# Open Metering System Specification

## OMS-Data Point List

**Annex B to**
**Volume 2: Primary Communication**
**Issue 5.0.1**

**RELEASE G (2023-12)**

# Document History

| Version | Date | Comment | Editor |
|---------|------|---------|--------|
| A 0.1.0 | 2013-09-25 | Generation of first Draft | U.Pahl |
| A 0.2.0 | 2013-10-16 | Update of OMS-DPL | U.Pahl |
| A 0.2.1 | 2013-10-17 | Correction T.Banz | U.Pahl |
| A 0.2.2 | 2013-10-18 | Foot note 15 for Heat/cooling | U.Pahl |
| A 0.2.3 | 2013-10-21 | Bugfix | U.Pahl |
| A 0.3.0 | 2014-01-17 | Changes according final vote | U.Pahl |
| A 0.3.1 | 2014-01-25 | Rename VIF-Type->VIB-Type<br>Release A | U.Pahl |
| B 0.4.0 | 2014-11-07 | Add encryption requirements<br>Add symbols 🔒 and 🔓 | U.Pahl |
| B 4.1.0 | 2016-06-22 | Add alternative optional description | Thomas Banz |
| C 4.2.0 | 2019-10-28 | Add declaration of "No Data", "C", "C", "Ox", "Empty"; Footnote 16 and 17; Device type "Breaker / Valve"; MB-Tag Section "DC-Disconnector Control", "YD-Descriptors"; MB-Tag "DC1!", "MM8!", "VM4!", "VM5!", "YD1!", "YD1!T", "YD2!P", "YD3!P"; VIB-Type section "CL-Control", "YD-Descriptor"; VIB-Types "MM07", "MM08", "MM09", "MM09", "MM10", "MM11", "VM07", "VM08", "VM09", "VM10", "YD01", YD02", "YD03", "YD04", "YD05", "YD06", "YD07" | Thomas Banz |
| D 4.3.0 | 2020-06-03 | Changed headline for B.2.2<br>New chapter B.2.3<br>Add conditions from OMS-S2, Annex M to "DC1!", "DT1!", "DT2!D", "EJ1!", "EJ1!T", "EJ2!", "EJ1!D", "EJ1!DT", "EJ2!D", "EW1!", "EW1!D", "EW1!T", "EW1!DT", "EW1!R", "EW1!RT", "EW2!D", "HC1!", "HC1!D", "MM2!", "MM3!", "TC1!", "TC2!", "VM1!", "VM1!D", "VM1!DT", "VM2!", "VM3!"<br>Editorial changes | Thomas Banz, Achim Reissinger |
| D 4.3.1 | 2020-06-04 | Editorial changes in B.2.3 | Thomas Banz, Achim Reissinger |
| D 4.3.2 | 2020-06-04 | Editorial changes | Uwe Pahl, Achim Reissinger |
| D 4.3.3 | 2020-06-05 | Editorial changes | Thomas Banz, Achim Reissinger |
| D 4.3.4 | 2020-07-07 | Updated title page<br>Add VIB-Types CL02, HC02<br>Add group CT<br>Add tags CT1!, XCL2! | AG1, Achim Reissinger |
| D 4.3.5 | 2020-07-09 | Wording changed for CT, CT1!, XCL2! | Achim Reissinger |
| D 4.3.6 | 2020-09-24<br><br>and<br><br>2020-09-29<br><br>and<br><br>2020-10-02 | Editorial changes<br><br><br><br>Add "O1" in Col. Breaker for DT1! And DT2!<br>Add two new MB-Tags:<br>• ID7! "Initial DIN address" with VarLen, T=0;F=0;X=0;FD=no and VIB Type=ID01<br>• ID8! "Current DIN address" with VarLen, T=0;F=0;X=0;FD=no and VIB Type=ID02 | Achim Reissinger<br><br><br><br>Uwe Pahl, Thomas Banz |
| D 4.3.7 | 2020-10-13 | List of MB-Command-Tags:<br>• Add new group "Compliance Test Command"<br>• Change VIB Type Reference form CL02 to CT01<br>• Change to XCL to XDC change Headline top "Disconnector Control Command" | Thomas Banz |

| Version | Date | Comment | Editor |
|---|---|---|---|
| | | • Change XCL1! To XDC1!<br><br>List of VIB-Types:<br>• Add new group "Compliance Test"<br>• Move CL02 to CT01<br>• Add CL02 | |
| D 4.3.8 | 2020-10-19 | Release | Achim Reissinger |
| E 4.4.0 | 2021-10-21 | Add B.2.3 for sensors<br>Update B.2.1, B.2.2, B.2.4 and B.3.1 for sensors<br><br><br>Release candidate | AG1,<br>AG1 TF Sensors,<br>Thomas Banz,<br>Achim Reissinger |
| E 4.4.1 | 2021-12 | List of MB-Data-Tags:<br>• Term for "temperature" corrected for TC1!, TC2!, TC3!<br>• Condition removed for VM1!DT<br><br>Release | AG1, Thomas Banz<br><br><br><br><br>Achim Reissinger |
| E 4.4.2 | 2022-01-31<br><br>and<br><br>2022-02-23<br><br>and<br><br>2022-05-30 | List of MB-Data-Tags:<br>• Condition for PT5!..PT8! corrected<br>• Table footnote 23 added for EJ1!D, EJ1!DT, EW1!D, EW1!DT<br>• Colouring of Footnote 23 removed<br>• DP5! and DP6! set to optional for all devices<br><br>List of VIB-Types:<br>• Add ER01<br><br>Legend and Notes:<br>• Declaration of "Time point (X and final DIFE(FD))" changed<br>• Line feed inside footnote 21 removed<br><br>Copyright remark added to front page<br><br>Release | Uwe Pahl, Thomas Banz, Achim Reissinger |
| F 4.5.0 | 2022-01-31<br><br>until<br><br>2022-10-15 | List of MB-Data-Tags:<br>• Unit corrected for PT5!..PT8!<br>• Data Field for Get ID4 set to NoData<br>• Table footnote 23 added for DT2!D, EJ1!D, EJ1!DT, EJ2!D, EW1!D, EW1!DT, EW1!R, EW2!D, TC1!, TC2!, VM1!D<br>• Condition for UC-07 removed for EJ1!, EJ1!T, EJ2!, EW1!, EW1!T, EW2!, HC1!, HC1!D, VM1!, VM2!, VM3!<br>• Change to "last", Add Condition for DT2!D<br>• ST2!N and MM6! added<br><br>List of MB-Command-Tags:<br>• Table footnote 24 added<br>• Change Data Field to "NoData" for getID4!<br>• Groups XDT, XVM, XEJ and XEW added<br>• getIDT2!D, getDT2!N, setDT2!N added<br>• XMM2!, XMM3!, XMM4! marked as valid until version 4.4.2<br>• notMM2!, notMM3!, clrMM3! replace XMM2!, XMM3!, CMM4! | AG1<br>Achim Reissinger |

| Version | Date | Comment | Editor |
|---|---|---|---|
| | | • setID2!, setID10! and setID11! added<br>• getMM6!, setMM6! added<br>• General section added<br>• arl***!, drl***! added<br>• Type/Encryption: Change std. Text for this commands to "Command to device"<br><br>List of VIB-Types:<br>• Group ER added<br>• ID04s, ID04g removed due to general rule<br>• DT05, ID10, MM17 added<br><br>Legend and Notes:<br>• SelRead" removed<br><br>B.1.4 incl. tables 2 to 4 added<br><br>Copyright remark added to front page<br><br>Release Candidate | |
| F 4.5.1 | 2022-11-08<br><br>to<br><br>2022-11-14 | Integration of review comments | AG1, Achim Reissinger |
| F 4.5.2 | 2022-12-20 | List of VIB-Types: ID10 deleted<br><br>Release | Thomas Banz,<br>Uwe Pahl,<br>Achim Reissinger |
| G 4.6.0 | 2023-07-10<br><br>to<br><br>2023-11-03 | Action items #131-3, #132-3, #132-15 integrated<br>Extension of rule for encryption of MB-Command-Tags in document<br>New issue and version number<br>Table index added<br>Table numbering corrected<br><br>List of MB-Data-Tags:<br><br>• CO Alarm        Change Headline to "CO Alarm Device(1Dh)"<br>• Heat Alarm Device(1Eh)    Add column with entries<br>• Conductivity Sensor    Remove column<br>• Heart Beat Sensor    Remove column<br>• Impedance Sensor    Remove column<br>• AD4!    Add VIB-Type Reference AD14<br>• AD5!    Add VIB-Type Reference AD15<br>• AD6!    Add VIB-Type Reference AD16<br>• AD7!    Add VIB-Type Reference AD17<br>• AD8!    Add VIB-Type Reference AD18<br>• AD9! Add VIB-Type Reference AD19<br>• AD10! Add VIB-Type Reference AD20<br>• AD11! Add VIB-Type Reference AD21<br>• AD12! Add VIB-Type Reference AD22 | Thomas Banz,<br>Uwe Pahl,<br>Achim Reissinger |

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|---------|------|---------|--------|
| | | <ul><li>AD13! Add VIB-Type Reference AD23</li><li>AD14! Add VIB-Type Reference DI03</li><li>CC1! Add VIB-Type Reference CC03</li><li>CC2! Add VIB-Type Reference CC04</li><li>ID9! Change Reference to ID10, change marking for CO Alarm from "M" to "O"</li><li>IR1! Add VIB-Type Reference IR02</li><li>LT1! Add VIB-Type Reference LT03</li><li>LT2! Add VIB-Type Reference LT04</li><li>MM12!   Add VIB-Type Reference MM18</li><li>MM13!   Add VIB-Type Reference MM19</li><li>MM14!   Add VIB-Type Reference MM20</li><li>MM15!   Add VIB-Type Reference MM21</li><li>MM16!   Add VIB-Type Reference MM22</li><li>MM17!   Add Tag</li><li>MO1!    Add VIB-Type Reference RH03</li><li>ND1!    Add VIB-Type Reference ND02</li><li>PF1!    Maked as "Valid only until OMS-S2 V4.5.1"</li><li>PH1!    Add VIB-Type Reference PH02</li><li>PT1!    Add VIB-Type Reference PT09</li><li>PT2!    Add VIB-Type Reference PT10</li><li>PT3!    Add VIB-Type Reference PT11 and change description from "PM1.5" to "PM2.5"</li><li>PT4!    Add VIB-Type Reference PT12</li><li>PT5!    Add VIB-Type Reference PT13</li><li>PT6!    Add VIB-Type Reference PT14</li><li>PT7!    Add VIB-Type Reference PT15</li><li>PT8!    Add VIB-Type Reference PT16</li><li>RF1!    Add VIB-Type Reference DI03 and DI04</li><li>TB1!    Add VIB-Type Reference TB02</li><li>VC1!    Add VIB-Type Reference VC03</li><li>VC2!    Add VIB-Type Reference VC04</li><li>WS1!    Add VIB-Type Reference WS02</li><li>ID9!    Closed lock symbol added</li><li>DP1!B, DT1!B, DT5!B, EJ1!B, EJ2!B, EW1!B, EW2!B, EW3!B, HC1!B, VM1!B, VM2!B, VM3!B added</li><li>EC added</li><li>EC1!, EC2!, EC1!D, EC2!D added</li><li>EC1!P, EC2!P added</li></ul> | |

| Version | Date | Comment | Editor |
|---------|------|---------|--------|
|  |  | <ul><li>DT1!P, EJ1!P, EJ1!PT, EJ2!P, EW1!P, EW1!PT, EW2!P, EW3!P, HC1!P, VM1!P, VM2!P, VM3!P added</li><li>HC1! change "M" to "A1"</li><li>VM1! change "M" to "A1" for water and hot water</li><li>ID11! remove encryption symbols for ID11!</li><li>ID11! changed to ID10!</li><li>EJ sort group to release mix of EJ1! And EJ2!</li></ul> List of MB-Command-Tags: <ul><li>XID2!, XID10!    Add commands</li><li>Col. B    Remove Encryption in headline and encryption symbols at commands and groups</li><li>XID11!   Add command</li><li>setID2!   Correct Description</li><li>XID2!    Correct Description</li><li>setID11! Correct VIB-Type reference (ID10 --> ID09)</li><li>setID10!, setID11! Remove condition to OMS-S2 Annex M</li><li>setID10!, setID11! Change Marking from "C" to "O"</li><li>setID10!, setID11! Change Description</li><li>setID10!, setID11! Set "setID10!" to "setID11!" and vice versa</li><li>List of MB-Data-Tags for sensors:</li><li>CO Alarm Change Headline to "CO Alarm Device(1Dh)"</li><li>Heat Alarm Device (1Eh) Add column</li><li>Conductivity Sensor Remove column</li><li>Heart Beat Sensor Remove column</li><li>Impedance Sensor Remove column</li><li>PT3! Change description from "PM1.5" to "PM2.5"</li></ul> List of VIB-Types: <ul><li>FR01, PR01, PR02, PR03, PR04, PR05, PR06, PR07, PR08, RH01, TC04, PJ01    Add Remark</li><li>AD14, AD15, AD16, AD17, AD18, AD19, AD20, AD21, AD22, AD23, CC03, CC04, DI03, DI04, ID10, IR02, LT03, LT04, MM18, MM19, MM20, MM21, MM22, MM23, ND02, PH02, PT09, PT10, PT11, PT12, PT13, PT14, PT15, PT16, RH03, TB02, VC03, VC04, WS02 Add VIB-Types</li><li>ID09 Maked as "Valid only until OMS-S2 V4.5.1"</li><li>PF01 Maked as "Valid only until OMS-S2 V4.5.1"</li><li>ID09 Reactivate with description Device Type</li><li>EW01 (ed): '000 0nnn' --> '0000 0nnn'</li><li>EC Add</li><li>EC01, EC02 Add</li></ul> |  |

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|---------|------|---------|--------|
| | | Release candidate | |
| G 4.6.1 | 2023-12-10 to 2024-01-14 | Consideration of review comments Release | AG1, Achim Reissinger |

# Contents

# Tables

# B.1 Overview about the OMS-Data Point List

## B.1.1 General

The OMS-Data Point List (OMS-DPL) lists all harmonised M-Bus-Tags. An M-Bus Tag is an abstract description of one or several M-Bus data points, which may differ in scaler or resolution or data type (according to [EN13757-3:2018], Table 4).

The OMS-DPL consists of two lists:

- VIB-Type List (VTL)
- M-Bus Tag List (MBTL)

## B.1.2 The VIB-Type List

A VIB-Type describes a physical unit with a scaler and an optional VIF property like direction of flow. Each VIB-Type in the VIB-Type-List is associated with one unique combination of VIF and VIFE.

Example: "EW02" means energy in Watt with special scaler $10^5$ to $10^6$ used only for imported energy.

## B.1.3 The M-Bus Tag List

Each MB-Tag listed in the OMS-DPL is associated with a unique combination of Tarif "T", Function "F", Storage number "X", the final DIFE "FD" and a set of VIB-Types. The set of VIB-Types has always the same VIF-properties, the same physical unit, but may be different scalers or different data types. One MB-Tag can be used by different device types (e.g. EW1! – Energy in Watt is in use for Electricity, Heat and Cooling meters).

Example: MB-Tag EW1!R describes a recent value of energy used for billing. This MB-Tag declares

- a historical (recent) value by a set FD
- a register (declared by Storage number X)
- an instantaneous value (declared by function F=0)
- applies no tariff (T=0)
- Unit is always Watt (declared by the VIB-Type)
- The scaler has a range of $10^{-6}$ to $10^6$ (declared by the VIB-Types EW01, EW02 and EW03)

Such a MB-Tag could be coded as shown in Table B.1.

**Table B.1: Example of MB-Tag EW1!R**

| Example | DIF/DIFE | VIF/VIFE | Value |
|---|---|---|---|
| 12,3 MWh (in register 5) | C2h 82h 00h | FBh 00h | 7Bh 00h |
| 12300 kWh (in register 5) | CBh 82h 00h | 06h | 00h 23h 01h |

## B.1.4 M-Bus Commands

M-Bus commands are represented by M-Bus-Command-Tags. The M-Bus-Command-Tag uses the same VIB-Type as an M-Bus-Data-tag. M-Bus Command-Tags are usually identified by a command action added to the VIB-Type.

**NOTE** 1: Some commands do not use a command action for historical reasons.

The used command actions shall be according to Table B.2.

**Table B.2: Command methods and their action code**

| Command | Command action | Action code |
|---|---|---|
| Set value | set | 00h |
| Add to value | add | 01h |
| Subtract from value | sub | 02h |
| Mask value with binary OR | bor | 03h |
| Mask value with binary AND | and | 04h |
| Mask value with binary XOR | xor | 05h |
| Mask value with binary NOT AND | not | 06h |
| Clear value | clr | 07h |
| Add to readout-list [a] | arl | 0Ch |
| Delete from readout-list [a] | drl | 0Dh |
| Get value | get | 0Fh |
| [a] To add MB-Data-Tags to or delete them from the readout list, the OMS end-device shall support<br>- the actually implemented VIB-Type and<br>- the first VIB-Type in the column "VIB-Type Reference" of the MB-Data-Tag list, where all possibly coming "n" shall be set to 0 (see Table B.4 for an example). | | |

The command action is represented in the M-Bus data point by an M-Bus action code according to Table B.2 (see also [EN13757-3:2018], 6.4.7).

The Action code shall be the last VIFE of the VIB type. To signal that the VIB-Type is being extended, the extension bit of the previous VIF(E) shall be set.

In case of a compact profile in a command tag the VIFE of the compact profile (13h, 1Eh or 1Fh) is the very last VIFE.

**NOTE 2:** As an M-Bus action code is added to the VIB type of a command, the M-Bus-Command-tag becomes one byte longer than the corresponding M-Bus-Data-tag.

OMS end-devices shall not send M-Bus Command-Tags.

Table B.3 and Table B.4 show examples for the VIB-Type extension of M-Bus-Command-Tags.

**Table B.3: Example for the VIB-Type extension of an M-Bus-Command tag with ID4!**

| | M-Bus-Tag | VIB-Type | M-Bus data point in hex |
|---|---|---|---|
| M-Bus-Data-tag for "Ownership number" with value 123456 | ID4! | ID04 | 0B FD 11  56 34 12 |
| M-Bus-command-tag for "Set Ownership number" to 123456 | setID4! | set[ID04] | 0B FD **91 00** 56 34 12 |
| M-Bus-command-tag for "Get Ownership number" | getID4! | get[ID04] | 00 FD **91 0F** |

**Table B.4: Example for the VIB-Type extension of an M-Bus-Command tag with VM1!D**

| Note | M-Bus-Tag | VIB-Type | M-Bus data point in hex |
|---|---|---|---|
| M-Bus-Data-tag for "Volume (V), accumulated, total, due date value" with value 12345678 | VM1!D | VM02 with nnn = 011$_b$ | 4C 93 7D  78 56 34 12 |
| M-Bus-command-tag for "Add Volume (V), accumulated, total,  due date value  to readout list" | arlVM1!D | arl[VM01] with nnn = 000$_b$ | 40 **90 0C** |
| M-Bus-command-tag for "Delete Volume (V), accumulated total, due date value from readout list" | delVM1!D | del[VM02] with  nnn as used by the meter | 40 **93 FD 0D** |

The communication partner shall use the communication security profile applied by the OMS end-device.

## B.2 M-Bus Tag List

### B.2.1 Legend and Notes

Data Field:
INT = Integer (8 Bit - 64 Bit) refer to [EN13757-3:2018], Table 4
8INT = 8 Bit Integer/Binary refer to [EN13757-3:2018], Table 4
64INT = 64 Bit Integer/Binary refer to [EN13757-3:2018], Table 4
BCD = Binary Coded Decimal refer to [EN13757-3:2018], Table 4
8BCD = 4 Byte BCD refer to [EN13757-3:2018], Table 4
VarLen = variable length refer to [EN13757-3:2018], Table 4
Type F = Compound CP32: Date and Time refer to [EN13757-3:2018], Annex A
Type G = Compound CP16: Date refer to [EN13757-3:2018], Annex A
Type I = Year down to second refer to [EN13757-3:2018], Annex A
Type J = Time of day refer to [EN13757-3:2018], Annex A
No Data = No Data refer to [EN13757-3:2018], Table 4

M = Mandatory (These data objects shall be provided.)
Ax = Alternatively (At least one of the with "A" and identical number marked data objects is mandatory.)
Xx = Exclusively alternatively (Precisely one of the with "X" and identical number marked data objects is mandatory.)
O = Optional (These data objects may or may not be provided.)
Ox = Optional alternatively (Only one of the with 'O' and identical number marked data objects are allowed in the datagram.)
C = Conditional (Mandatory if condition applies). If condition does not apply, optional 'O' is valid.
C Ox = Conditional or optional alternatively (mandatory if condition applies). If condition does not apply, optional alternatively 'Ox' is valid.
Empty = An empty field indicates that this MB-Tag is not applicable to this device type.
S = MB-Sensor-Tag, see chapter "List of MB-Sensor-Tags".
E = Exclusively use (Mandatory if condition applies. Otherwise it is not applicable to this device type.)

Encryption
The column "type" also shows the encryption requirements according to the selected security profile [OMS-S2], 9.1. In the headline of each value group a respective symbol can be found which is valid for each M-Bus-Tag below in this group. Only in case of exceptions a separate symbol is shown directly after the type definition of this single M-Bus-Tag (e.g. ID6!).
Symbols:
🔒 = Encryption is mandatory.
🔒🔓 = Encryption is not required but can be used optionally.
🔓 = Encryption is not allowed.
For data points that are not listed in the M-Bus Tag List encryption is optional. This includes manufacturer specific data. However, it is strongly recommended to encrypt all consumer relevant data.

The letters and numbers in front of the alert sign "!" declare the supported combination of VIB-Types. The letters after the alert sign are optional and declare additional conditions. Every letter after alert sign is used once only).

*Declaration of Measurement condition (F)*
   * [ ] instant
   * [A] maximum
   * [I] minimum
   * [E] Error condition


*Declaration of Time point (X and final DIFE(FD))*
   * [ ] current value (X=0)
   * [B] usage according [OMS-S2] Annex R (see also [OMS-S2] Annex G), (X=3)
   * [D] due date value (X=1)
   * [N] next date (X=1)
   * [P] periodical values (X=8..199)
   * [R] Recent value (X=0..99, 101..124 + final DIFE)
   * [C] cumulative value of a maximum/minimum
   * [Xn] Sporadic event, where n is the value of used Storage number (X = 3..31) e.g. 'X3'


*Declartion of Tarif-Register (T)*
   * [] No tarif
   * [T] Tariff 1..15


Example:  1-0:1.6.e*f "Actual maximum of active power import (+P), recent value for billing, total (value + time stamp)"  is coded as  "DT1!ART".


[10] This MB-Tag is several times used. The description for this MB-Tag depends on the device type of the transmitting OMS end-device.


[11] Recent values are always coded with a final DIFE with the value 00h. The number of DIFEs is variable. For downward compatibility reasons and for realization of constant data record length it is allowed to use more DIFEs (between the DIF and the final DIFE = 00h) than necessary.


[12] Depending on Data field: Identification number (8BCD) or Application Layer Address (64INT)
Order of Application Layer Address (ALA) according [EN13757-7:2018], Table 12.


[14] Refer to [EN13757-3:2018], Annex E.1


[15] For device type comb. Heat/Cooling the tariff 1 is allowed only!


[16] According to [EN13757-3:2018], Annex C.3, subunit must be 1 if the disconnector is integrated into a meter.


[17] The subunit of the subunit descriptor shall be >0.


[19] VarLen with a 14 characters ASCII string (LSB first) according to [EN13757-3:2018], Table 5. For example, the address in [OMS-S2],Table 5 is coded as: 0D 78 0E 34 34 33 33 32 32 31 31 31 30 53 44 51 37

[21] The OMS end-device shall provide this MB-Tag in a static datagram (according to OMS-S2, 4.3.2.4).

[22] VarLen with binary value range (E0h – EFh)

[23] Related M-Bus-Data-Tags may only be transmitted in the consumer information messages (content index 3).

[24] VIB-Type references enclosed in square brackets are extended with the given action code according to subclause B.1.4.

[25] The periodical values shall fulfill minimum data granularity and update interval maximum according to [OMS-S2], 4.3.2.2., Table 8.

[26] This data point is for device type comb. heat/cooling meter (0Dh) expected to be deprecated in the future.

## B.2.2 List of MB-Data-Tags

| Type / Encryption | MB-Tag | Description | Data field | Tariff [T] | Func-tion [F] | Storage [X] | Final DIFE [FD] 11 | VIB-Type Reference | Electricity (02h) | HCA (08h) | Cooling (0Ah;0Bh) | Comb. Heat/Cooling (0Dh) | Heat (04h;0Ch) | Gas (03h) | Cold Water (07h;16h) | Hot Water (06h;15h) | Breaker / Valve (20h; 21h) | Sensor Device |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 🔒 | **AD** | **Alarm Devices** | | | | | | | | | | | | | | | | |
| Sensor reading | AD4! | Number of dismounts / removal counter | INT, BCD | 0 | 0 | 4 | no | AD04, AD14 | | | | | | | | | | S |
| Sensor reading | AD5! | Number of test button operated counter | INT, BCD | 0 | 0 | 5 | no | AD05, AD15 | | | | | | | | | | S |
| Sensor reading | AD6! | Number of alarms | INT, BCD | 0 | 0 | 6 | no | AD06, AD16 | | | | | | | | | | S |
| Sensor reading | AD7! | Number of alarm mute switch operated counter | INT, BCD | 0 | 0 | 7 | no | AD07, AD17 | | | | | | | | | | S |
| Sensor reading | AD8! | Number of obstacle detected counter | INT, BCD | 0 | 0 | 8 | no | AD08, AD18 | | | | | | | | | | S |
| Sensor reading | AD9! | Number of smoke entries blocked | INT, BCD | 0 | 0 | 9 | no | AD09, AD19 | | | | | | | | | | S |
| Sensor reading | AD10! | Number of smoke chamber defects | INT, BCD | 0 | 0 | 10 | no | AD10, AD20 | | | | | | | | | | S |
| Sensor reading | AD11! | Number of self-test failed counter | INT, BCD | 0 | 0 | 11 | no | AD11, AD21 | | | | | | | | | | S |
| Sensor reading | AD12! | Number of sounder defect counter | INT, BCD | 0 | 0 | 12 | no | AD12, AD22 | | | | | | | | | | S |

| | Code | Description | Format | | | | | References | c1 | c2 | c3 | c4 | c5 | c6 | c7 | c8 | c9 | c10 | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sensor reading | AD13! | Chamber Pollution Level | INT, BCD | 0 | 0 | 13 | no | AD13, AD23 | | | | | | | | | | | S |
| Sensor reading | AD14! | Obstacle check distance | INT, BCD | 0 | 0 | 14 | no | DI01, DI02, DI03 | | | | | | | | | | | S |
| 🔒 | **CA** | **Current [A]** | | | | | | | | | | | | | | | | | |
| Meter reading | CA1! | Current at phase L1, instantaneous value | INT, BCD | 0 | 0 | 0 | no | CA01 | O | | | | | | | | | | |
| Meter reading | CA2! | Current at phase L2, instantaneous value | INT, BCD | 0 | 0 | 0 | no | CA02 | O | | | | | | | | | | |
| Meter reading | CA3! | Current at phase L3, instantaneous value | INT, BCD | 0 | 0 | 0 | no | CA03 | O | | | | | | | | | | |
| Meter reading | CA4! | Current at neutral L0, instantaneous value | INT, BCD | 0 | 0 | 0 | no | CA04 | O | | | | | | | | | | |
| 🔒 | **CC** | **Carbon Oxide Content** | | | | | | | | | | | | | | | | | |
| Sensor reading | CC1! | Carbon monoxide content | INT, BCD | 0 | 0 | 0 | no | CC01, CC03 | | | | | | | | | | | S |
| Sensor reading | CC2! | Carbon dioxide content | INT, BCD | 0 | 0 | 0 | no | CC02, CC04 | | | | | | | | | | | S |
| 🔒 | **CD** | **Conductivity** | | | | | | | | | | | | | | | | | |
| Sensor reading | CD1! | Electrical conductivity | INT, BCD | 0 | 0 | 0 | no | CD01 | | | | | | | | | | | S |
| 🔒 | **CT** | **Compliance test** | | | | | | | | | | | | | | | | | |
| | CT1! | Compliance test function *Condition: See OMS-S2 Annex M OMS-UC-00* | INT, VarLen | 0 | 0 | 0 | no | CT01 | C | C | C | C | C | C | C | C | C | | |
| 🔒 | **DC** | **Disconnector Control** | | | | | | | | | | | | | | | | | |
| Meter/actuator reading | DC1! | Control state of breaker/valve [16] *Condition: See OMS-S2 Annex M OMS-UC-03* | INT | 0 | 0 | 0 | no | CL01 | C | | | | | | C | C | C | M | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter/actuator reading | DC2! | Actual physical state of breaker/valve [16] *Condition: See OMS-S2 Annex M OMS-UC-03* | INT | 0 | 0 | 0 | no | CL02 | C | | | | | | C | C | C | M | |
| 🔒🔓 | **DP** | **Duration/Period** | | | | | | | | | | | | | | | | |
| Time, date of reading [10] | DP1! | Run time difference between measurement of current value and transmission *Condition: See CEN/TR 17167:2018 Annex C.2* | INT, BCD | 0 | 0 | 0 | no | DP01 | C | C | C | C | C | C | C | C | | |
| Time, date of reading | DP1!B | Run time difference between meter value and its transmission *Exclusive condition: See OMS-S2 Annex R* | INT, BCD | 0 | 0 | 3 | no | DP01 | E | | E | E | E | E | E | E | | |
| Time integral [10] | DP2! | Averaging duration for actual value | INT, BCD | 0 | 0 | 0 | no | DP02 | O | | O | O | O | O | O | O | | |
| Transmission interval | DP3! | Nominal period of synchronous transmission | INT, BCD | 0 | 0 | 0 | no | DP03 | O | O | O | O | O | O | O | O | | |
| - | DP4! | Valid only until OMS-S2 V4.1.2. => Replaced by YD2!P | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Run time of OMS end-device | DP5! | Operating Time | INT, BCD | 0 | 0 | 0 | no | DP05 | O | O | O | O | O | O | O | O | O | S |
| Run time of OMS end-device | DP6! | On Time | INT, BCD | 0 | 0 | 0 | no | DP06 | O | O | O | O | O | O | O | O | O | S |
| 🔒🔓 | **DT** | **Date / Time (Time stamp)** | | | | | | | | | | | | | | | | |
| Date/Time of OMS-end device [10] | DT1! | Current date/time at time of transmission *Condition: See OMS-S2 Annex M OMS-UC-04* | Type F,I | 0 | 0 | 0 | no | DT01 | C O1 | C O1 | C O1 | C O1 | C O1 | C O1 | C O1 | C O1 | C O1 | S |
| Time, date of reading | DT1!B | Local date at time of meter value *Exclusive condition: See OMS-S2 Annex R* | Type F,I | 0 | 0 | 3 | no | DT01 | E | | E | E | E | E | E | E | | |

| Name | Code | Description | Type | | | | | DT | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 | P9 | P10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time, date of reading [10] | DT1!R | Local date at time of recent meter value | Type F,I | 0 | 0 | 0..99, 101..124 | yes | DT01 | O2 | | | | | O2 | | | | |
| Date/Time of reading [10][25] | DT1!P | Date/time of periodic meter value *Condition: See OMS-S2 Clause 4.3.2.2* | Type F,I | 0 | 0 | 8..199 | no | DT01 | C | C | C | C | C | C | C | C | | |
| Date, time of max. 🔒 | DT1!A | Point of time of actual maximum of active power import (+P), current value, total | Type F,I | 0 | 1 | 0 | no | DT01 | O3 | | | | | | | | | |
| Date, time of max. 🔒 | DT1!AR | Point of time of actual maximum of active power import (+P). recent value, total | Type F,I | 0 | 1 | 0..99, 101..124 | yes | DT01 | O5 | | | | | | | | | |
| Date, time of max. 🔒 | DT1!AT | Point of time of actual maximum of active power import (+P), current value, tariff 1..15 | Type F,I | 1..15 | 1 | 0 | no | DT01 | O4 | | | | | | | | | |
| Date, time of max. 🔒 | DT1!ART | Point of time of actual maximum of active power import (+P). recent value, tariff 1..15 | Type F,I | 1..15 | 1 | 0..99, 101..124 | yes | DT01 | O6 | | | | | | | | | |
| Date, time of event 🔒 | DT1!Xn | Date / Time of related sporadic event | Type F,I | 0 | 0 | 3..31 | no | DT01 | | | | | | | | | | S |
| Date of reading [10] | DT2!R | Local date at time of recent meter value | Type G | 0 | 0 | 0..99, 101..124 | yes | DT02 | O2 | | | | | O2 | | | | |
| Date of OMS end-device [10] | DT2! | Current date at time of transmission | Type G | 0 | 0 | 0 | no | DT02 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | S |
| Date of reading [10] | DT2!D | Local date at last due date *Condition - 1: See OMS-S2 Annex M OMS-UC-07[23] Condition - 2: See OMS-S2 Annex M OMS-UC-12a Condition - 3: See OMS-S2, 8.4.5.1* | Type G | 0 | 0 | 1 | no | DT02 | | M | C | C | C | | C | C | | |
| Date of reading [10] | DT2!N | Local date at next due date *Condition: See OMS-S2 Annex M OMS-UC-12a* | Type G | 0 | 0 | 1 | no | DT05 | | C | C | C | C | | C | C | | |

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date of max. 🔒 | DT2!A | Point of time of actual maximum of active power import (+P), current value, total | Type G | 0 | 1 | 0 | no | DT02 | O3 | | | | | | | | | | | | |
| Date of max. 🔒 | DT2!AR | Point of time of actual maximum of active power import (+P). recent value, total | Type G | 0 | 1 | 0..99, 101..124 | yes | DT02 | O5 | | | | | | | | | | | | |
| Date of max. 🔒 | DT2!AT | Point of time of actual maximum of active power import (+P), current value, tariff 1..15 | Type G | 1..15 | 1 | 0 | no | DT02 | O4 | | | | | | | | | | | | |
| Date of max. 🔒 | DT2!ART | Point of time of actual maximum of active power import (+P). recent value, tariff 1..15 | Type G | 1..15 | 1 | 0..99, 101..124 | yes | DT02 | O6 | | | | | | | | | | | | |
| Date of event 🔒 | DT2!Xn | Date of related sporadic event | Type G | 0 | 0 | 3..31 | no | DT02 | | | | | | | | | | | | | S |
| Date, time of max. 🔒 | DT3!A | Point of time of actual maximum of active power export (-P), current value, total | Type F,I | 0 | 1 | 0 | no | DT03 | O7 | | | | | | | | | | | | |
| Date, time of max. 🔒 | DT3!AR | Point of time of actual maximum of active power export (-P), recent value, total | Type F,I | 0 | 1 | 0..99, 101..124 | yes | DT03 | O8 | | | | | | | | | | | | |
| Date, time of max. 🔒 | DT3!AT | Point of time of actual maximum of active power export (-P), current value, tariff 1..15 | Type F,I | 1..15 | 1 | 0 | no | DT03 | O9 | | | | | | | | | | | | |
| Date, time of max. 🔒 | DT3!ART | Point of time of actual maximum of active power export (-P), recent value, tariff 1..15 | Type F,I | 1..15 | 1 | 0..99, 101..124 | yes | DT03 | O 10 | | | | | | | | | | | | |
| Date of max. 🔒 | DT4!A | Point of time of actual maximum of active power export (-P), current value, total | Type G | 0 | 1 | 0 | no | DT04 | O7 | | | | | | | | | | | | |
| Date of max. 🔒 | DT4!AR | Point of time of actual maximum of active power export (-P), recent value, total | Type G | 0 | 1 | 0..99, 101..124 | yes | DT04 | O8 | | | | | | | | | | | | |
| Date of max. 🔒 | DT4!AT | Point of time of actual maximum of active power export (-P), current value, tariff 1..15 | Type G | 1..15 | 1 | 0 | no | DT04 | O9 | | | | | | | | | | | | |

| Name | Code | Description | Type | | | | Acc. | Ref. | Orange | | Cyan | Green | Gold | Yellow | Lt.Blue | Pink | Dk.Green | Purple |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date of max. 🔒 | DT4!ART | Point of time of actual maximum of active power export (-P), recent value, tariff 1..15 | Type G | 1..15 | 1 | 0..99, 101..124 | yes | DT04 | O 10 | | | | | | | | | |
| Time of OMS end-device [10] | DT5! | Current time at time of transmission | Type J | 0 | 0 | 0 | no | DT01 | O1 | | | | | | | | | |
| Time of OMS end-device | DT5!B | Local time at time of meter value *Exclusive condition: See OMS-S2 Annex R* | Type J | 0 | 0 | 3 | no | DT01 | E | | E | E | E | E | E | E | | |
| 🔒 | **EC** | **Energy in calorie** | | | | | | | | | | | | | | | | |
| Meter reading [10] | EC1! | Energy import | INT, BCD | 0 | 0 | 0 | no | EC01 | | | O | O | O | | | | | |
| Meter reading [10] | EC1!D | Energy import *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 0 | 0 | 1 | no | EC01 | | | C O | C O | C O | | | | | |
| Meter reading [10] [25] | EC1!P | Energy, periodical value, import | INT, BCD | 0 | 0 | 8..199 | no | EC01 | | | O | O | O | | | | | |
| Meter reading | EC2! | Energy import (2nd value for cooling), current value in calorie, total | INT, BCD | 0 | 0 | 0 | no | EC02 | | | | O | | | | | | |
| Meter reading | EC2!D | Energy import (2nd value for cooling), due date value in calorie, total *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 0 | 0 | 1 | no | EC02 | | | | C O | | | | | | |
| Meter reading [25] | EC2!P | Energy import (2nd value for cooling), periodical value in calorie, total | INT, BCD | 0 | 0 | 8..199 | no | EC02 | | | | O | | | | | | |
| 🔒 | **EJ** | **Energy in Joule** | | | | | | | | | | | | | | | | |
| Meter reading [10] | EJ1! | Energy import | INT, BCD | 0 | 0 | 0 | no | EJ01, EJ02, EJ03 | | | X1 | X1 | X1 | | | | | |
| Meter reading [10] | EJ1!B | Energy import *Exclusive condition: See OMS-S2 Annex R* | INT, BCD | 0 | 0 | 3 | no | EJ01, EJ02, EJ03 | | | E | E | E | | | | | |

| | Code | Description | Data | | | | | VIF codes | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter reading [15] | EJ1!T [26] | Energy import (2nd value for cooling), current value in Joule, total | INT, BCD | 1 | 0 | 0 | no | EJ01, EJ02, EJ03, | | | | X2 | | | | | | |
| Meter reading [10] [25] | EJ1!P | Energy, periodical value, import | INT, BCD | 0 | 0 | 8..199 | no | EJ01, EJ02, EJ03 | | | O7 | O7 | O7 | | | | | |
| Meter reading [10] | EJ1!D | Energy import *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 0 | 0 | 1 | no | EJ01, EJ02, EJ03 | | | C O3 | C O3 | C O3 | | | | | |
| Meter reading | EJ1!DT [26] | Energy import (2nd value for cooling), due date value in Joule, total *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 1 | 0 | 1 | no | EJ01, EJ02, EJ03, | | | | C O5 | | | | | | |
| Meter reading | EJ2! | Energy import (2nd value for cooling), current value in Joule, total | INT, BCD | 0 | 0 | 0 | no | EJ04, EJ05, EJ06, | | | | X2 | | | | | | |
| Meter reading | EJ2!B | Energy import (2nd value for cooling), current value in Joule, total *Exclusive condition: See OMS-S2 Annex R* | INT, BCD | 0 | 0 | 3 | no | EJ04, EJ05, EJ06, | | | | E | | | | | | |
| Meter reading | EJ2!D | Energy import (2nd value for cooling), due date value in Joule, total *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 0 | 0 | 1 | no | EJ04, EJ05, EJ06, | | | | C O6 | | | | | | |
| Meter reading [25] | EJ2!P | Energy import (2nd value for cooling), periodical value in Joule, total | INT, BCD | 0 | 0 | 8..199 | no | EJ04, EJ05, EJ06, | | | | O8 | | | | | | |
| 🔒 | **ER** | **Electrical Resistance** | | | | | | | | | | | | | | | | |
| Sensor reading | ER1! | Electrical Resistance | INT, BCD | 0 | 0 | 0 | no | ER01 | | | | | | | | | | S |
| 🔒 | **EW** | **Energy in Watt hour** | | | | | | | | | | | | | | | | |
| Meter reading [10] | EW1! | (Active) energy import | INT, BCD | 0 | 0 | 0 | no | EW01, EW02, EW03 | A1 | | X1 | X1 | X1 | | | | | |

| Meter reading | EW1!B | (Active) energy import *Exclusive condition: See OMS-S2 Annex R* | INT, BCD | 0 | 0 | 3 | no | EW01, EW02, EW03 | E | | E | | E | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter reading [10] | EW1!D | Energy import *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 0 | 0 | 1 | no | EW01, EW02, EW03 | | | C O3 | C O3 | C O3 | | | | | |
| Meter reading [10] [15] | EW1!T [26] | (Active) energy import | INT, BCD | 1..15 | 0 | 0 | no | EW01, EW02, EW03 | O | | | X2 | | | | | | |
| Meter reading | EW1!DT [26] | Energy import (2nd value for cooling), due date value in Watt, total *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 1 | 0 | 1 | no | EW01, EW02, EW03 | | | | C O5 | | | | | | |
| Meter reading [10] [25] | EW1!P | (Active) energy, periodical value, import | INT, BCD | 0 | 0 | 8..199 | no | EW01, EW02, EW03 | O | | O7 | O7 | O7 | | | | | |
| Meter reading | EW1!R | Active energy import (+A), recent value for billing in Watt, total *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 0 | 0 | 0..99, 101..124 | yes | EW01, EW02, EW03 | C | | | | | | | | | |
| Meter reading | EW1!RT | Active energy import (+A), recent value for billing in Watt, tariff 1-15 | INT, BCD | 1..15 | 0 | 0..99, 101..124 | yes | EW01, EW02, EW03 | O | | | | | | | | | |
| Meter reading [10] | EW2! | Energy export for electricity/energy import (2nd value for cooling) for comb. heat/cooling | INT, BCD | 0 | 0 | 0 | no | EW04, EW05, EW06 | A1 | | | X2 | | | | | | |
| Meter reading [10] | EW2!B | Energy export for electricity/energy import (2nd value for cooling) for comb. heat/cooling *Exclusive condition: See OMS-S2 Annex R* | INT, BCD | 0 | 0 | 3 | no | EW04, EW05, EW06 | E | | | E | | | | | | |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter reading | EW2!D | Energy import (2nd value for cooling), due date value in Watt, total *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 0 | 0 | 1 | no | EW04, EW05, EW06 | | | | C O6 | | | | | |
| Meter reading | EW2!T | Active energy export (-*A*), current value in Watt, tariff 1-15 | INT, BCD | 1..15 | 0 | 0 | no | EW04, EW05, EW06 | O | | | | | | | | |
| Meter reading [10 25] | EW2!P | energy, periodical value | INT, BCD | 0 | 0 | 8..199 | no | EW04, EW05, EW06 | O | | O8 | | | | | | |
| Meter reading | EW2!R | Active energy export (-A), recent value for billing in Watt, total | INT, BCD | 0 | 0 | 0..99, 101..124 | yes | EW04, EW05, EW06 | O | | | | | | | | |
| Meter reading | EW2!RT | Active energy export (-A), recent value for billing in Watt, tariff 1-15 | INT, BCD | 1..15 | 0 | 0..99, 101..124 | yes | EW04, EW05, EW06 | O | | | | | | | | |
| Meter reading | EW3! | Active energy import (abs.(*A*)), current value in Watt, total | INT, BCD | 0 | 0 | 0 | no | EW07, EW08, EW09 | A1 | | | | | | | | |
| Meter reading | EW3!B | Active energy import (abs.(*A*)), current value in Watt, total *Exclusive condition: See OMS-S2 Annex R* | INT, BCD | 0 | 0 | 3 | no | EW07, EW08, EW09 | E | | | | | | | | |
| Meter reading | EW3!T | Active energy import (abs.(*A*)), current value in Watt, tariff 1-15 | INT, BCD | 1..15 | 0 | 0 | no | EW07, EW08, EW09 | O | | | | | | | | |
| Meter reading [25] | EW3!P | Active energy import (abs.(*A*)), periodical value in Watt, total | INT, BCD | 0 | 0 | 8..199 | no | EW07, EW08, EW09 | O | | | | | | | | |
| Meter reading | EW3!R | Active energy import (abs.(A)), recent value for billing in Watt, total | INT, BCD | 0 | 0 | 0..99, 101..124 | yes | EW07, EW08, EW09 | O | | | | | | | | |
| Meter reading | EW3!RT | Active energy import (abs.(A)), recent value for billing in Watt, tariff 1-15 | INT, BCD | 1..15 | 0 | 0..99, 101..124 | yes | EW07, EW08, EW09 | O | | | | | | | | |
| 🔒 | **FR** | **Frequency** | | | | | | | | | | | | | | | |

| | Code | Definition | Data type | | | | | Ref | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter reading | FR1! | Supply frequency, instantaneous value | INT, BCD | 0 | 0 | 0 | no | FR01 | O | | | | | | | | | | |
| 🔒 | **HC** | **Heat coast allocation units** | | | | | | | | | | | | | | | | | |
| Meter reading | HC1! | Unrated integral, current value | INT, BCD | 0 | 0 | 0 | no | HC01, HC02 | | M | | | | | | | | | |
| Meter reading | HC1!D | Unrated integral, due date value | INT, BCD | 0 | 0 | 1 | no | HC01 | | M | | | | | | | | | |
| Meter reading [25] | HC1!P | Unrated integral, periodical value | INT, BCD | 0 | 0 | 8..199 | no | HC01, HC02 | | O | | | | | | | | | |
| 🔓 | **ID** | **Identification** | | | | | | | | | | | | | | | | | |
| Fabrication number | ID1! | Serial number (not changeable number assigned by the manufacturer) | 8BCD | 0 | 0 | 0 | no | ID01 | O | O | O | O | O | O | O | O | O | S |
| (Enhanced) identification [12] | ID2! | Identification number or full Application Layer Address | 64INT, 8BCD | 0 | 0 | 0 | no | ID02 | O | O | O | O | O | O | O | O | O | S |
| Primary address | ID3! | One byte Link Layer Address | 8INT | 0 | 0 | 0 | no | ID03 | O | O | O | O | O | O | O | O | O | S |
| Ownership number 🔒🔓 | ID4! | Ownership number | INT, BCD, VarLen | 0 | 0 | 0 | no | ID04 | O | O | O | O | O | O | O | O | O | S |
| Metering point ID 🔒🔓 | ID5! | Identification of the metering point | INT, BCD, VarLen | 0 | 0 | 0 | no | ID05 | O | O | O | O | O | O | O | O | O | S |
| Unique message identification 🔒🔓 | ID6! | Unique message identification | INT | 0 | 0 | 0 | no | ID06 | O | O | O | O | O | O | O | O | O | S |
| DIN address | ID7! | Initial DIN address | VarLen [19] | 0 | 0 | 0 | no | ID01 | O | O | O | O | O | O | O | O | O | S |
| DIN address | ID8! | Current DIN address | VarLen [19] | 0 | 0 | 0 | no | ID02 | O | O | O | O | O | O | O | O | O | S |
| | ID9! | Valid only until OMS-S2 V4.5.1. => Replaced by ID11! | | | | | | | | | | | | | | | | | |
| Device type information | ID10! | Device type | 8INT | 0 | 0 | 0 | no | ID09 | O | O | O | O | O | O | O | O | O | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Device type information 🔒🔓 | ID11! | Sub Device Types | VarLen 22 | 0 | 0 | 0 | no | ID10 | | | | | | | | | | S |
| 🔒 | **IR** | **Irradiance** | | | | | | | | | | | | | | | | |
| Sensor reading | IR1! | Irradiance, Radiant flux density | INT, BCD | 0 | 0 | 0 | no | IR01, IR02 | | | | | | | | | | S |
| 🔒 | **LT** | **Light** | | | | | | | | | | | | | | | | |
| Sensor reading | LT1! | Illuminance | INT, BCD | 0 | 0 | 0 | no | LT01, LT03 | | | | | | | | | | S |
| Sensor reading | LT2! | Luminous intensity | INT, BCD | 0 | 0 | 0 | no | LT02, LT04 | | | | | | | | | | S |
| 🔒🔓 | **MM** | **Meter Management** | | | | | | | | | | | | | | | | |
| Quality of Service | MM1! | Reception level | INT, BCD | 0 | 0 | 0 | no | MM01 | O | O | O | O | O | O | O | O | O | S |
| Quality of Service | MM1!I | Quality limit of reception level | INT, BCD | 0 | 2 | 0 | no | MM01 | O | O | O | O | O | O | O | O | O | S |
| Quality of Service | MM1!E | Noise level | INT, BCD | 0 | 3 | 0 | no | MM01 | O | O | O | O | O | O | O | O | O | S |
| Error | MM2! | Error flags *Condition: See OMS-S2 Annex M OMS-UC-06* | INT | 0 | 0 | 0 | no | MM02 | C | C | C | C | C | C | C | C | C | S |
| Error | MM3! | Error flags (standard) [14] *Condition: See OMS-S2 Annex M OMS-UC-06* | INT | 0 | 0 | 0 | no | MM03 | C | C | C | C | C | C | C | C | C | S |
| Operator data | MM4! | Operator specific data (reserved for the operator) | INT, BCD, VarLen | 0 | 0 | 0 | no | MM04 | O | O | O | O | O | O | O | O | O | S |
| - | MM5! | Valid only until OMS-S2 V4.1.2. => Replaced by YD3!P | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | MM6! | Currently selected application *Condition: See OMS-Se Annex M OMS-UC-14* | INT | 0 | 0 | 0 | no | MM17 | C | C | C | C | C | C | C | C | C | S |
| Meter reading 🔒 | MM7! | Cumulation counter (contains the last written register) | INT | 0 | 0 | 0 | no | MM06 | O | | | | | | | | | |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **OMS end-device** information | MM8! | Remaining battery lifetime | INT, BCD | 0 | 0 | 0 | no | MM09, MM10 | O | O | O | O | O | O | O | O | O | S |
| Sensor reading 🔒 | MM12! | Battery status | INT, BCD | 0 | 0 | 0 | no | MM12, MM18 | | | | | | | | | | S |
| Sensor status 🔒 | MM13! | Status bits for pressure sensor | INT | 0 | 0 | 0 | no | MM13, MM19 | | | | | | | | | | S |
| Sensor status 🔒 | MM14! | Status bits for CO alarm devices | INT | 0 | 0 | 0 | no | MM14, MM20 | | | | | | | | | | S |
| Sensor status 🔒 | MM15! | Status bits for smoke alarm devices | INT | 0 | 0 | 0 | no | MM15, MM21 | | | | | | | | | | S |
| Sensor status 🔒 | MM16! | Status bits for "Door/Window Contact Sensor" and "Locked Door/Window Detector" | INT | 0 | 0 | 0 | no | MM16, MM22 | | | | | | | | | | S |
| Sensor status 🔒 | MM17! | Status bits for heat alarm device | INT | 0 | 0 | 0 | no | MM23 | | | | | | | | | | S |
| 🔒 | **MO** | **Moisture** | | | | | | | | | | | | | | | | |
| Sensor reading | MO1! | Moisture in % | INT, BCD | 0 | 0 | 0 | no | RH02, RH03 | | | | | | | | | | S |
| 🔒 | **ND** | **Noise** | | | | | | | | | | | | | | | | |
| Sensor reading | ND1! | Noise | INT, BCD | 0 | 0 | 0 | no | ND01, ND02 | | | | | | | | | | S |
| 🔒 | **PD** | **Phase in Degree** | | | | | | | | | | | | | | | | |
| Meter reading | PD1! | Angle between voltage on phase L1 and L2, instantaneous value | INT, BCD | 0 | 0 | 0 | no | PD01 | O | | | | | | | | | |
| Meter reading | PD2! | Angle between voltage on phase L2 and L3, instantaneous value | INT, BCD | 0 | 0 | 0 | no | PD02 | O | | | | | | | | | |
| Meter reading | PD3! | Angle between voltage on phase L3 and L1, instantaneous value | INT, BCD | 0 | 0 | 0 | no | PD03 | O | | | | | | | | | |
| Meter reading | PD4! | Angle between voltage and current on phase L1, instantaneous value | INT, BCD | 0 | 0 | 0 | no | PD04 | O | | | | | | | | | |
| Meter reading | PD5! | Angle between voltage and current on phase L2, instantaneous value | INT, BCD | 0 | 0 | 0 | no | PD05 | O | | | | | | | | | |

| Category | Code | Description | Type | | | | | OBIS | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter reading | PD6! | Angle between voltage and current on phase L3, instantaneous value | INT, BCD | 0 | 0 | 0 | no | PD06 | O | | | | | | | | | | |
| 🔒 | **PF** | **Pulse frequency** | | | | | | | | | | | | | | | | | |
| | PF1! | Valid only until OMS-S2 V4.5.1 | | | | | | | | | | | | | | | | | |
| 🔒 | **PH** | **pH value** | | | | | | | | | | | | | | | | | |
| Sensor reading | PH1! | pH value | INT, BCD | 0 | 0 | 0 | no | PH01, PH02 | | | | | | | | | | | S |
| 🔒 | **PJ** | **Power in Joule per hour** | | | | | | | | | | | | | | | | | |
| Power [10] | PJ1! | Power (energy flow) (P), average, current value *Condition: See CEN/TR 17167:2018 Annex C.2* | INT, BCD | 0 | 0 | 0 | no | PJ01 | | | O2 | O2 | O2 | | | | | | |
| Power | PJ1!T [26] | Power (energy flow) (P), average, current value, tarif 1 | INT, BCD | 1 | 0 | 0 | no | PJ01 | | | | O4 | | | | | | | |
| 🔒 | **PR** | **Pressure** | | | | | | | | | | | | | | | | | |
| Base pressure | PR1! | defined Pressure, absolute, at base conditions ($p_b$) | INT, BCD | 0 | 0 | 0 | no | PR01, PR02 | | | | | | O | | | | | S |
| Pressure | PR2! | Defined pressure, absolute | INT, BCD | 0 | 0 | 0 | no | PR03, PR04 | | | | | | | | | | | S |
| Pressure | PR3! | Upper pressure threshold | INT, BCD | 0 | 0 | 0 | no | PR05, PR06 | | | | | | | | | | | S |
| Pressure | PR4! | Lower pressure threshold | INT, BCD | 0 | 0 | 0 | no | PR07, PR08 | | | | | | | | | | | S |
| 🔒 | **PT** | **Particles** | | | | | | | | | | | | | | | | | |
| Sensor reading | PT1! | Particles as unspecific range [µg/m3] | INT, BCD | 0 | 0 | 0 | no | PT01, PT09 | | | | | | | | | | | S |
| Sensor reading | PT2! | Particles as PM1 [µg/m3] | INT, BCD | 0 | 0 | 0 | no | PT02, PT10 | | | | | | | | | | | S |
| Sensor reading | PT3! | Particles as PM2.5 [µg/m3] | INT, BCD | 0 | 0 | 0 | no | PT03, PT11 | | | | | | | | | | | S |
| Sensor reading | PT4! | Particles as PM10 [µg/m3] | INT, BCD | 0 | 0 | 0 | no | PT04, PT12 | | | | | | | | | | | S |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sensor reading | PT5! | Particles as unspecific range [10e5/m³] | INT, BCD | 0 | 0 | 0 | no | PT05, PT13 | | | | | | | | | | S |
| Sensor reading | PT6! | Particles as PM1 [10e5/m³] | INT, BCD | 0 | 0 | 0 | no | PT06, PT14 | | | | | | | | | | S |
| Sensor reading | PT7! | Particles as PM2.5 [10e5/m³] | INT, BCD | 0 | 0 | 0 | no | PT07, PT15 | | | | | | | | | | S |
| Sensor reading | PT8! | Particles as PM10 [10e5/m³] | INT, BCD | 0 | 0 | 0 | no | PT08, PT16 | | | | | | | | | | S |
| 🔒 | **PW** | **Power in Watt** | | | | | | | | | | | | | | | | |
| Meter reading [10] | PW1! | Active power, current value *Condition: See CEN/TR 17167:2018 Annex C.2* | INT, BCD | 0 | 0 | 0 | no | PW01 | O | | O2 | O2 | O2 | | | | | |
| Meter reading | PW1!T [26] | Power (energy flow) (P), average, current value, tarif1 | INT, BCD | 1 | 0 | 0 | no | PW01 | | | | O4 | | | | | | |
| Meter reading | PW1!A | Actual maximum of active power import (+P), current value, total | INT, BCD | 0 | 1 | 0 | no | PW01 | O | | | | | | | | | |
| Meter reading | PW1!AT | Actual maximum of active power import (+P), current value, tariff 1..15 | INT, BCD | 1..15 | 1 | 0 | no | PW01 | O | | | | | | | | | |
| Meter reading | PW1!AR | Actual maximum of active power import (+P), recent value for billing, total | INT, BCD | 0 | 1 | 0..99, 101..124 | yes | PW01 | O | | | | | | | | | |
| Meter reading | PW1!ART | Actual maximum of active power import (+P), recent value for billing, tariff 1..15 | INT, BCD | 1..15 | 1 | 0..99, 101..124 | yes | PW01 | O | | | | | | | | | |
| Meter reading | PW3! | Active power export (-P), current value *Condition: See CEN/TR 17167:2018 Annex C.2* | INT, BCD | 0 | 0 | 0 | no | PW03 | C | | | | | | | | | |
| Meter reading | PW3!A | Actual maximum of active power export (-P), current value, total | INT, BCD | 0 | 1 | 0 | no | PW03 | O | | | | | | | | | |
| Meter reading | PW3!AT | Actual maximum of active power export (-P), current value, tariff 1..15 | INT, BCD | 1..15 | 1 | 0 | no | PW03 | O | | | | | | | | | |

| Meter reading | PW3!AR | Actual maximum of active power export (-P), recent value for billing, total | INT, BCD | 0 | 1 | 0..99, 101..124 | yes | PW03 | O | | | | | | | | | |
| Meter reading | PW3!ART | Actual maximum of active power export (-P), recent value for billing, tariff 1..15 | INT, BCD | 1..15 | 1 | 0..99, 101..124 | yes | PW03 | O | | | | | | | | | |
| Meter reading | PW4!AC | Cumulative maximum of active power import (+P), total | INT, BCD | 0 | 1 | 0 | no | PW04 | O | | | | | | | | | |
| Meter reading | PW4!ACT | Cumulative maximum of active power import (+P), tariff 1-15 | INT, BCD | 1..15 | 1 | 0 | no | PW04 | O | | | | | | | | | |
| Meter reading | PW6!AC | Cumulative maximum of active power export (-P), total | INT, BCD | 0 | 1 | 0 | no | PW06 | O | | | | | | | | | |
| Meter reading | PW6!ACT | Cumulative maximum of active power export (-P), tariff 1-15 | INT, BCD | 1..15 | 1 | 0 | no | PW06 | O | | | | | | | | | |
| Meter reading | PW7! | Active power absolute (\|P\|), instantaneous value, total *Condition: See CEN/TR 17167:2018 Annex C.2* | INT, BCD | 0 | 0 | 0 | no | PW07, PW08 | C | | | | | | | | | |
| Meter reading | PW8! | Active power absolute (\|P\|), instantaneous value, total | INT, BCD | 0 | 0 | 0 | no | PW09, PW10 | O | | | | | | | | | |
| 🔒 | **RE** | **Reactive Energy** | | | | | | | | | | | | | | | | |
| Meter reading | RE1! | Reactive energy import (+R), current value, total | INT, BCD | 0 | 0 | 0 | no | RE01, RE02 | O | | | | | | | | | |
| Meter reading | RE1!T | Reactive energy import (+R), current value, tariff 1-15 | INT, BCD | 1..15 | 0 | 0 | no | RE01, RE02 | O | | | | | | | | | |
| Meter reading | RE1!R | Reactive energy import (+R), recent value for billing, total | INT, BCD | 0 | 0 | 0..99, 101..124 | yes | RE01, RE02 | O | | | | | | | | | |
| Meter reading | RE1!RT | Reactive energy import (+R), recent value for billing, tariff 1-15 | INT, BCD | 1..15 | 0 | 0..99, 101..124 | yes | RE01, RE02 | O | | | | | | | | | |
| Meter reading | RE2! | Reactive energy export (-R), current value, total | INT, BCD | 0 | 0 | 0 | no | RE03, RE04 | O | | | | | | | | | |
| Meter reading | RE2!T | Reactive energy export (-R), current value, tariff 1-15 | INT, BCD | 1..15 | 0 | 0 | no | RE03, RE04 | O | | | | | | | | | |

| Category | Abbr. | Description | Type | | | Range | Readout | OBIS | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter reading | RE2!R | Reactive energy export (-R), recent value for billing, total | INT, BCD | 0 | 0 | 0..99, 101..124 | yes | RE03, RE04 | O | | | | | | | | | |
| Meter reading | RE2!RT | Reactive energy export (-R), recent value for billing, tariff 1-15 | INT, BCD | 1..15 | 0 | 0..99, 101..124 | yes | RE03, RE04 | O | | | | | | | | | |
| 🔒 | **RF** | **Rainfall** | | | | | | | | | | | | | | | | |
| Sensor reading | RF1! | Rainfall | INT, BCD | 0 | 0 | 0 | no | DI01, DI03, DI04 | | | | | | | | | | S |
| 🔒 | **RH** | **Relative Humidity** | | | | | | | | | | | | | | | | |
| Sensor reading | RH1! | Relative Humidity in % | INT, BCD | 0 | 0 | 0 | no | RH01 | | | | | | | | | | S |
| 🔒 | **RP** | **Reactive Power** | | | | | | | | | | | | | | | | |
| Meter reading | RP1! | Reactive power import (+Q), current value | INT, BCD | 0 | 0 | 0 | no | RP01 | O | | | | | | | | | |
| Meter reading | RP2! | Reactive power export (-Q), current value | INT, BCD | 0 | 0 | 0 | no | RP02 | O | | | | | | | | | |
| 🔒 | **TB** | **Turbidity** | | | | | | | | | | | | | | | | |
| Sensor reading | TB1! | Turbidity | INT, BCD | 0 | 0 | 0 | no | TB01, TB02 | | | | | | | | | | S |
| 🔒 | **TC** | **Temperature in °C** | | | | | | | | | | | | | | | | |
| Temperature [10] | TC1! | Flow temperature, current value *Condition: See OMS-S2 Annex M OMS-UC-07 [23]* | INT, BCD | 0 | 0 | 0 | no | TC01 | | O | C | C | C | | | | | |
| Temperature [10] | TC2! | Return temperature, current value *Condition: See OMS-S2 Annex M OMS-UC-07 [23]* | INT, BCD | 0 | 0 | 0 | no | TC02 | | O | C | C | C | | | | | S |
| Base temperature | TC3! | defined Temperature, absolute, at base conditions ($T_b$) or for conversion ($T_{tc}$) | INT, BCD | 0 | 0 | 0 | no | TC03 | | | | | | O | | | | |
| Sensor reading | TC4! | External Temperature | INT, BCD | 0 | 0 | 0 | no | TC04 | | | | | | | | | | S |

| Function | Code | Description | Data | | | | Store | Ref | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sensor reading | TC5! | Minimum temperature limit value | INT, BCD | 0 | 2 | 0 | no | TC05 | | | | | | | | | | S |
| Sensor reading | TC6! | Maximum temperature limit value | INT, BCD | 0 | 1 | 0 | no | TC05 | | | | | | | | | | S |
| 🔒 | **TS** | **Tension** | | | | | | | | | | | | | | | | |
| Sensor reading | TS1! | Tension | INT, BCD | 0 | 0 | 0 | no | TS01 | | | | | | | | | | S |
| 🔒 | **VC** | **VOC Content** | | | | | | | | | | | | | | | | |
| Sensor reading | VC1! | VOC Content [ppb] | INT, BCD | 0 | 0 | 0 | no | VC01, VC03 | | | | | | | | | | S |
| Sensor reading | VC2! | VOC Content [µg/m3] | INT, BCD | 0 | 0 | 0 | no | VC02, VC04 | | | | | | | | | | S |
| 🔒 | **VF** | **Volume Flow** | | | | | | | | | | | | | | | | |
| Flow rate [10] | VF1! | Flow rate *Condition: See CEN/TR 17167:2018 Annex C.2* | INT, BCD | 0 | 0 | 0 | no | VF01 | | | O | O | O | O | O | O | | S |
| Flow rate | VF1!T [26] | Flow rate, average (Va/t), current value, tariff 1 | INT, BCD | 1 | 0 | 0 | no | VF01 | | | | | | O | | | | |
| Flow rate | VF2! | Flow rate *Condition: See CEN/TR 17167:2018 Annex C.2* | INT, BCD | 0 | 0 | 0 | no | VF02 | | | | | | C | | | | |
| Flow rate | VF3! | Flow rate *Condition: See CEN/TR 17167:2018 Annex C.2* | INT, BCD | 0 | 0 | 0 | no | VF03 | | | | | | C | | | | |
| 🔒 | **VM** | **Volume in m³** | | | | | | | | | | | | | | | | |
| Meter reading [10] | VM1! | Volume, current value, total | INT, BCD | 0 | 0 | 0 | no | VM01, VM02 | | | O | O | O | A1 | M | M | | |
| Meter reading [10] | VM1!B | Volume, current value, total *Exclusive condition: See OMS-S2 Annex R* | INT, BCD | 0 | 0 | 3 | no | VM01, VM02 | | | | | | E | E | E | | |

| Meter reading | Code | Description | Type | | | | | VM | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter reading [10] | VM1!D | Volume (V), accumulated, total, due date value *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | INT, BCD | 0 | 0 | 1 | no | VM01, VM02 | | | O | O | O | | C | C | | |
| Meter reading [10] [15] | VM1!T [26] | Volume, current value, tariff | INT, BCD | 1..15 | 0 | 0 | no | VM01, VM02 | | | | O | | O | | | | |
| Meter reading | VM1!DT [26] | Volume (V), accumulated, due date value, tarif 1 (2nd value for cooling) | INT, BCD | 1 | 0 | 1 | no | VM01, VM02 | | | | O | | | | | | |
| Meter reading [10] [25] | VM1!P | Volume, periodical value, total | INT, BCD | 0 | 0 | 8..199 | no | VM01, VM02 | | | O | O | O | O3 | O | O | | |
| Meter reading | VM1!R | Volume (meter), temperature converted ($V_{tc}$), forward, absolute, recent value for billing, total | INT, BCD | 0 | 0 | 0..99, 101..124 | yes | VM01, VM02 | | | | | | O | | | | |
| Meter reading | VM1!RT | Volume (meter), temperature converted ($V_{tc}$), forward, absolute, recent value for billing, tariff 1-15 | INT, BCD | 1..15 | 0 | 0..99, 101..124 | yes | VM01, VM02 | | | | | | O | | | | |
| Meter reading | VM2! | Volume (meter), measuring conditions ($V_m$), forward, absolute, current value, total | INT, BCD | 0 | 0 | 0 | no | VM03, VM04 | | | | | | A1 | | | | |
| Meter reading | VM2!B | Volume (meter), measuring conditions ($V_m$), forward, absolute, current value, total *Condition: See OMS-S2 Annex R* | INT, BCD | 0 | 0 | 3 | no | VM03, VM04 | | | | | | E | | | | |
| Meter reading | VM2!T | Volume (meter), measuring conditions ($V_m$), forward, absolute, current value, tariff 1-15 | INT, BCD | 1..15 | 0 | 0 | no | VM03, VM04 | | | | | | O | | | | |
| Meter reading [25] | VM2!P | Volume (meter), measuring conditions ($V_m$), forward, absolute, periodical value, total | INT, BCD | 0 | 0 | 8..199 | no | VM03, VM04 | | | | | | O3 | | | | |

| | Code | Description | Type | | | | | Ref | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter reading | VM2!R | Volume (meter), measuring conditions ($V_m$), forward, absolute, recent value for billing, total | INT, BCD | 0 | 0 | 0..99, 101..124 | yes | VM03, VM04 | | | | | | | O | | | | |
| Meter reading | VM2!RT | Volume (meter), measuring conditions ($V_m$), forward, absolute, recent value for billing, tariff 1-15 | INT, BCD | 1..15 | 0 | 0..99, 101..124 | yes | VM03, VM04 | | | | | | | O | | | | |
| Meter reading | VM3! | Volume (meter), base conditions ($V_b$), forward, absolute, current value, total | INT, BCD | 0 | 0 | 0 | no | VM05, VM06 | | | | | | | A1 | | | | |
| Meter reading | VM3!B | Volume (meter), base conditions ($V_b$), forward, absolute, current value, total _Exclusive condition: See OMS-S2 Annex R_ | INT, BCD | 0 | 0 | 3 | no | VM05, VM06 | | | | | | | E | | | | |
| Meter reading | VM3!T | Volume (meter), base conditions ($V_b$), forward, absolute, current value, tariff 1-15 | INT, BCD | 1..15 | 0 | 0 | no | VM05, VM06 | | | | | | | O | | | | |
| Meter reading [25] | VM3!P | Volume (meter), base conditions ($V_b$), forward, absolute, periodical value, total | INT, BCD | 0 | 0 | 8..199 | no | VM05, VM06 | | | | | | | O3 | | | | |
| Meter reading | VM3!R | Volume (meter), base conditions ($V_b$), forward, absolute, recent value for billing, total | INT, BCD | 0 | 0 | 0..99, 101..124 | yes | VM05, VM06 | | | | | | | O | | | | |
| Meter reading | VM3!RT | Volume (meter), base conditions ($V_b$), forward, absolute, recent value for billing, tariff 1-15 | INT, BCD | 1..15 | 0 | 0..99, 101..124 | yes | VM05, VM06 | | | | | | | O | | | | |
| Meter reading | VM4! | Volume, forward value | INT, BCD | 0 | 0 | 0 | no | VM07, VM08 | | | | | | | | O | O | | |
| Meter reading | VM5! | Volume, backward value | INT, BCD | 0 | 0 | 0 | no | VM09, VM10 | | | | | | | | O | O | | |
| 🔒 | **VV** | **Voltage in Volt** | | | | | | | | | | | | | | | | | |
| Meter reading | VV1! | Voltage at phase L1, instantaneous value | INT, BCD | 0 | 0 | 0 | no | VV01 | O | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meter reading | VV2! | Voltage at phase L2, instantaneous value | INT, BCD | 0 | 0 | 0 | no | VV02 | O | | | | | | | | | |
| Meter reading | VV3! | Voltage at phase L3, instantaneous value | INT, BCD | 0 | 0 | 0 | no | VV03 | O | | | | | | | | | |
| 🔒 | **WS** | **Wind speed** | | | | | | | | | | | | | | | | |
| Sensor reading | WS1! | Wind speed | INT, BCD | 0 | 0 | 0 | no | WS01, WS02 | | | | | | | | | | S |
| 🔒 | **YD** | **Descriptors** | | | | | | | | | | | | | | | | |
| Descriptor | YD1! | Subunit descriptor [17] *Condition: See OMS-S2 Annex K* | INT, BCD | 0 | 0 | 0 | no | YD01 | C | C | C | C | C | C | C | C | | |
| Descriptor | YD1!T | Tariff descriptor *Condition: See OMS-S2 Annex K* | INT, BCD | 1..15 | 0 | 0 | no | YD01 | C | C | C | C | C | C | C | C | | |
| Descriptor | YD2!P | Storage interval descriptor *Condition: See OMS-S2 Annex K* | INT, BCD | 0 | 0 | 1..199 | no | YD02, YD03, YD04 | C | C | C | C | C | C | C | C | | |
| Descriptor | YD3!P | Storage range descriptor *Condition: See OMS-S2 Annex K* | INT, BCD | 0 | 0 | 1..199 | no | YD05, YD06, YD07 | C | C | C | C | C | C | C | C | | |

## B.2.3 List of MB-Sensor-Tags

| Description | MB-Tag | Pressure Device (18h) | Smoke Alarm Device (1Ah) | CO Alarm Device (1Dh) | Heat Alarm Device (1Eh) | Humidity Sensor | Moisture Sensor | Temperature Sensor | Light Sensor | Rainfall Sensor | pH Sensor | Anemometer | Glass Break Detector | Door/Window Contact | Locked Door/Window Detector | Water Leakage Detector | Air Quality Sensor | CO2 Sensor | Turbidity Sensor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of dismounts / removal counter | AD4! | | O | O | O | | | | | | | | | | | | | | |
| Number of test button operated counter | AD5! | | O | O | O | | | | | | | | | | | | | | |
| Number of alarms | AD6! | | O | O | O | | | | | | | | | | | | | | |
| Number of alarm mute switch operated counter | AD7! | | O | O | O | | | | | | | | | | | | | | |
| Number of obstacle detected counter | AD8! | | O | O | O | | | | | | | | | | | | | | |
| Number of smoke entries blocked | AD9! | | O | O | | | | | | | | | | | | | | | |
| Number of smoke chamber defects | AD10! | | O | O | | | | | | | | | | | | | | | |
| Number of self-test failed counter | AD11! | | O | O | O | | | | | | | | | | | | | | |
| Number of sounder defect counter | AD12! | | O | O | O | | | | | | | | | | | | | | |
| Chamber Pollution Level | AD13! | | O | O | | | | | | | | | | | | | | | |
| Obstacle check distance | AD14! | | O | O | O | | | | | | | | | | | | | | |
| Carbon monoxide content | CC1! | | | M | | | | | | | | | | | | | O | | |
| Carbon dioxide content | CC2! | | | | | | | | | | | | | | | | O | M | |
| Electrical conductivity | CD1! | | | | | | | | | | | | | O | O | | | | |
| Operating Time | DP5! | O | A1 | A1 | A1 | O | O | O | O | O | O | O | O | O | O | O | O | O | O |

| Description | Code | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| On Time | DP6! | O | A1 | A1 | A1 | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Current date/time at time of transmission *Condition: See OMS-S2 Annex M OMS-UC-04* | DT1! | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 |
| Date / Time of related sporadic event | DT1!Xn | | O2 | O2 | O2 | | | | | | | | | | | | O2 | O2 | |
| Current date at time of transmission | DT2! | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 | O1 |
| Date of related sporadic event | DT2!Xn | | O2 | O2 | O2 | | | | | | | | | | | | O2 | O2 | |
| Electrical Resistance | ER1! | | | | | | | | | | | | | | O | O | | | |
| Serial number (not changeable number assigned by the manufacturer) | ID1! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Identification number or full Application Layer Address | ID2! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| One byte Link Layer Address | ID3! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Ownership number | ID4! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Identification of the metering point | ID5! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Unique message identification | ID6! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Initial DIN address | ID7! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Current DIN address | ID8! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Sub Device Types | ID11! | O | O | O | O | M | M | M | M | M | M | M | M | M | M | M | M | M | M |
| Irradiance, Radiant flux density | IR1! | | | | | | | | O | | | | | | | | | | |
| Illuminance | LT1! | | | | | | | | A1 | | | | | | | | | | |
| Luminous intensity | LT2! | | | | | | | | A1 | | | | | | | | | | |
| Reception level | MM1! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Quality limit of reception level | MM1!I | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Noise level | MM1!E | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Error flags *Condition: See OMS-S2 Annex M OMS-UC-06* | MM2! | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C |

| Description | Code | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Error flags (standard) 14 *Condition: See OMS-S2 Annex M OMS-UC-06* | MM3! | C | C | C | C | M | M | M | M | M | M | M | M | M | M | M | M | M | M |
| Operator specific data (reserved for the operator) | MM4! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Currently selected application *Condition: See OMS-Se Annex M OMS-UC-14* | MM6! | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C |
| Remaining battery lifetime | MM8! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Battery status | MM12! | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Status bits for pressure sensor | MM13! | M | | | | | | | | | | | | | | | | | |
| Status bits for CO alarm devices | MM14! | | | M | | | | | | | | | | | | | | | |
| Status bits for smoke alarm devices | MM15! | | M | | | | | | | | | | | | | | | | |
| Status bits for "Door/Window Contact Sensor" and "Locked Door/Window Detector" | MM16! | | | | | | | | | | | | | | M | M | | | |
| Status bits for heat alarm device | MM17! | | | | M | | | | | | | | | | | | | | |
| Moisture in % | MO1! | | | | | M | | | | | | | | | | | | | |
| Noise | ND1! | | | | | | | | | | | | | A1 | | | | | |
| pH value | PH1! | | | | | | | | | | | M | | | | | | | |
| defined Pressure, absolute, at base conditions (pb) | PR1! | A1 | | | | | | | | | | | | | | | | | |
| Defined pressure, absolute | PR2! | A1 | | | | | | | | | | | | | | | | | |
| Upper pressure threshold | PR3! | M21 | | | | | | | | | | | | | | | | | |
| Lower pressure threshold | PR4! | M21 | | | | | | | | | | | | | | | | | |
| Particles as unspecific range [µg/m³] | PT1! | | | | | | | | | | | | | | | | O | O | |
| Particles as PM1 [µg/m³] | PT2! | | | | | | | | | | | | | | | | O | O | |

| Measurand | Code | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Particles as PM2.5 [µg/m$^3$] | PT3! | | | | | | | | | | | O | O | |
| Particles as PM10 [µg/m$^3$] | PT4! | | | | | | | | | | | O | O | |
| Particles as unspecific range [10e5/m$^3$] | PT5! | | | | | | | | | | | O | O | |
| Particles as PM1 [10e5/m$^3$] | PT6! | | | | | | | | | | | O | O | |
| Particles as PM2.5 [10e5/m$^3$] | PT7! | | | | | | | | | | | O | O | |
| Particles as PM10 [10e5/m$^3$] | PT8! | | | | | | | | | | | O | O | |
| Rainfall | RF1! | | | | | | M | | | | | | | |
| Relative Humidity in % | RH1! | | O | M | | O | | | | | | O | | |
| Turbidity | TB1! | | | | | | | | | | | | | M |
| Return temperature, current value *Condition: See OMS-S2 Annex M OMS-UC-07* [23] | TC2! | | | O | O | | | | | | | O | | |
| External Temperature | TC4! | O | | M | O | O | M | | | | | O | | |
| Minimum temperature limit value | TC5! | | O | O | O | | O | | | | | | | |
| Maximum temperature limit value | TC6! | | O | O | O | | O | | | | | | | |
| Tension | TS1! | | | | | | | | | A1 | | | | |
| VOC Content [ppb] | VC1! | | | | | | | | | | | A1 | O | |
| VOC Content [µg/m$^3$] | VC2! | | | | | | | | | | | A1 | O | |
| Flow rate *Condition: See CEN/TR 17167:2018 Annex C.2* | VF1! | | | | | | O | | | | O | | | |
| Wind speed | WS1! | | | | | | | | M | | | | | |

## B.2.4  List of MB-Command-Tags

| Type | MB-Tag | Description | Data field | Tariff [T] | Func-tion [F] | Storage [X] | Final DIFE [FD] [11] | VIB-Type Reference [24] | Electricity (02h) | HCA (08h) | Cooling (0Ah;0Bh) | Comb. Heat/Cooling (0Dh) | Heat (04h;0Ch) | Gas (03h) | Cold Water (07h;16h) | Hot Water (06h;15h) | Breaker / Valve (20h; 21h) | Sensor Device |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *** | **General applicable for all MB-Data-Tag** | | | | | | | | | | | | | | | | |
| | arl***! | Add MB-Data-Tag (***) to readout list *Condition: See OMS-S2 Annex M OMS-UC-14* | No Data | According to MB-Data-Tag definition | | | | arl[VIB-Type according to MB-Data-Tag] | C | C | C | C | C | C | C | C | C | |
| | drl***! | Remove MB-Data-Tag (***) from redaout-list *Condition: See OMS-S2 Annex M OMS-UC-14* | No Data | According to MB-Data-Tag definition | | | | drl[VIB-Type according to MB-Data-Tag] | C | C | C | C | C | C | C | C | C | |
| | **XCT** | **Compliance Test Command** | | | | | | | | | | | | | | | | |
| Command to OMS end-device | XCT1! | Set test state of compliance test *Condition: See OMS-S2 Annex M OMS-UC-00* | INT, VarLen | 0 | 0 | 0 | no | CT01 | C | C | C | C | C | C | C | C | C | |
| | **XDC** | **Disconenctor Control Command** | | | | | | | | | | | | | | | | |
| Command to OMS end-device | XDC1! | Set control state of breaker/valve [16] *Condition: See OMS-S2 Annex M OMS-UC-03* | INT | 0 | 0 | 0 | no | CL01 | C | | | | | | C | C | C | M | |
| | **XDT** | **Date / Time (Time stamp)** | | | | | | | | | | | | | | | | |

| Command to | Code | Description | Data | | | | | Reference | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Command to OMS end-device | getDT2!D | Get last due date *Condition: See OMS-S2 Annex M OMS-UC-12a* | No Data | 0 | 0 | 1 | no | get[DT02] | | C | C | C | C | | C | C | | |
| Command to OMS end-device | getDT2!N | Get next due date *Condition: See OMS-S2 Annex M OMS-UC-12a* | No Data | 0 | 0 | 1 | no | get[DT05] | | C | C | C | C | | C | C | | |
| Command to OMS end-device | setDT2!N | Set next due date *Condition: See OMS-S2 Annex M OMS-UC-12a* | Type G | 0 | 0 | 1 | no | set[DT05] | | C | C | C | C | | C | C | | |
| | **XEJ** | **Command Energy in Joule** | | | | | | | | | | | | | | | | |
| Command to OMS end-device | addEJ1! | Add energy to current value *Condition: See OMS-S2 Annex M OMS-UC-20b* | INT, BCD | 0 | 0 | 0 | no | add[EJ01], add[EJ02], add[EJ03] | C | | C | C | C | | | | | |
| Command to OMS end-device | getEJ1! | Get energy import *Condition: See OMS-S2 Annex M OMS-UC-20b* | No Data | 0 | 0 | 0 | no | get[EJ01], get[EJ02], get[EJ03] | C | | C | C | C | | | | | |
| Command to OMS end-device | setEJ1! | Set energy import *Condition: See OMS-S2 Annex M OMS-UC-20b* | INT, BCD | 0 | 0 | 0 | no | set[EJ01], set[EJ02], set[EJ03] | C | | C | C | C | | | | | |
| Command to OMS end-device | subEJ1! | Subtract energy from current value *Condition: See OMS-S2 Annex M OMS-UC-20b* | INT, BCD | 0 | 0 | 0 | no | sub[EJ01], sub[EJ02], sub[EJ03] | C | | C | C | C | | | | | |
| | **XEW** | **Command Energy in Watt hour** | | | | | | | | | | | | | | | | |
| Command to OMS end-device | addEW1! | Add energy to current value *Condition: See OMS-S2 Annex M OMS-UC-20b* | INT, BCD | 0 | 0 | 0 | no | add[EW01], add[EW02], add[EW03] | C | | C | C | C | | | | | |
| Command to OMS end-device | getEW1! | Get energy import *Condition: See OMS-S2 Annex M OMS-UC-20b* | No Data | 0 | 0 | 0 | no | get[EW01], get[EW02], get[EW03] | C | | C | C | C | | | | | |
| Command to OMS end-device | setEW1! | Set energy import *Condition: See OMS-S2 Annex M OMS-UC-20b* | INT, BCD | 0 | 0 | 0 | no | set[EW01], set[EW02], set[EW03] | C | | C | C | C | | | | | |

| Command to OMS end-device | subEW1! | Subtract energy from current value *Condition: See OMS-S2 Annex M OMS-UC-20b* | INT, BCD | 0 | 0 | 0 | no | sub[EW01], sub[EW02], sub[EW03] | C | | C | C | C | | | | | |
| Command to OMS end-device | **XID** | **Identification** | | | | | | | | | | | | | | | | |
| Command to OMS end-device | setID2! | Set Application Layer Address *Condition: See OMS-S2 Annex M OMS-UC-20a* | 64INT | 0 | 0 | 0 | no | set[ID02] | C | C | C | C | C | C | C | C | C | |
| Command to OMS end-device | XID2! | Set Application Layer Address *Condition: See OMS-S2 Annex P* | 64INT | 0 | 0 | 0 | no | ID02 | C | C | C | C | C | C | C | C | C | |
| Command to OMS end-device | XID3! | Set one byte Link Layer Address *Condition: See OMS-S2 Annex P* | 8INT | 0 | 0 | 0 | no | ID03 | C | C | C | C | C | C | C | C | C | |
| Command to OMS end-device | getID4! | Get ownership number *Condition: See OMS-S2 Annex M OMS-UC-12b* | No Data | 0 | 0 | 0 | no | get[ID04] | C | C | C | C | C | C | C | C | C | |
| Command to OMS end-device | setID4! | Set ownership number *Condition: See OMS-S2 Annex M OMS-UC-12b* | INT, BCD, VarLen | 0 | 0 | 0 | no | set[ID04] | C | C | C | C | C | C | C | C | C | |
| Command to OMS end-device | setID10! | Set device type | 8INT | 0 | 0 | 0 | no | set[ID09] | O | O | O | O | O | O | O | O | O | |
| Command to OMS end-device | XID10! | Set device type *Condition: See OMS-S2 Annex P* | 8INT | 0 | 0 | 0 | no | ID09 | C | C | C | C | C | C | C | C | C | |
| Command to OMS end-device | setID11! | Set identication number | 8BCD | 0 | 0 | 0 | no | set[ID02] | O | O | O | O | O | O | O | O | O | |
| Command to OMS end-device | XID11! | Set identication number *Condition: See OMS-S2 Annex P* | 8BCD | 0 | 0 | 0 | no | ID02 | C | C | C | C | C | C | C | C | C | |
| Command to OMS end-device | **XMM** | **Meter Management Command** | | | | | | | | | | | | | | | | |
| Command to OMS end-device | notMM2! | Masked clear binary coded error flag *Condition: See OMS-S2 Annex M OMS-UC-06* | INT | 0 | 0 | 0 | no | not[MM02] | C | C | C | C | C | C | C | C | C | |

| Command to OMS end-device | notMM3! | Masked clear binary coded error flag (standard) *Condition: See OMS-S2 Annex M OMS-UC-06* | INT | 0 | 0 | 0 | no | not[MM03] | C | C | C | C | C | C | C | C | C | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Command to OMS end-device | clrMM3! | Clear all error flags (standard and manufacturer specific) *Condition: See OMS-S2 Annex M OMS-UC-06* | No Data | 0 | 0 | 0 | no | clr[MM03] | C | C | C | C | C | C | C | C | C | |
| | XMM2! | Valid only until OMS-S2 V4.4.2 => Replaced by notMM2! | | | | | | | | | | | | | | | | |
| | XMM3! | Valid only until OMS-S2 V4.4.2 => Replaced by notMM3! | | | | | | | | | | | | | | | | |
| | XMM4! | Valid only until OMS-S2 V4.4.2 => Replaced by clrMM3! | | | | | | | | | | | | | | | | |
| Command to OMS end-device | getMM6! | Get application selection *Condition: See OMS-S2 Annex M OMS-UC-14* | No Data | 0 | 0 | 0 | no | get[MM17] | C | C | C | C | C | C | C | C | C | |
| Command to OMS end-device | setMM6! | Set application selection *Condition: See OMS-S2 Annex M OMS-UC-14* | No Data, INT | 0 | 0 | 0 | no | set[MM17] | C | C | C | C | C | C | C | C | C | |
| | **XVM** | **Volume Command** | | | | | | | | | | | | | | | | |
| Command to OMS end-device | addVM1! | Add volume to current value *Condition: See OMS-S2 Annex M OMS-UC-20b* | INT, BCD | 0 | 0 | 0 | no | add[VM01], add[VM02] | | | | | | C | C | C | | |
| Command to OMS end-device | getVM1! | Get volume, current value, total *Condition: See OMS-S2 Annex M OMS-UC-20b* | No Data | 0 | 0 | 0 | no | get[VM01], get[VM02] | | | | | | C | C | C | | |
| Command to OMS end-device | setVM1! | Set volume, current value, total *Condition: See OMS-S2 Annex M OMS-UC-20b* | INT, BCD | 0 | 0 | 0 | no | set[VM01], set[VM02] | | | | | | C | C | C | | |
| Command to OMS end-device | subVM1! | Subtract volume from current value *Condition: See OMS-S2 Annex M OMS-UC-20b* | INT, BCD | 0 | 0 | 0 | no | sub[VM01], sub[VM02] | | | | | | C | C | C | | |

## B.3 VIB-Type List

### B.3.1 Legend and Notes

*VIB-Type list*

n   One or more Bits, according to tables 10, 12, 14, 15 of [EN 13757-3:2018].

*Table footnotes*

[50] 'Temperature converted value' is just applicable for device type 03h (gas). All other device types consider this data Point as 'normal value'.

## B.3.2 List of VIB-Types

| VIB-Type Reference | VIF / VIFE | Scaler+Unit/Type | Remark |
|---|---|---|---|
| **AD** | **Alarm Devices (CO and Smoke Alarm)** | | |
| AD04 | 0111 1100  0000 0011  0100 1001  0101 0101  0010 0011 | # number | Number of dismounts / removal counter (ASCII-Coding: "#UI", Number of Un-Installations) |
| AD05 | 0111 1100  0000 0011  0101 0100  0100 0110  0010 0011 | # number | Number of test button operated counter (ASCII-Coding: "#FT", Number of Function Tests) |
| AD06 | 0111 1100  0000 0011  0100 1100  0100 0001  0010 0011 | # number | Number of smoke / CO alarms (ASCII-Coding: "#AL", Number of Alarms) |
| AD07 | 0111 1100  0000 0011  0100 1101  0100 0001  0010 0011 | # number | Number of alarm mute switch operated counter (ASCII-Coding: "#AM", Number of Alarm Muted) |
| AD08 | 0111 1100  0000 0011  0100 0100  0100 1111  0010 0011 | # number | Number of obstacle detected counter (ASCII-Coding: "#OD", Number of Obstacle Detected) |

| AD09 | 0111 1100  0000 0011  0100 0010  0101 0011  0010 0011 | # number | Smoke entries blocking cumulated counter (ASCII-Coding: "#SB", Number of Smoke entries Blocked) |
|---|---|---|---|
| AD10 | 0111 1100  0000 0100  0100 0100  0100 0011  0101 0011  0010 0011 | # number | Smoke chamber defect cumulated counter (ASCII-Coding: "#SCD", Number of Smoke Chamber Defects) |
| AD11 | 0111 1100  0000 0011  0100 0110  0101 0011  0010 0011 | # number | Number of self-test failed counter (ASCII-Coding: "#SF", Number of self-test Failed) |
| AD12 | 0111 1100  0000 0011  0100 0100  0101 0011  0010 0011 | # number | Number of sounder defect counter (ASCII-Coding: "#SD", Number of Sounder Defect) |
| AD13 | 0111 1100  0000 0011  0101 0000  0100 0011  0010 0101 | % percentage | Percentage of Chamber Pollution Level (ASCII-Coding: "%CP") |
| AD14 | 1111 1101  1111 1101  0010 1100 | # number | Number of dismounts / removal counter |
| AD15 | 1111 1101  1111 1101  0010 1101 | # number | Number of test button operated counter |
| AD16 | 1111 1101  1111 1101  0010 1110 | # number | Number of alarms |
| AD17 | 1111 1101  1111 1101  0010 1111 | # number | Number of alarm mute switch operated counter |
| AD18 | 1111 1101  1111 1101  0011 0000 | # number | Number of obstacle detected counter |
| AD19 | 1111 1101  1111 1101  0011 0001 | # number | Smoke entries blocking cumulated counter |
| AD20 | 1111 1101  1111 1101  0011 0010 | # number | Smoke chamber defect cumulated counter |
| AD21 | 1111 1101  1111 1101  0011 0011 | # number | Number of self-test failed counter |

| | | | |
|---|---|---|---|
| AD22 | 1111 1101 1111 1101 0011 0100 | # number | Number of sounder defect counter |
| AD23 | 1111 1101 1111 1101 0011 1001 | percentage 0-100% | Percentage of Chamber Pollution Level |
| **CA** | **Current [A]** | | |
| CA01 | 1111 1101 1101 nnnn 1111 1100 0000 0001 | A 10e-12 … 10e+3 | Curr_L1 |
| CA02 | 1111 1101 1101 nnnn 1111 1100 0000 0010 | A 10e-12 … 10e+3 | Curr_L2 |
| CA03 | 1111 1101 1101 nnnn 1111 1100 0000 0011 | A 10e-12 … 10e+3 | Curr_L3 |
| CA04 | 1111 1101 1101 nnnn 1111 1100 0000 0100 | A 10e-12 … 10e+3 | Curr_N |
| **CC** | **Carbon Oxide Content** | | |
| CC01 | 0111 1100 0000 0011 0011 0001 0100 1111 0100 0011 | ppm 10e0 | Carbon monoxide content (ASCII-Coding: "CO1" for Carbon Monoxide) |
| CC02 | 0111 1100 0000 0011 0011 0010 0100 1111 0100 0011 | ppm 10e0 | Carbon dioxide content (ASCII-Coding: "CO2" for Carbon Dioxide) |
| CC03 | 1111 1101 1111 1101 0001 001n | ppm 10e+0 … 10e+1 | Carbon monoxide content |
| CC04 | 1111 1101 1111 1101 0001 000n | ppm 10e+0 … 10e+1 | Carbon dioxide content |
| **CD** | **Conductivity** | | |
| CD01 | 0111 1100 0000 0011 0011 0001 0100 0100 0100 0011 | µS/cm 10e0 | electrical conductivity in µS/cm (ASCII-Coding: "CD1" for Conductivity 1) |
| **CL** | **Control** | | |
| CL01 | 1111 1101 0001 1111 | | disconnector control state |
| CL02 | 1111 1101 0001 1010 | | output state |
| **CT** | **Compliance Test** | | |
| CT01 | 1111 1101 1001 1111 0001 1101 | | compliance test |
| **DI** | **Distances** | | |
| DI01 | 0111 1100 0000 0010 0110 1101 0110 1101 | mm | Distance (ASCII-Coding: "mm" for millimetre) |
| DI02 | 0111 1100 0000 0010 0110 1101 0110 0011 | cm | Distance (ASCII-Coding: "cm" for centimetre) |
| DI03 | 1111 1101 1111 1101 0011 101n | 10e+0 mm (mm, cm) | Distance |

| DI04 | 1111 1101 1111 1101 0010 0011 | liters/mm² | Rainfall |
|---|---|---|---|
| **DP** | **Duration/Period** | | |
| DP01 | 0111 01nn | s, min, h, d | actuality dur. |
| DP02 | 0111 00nn | s, min, h, d | average dur. |
| DP03 | 1111 1101 0011 110n | s, min | Period of nominal transmission |
| DP04 | Valid only until OMS-S2 V4.1.2. => Replaced by YD03 | | |
| DP05 | 0010 01nn | s, min, h, d | Operation time (Duration of accumulation) |
| DP06 | 0010 00nn | s, min, h, d | On time (Duration since power up) |
| **DT** | **Date / Time (Duration and Time stamp)** | | |
| DT01 | 0110 1101 | Date+Time / Time | forward |
| DT02 | 0110 1100 | Date | forward |
| DT03 | 1110 1101 0011 1100 | Date+Time / Time | backward |
| DT04 | 1110 1100 0011 1100 | Date | backward |
| DT05 | 1110 1100 0111 1110 | Date; future date | forward |
| **EC** | **Energy [Mcal]** | | |
| EC01 | 1111 1011 0000 11nn | Mcal 10e-1 … 10e2 | forward |
| EC02 | 1111 1011 1000 11nn 0011 1100 | Mcal 10e-1 … 10e2 | backward |
| **EJ** | **Energy [GJ]** | | |
| EJ01 | 0000 1nnn | GJ 10e-9 … 10e-2 | forward |
| EJ02 | 1111 1011 0000 100n | GJ 10e-1 … 10e0 | forward |
| EJ03 | 1111 1011 1000 100n 0111 1101 | GJ 10e+2 … 10e+3 | forward |
| EJ04 | 1000 1nnn 0011 1100 | GJ 10e-9 … 10e-2 | backward |
| EJ05 | 1111 1011 1000 100n 0011 1100 | GJ 10e-1 … 10e+0 | backward |
| EJ06 | 1111 1011 1000 100n 1111 1101 0011 1100 | GJ 10e+2 … 10e+3 | backward |
| **ER** | **Electrical Resistance** | | |
| ER01 | 0111 1100 0000 0011 0110 1101 0110 1000 0100 1111 | Ohm 10e+0 | Resistance (ASCII-Coding: "Ohm") |
| **EW** | **Energy [kWh]** | | |
| EW01 | 0000 0nnn | kWh 10e-6 … 10e+1 | forward |
| EW02 | 1111 1011 0000 000n | kWh 10e+2 … 10e+3 | forward |
| EW03 | 1111 1011 1000 000n 0111 1101 | kWh 10e+5 … 10e+6 | forward |

| | | | |
|---|---|---|---|
| EW04 | 1000 0nnn  0011 1100 | kWh 10e-6 … 10e+1 | backward |
| EW05 | 1111 1011  1000 000n  0011 1100 | kWh 10e+2 … 10e+3 | backward |
| EW06 | 1111 1011  1000 000n  1111 1101  0011 1100 | kWh 10e+5 … 10e+6 | backward |
| EW07 | 1000 0nnn  1111 1100  0001 0000 | kWh 10e-6 … 10e+1 | abs. |
| EW08 | 1111 1011  1000 000n  1111 1100  0001 0000 | kWh 10e+2 … 10e+3 | abs. |
| EW09 | 1111 1011  1000 000n  1111 1101 1111 1100  0001 0000 | kWh 10e+5 … 10e+6 | abs. |
| **FR** | **Frequency [Hz]** | | |
| FR01 | 1111 1011  0010 11nn | Hz 10e-3 … 10e0 | mains power frequency |
| **HC** | **Heat Cost Allocation unit** | | |
| HC01 | 0110 1110 | HCA 10e+0 | signed |
| HC02 | 1110 1110  1111 1100  0001 0001 | HCA 10e+0 | unsigned |
| **ID** | **Identification Numbers** | | |
| ID01 | 0111 1000 | | Fabrication number |
| ID02 | 0111 1001 | | (Enhanced) identification |
| ID03 | 0111 1010 | | Primary address |
| ID04 | 1111 1101  0001 0001 | | Ownership number |
| ID05 | 1111 1101  0001 0000 | | Metering Point ID |
| ID06 | 1111 1101  0000 1000 | | Unique message idendtification |
| ID09[52] | 1111 1101  0000 1001 | | Device type |
| ID10 | 1111 1101  1111 1101  0000 0001 | list of sub device types | see [prEN13757-3:2023] Table 20 |
| **IR** | **Irradiance** | | |
| IR01 | 0111 1100  0000 0011  0011 0001  0101 0010  0100 1001 | W/m$^2$ 10e0 | radiant flux density (ASCII-Coding: "IR1" for Irradiance 1) |
| IR02 | 1111 1101  1111 1101  0010 0001 | W/m$^2$ 10e0 | radiant flux density |
| **LT** | **Light** | | |
| LT01 | 0111 1100  0000 0010  0111 1000  0110 1100 | lx 10e0 | Illuminance (ASCII-Coding: "lx" for lux) |
| LT02 | 0111 1100  0000 0010  0110 0100  0110 0011 | cd 10e0 | Luminous intensity (ASCII-Coding: "cd" for candela) |
| LT03 | 1111 1101  1111 1101  0001 1111 | lx 10e0 | Illuminance (lux) |
| LT04 | 1111 1101  1111 1101  0010 0000 | cd 10e0 | Luminous intensity (candela) |

**MM      Meter Management**

| | | | |
|---|---|---|---|
| MM01 | 1111 1101  0111 0001 | dBm | Reception or noise level |
| MM02 | 1111 1101  0001 0111 | binary | Error flags |
| MM03 | 1111 1101  1001 0111 0001 1101 | binary | Error flags (standard) |
| MM04 | 1111 1101  0010 1010 | | Operator specific data |
| MM05 | Valid only until OMS-S2 V4.1.2. => Replaced by YD07 | – | – |
| MM06 | 1111 1101  0110 0001 | Register index | Cumulation Counter |
| MM07 | Valid only until OMS-S2 V4.4.2 => Replaced by not[MM02] | | – |
| MM08 | Valid only until OMS-S2 V4.4.2 => Replaced by not[MM03] | | – |
| MM09 | 1111 1101  0111 0100 | days | Remaining battery life time |
| MM10 | 1111 1101  1111 1101  0000 0010 | month(s) | Remaining battery life time |
| MM11 | Valid only until OMS-S2 V4.4.2 => Replaced by clr[MM03] | | – |
| MM12 | 0111 1100  0000 0011  0101 0011  0100 0010  0010 0101 | % percentage | Percentage of Battery Status (ASCII-Coding: "%BS") |
| MM13 | 0111 1100  0000 0011  0011 0001  0101 0011  0100 0100 | binary | Status bits for pressure device see [OMS-S2], Annex C table C.5 (ASCII-Coding: "DS1" for Device Status1) |
| MM14 | 0111 1100  0000 0011  0011 0010  0101 0011  0100 0100 | binary | Status bits for CO alarm devices, see [OMS-S2], Annex C table C.4 (ASCII-Coding: "DS2" for Device Status 2) |
| MM15 | 0111 1100  0000 0011  0011 0011  0101 0011  0100 0100 | binary | Status bits for smoke alarm devices, see [OMS-S2], Annex C table C.3 (ASCII-Coding: "DS3" for Device Status 3) |

| | | | | |
|---|---|---|---|---|
| MM16 | 0111 1100  0000 0011  0011 0100  0101 0011  0100 0100 | binary | Status bits for "Door/Window Contact Sensor" and "Locked Door/Window Detector", see [OMS-S2], Annex C table C.6 (ASCII-Coding: "DS4" for Device Status 4) |
| MM17 | 1111 1101  1111 1101  0000 0000 | binary | Currently selected application |
| MM18 | 1111 1101  1111 1101  0011 1000 | % percentage | Battery Status |
| MM19 | 1111 1101  1111 1101  0100 0000 | binary | Status bits for pressure sensor see [prEN13757], table 20 |
| MM20 | 1111 1101  1111 1101  0100 0010 | binary | Status bits for CO alarm devices, see [prEN13757], table 20 |
| MM21 | 1111 1101  1111 1101  0100 0001 | binary | Status bits for smoke alarm devices, see [prEN13757], table 20 |
| MM22 | 1111 1101  1111 1101  0100 0100 | binary | Status bits for "Door/Window Contact Sensor" and "Locked Door/Window Detector", see [prEN13757], table 20 |
| MM23 | 1111 1101  1111 1101  0100 0011 | binary | Status bits for heat alarm device, see [prEN13757], table 20 |
| **ND** | **Noise** | | |
| ND01 | 0111 1100  0000 0011  0100 0001  0100 0010  0110 0100 | dBA 10e0 | Decibel A-weighting (ASCII-Coding: "dBA") |
| ND02 | 1111 1101  1111 1101  0010 0100 | dBA 10e0 | Decibel A-weighting |
| **PD** | **Phase in Degree [°]** | | |
| PD01 | 1111 1011  1010 1010  1111 1100  0000 0101 | ° 10e-1 | Volt_L1-L2 |
| PD02 | 1111 1011  1010 1010  1111 1100  0000 0110 | ° 10e-1 | Volt_L2-L3 |
| PD03 | 1111 1011  1010 1010  1111 1100  0000 0111 | ° 10e-1 | Volt_L3-L1 |
| PD04 | 1111 1011  1010 1011  1111 1100  0000 0001 | ° 10e-1 | Curr_L1 |
| PD05 | 1111 1011  1010 1011  1111 1100  0000 0010 | ° 10e-1 | Curr_L2 |
| PD06 | 1111 1011  1010 1011  1111 1100  0000 0011 | ° 10e-1 | Curr_L3 |

| PF | Pulse frequency | | |
|---|---|---|---|
| PF01 | Valid only until OMS-S2 V4.5.1 [PF01] | | |
| **PH** | **pH value** | | |
| PH01 | 0111 1100  0000 0010  0100 1000  0111 0000 | pH 10e-1 | potential of hydrogen (ASCII-Coding: "pH") |
| PH02 | 1111 1101  1111 1101  0010 0111 | pH 10e-1 | potential of hydrogen |
| **PJ** | **Power [kJ/h]** | | |
| PJ01 | 0011 0nnn | kJ/h 10e-3 … 10e+4 | forward |
| **PR** | **Pressure [bar]** | | |
| PR01 | 1110 10nn  0011 1110 | bar 10e-3 … 10e+0 | pressure at base condition |
| PR02 | 1110 10nn  1111 0011  0011 1110 | bar 10e-6 … 10e-3 | pressure at base condition |
| PR03 | 0110 10nn | bar 10e-3 … 10e+0 | pressure value |
| PR04 | 1110 10nn  0111 0011 | bar 10e-6 … 10e-3 | pressure value |
| PR05 | 1110 10nn  0100 1000 | bar 10e-3 … 10e+0 | pressure upper limit |
| PR06 | 1110 10nn  1100 1000  0111 0011 | bar 10e-6 … 10e-3 | pressure upper limit |
| PR07 | 1110 10nn  0100 0000 | bar 10e-3 … 10e+0 | pressure lower limit |
| PR08 | 1110 10nn  1100 0000  0111 0011 | bar 10e-6 … 10e-3 | pressure lower limit |
| **PT** | **Particles** | | |
| PT01 | 0111 1100  0000 0011  0011 0001  0101 0100  0101 0000 | µg/m³ 10e0 | unspecific range (ASCII-Coding: "PT1") |
| PT02 | 0111 1100  0000 0011  0011 0010  0101 0100  0101 0000 | µg/m³ 10e0 | PM1 (ASCII-Coding: "PT2", Particles 2) |
| PT03 | 0111 1100  0000 0011  0011 0011  0101 0100  0101 0000 | µg/m³ 10e0 | PM2,5 (ASCII-Coding: "PT3", Particles 3) |
| PT04 | 0111 1100  0000 0011  0011 0100  0101 0100  0101 0000 | µg/m³ 10e0 | PM10 (ASCII-Coding: "PT4", Particles 4) |
| PT05 | 0111 1100  0000 0011  0011 0101  0101 0100  0101 0000 | 1/m³ 10e5 | unspecific range (ASCII-Coding: "PT5", Particles 5) |
| PT06 | 0111 1100  0000 0011  0011 0110  0101 0100  0101 0000 | 1/m³ 10e5 | PM1 (ASCII-Coding: "PT6", Particles 6) |
| PT07 | 0111 1100  0000 0011  0011 0111  0101 0100  0101 0000 | 1/m³ 10e5 | PM2,5 (ASCII-Coding: "PT7", Particles 7) |

| | | | |
|---|---|---|---|
| PT08 | 0111 1100 0000 0011 0011 1000 0101 0100 0101 0000 | 1/m³ 10e5 | PM10 (ASCII-Coding: "PT8", Particles 8) |
| PT09 | 1111 1101 1111 1101 0001 0111 | µg/m³ 10e0 | unspecific range |
| PT10 | 1111 1101 1111 1101 0001 1000 | µg/m³ 10e0 | PM1 |
| PT11 | 1111 1101 1111 1101 0001 1001 | µg/m³ 10e0 | PM2,5 |
| PT12 | 1111 1101 1111 1101 0001 1010 | µg/m³ 10e0 | PM10 |
| PT13 | 1111 1101 1111 1101 0001 1011 | 1/m³ 10e5 | unspecific range |
| PT14 | 1111 1101 1111 1101 0001 1100 | 1/m³ 10e5 | PM1 |
| PT15 | 1111 1101 1111 1101 0001 1101 | 1/m³ 10e5 | PM2,5 |
| PT16 | 1111 1101 1111 1101 0001 1110 | 1/m³ 10e5 | PM10 |
| **PW** | **Power [W]** | | |
| PW01 | 0010 1nnn | W 10e-3 … 10e+4 | forward |
| PW03 | 1010 1nnn 0011 1100 | W 10e-3 … 10e+4 | backward |
| PW04 | 1111 1011 0111 1nnn | W 10e-3 … 10e+4 | cum. forward |
| PW06 | 1111 1011 1111 1nnn 0011 1100 | W 10e-3 … 10e+4 | cum. backward |
| PW07 | 1010 1nnn 1111 1100 0001 0000 | kW 10e-6 … 10e+1 | abs. |
| PW08 | 1111 1011 1010 100n 1111 1100 0001 0000 | kW 10e+2 … 10e+3 | abs. |
| PW09 | 1010 1nnn 1111 1100 0000 1100 | kW 10e-6 … 10e+1 | delta |
| PW10 | 1111 1011 1010 100n 1111 1100 0000 1100 | kW 10e+2 … 10e+3 | delta |
| **RE** | **Reactive Energy [kvarh]** | | |
| RE01 | 1111 1011 0000 001n | kvarh 10e0 … 10e+1 | forward |
| RE02 | 1111 1011 1000 001n 0111 0nnn | kvarh 10e-6 … 10e+2 | forward |
| RE03 | 1111 1011 1000 001n 0011 1100 | kvarh 10e0 … 10e+1 | backward |
| RE04 | 1111 1011 1000 001n 1111 0nnn 0011 1100 | kvarh 10e-6 … 10e+2 | backward |
| **RH** | **Relative Humidity [%]** | | |
| RH01 | 1111 1011 0001 101n | % 10e-01 … 10e0 | relative humidity |
| RH02 | 0111 1100 0000 0011 0011 0010 0100 1000 0101 0010 | % 10e0 | Moisture Level (ASCII-Coding: "RH2") |
| RH03 | 1111 1101 1111 1101 0011 1110 | % 10e0 | Moisture Level |
| **RP** | **Reactive Power [kvar]** | | |
| RP01 | 1111 1011 0001 01nn | kvar 10e-3 … 10e+0 | forward |
| RP02 | 1111 1011 1001 01nn 0011 1100 | kvar 10e-3 … 10e+0 | backward |
| **TB** | **Turbidity** | | |

| | | | |
|------|------|------|------|
| TB01 | 0111 1100  0000 0011  0101 0101  0100 1110  0100 0110 | FNU 10e0 | Formazin Nephelometric Units (ASCII-Coding: "FNU") |
| TB02 | 1111 1101  1111 1101  0010 0101 | FNU 10e0 | Formazin Nephelometric Units |
| **TC** | **Temperature [°C]** | | |
| TC01 | 0101 10nn | °C 10e-3 … 10e+0 | flow |
| TC02 | 0101 11nn | °C 10e-3 … 10e+0 | return |
| TC03 | 1101 10nn  0011 1110 | °C 10e-3 … 10e+0 | base condition |
| TC04 | 0110 01nn | °C 10e-3 … 10e+0 | external temperature |
| TC05 | 1111 1011  0111 01nn | °C 10e-3 … 10e+0 | Temperature Limit |
| **TS** | **Tension** | | |
| TS01 | 0111 1100  0000 0010  0100 1101  0100 1110 | Nm/m² | tension of surfaces in Newton Meters (ASCII-Coding: "NM") |
| **VC** | **VOC Content** | | |
| VC01 | 0111 1100  0000 0011  0011 0001  0100 0011  0101 0110 | ppb 10e0 | (ASCII-Coding: "VC1" for VOC Content 1) |
| VC02 | 0111 1100  0000 0011  0011 0010  0100 0011  0101 0110 | µg/m³ 10e0 | (ASCII-Coding: "VC2" for VOC Content 2) |
| VC03 | 1111 1101  1111 1101  0001 010n | ppb 10e0 .. 10e+1 | Volatile Organic Compounds |
| VC04 | 1111 1101  1111 1101  0001 0110 | µg/m³ 10e0 | Volatile Organic Compounds |
| **VF** | **Volume Flow [m³ / h]** | | |
| VF01 | 0011 1nnn | m³/h 10e-6 … 10e+1 | normal / temp. Converted [50] |
| VF02 | 1011 1nnn  0011 1010 | m³/h 10e-6 … 10e+1 | meas. condition |
| VF03 | 1011 1nnn  0011 1110 | m³/h 10e-6 … 10e+1 | base condition |
| **VM** | **Volume [m³]** | | |
| VM01 | 0001 0nnn | m³ 10e-6 … 10e+1 | normal / temp. Converted [50] |
| VM02 | 1001 0nnn  0111 1101 | m³ 10e-3 … 10e+4 | normal / temp. Converted [50] |
| VM03 | 1001 0nnn  0011 1010 | m³ 10e-6 … 10e+1 | meas. condition |
| VM04 | 1001 0nnn  1111 1101  0011 1010 | m³ 10e-3 … 10e+4 | meas. condition |
| VM05 | 1001 0nnn 0011 1110 | m³ 10e-6 … 10e+1 | base condition |

| | | | | |
|---|---|---|---|---|
| VM06 | 1001 0nnn  1111 1101  0011 1110 | | m³ 10e-3 … 10e+4 | base condition |
| VM07 | 1001 0nnn  0011 1011 | | m³ 10e-6 … 10e+1 | forward volume |
| VM08 | 1001 0nnn  1111 1101  0011 1011 | | m³ 10e-3 … 10e+4 | forward volume |
| VM09 | 1001 0nnn  0011 1100 | | m³ 10e-6 … 10e+1 | backward volume |
| VM10 | 1001 0nnn  1111 1101  0011 1100 | | m³ 10e-3 … 10e+4 | backward volume |
| **VV** | **Voltage [V]** | | | |
| VV01 | 1111 1101  1100 nnnn  1111 1100  0000 0001 | | V 10e-9 … 10e6 | Volt_L1 |
| VV02 | 1111 1101  1100 nnnn  1111 1100  0000 0010 | | V 10e-9 … 10e6 | Volt_L2 |
| VV03 | 1111 1101  1100 nnnn  1111 1100  0000 0011 | | V 10e-9 … 10e6 | Volt_L3 |
| **WS** | **Wind speed** | | | |
| WS01 | 0111 1100  0000 0011  0011 0001  0101 0011  0101 0111 | | m/s 10e0 | (ASCII-Coding: "WS1" for Wind Speed) |
| WS02 | 1111 1101  1111 1101  0010 0010 | | m/s 10e0 | Wind Speed |
| **YD** | **Descriptor** | | | |
| YD01 | 1111 1101  0010 0011 | | | Descriptor tariff and subunit |
| YD02 | 1111 1101  0010 01nn | | s, min, h, d | Storage interval |
| YD03 | 1111 1101  0010 1000 | | month | Storage interval |
| YD04 | 1111 1101  0010 1001 | | years | Storage interval |
| YD05 | 1111 1101  0010 0000 | | | First storage no. for cyclic storage |
| YD06 | 1111 1101  0010 0001 | | | Last storage no. for cyclic storage |
| YD07 | 1111 1101  0010 0010 | | | Size of storage block |