartCare/PS	
Therapy phase	
79H	SC Therapy phase: Adapting
7AH	SC Therapy phase: Observing
7BH	SC Therapy phase: Maintaining
Classification	
7CH	Diagnosis: Normal Ventilation
7DH	Diagnosis: Hyperventilation
7EH	Diagnosis: Hypoventilation
7FH	Diagnosis: Insufficient Ventilation
80H	Diagnosis: Tachypnea
81H	Diagnosis: Severe Tachypnea
82H	Diagnosis: Unexplained Hyperventilation
83H	Diagnosis: Central Hypoventilation
84H	COPD
85H	Neurologic Disorder
86H	Night rest
8FH	Customizing

Only for Babylog VN500

Code	Text message
Pressure controlled ventilation modes	
1BH	Mode PC-HFO Mode PC-HFO +VG Mode PC-HFO +Sigh Mode PC-HFO +Sigh +VG
0DH	Mode PC-MMV +VG (planned)

Alarm Messages

There are no alarm messages sent in standby mode.

Codepage 1 – for Evita Infinity V500 and Babylog VN500

Code	Alarm Description	Priority	Alarm phrase
08H	FiO_2 low	18	% O2 LOW
08H	FiO_2 low	28	% O2 LOW
10H	Airway pressure high	30	PAW HIGH
12H	Air supply down, ASU active	5	AIR SUPPLY ?
12H	Nebulizer uses O_2 only	16	AIR SUPPLY ?
12H	ASU inop	27	AIR SUPPLY ?
12H	Air supply down	31	AIR SUPPLY ?
13H	Nebulizer uses Air only	16	LO O2 SUPPLY
13H	O_2 supply down	31	O2 SUPPLY ?
19H	MV low	29	MIN VOL LOW
27H	$etCO_2$ low	28	ET CO2 LOW
28H	$etCO_2$ high	28	ET CO2 HIGH
33H	VT not reached	6	VOL INCONST
33H	VT not reached, leakage	6	VOL INCONST
33H	Tidal volume low	20	TIDAL VOL LO
36H	O_2 supply down	5	NO OXYGEN
37H	FiO_2 high	18	% O2 HIGH
37H	FiO_2 high	28	% O2 HIGH
3EH	Check CO_2 cuvette	16	CO2 NOT CAL
3EH	CO_2 zero ?	28	CO2 ZERO CAL
4BH	Internal battery failure	17	BATTERY ERR
4BH	Internal battery discharged	31	BATTERY LOW
64H	Clean CO_2 cuvette	28	CLEAN CO2
65H	Alarm system malfunction	5	SPEAKER FAIL
65H	Auxiliary alarm failure	17	SPEAKER FAIL
6AH	CO_2 measurement failed	28	CO2 ERR
78H	Medibus communication failure	1	RS232COM ERR

Code	Alarm Description	Priority	Alarm phrase
90H	High respiratory rate	29	RESP RATE HI
98H	Apnea	29	APNEA RESP
9AH	Airway pressure low	30	PAW LOW
9AH	Disconnection ?	30	DISCONNECT
9BH	MV high	29	MIN VOL HIGH
9FH	Ventilation unit restarted	24	EVITA ERR
9FH	Ventilator failure	31	VENT ERR
A1H	O_2 measurement failed	28	% O2 ERR
A2H	Gas delivery system needs calibration	1	VOL CAL ?
A2H	Gas delivery system needs calibration	31	VOL CAL ?
A3H	Airway pressure negative	18	PAW NEGATIVE
A3H	Airway pressure negative	28	PAW NEGATIVE
A4H	Volume inaccurate	5	VOL ERR
A4H	Flow measurement inaccurate	16	VOL ERR
ADH	Pressure measurement inaccurate	16	PRESS ERR
ADH	Pressure measurement disturbed	18	PRESS ERR
ADH	Pressure sensor? Ventilation impaired	18	PRESS ERR
ADH	Pressure measurement failed	31	PRESS ERR
B0H	Expiratory valve malfunction	27	EXP-VALVE ?
B0H	Expiratory valve malfunction	30	EXP-VALVE ?
B8H	Device temp. measurement failed	18	AW-TEMP INOP
B9H	Device temp. measurement failed	18	COOLING ?
B9H	Device temp. measurement failed	18	AW-TEMP SENS
C4H	Pressure limited! VT not reached	6	PRESSURE LIM
C4H	Pressure Limited	6	PRESSURE LIM
C9H	Device temperature high	30	INT.TMP.HIGH
D6H	Hose system connected reversely	16	HOSES MIXED?
D7H	Hose system not compatible with patient type	16	WRONG HOSES?
D8H	Accessory ID detection failure	3	ID-FUNC-INOP
D9H	CO_2 sensor ?	28	CO2 SENSOR ?
DAH	PEEP high	28	PEEP HIGH
DAH	Plow not reached	28	PLOW HIGH
E6H	Air pressure regulator failed	17	AIR PRESS HI
E7H	O_2 pressure regulator failed	17	HI O2 SUPPLY

Code	Alarm Description	Priority	Alarm phrase
ECH	ASU communication failure	5	GAS FAILURE
ECH	ASU device failure	17	GAS FAILURE
ECH	ASU communication failure	28	GAS FAILURE
ECH	ASU device failure	28	GAS FAILURE
F2H	Silence key faulty / stuck	14	SYSTEM FAULT
F2H	Rotary knob faulty / stuck	14	SYSTEM FAULT
F2H	Silence key faulty / toggling	14	SYSTEM FAULT
F2H	Rotary knob faulty / toggling	14	SYSTEM FAULT
F2H	Device failure	31	SYSTEM FAULT

Codepage 1 – only for Evita Infinity V500

Code	Alarm Description	Priority	Alarm phrase
33H	Volume not constant, Pmax active	6	VOL INCONST
42H	Incompatible flow sensor detected	1	FLOW SENSOR?
42H	Expiratory flow sensor calibration failed	5	FLOW SENSOR?
42H	Flow sensor ?	30	FLOW SENSOR?
42H	Expiratory flow measurement failed	31	FLOW SENSOR?
A4H	Flow sensor? Ventilation impaired	18	VOL ERR
E8H	Tidal volume high	8	TIDAL VOL HI
E8H	Tidal volume high	20	TIDAL VOL HI

Codepage 1 – only for Babylog VN500

Code	Alarm Description	Priority	Alarm phrase
10H	Airway pressure high	30	PAW HIGH HF
A3H	Airway pressure (averaged) negative	18	PAW NEGATIVE
A3H	Airway pressure (averaged) negative	28	PAW NEGATIVE
ECH	Air and O_2 supply insufficient <HFO>	17	GAS FAILURE

Codepage 2 – for Evita Infinity V500 and Babylog VN500

Code	Alarm Description	Priority	Alarm phrase
37H	Air supply down	5	NO AIR
3BH	Ambient pressure sensor ?	16	AMB PRESS ?
5AH	Internal battery activated	21	BATTERY ON
5AH	Internal battery activated	29	BATTERY ON
5CH	Internal battery low	31	BATT. LOW
6AH	Airway obstructed?	30	TUBE OBSTRUC
90H	Neo. flow sensor changed ?	5	NEO FLOW?
90H	Neo. flow sensor calibration required	17	NEO FLOW?
90H	Neo. flow sensor soiled	17	NEO FLOW?
90H	Neo. flow sensor failure	17	NEO FLOW?
90H	Neo. flow calibration unsuccessful	17	NEO FLOW?
90H	Neo. flow sensor ?	28	NEO FLOW?
90H	Neo. flow sensor calibration required	30	NEO FLOW?
90H	Neo. flow sensor ?	30	NEO FLOW?
90H	Neo. flow sensor failure	30	NEO FLOW?
90H	Neo. flow measurement failed	30	NEO FLOW?
90H	Neo. flow calibration unsuccessful	30	NEO FLOW?
91H	Check settings	18	LOSS OF DATA
91H	Loss of data	24	LOSS OF DATA
91H	Loss of data	31	LOSS OF DATA
93H	Apnea ventilation	23	APNEA VENT
94H	Device check incomplete	5	CHECK EVITA
94H	Suction maneuver overused?	6	CHECK RESP
99H	Insp. hold interrupted	6	INSPHOLD END
94H	Suction maneuver failure	13	CHECK RESP
94H	Oxygenation maneuver failure	13	CHECK RESP
94H	Execute device check	22	CHECK EVITA
94H	Check ventilation settings	24	CHECK EVITA
94H	Device check failed.	23	CHECK EVITA
94H	Check ventilator settings	24	CHECK EVITA
9CH	Leakage	6	LEAKAGE
9FH	Nebulization finished	5	NEBULIZ. OFF

Code	Alarm Description	Priority	Alarm phrase
9FH	Nebulization aborted	17	NEBULIZ. OFF
A1H	Internal power supply failure	17	POWER ERR
A9H	License transfer failed	2	SET.CANCELED
A9H	Import failed, check settings	2	SET.CANCELED
CCH	PEEP low	28	PEEP LOW
CCH	Plow falls short of set limit	28	PEEP LOW
CEH	Hose kinked	22	HOSE KINKED
D1H	ID breathing circuit failure	3	HOSE ERROR
D7H	Current hose sets does not match selected configuration	16	WRONG HOSES ?
DAH	ID Expiratory valve failure	3	EXP TIME ERR
DAH	ID Breathing circuit failure	3	EXP TIME ERR

Codepage 2 – only for Evita Infinity V500

Code	Alarm Description	Priority	Alarm phrase
94H	Low Flow PV-Loop maneuvre overused?	6	CHECK RESP
94H	Low Flow PV-Loop maneuvre failure	13	CHECK RESP
9EH	Exp. hold interrupted	6	EXPHOLD END
BAH	Tidalvol. high (minimal pressure)	20	PMIN REACHED
DAH	ID Flow sensor failure	13	EXP TIME ERR

Codepage 2 – only for Babylog VN500

Code	Alarm Description	Priority	Alarm phrase
CAH	Air supply insufficient <HFO>	17	NO AIR
ECH	HFO not possible	31	EJECTOR INOP
F4H	Mean Airway Pressure Low	30	MAP LOW

Alarm messages for SmartCare/PS

Codepage 2 – only for Evita Infinity V500

Code	Alarm Description	Priority	Alarm phrase
E5H	SC: Patient Session aborted	28	SC ABORTED
E6H	SC: Internal error! Patient Session aborted	28	SC INOP
E7H	SC: Central Hypoventilation	28	CENTRAL HYPO
E8H	SC: Persistent Tachypnea	28	PERS TACHYP
E9H	SC: Unexplained Hyperventilation	28	UNEXPL HYPER
EAH	SC: Can PEEP be reduced?	4	PEEP REDUCIB
EBH	SC: SBT successful	4	CONS SEPARAT
F3H	SC: Can FiO2 be reduced?	4	FiO2 REDUCIB

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CE 0123
Directive 93/42/EEC
concerning Medical Devices

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