



Open Metering System Specification

OIMS-Data Point List

**Annex B to
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B.1 Overview about the OMS-Data Point List

B.1.1 General

The OMS-Data Point List (OMS-DPL) list 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 [EN13757-3:2013] Table 21).

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 1.

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

Table 1: Example of MB-Tag EW1!R

B.2 M-Bus Tag List

B.2.1 Legend and Notes

Legends M-Bus

Data Field:

INT = Integer (8 Bit - 64 Bit) refer to EN13757-3 (2013) Table 21
8INT = 8 Bit Integer/Binary refer to EN13757-3 (2013) Table 21
64INT = 64 Bit Integer/Binary refer to EN13757-3 (2013) Table 21
BCD = Binary Coded Decimal refer to EN13757-3 (2013) Table 21
8BCD = 4 Byte BCD refer to EN13757-3 (2013) Table 21
VarLen = variable length refer to EN13757-3 (2013) Table 21
Type F = Compound CP32: Date and Time refer to EN13757-3 (2013) Annex A
Type G = Compound CP16: Date refer to EN13757-3 (2013) Annex A
Type I = Year down to second refer to EN13757-3 (2013) Annex A
Type J = Time of day refer to EN13757-3 (2013) Annex A

M = Mandatory (These data objects have to be specified)

Ax = Alternatively (One of the with "A" and identical number marked data objects are mandatory)

O = Optional (These data objects do not need to exist)

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 (S and final DIFE)

- * [] current value
- * [D] due date value (X=1)
- * [P] periodical values (X=8..99)
- * [R] Recent value (X=0..99 + final DIFE)
- * [C] cumulative value of a maximum/minimum

Declaration of Tarif-Register

- * [] No tarif
- * [T] Tariff 1..15

Example: 1-0:1.6.e*f "Actual maximum of active power import (+A), 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 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 [EN13757-3:2013] Table E.5.

¹³ Data point shall be used according to Annex G1 of OMS Spec. Volume2 issue 3.0.1.

¹⁴ Refer to [EN13737-3:2013] Annex H.1

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

B.2.2 List of MB-Tags

Type	MB-Tag	Description	Data field	Tariff [T]	Function [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)
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							
DP		Duration/Period														
Time, date of reading ¹⁰	DP1!	Run time difference between measurement of current value and transmission	INT, BCD	0	0	0	no	DP01	O	O	O	O	O	O	O	O
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!	Period of nominal data transmission	INT, BCD	0	0	0	no	DP03	O	O	O	O	O	O	O	O



Load profile	DP4!	Monthly Interval ²⁰	BCD	0	0	0	no	DP04	O	O	O	O	O	O	O	O	
DT		Date / Time (Time stamp)															
Date/Time of device ¹⁰	DT1!	Current date/time at time of transmission	Type F,I	0	0	0	no	DT01	O	O	O	O	O	O	O	O	
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	O					O			
Date, time of max.	DT1!A	Point of time of actual maximum of active power import (+A), current value, total	Type F,I	0	1	0	no	DT01	O								
Date, time of max.	DT1!AR	Point of time of actual maximum of active power import (+A). recent value, total	Type F,I	0	1	0..99, 101..124	yes	DT01	O								
Date, time of max.	DT1!AT	Point of time of actual maximum of active power import (+A), current value, tariff 1..15	Type F,I	1..15	1	0	no	DT01	O								
Date, time of max.	DT1!ART	Point of time of actual maximum of active power import (+A). recent value, tariff 1..15	Type F,I	1..15	1	0..99, 101..124	yes	DT01	O								
Date of reading ¹⁰	DT2!R	Local date at time of recent meter value	Type G	0	0	0..99, 101..124	yes	DT02	O					O			
Date of device ¹⁰	DT2!	Current date at time of transmission	Type G	0	0	0	no	DT02	O	O	O	O	O	O	O	O	
Date of reading ¹⁰	DT2!D	Local date at due date	Type G	0	0	1	no	DT02		M	O	O	O		O	O	
Date of max.	DT2!A	Point of time of actual maximum of active power import (+A), current value, total	Type G	0	1	0	no	DT02	O								
Date of max.	DT2!AR	Point of time of actual maximum of active power import (+A). recent value, total	Type G	0	1	0..99, 101..124	yes	DT02	O								
Date of max.	DT2!AT	Point of time of actual maximum of active power import (+A), current value, tariff	Type G	1..15	1	0	no	DT02	O								



									1..15							
Date of max.	DT2!ART	Point of time of actual maximum of active power import (+A), recent value, tariff 1..15	Type G	1..15	1	0..99, 101..124	yes	DT02	O							
Date, time of max.	DT3!A	Point of time of actual maximum of active power export (-A), current value, total	Type F,I	0	1	0	no	DT03	O							
Date, time of max.	DT3!AR	Point of time of actual maximum of active power export (-A), recent value, total	Type F,I	0	1	0..99, 101..124	yes	DT03	O							
Date, time of max.	DT3!AT	Point of time of actual maximum of active power export (-A), current value, tariff 1..15	Type F,I	1..15	1	0	no	DT03	O							
Date, time of max.	DT3!ART	Point of time of actual maximum of active power export (-A), recent value, tariff 1..15	Type F,I	1..15	1	0..99, 101..124	yes	DT03	O							
Date of max.	DT4!A	Point of time of actual maximum of active power export (-A), current value, total	Type G	0	1	0	no	DT04	O							
Date of max.	DT4!AR	Point of time of actual maximum of active power export (-A), recent value, total	Type G	0	1	0..99, 101..124	yes	DT04	O							
Date of max.	DT4!AT	Point of time of actual maximum of active power export (-A), current value, tariff 1..15	Type G	1..15	1	0	no	DT04	O							
Date of max.	DT4!ART	Point of time of actual maximum of active power export (-A), recent value, tariff 1..15	Type G	1..15	1	0..99, 101..124	yes	DT04	O							
Time of device ¹⁰	DT5!	Current time at time of transmission	Type J	0	0	0	no	DT01	O							



EJ		Energy in Joule														
Meter reading ₁₀	EJ1!	Energy import	INT, BCD	0	0	0	no	EJ01, EJ02, EJ03			A1	A1	A1			
Meter reading ₁₅	EJ1!T	Energy import (2nd value for cooling), current value in Joule, total	INT, BCD	1	0	0	no	EJ01, EJ02, EJ03,				A2				
Meter reading	EJ2!	Energy import (2nd value for cooling), current value in Joule, total	INT, BCD	0	0	0	no	EJ04, EJ05, EJ06,				A2				
Meter reading ₁₀	EJ1!D	Energy import	INT, BCD	0	0	1	no	EJ01, EJ02, EJ03			○	○	○			
Meter reading	EJ1!DT	Energy import (2nd value for cooling), due date value in Joule, total	INT, BCD	1	0	1	no	EJ01, EJ02, EJ03,				○				
Meter reading	EJ2!D	Energy import (2nd value for cooling), due date value in Joule, total	INT, BCD	0	0	1	no	EJ04, EJ05, EJ06,				○				
EW		Energy in Watt hour														
Meter reading ₁₀	EW1!	(Active) energy import	INT, BCD	0	0	0	no	EW01, EW02, EW03	A1		A1	A1	A1			
Meter reading ₁₀	EW1!D	Energy import	INT, BCD	0	0	1	no	EW01, EW02, EW03			○	○	○			
Meter reading _{10 15}	EW1!T	(Active) energy import	INT, BCD	1..15	0	0	no	EW01, EW02, EW03	○			A2				
Meter reading	EW1!DT	Energy import (2nd value for cooling), due date value in Watt, total	INT, BCD	1	0	1	no	EW01, EW02, EW03				○				
Meter reading	EW1!R	Active energy import (+A), recent value for billing in Watt, total	INT, BCD	0	0	0..99, 101..124	yes	EW01, EW02, EW03	○							



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	INT, BCD	0	0	0	no	EW04, EW05, EW06	A1			A2				
Meter reading	EW2!D	Energy import (2nd value for cooling), due date value in Watt, total	INT, BCD	0	0	1	no	EW04, EW05, EW06				O				
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	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!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	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														
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		M						
Meter reading	HC1!D	Unrated integral, due date value	INT, BCD	0	0	1	no	HC01		M						
	ID	Identification														
Fabrication number	ID1!	Serial number (not changeable number assigned by the manufacturer)	8BCD	0	0	0	no	ID01	○	○	○	○	○	○	○	○
(Enhanced) identification ¹²	ID2!	Identification number or full Application Layer Address	64INT, 8BCD	0	0	0	no	ID02	○	○	○	○	○	○	○	○
Primary address	ID3!	One byte Link Layer Address	8INT	0	0	0	no	ID03	○	○	○	○	○	○	○	○
Ownership number	ID4!	Ownership number	INT, BCD, VarLen	0	0	0	no	ID04	○	○	○	○	○	○	○	○
Metering point ID	ID5!	Identification of the metering point	INT, BCD, VarLen	0	0	0	no	ID05	○	○	○	○	○	○	○	○
Unique message identification	ID6!	Unique message identification	INT	0	0	0	no	ID06	○	○	○	○	○	○	○	○
	MM	Meter Management														
Quality of Service	MM1!	Reception level	INT, BCD	0	0	0	no	MM01	○	○	○	○	○	○	○	○
Quality of Service	MM1!I	Quality limit of reception level	INT, BCD	0	2	0	no	MM01	○	○	○	○	○	○	○	○
Quality of Service	MM1!E	Noise level	INT, BCD	0	3	0	no	MM01	○	○	○	○	○	○	○	○
Error	MM2!	Error flags	INT	0	0	0	no	MM02	○	○	○	○	○	○	○	○
Error	MM3!	Error flags (standard) ¹⁴	INT	0	0	0	no	MM03	○	○	○	○	○	○	○	○



Operator data	MM4!	Operator specific data (reserved for the operator)	INT, BCD, VarLen	0	0	0	no	MM04	○	○	○	○	○	○	○	○
Load profile	MM5!	Last storage number ¹³	BCD	0	0	0	no	MM05	○	○	○	○	○	○	○	○
Meter reading	MM7!	Cumulation counter (contains the last written register)	INT	0	0	0	no	MM06	○							
PD		Phase in Degree														
Meter reading	PD1!	Angle between voltage on phase L1 and L2, instantaneous value	INT, BCD	0	0	0	no	PD01	○							
Meter reading	PD2!	Angle between voltage on ^{phase} L2 and L3, instantaneous value	INT, BCD	0	0	0	no	PD02	○							
Meter reading	PD3!	Angle between voltage on phase L3 and L1, instantaneous value	INT, BCD	0	0	0	no	PD03	○							
Meter reading	PD4!	Angle between voltage ^{and} current on phase L1, instantaneous value	INT, BCD	0	0	0	no	PD04	○							
Meter reading	PD5!	Angle between voltage and current on phase L2, instantaneous value	INT, BCD	0	0	0	no	PD05	○							
Meter reading	PD6!	Angle between voltage and current on phase L3, instantaneous value	INT, BCD	0	0	0	no	PD06	○							
PJ		Power in Joule per hour														
Power 10	PJ1!	Power (energy flow) (P), average, current value	INT, BCD	0	0	0	no	PJ01			○		○			
Power	PJ1!T	Power (energy flow) (P), average, current value, tarif 1	INT, BCD	1	0	0	no	PJ01				○				
PR		Pressure														



Meter reading	PW4!ACT	Cumulative maximum of active power import (+A), tariff 1-15	INT, BCD	1..15	1	0	no	PW04	O								
Meter reading	PW6!AC	Cumulative maximum of active power export (-A), total	INT, BCD	0	1	0	no	PW06	O								
Meter reading	PW6!ACT	Cumulative maximum of active power export (-A), tariff 1-15	INT, BCD	1..15	1	0	no	PW06	O								
Meter reading	PW7!	Active power absolute (P), instantaneous value, total	INT, BCD	0	0	0	no	PW07, PW08	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								
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								
RH		Relative Humidity															
Sensor reading	RH1!	Relative Humidity in %	INT, BCD	0	0	0	no	RH01	O								
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								
TC		Temperature in °C															
Temperatur 10	TC1!	Flow temperature, current value	INT, BCD	0	0	0	no	TC01			O	O	O				
Temperatur 10	TC2!	Return temperature, current value	INT, BCD	0	0	0	no	TC02			O	O	O				
Base temperatur	TC3!	defined Temperature, absolute, at base conditions (Tb) or for conversion (Ttc)	INT, BCD	0	0	0	no	TC03						O			
VF		Volume Flow															
Flow rate ¹⁰	VF1!	Flow rate	INT, BCD	0	0	0	no	VF01			O		O	O	O	O	O
Flow rate	VF1!T	Flow rate, average (Va/t), current value, tariff 1	INT, BCD	1	0	0	no	VF01				O					
Flow rate	VF2!	Flow rate at measuring conditions, averaging period 1 (default period = 5 min), current interval (Vm/t1)	INT, BCD	0	0	0	no	VF02						O			
Flow rate	VF3!	Flow rate at base conditions, averaging period 1 (default period = 5 min), current interval (Vb/t1)	INT, BCD	0	0	0	no	VF03						O			
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!D	Volume (V), accumulated, total, due date value	INT, BCD	0	0	1	no	VM01, VM02			O	O	O		O	O	



Meter reading 10 15	VM1!T	Volume, current value, tariff	INT, BCD	1..15	0	0	no	VM01, VM02									
Meter reading	VM1!DT	Volume (V), accumulated, due date value, tarif 1 (2nd value for cooling)	INT, BCD	1	0	1	no	VM01, VM02									
Meter reading	VM1!R	Volume (meter), temperature converted (Vtc), forward, absolute, recent value for billing, total	INT, BCD	0	0	0..99, 101..124	yes	VM01, VM02									
Meter reading	VM1!RT	Volume (meter), temperature converted (Vtc), forward, absolute, recent value for billing, tariff 1-15	INT, BCD	1..15	0	0..99, 101..124	yes	VM01, VM02									
Meter reading	VM2!	Volume (meter), measuring conditions (Vm), forward, absolute, current value, total	INT, BCD	0	0	0	no	VM03, VM04									
Meter reading	VM2!T	Volume (meter), measuring conditions (Vm), forward, absolute, current value, tariff 1-15	INT, BCD	1..15	0	0	no	VM03, VM04									
Meter reading	VM2!R	Volume (meter), measuring conditions (Vm), forward, absolute, recent value for billing, total	INT, BCD	0	0	0..99, 101..124	yes	VM03, VM04									
Meter reading	VM2!RT	Volume (meter), measuring conditions (Vm), forward, absolute, recent value for billing, tariff 1-15	INT, BCD	1..15	0	0..99, 101..124	yes	VM03, VM04									
Meter reading	VM3!	Volume (meter), base conditions (Vb), forward, absolute, current value, total	INT, BCD	0	0	0	no	VM05, VM06									
Meter reading	VM3!T	Volume (meter), base conditions (Vb), forward, absolute, current value, tariff 1-15	INT, BCD	1..15	0	0	no	VM05, VM06									
Meter reading	VM3!R	Volume (meter), base conditions (Vb), forward, absolute, recent value for	INT, BCD	0	0	0..99, 101..124	yes	VM05, VM06									



		billing, total											
Meter reading	VM3!RT	Volume (meter), base conditions (Vb), forward, absolute, recent value for billing, tariff 1-15	INT, BCD	1..15	0	0..99, 101..124	yes	VM05, VM06					
	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				

B.3 VIB-Type List

B.3.1 Legend and Notes

VIB-Type list

n One or more Bits, according to tables 26, 28, 29, 30 of [EN 13757-3:2013].

²⁰ Temperature converted value is just for medium gas. All other media is normal value.

B.3.2 List of VIB-Types

VIB-Type Reference	VIF / VIFE	Scaler+Unit/Type	Remark
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
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 synchronous frames
DP04	1111 1101 0010 1000	month	Interval montly values
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
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
EW	Energy [kWh]		
EW01	000 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	
HC	Heat Cost Allocation unit		
HC01	0110 1110	HCA 10e+0	
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 identification
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	1111 1101 0010 0010	Storage number	Last storage number
MM06	1111 1101 0110 0001	Register index	Cumulation Counter
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
PJ	Power [kJ/h]		
PJ01	0011 0nnn	kJ/h 10e-3 ... 10e+4	
PR	Pressure [bar]		
PR01	1110 10nn 0011 1110	bar 10e-3 ... 10e+0	base condition
PR02	1110 10nn 1111 0011 0011 1110	bar 10e-6 ... 10e-3	base condition
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.
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	
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
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
VF	Volume Flow [m³ / h]		



VF01	0011 1nnn	m ³ /h 10e-6 ... 10e+1	normal / temp. Converted ²⁰
VF02	1011 1nnn 0011 1010	m ³ /h 10e-6 ... 10e+1	meas. condition
VF03	1011 1nnn 0011 1110	m ³ /h 10e-6 ... 10e+1	base condition
VM	Volume [m³]		
VM01	0001 0nnn	m ³ 10e-6 ... 10e+1	normal / temp. Converted ²⁰
VM02	1001 0nnn 0111 1101	m ³ 10e-3 ... 10e+4	normal / temp. Converted ²⁰
VM03	1001 0nnn 0011 1010	m ³ 10e-6 ... 10e+1	meas. condition
VM04	1001 0nnn 1111 1101 0011 1010	m ³ 10e-3 ... 10e+4	meas. condition
VM05	1001 0nnn 0011 1110	m ³ 10e-6 ... 10e+1	base condition
VM06	1001 0nnn 1111 1101 0011 1110	m ³ 10e-3 ... 10e+4	base condition
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