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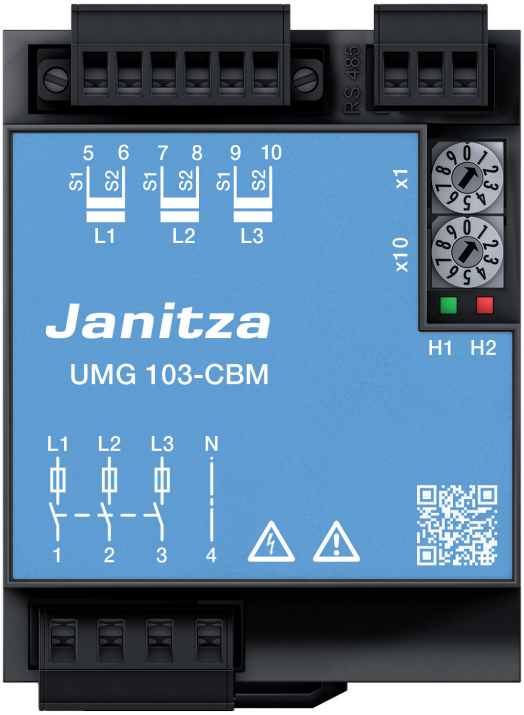
DIN Rail Measuring Device

UMG 103-CBM

Modbus-address liste and Formulary



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Converter Ratios

CT VT = The current converter or voltage converter ratio is not included in this value.

Modbus

Modbus Functions (Slave)

As a slave, the UMG103-CBM supports the following modbus functions:

03 Read Holding Registers
Reads the binary contents of holding registers (4X references) in the slave.

04 Read Input Registers
Reads the binary contents of input registers (3X references) in the slave.

06 Preset Single Register
Presets a value into a single holding register (4X reference). When broadcast, the function presets the same register reference in all attached slaves.

16 (10Hex) Preset Multiple Registers
Presets values into a sequence of holding registers (4X references). When broadcast, the function presets the same register references in all attached slaves.

23 (17Hex) Read/Write 4X Registers
Performs a combination of one read and one write operation in a single Modbus transaction. The function can write new contents to a group of 4XXXX registers, and then return the contents of another group of 4XXXX registers. Broadcast is not supported.

Transfer parameters

The UMG103-CBM supports the following transfer parameters:

Baud rate : 9600, 19200, 38400, 57600 and 11500 Baud
Data bits : 8
Parity : none
Stop bits (UMG103-CBM) : 2
Stop bits external : 1 or 2

Byte sequence

The data in the modbus address list can be called up in the

- Big-Endian (high-Byte before low-Byte) and in the
- Little-Endian (low-byte before high-byte)

format.
The addresses described in this address list supply the data in the „Big-Endian“ format.
If you require the data in the „Little-Endian“ format, you must add the value 32768 to the address.

Update rate

The modbus register addresses are updated every 200ms.

Number formats

Type	Size	Minimum	Maximum
char	8 bit	0	255
byte	8 bit	-128	127
short	16 bit	-2^{15}	2^{15} -1
int	32 bit	-2^{31}	2^{31} -1
uint	32 bit	0	2^{32} -1
long64	64 bit	-2^{63}	2^{63} -1
float	32 bit	IEEE 754	IEEE 754
double	64 bit	IEEE 754	IEEE 754

Symbols and definitions

N	Total number of sample points per period (For example, in a period of 20 ms)
k	Sample value or number of samples per period (0 <= k < N)
p	Number or identification of the phase conductor (p = 1, 2 oder 3)
i_{pk}	Sample value k of the current of the phase conductor p
u_{pNk}	Sample value k of the neutral voltage of the phase conductor p
P_p	Real power of the phase conductor p

Explanations of the measured values

Measured value

- A measured value is a effective value which is formed over a period (measuring window) of 200ms.
- A measuring window is 10 periods in the 50Hz network and 12 periods in the 60Hz network.
- A measuring window has a start time and an end time.
- The resolution between the start time and end time is approximately 2ns.
- The accuracy of the start time and end time depends on the accuracy of the internal clock. (Typically +- 1 minute/month)
- In order to improve the accuracy of the internal clock, it is recommended that the clock in the device is compared with a time service and reset.

Mean value of measured value

- For each measured value, a sliding mean value is calculated over the selected averaging time.
- The mean value is calculated every 200ms.
- You can take the possible averaging times from the table.

n	Mean time / seconds
0	5
1	10
2	15
3	30
4	60
5	300
6	480
7	600
8	900

Max. value of measured value

- The ***max. value of the measured value*** is the largest measured value which has occurred since the last deletion.

Min. value of measured value

- The ***min. value of the measured value*** is the lowest measured value which has occurred since the last deletion.

Max. value of mean value

- The ***max. value of the mean value*** is the largest mean value which has occurred since the last deletion.

Nominal current, voltage, frequency

- The limit values for events and transients are set by the nominal value in percentage.

Nominal current I_{rated}

- The Irated is the nominal current of the transformers and is required for calculation of the K-factor.

Peak value negative

- Höchster negativer Abtastwert aus dem letzten 200ms Messfenster.

Peak value positive

- Highest positive sampling value from the last 200ms measuring window.

Crest factor

- The crest factor describes the relation between the peak value and effective value of a periodic quantity. It serves as a characteristic value for general description of the curve form of a periodic quantity. The distortion factor is another example of a quantity for characterization of the difference from the pure sinusoidal form.

- Example
  A sinusoidal change voltage with an effective value of 230 V has a peak value of approx. 325 V. The crest factor is then 325 V / 230 V =1.414 .

Effective value of the current for phase conductor p

$$I_p = \sqrt{\frac{1}{N} \cdot \sum_{k=0}^{N-1} i_{p_k}^{\,2}}$$

Effective value of neutral conductor current

$$I_N = \sqrt{\frac{1}{N} \cdot \sum_{k=0}^{N-1} (i_{1_k} + i_{2_k} + i_{3_k})^2}$$

Effective voltage L-N

$$U_{pN} = \sqrt{\frac{1}{N} \cdot \sum_{k=0}^{N-1} u_{pN_k}^{\,2}}$$

Effective voltage L-L

$$U_{pg} = \sqrt{\frac{1}{N} \cdot \sum_{k=0}^{N-1} (u_{gN_k} - u_{pN_k})^2}$$

Star connection voltage (vectorial)

$$U_{Sternpunktspannung} = U_{1_{rms}} + U_{2_{rms}} + U_{3_{rms}}$$

Real power for phase conductor

$$P_p = \frac{1}{N} \cdot \sum_{k=0}^{N-1} (u_{pN_k} \times i_{p_k})$$

Apparent power for phase conductor

- Unsigned

$$S_p = U_{pN} \cdot I_p$$

Total apparent power (arithmetic) Sa

- Unsigned

$$S_A = S_1 + S_2 + S_3$$

Order number of harmonics

xxx[0] = mains frequency (50Hz/60Hz)
xxx[1] = 2nd harmonic (100Hz/120Hz)
xxx[2] = 3rd harmonic (150Hz/180Hz)
etc.

THD

- THD (Total Harmonic Distortion) is the distortion factor and provides the relation of the harmonic parts of an oscillation to the mains frequency.

Distortion factor for the voltage

- M = 40 (UMG604, UMG508, UMG509, UMG96RM)
- M = 50 (UMG605, UMG511, UMG512)
- fund corresponds to n=1

$$THD_U = \frac{1}{|U_{fund}|}\sqrt{\sum_{n=2}^{M}|U_{n.Harm}|^2}$$

Distortion factor for the current

- M = 40 (UMG604, UMG508, UMG509, UMG96RM)
- M = 50 (UMG605, UMG511, UMG512)
- fund corresponds to n=1

$$THD_I = \frac{1}{|I_{fund}|}\sqrt{\sum_{n=2}^{M}|I_{n.Harm}|^2}$$

ZHD

- THD for the interharmonics.
- Is calculated in the product series and UMG511, UMG512 UMG605.

Interharmonics

- Sinusoidal oscillations, which frequencies are not a multiple integer of the mains frequency.
- Is calculated in the product series and UMG511, UMG512, UMG605.
- Calculation and measurement methods in accordance with the DIN EN 61000-4-30.
- The order number of inter harmonics corresponds to the order number of the next smallest harmonic. For example, between the 3rd and 4th harmonic of the 3rd inter harmonics.

TDD (I)

- TDD Total demand distortion, harmonic current distortion in % of maximum demand load current
- IL = IL= Maximum demand load current
- M = 40 (UMG604, UMG508, UMG509, UMG96RM)
- M = 50 (UMG605, UMG511, UMG512)

$$TDD = \frac{1}{I_L}\sqrt{\sum_{n=2}^{M} I_n^2} \times 100\%$$

Ripple control signal U (EN61000-4-30)

The ripple control signal U is a voltage (200ms measured value) which is measured at a carrier frequency specified by the user. Only frequencies beneath 3kHz are observed.

Ripple control signal I

The ripple control signal I is a current (200ms measured value) which is measured at a carrier frequency specified by the user. Only frequencies beneath 3kHz are observed.

Positive sequence-negative sequence-zero sequence

- The extent of a voltage or current imbalance in a three-phase system is identified using the positive sequence, negative sequence and zero sequence components.
- The balance of the rotation current system strived for in normal operation is disturbed by the unsymmetrical loads, errors and equipment.
- A three-phase system is called symmetric, when the three phase conductor voltages and currents are the same size and are displaced against each other by 120°. If one or both conditions are not fulfilled, the system is described as unsymmetrical. By calculating the symmetrical components consisting of the positive sequence, negative sequence and zero sequence, the simplified analysis of an imbalanced error is possible in a rotary current system..
- Imbalance is a feature of the network quality for the limits specified in international norms (EN 50160 for example).

Positive sequence

$$U_{Mit} = \frac{1}{3}\left|U_{L1,fund} + U_{L2,fund} \cdot e^{j\frac{2\pi}{3}} + U_{L3,fund} \cdot e^{j\frac{4\pi}{3}}\right|$$

Negative sequence

$$U_{Geg} = \frac{1}{3}\left|U_{L1,fund} + U_{L2,fund} \cdot e^{-j\frac{2\pi}{3}} + U_{L3,fund} \cdot e^{-j\frac{4\pi}{3}}\right|$$

Zero sequence

$$U_{Nullsystem} = \frac{1}{3}\left|U_{L1,fund} + U_{L2,fund} + U_{L3,fund}\right|$$

A zero component can only occur if a sum current can flow back through the main conductor.

Voltage imbalance

$$Unsymmetrie = \frac{U_{Geg}}{U_{Mit}}$$

Under difference U (EN61000-4-30)

$$U_{unter} = \frac{U_{din} - \sqrt{\frac{\sum_{i=1}^{n} U_{rms-unter,i}^2}{n}}}{U_{din}}\left[\%\right]$$

Under difference I

$$I_{unter} = \frac{I_{Nennstrom} - \sqrt{\frac{\sum_{i=1}^{n} I_{rms-unter,i}^2}{n}}}{I_{Nennstrom}}\left[\%\right]$$

K-factor

- The K-factor describes the increase of the eddy current losses when loaded with harmonics. For a sinusoidal load on the transformer, the K-factor =1. The larger the K-factor, the heavier a transformer can be loaded with harmonics without overheating.

Power Factor (vectorial) - Lambda

- The power factor is unsigned.

$$PF_A = \frac{|P|}{S_A}$$

CosPhi - Fundamental Power Factor

- Only the mains frequency part is used for calculation of the cosphi.
- CosPhi sign:
  - = for the supply of real power
  + = for obtaining real power

$$PF_1 = \cos(\varphi) = \frac{P_1}{S_1}$$

CosPhi total

- CosPhi sign:
  - = for the supply of real power
  + = for obtaining real power

$$\cos(\varphi)_{Sum_3} = \frac{P_{1_{fund}} + P_{2_{fund}} + P_{3_{fund}}}{\sqrt{(P_{1_{fund}} + P_{2_{fund}} + P_{3_{fund}})^2 + (Q_{1_{fund}} + Q_{2_{fund}} + Q_{3_{fund}})^2}}$$

$$\cos(\varphi)_{Sum_4} = \frac{P_{1_{fund}} + P_{2_{fund}} + P_{3_{fund}} + P_{4_{fund}}}{\sqrt{(P_{1_{fund}} + P_{2_{fund}} + P_{3_{fund}} + P_{4_{fund}})^2 + (Q_{1_{fund}} + Q_{2_{fund}} + Q_{3_{fund}} + Q_{4_{fund}})^2}}$$

Phase Angle Phi

- The phase angle between current and voltage of the external conductor p is calculated according to DIN EN 61557-12 and displayed.
- The sign of the phase angle corresponding to the sign of the reactive power.

Mains frequency power factor

The mains frequency power factor is the power factor of the mains frequency and is calculated using the fourier analysis (FFT). The voltage and current must not be sinusoidal. All in the device calculated reactive power are resulting of fundamental reactive power.

Power factor sign

- Sign Q = +1 for phi in the range 0° .. 180° (inductive)
- Sign Q = -1 for phi in the range 189° .. 360° (capacitive)

$$Vorzeichen\,Q(\varphi_p) = +1\ falls\ \varphi_p \in [0° - 180°]$$

$$Vorzeichen\,Q(\varphi_p) = -1\ falls\ \varphi_p \in [180° - 360°]$$

Reactive power for phase conductor p

- Reactive power of the mains frequency.

$$Q_{fund\,p} = Vorzeichen\,Q(\varphi_p) \cdot \sqrt{S_{fund\,p}^{\ 2} - P_{fund\,p}^{\ 2}}$$

Total reactive power

- Reactive power of the mains frequency.

$$Q_V = Q_1 + Q_2 + Q_3$$

Distortion power factor

- The distortion power factor is the power factor of all mains frequencies and is calculated using the fourier analysis (FFT).

$$D = \sqrt{S^2 - P^2 - Q_{fund}^2}$$

- The apparent power „S" contains all fundamental harmonics and all harmonic rates up to the M-th harmonic.
- The effective power „P" contains all fundamental harmonics and all harmonic rates up to the M-th harmonic.
- M = 40 (UMG604, UMG508, UMG509, UMG96RM)
- M = 50 (UMG605, UMG511, UMG512)

Reactive energy per phase

$$E_{r_{L1}} = \int Q_{L1}(t) \cdot \Delta t$$

Reactive energy per phase, inductive

$$E_{r(ind)_{L1}} = \int Q_{L1}(t) \cdot \Delta t \qquad \text{für } Q_{L1}(t) > 0$$

Reactive energy per phase, capazitive

$$E_{r(cap)_{L1}} = \int Q_{L1}(t) \cdot \Delta t \qquad \text{für } Q_{L1}(t) < 0$$

Reactive energy, sum L1-L3

$$E_{r_{L1,L2,L3}} = \int (Q_{L1}(t) + Q_{L2}(t) + Q_{L3}(t)) \cdot \Delta t$$

Reactive energy, sum L1-L3, inductive

$$E_{r(ind)_{L1,L2,L3}} = \int (Q_{L1}(t) + Q_{L2}(t) + Q_{L3}(t)) \cdot \Delta t$$

für $(Q_{L1}(t) + Q_{L2}(t) + Q_{L3}(t)) > 0$

Reactive energy, sum L1-L3, capazitive

$$E_{r(cap)_{L1,L2,L3}} = \int (Q_{L1}(t) + Q_{L2}(t) + Q_{L3}(t)) \cdot \Delta t$$

für $(Q_{L1}(t) + Q_{L2}(t) + Q_{L3}(t)) < 0$

Address List

Frequently required readings

Address	Type	RD/WR	Designation	Unit	Remark
19000	float	RD	_ULN[0]	V	Voltage L1-N
19002	float	RD	_ULN[1]	V	Voltage L2-N
19004	float	RD	_ULN[2]	V	Voltage L3-N
19006	float	RD	_ULL[0]	V	Voltage L1-L2
19008	float	RD	_ULL[1]	V	Voltage L2-L3
19010	float	RD	_ULL[2]	V	Voltage L3-L1
19012	float	RD	_ILN[0]	A	Apparent current, L1
19014	float	RD	_ILN[1]	A	Apparent current, L2
19016	float	RD	_ILN[2]	A	Apparent current, L3
19018	float	RD	_I_SUM3	A	Vector sum; IN=I1+I2+I3
19020	float	RD	_PLN[0]	W	Real power L1
19022	float	RD	_PLN[1]	W	Real power L2
19024	float	RD	_PLN[2]	W	Real power L3
19026	float	RD	_P_SUM3	W	Sum; Psum3=P1+P2+P3
19028	float	RD	_SLN[0]	VA	Apparent power L1
19030	float	RD	_SLN[1]	VA	Apparent power L2
19032	float	RD	_SLN[2]	VA	Apparent power L3
19034	float	RD	_S_SUM3	VA	Sum; Ssum3=S1+S2+S3
19036	float	RD	_QLN[0]	var	Reactive power (mains frequ.) L1
19038	float	RD	_QLN[1]	var	Reactive power (mains frequ.) L2
19040	float	RD	_QLN[2]	var	Reactive power (mains frequ.) L3
19042	float	RD	_Q_SUM3	var	Sum; Qsum3=Q1+Q2+Q3
19044	float	RD	_COS_PHI[0]		Fund.power factor, CosPhi; UL1 IL1
19046	float	RD	_COS_PHI[1]		Fund.power factor, CosPhi; UL2 IL2
19048	float	RD	_COS_PHI[2]		Fund.power factor, CosPhi; UL3 IL3
19050	float	RD	_FREQ	Hz	Measured frequency
19052	float	RD	_PHASE_SEQ		Rotation field; 1=right, 0=none, -1=left
*19054**	*float*	*RD*	*_WH_V[0]*	*Wh*	*Real energy L1, consumed*
*19056**	*float*	*RD*	*_WH_V[1]*	*Wh*	*Real energy L2, consumed*
*19058**	*float*	*RD*	*_WH_V[2]*	*Wh*	*Real energy L3, consumed*
19060	float	RD	_WH_V_HT_SUML13	Wh	Real energy L1..L3
19062	float	RD	_WH_V[0]	Wh	Real energy L1, consumed
19064	float	RD	_WH_V[1]	Wh	Real energy L2, consumed
19066	float	RD	_WH_V[2]	Wh	Real energy L3, consumed
19068	float	RD	_WH_V_HT_SUML13	Wh	Real energy L1..L3, consumed, rate 1
19070	float	RD	_WH_Z[0]	Wh	Real energy L1, delivered
19072	float	RD	_WH_Z[1]	Wh	Real energy L2, delivered
19074	float	RD	_WH_Z[2]	Wh	Real energy L3, delivered
19076	float	RD	_WH_Z_SUML13	Wh	Real energy L1..L3, delivered
19078	float	RD	_WH_S[0]	VAh	Apparent energy L1
19080	float	RD	_WH_S[1]	VAh	Apparent energy L2
19082	float	RD	_WH_S[2]	VAh	Apparent energy L3
19084	float	RD	_WH_S_SUML13	VAh	Apparent energy L1..L3
*19086**	*float*	*RD*	*_IQH[0]*	*varh*	*Reactive energy, inductive, L1*
*19088**	*float*	*RD*	*_IQH[1]*	*varh*	*Reactive energy, inductive, L2*
*19090**	*float*	*RD*	*_IQH[2]*	*varh*	*Reactive energy, inductive, L3*
19092	float	RD	_IQH_SUML13	varh	Reactive energy L1..L3
19094	float	RD	_IQH[0]	varh	Reactive energy, inductive, L1
19096	float	RD	_IQH[1]	varh	Reactive energy, inductive, L2
19098	float	RD	_IQH[2]	varh	Reactive energy, inductive, L3
19100	float	RD	_IQH_SUML13	varh	Reactive energy L1..L3, ind.

* The selected device addresses do not match with the standard device addresses of the UMG series.

Address	Type	RD/WR	Designation	Unit	Remark
19102	float	RD	_CQH[0]	varh	Reactive energy, capacitive, L1
19104	float	RD	_CQH[1]	varh	Reactive energy, capacitive, L2
19106	float	RD	_CQH[2]	varh	Reactive energy, capacitive, L3
19108	float	RD	_CQH_SUML13	varh	Reactive energy L1..L3, cap.
19110	float	RD	_THD_ULN[0]	%	Harmonic, THD,U L1-N
19112	float	RD	_THD_ULN[1]	%	Harmonic, THD,U L2-N
19114	float	RD	_THD_ULN[2]	%	Harmonic, THD,U L3-N
19116	float	RD	_THD_ILN[0]	%	Harmonic, THD,I L1
19118	float	RD	_THD_ILN[1]	%	Harmonic, THD,I L2
19120	float	RD	_THD_ILN[2]	%	Harmonic, THD,I L3

Address	Designation	Configuration Range		Type	Default Setting
8	Delete MinMax-Value	0	1	CHAR	0
9	Delete_Work	0	1	CHAR	0
13	Comparator 1A, Threshold Val.	-999999999	999999999	LONG	0
15	Comparator 1A, Measured Val.	0	999	SHORT	
16	Comparator 1A, Min. Duration	1	900	SHORT	1 Sec.
17	Comparator 1A, Operator	0	1	CHAR	0
18	Comparator 1B, Threshold Val.	-999999999	999999999	LONG	0
20	Comparator 1B, Measured Val.	0	999	SHORT	
21	Comparator 1B, Min. Duration	1	900	SHORT	1 Sec.
22	Comparator 1B, Operator	0	1	CHAR	0
23	Comparator 1C, Threshold Val.	-999999999	999999999	LONG	0
25	Comparator 1C, Measured Val.	0	999	SHORT	
26	Comparator 1C, Min. Duration	1	900	SHORT	1 Sec.
27	Comparator 1C, Operator	0	1	CHAR	0
28	Comparator 2A, Threshold Val.	-999999999	999999999	LONG	0
30	Comparator 2A, Measured Val.	0	999	SHORT	
31	Comparator 2A, Min. Duration	1	900	SHORT	1 Sec.
32	Comparator 2A, Operator	0	1	CHAR	0
33	Comparator 2B, Threshold Val.	-999999999	999999999	LONG	0
35	Comparator 2B, Measured Val.	0	999	SHORT	
36	Comparator 2B, Min. Duration	1	900	SHORT	1 Sec.
37	Comparator 2B, Operator	0	1	CHAR	0
38	Comparator 2C, Threshold Val.	-999999999	999999999	LONG	0
40	Comparator 2C, Measured Val.	0	999	SHORT	
41	Comparator 2C, Min. Duration	1	900	SHORT	1 Sec.
42	Comparator 2C, Operator	0	1	CHAR	0
43	Output[0] link	0	1	CHAR	0
44	Output[0] invert	0	1	CHAR	0
45	Output[1] link	0	1	CHAR	0
46	Output[1] invert	0	1	CHAR	0
57	Averaging Time for all I	0	8	CHAR	
58	Averaging Time for all P	0	8	CHAR	0 = 5 Sec. 1 = 10 Sec. 2 = 30 Sec. 3 = 60 Sec. 4 = 300 Sec. 5 = 480 Sec. 6 = 900 Sec. (default) 7 = 30 Min. 8 = 60 Min.
63	Frequency	0	2	CHAR	0=Automatic (default) 1=50Hz 2=60Hz
64	Comparator 1A Lead Time	1	900	SHORT	0 Sec.1
65	Comparator 1B Lead Time	1	900	SHORT	0 Sec.
66	Comparator 1C Lead Time	1	900	SHORT	0 Sec.
67	Comparator 2A Lead Time	1	900	SHORT	0 Sec.
68	Comparator 2B Lead Time	1	900	SHORT	0 Sec.
69	Comparator 2C Lead Time	1	900	SHORT	0 Sec.
71	HT/ switch real energy	0	1	CHAR	0
72	HT/NT switch reactive energy	0	1	CHAR	0

Address	Designation	Configuration	Range	Type	Default Setting
73	Averaging time for all U	0	8	CHAR	0 = 5 Sec. 1 = 10 Sec. 2 = 30 Sec. 3 = 60 Sec. 4 = 300 Sec. 5 = 480 Sec. 6 = 900 Sec. (default) 7 = 30 Min. 8 = 60 Min
600	ct_prim	0	10000	SHORT	Primary Current Converter (in A)
601	ct_sec	1	5	SHORT	Secondary Current Converter (in A)
602	vt_prim	100	60000	USHORT	Primary Voltage Converter (in V)
603	vt_sec	100	400	SHORT	Secondary Voltage Converter (in V)
800	Write Operations in EEPROM Bit 1 = 1, write calibration data Bit 2 = 1, Write programming data Bit 4 = 1, Write counter Bit 8 = 1, Min-max values		1	SHORT	
860	Calibration Password			SHORT	
911	Serial number	only read		LONG	
913	Firmware-Release	only read		SHORT	
914	Hardware-Expansion	only read		SHORT	

Address	Designation	Scaling Factor	Type	Unit	Remark
200	Voltage Uln L1	10	SHORT	V	VT
201	Voltage Uln L2	10	SHORT	V	VT
202	Voltage Uln L3	10	SHORT	V	VT
203	Voltage Ull L1-L2	10	SHORT	V	VT
204	Voltage Ull L2-L3	10	SHORT	V	VT
205	Voltage Ull L3-L1	10	SHORT	V	VT
206	Current I L1	1000	SHORT	mA	CT
207	Current I L2	1000	SHORT	mA	CT
208	Current I L3	1000	SHORT	mA	CT
209	Real power L1	10	SHORT	W	CT VT
210	Real power L2	10	SHORT	W	CT VT
211	Real power L3	10	SHORT	W	CT VT
212	Reactive power L1	10	SHORT	var	CT VT
213	Reactive power L2	10	SHORT	var	CT VT
214	Reactive power L3	10	SHORT	var	CT VT
215	Apparent power L1	10	SHORT	VA	CT VT
216	Apparent power L2	10	SHORT	VA	CT VT
217	Apparent power L3	10	SHORT	VA	CT VT
218	CosPhi L1	100	SHORT	-	
219	CosPhi L2	100	SHORT	-	
220	CosPhi L3	100	SHORT	-	
221	1. Harmonic U L1	10	SHORT	V	VT
222	3. Harmonic U L1	10	SHORT	V	VT
223	5. Harmonic U L1	10	SHORT	V	VT
224	7. Harmonic U L1	10	SHORT	V	VT
225	9. Harmonic U L1	10	SHORT	V	VT
226	11. Harmonic U L1	10	SHORT	V	VT
227	13. Harmonic U L1	10	SHORT	V	VT
228	15. Harmonic U L1	10	SHORT	V	VT
229	1. Harmonic U L2	10	SHORT	V	VT
230	3. Harmonic U L2	10	SHORT	V	VT
231	5. Harmonic U L2	10	SHORT	V	VT
232	7. Harmonic U L2	10	SHORT	V	VT
233	9. Harmonic U L2	10	SHORT	V	VT
234	11. Harmonic U L2	10	SHORT	V	VT
235	13. Harmonic U L2	10	SHORT	V	VT
236	15. Harmonic U L2	10	SHORT	V	VT
237	1. Harmonic U L3	10	SHORT	V	VT
238	3. Harmonic U L3	10	SHORT	V	VT
239	5. Harmonic U L3	10	SHORT	V	VT
240	7. Harmonic U L3	10	SHORT	V	VT
241	9. Harmonic U L3	10	SHORT	V	VT
242	11. Harmonic U L3	10	SHORT	V	VT
243	13. Harmonic U L3	10	SHORT	V	VT
244	15. Harmonic U L3	10	SHORT	V	VT
245	1. Harmonic I L1	1000	SHORT	mA	CT
246	3. Harmonic I L1	1000	SHORT	mA	CT
247	5. Harmonic I L1	1000	SHORT	mA	CT
248	7. Harmonic I L1	1000	SHORT	mA	CT
249	9. Harmonic I L1	1000	SHORT	mA	CT
250	11. Harmonic I L1	1000	SHORT	mA	CT
251	13. Harmonic I L1	1000	SHORT	mA	CT
252	15. Harmonic I L1	1000	SHORT	mA	CT
253	1. Harmonic I L2	1000	SHORT	mA	CT
254	3. Harmonic I L2	1000	SHORT	mA	CT
255	5. Harmonic I L2	1000	SHORT	mA	CT
256	7. Harmonic I L2	1000	SHORT	mA	CT
257	9. Harmonic I L2	1000	SHORT	mA	CT
258	11. Harmonic I L2	1000	SHORT	mA	CT

CT, VT: Current, voltage transformer — Scaling according the transformer ratio!

Address	Designation	Scaling Factor	Type	Unit	Remark
259	13. Harmonic I L2	1000	SHORT	mA	CT
260	15. Harmonic I L2	1000	SHORT	mA	CT
261	1. Harmonic I L3	1000	SHORT	mA	CT
262	3. Harmonic I L3	1000	SHORT	mA	CT
263	5. Harmonic I L3	1000	SHORT	mA	CT
264	7. Harmonic I L3	1000	SHORT	mA	CT
265	9. Harmonic I L3	1000	SHORT	mA	CT
266	11. Harmonic I L3	1000	SHORT	mA	CT
267	13. Harmonic I L3	1000	SHORT	mA	CT
268	15. Harmonic I L3	1000	SHORT	mA	CT
269	THD U L1	1000	SHORT	%	
270	THD U L2	1000	SHORT	%	
271	THD U L3	1000	SHORT	%	
272	THD I L1	1000	SHORT	%	
273	THD I L2	1000	SHORT	%	
274	THD I L3	1000	SHORT	%	
275	Frequency	100	USHORT	Hz	
276	CosPhi sum	100	SHORT	-	
277	Rotation field	1	SHORT	-	+1= right rotary field 0= no rotary field -1= left rotary field
278	I Sum (converted current in N)	1000	SHORT	mA	CT
279	P Sum	1	SHORT	W	CT VT
280	Q Sum	1	SHORT	var	CT VT
281	S Sum	1	SHORT	VA	CT VT
282	Mean value I L1	1000	SHORT	mA	CT
283	Mean value I L2	1000	SHORT	mA	CT
284	Mean value I L3	1000	SHORT	mA	CT
285	Mean value P L1	10	SHORT	W	CT VT
286	Mean value P L2	10	SHORT	W	CT VT
287	Mean value P L3	10	SHORT	W	CT VT
288	Mean value Q L1	10	SHORT	var	CT VT
289	Mean value Q L2	10	SHORT	var	CT VT
290	Mean value Q L3	10	SHORT	var	CT VT
291	Mean value S L1	10	SHORT	VA	CT VT
292	Mean value S L2	10	SHORT	VA	CT VT
293	Mean value S L3	10	SHORT	VA	CT VT
294	Mean value I Sum	1000	SHORT	mA	CT
295	Mean value P Sum	1	SHORT	W	CT VT
296	Mean value Q Sum	1	SHORT	var	CT VT
297	Mean value S Sum	1	SHORT	VA	CT VT
298	Max. Mean value I Sum	1000	SHORT	mA	CT
299	Max. Mean value P Sum	1	SHORT	W	CT VT
300	Max. value I Sum	1000	SHORT	mA	CT
301	Max. value P Sum	1	SHORT	W	CT VT
302	Max. value Q Sum	1	SHORT	var	CT VT
303	Max. value S Sum	1	SHORT	VA	CT VT
304	Max. value CosPhi Sum	100	SHORT	-	
305	Min. value Uln L1	10	SHORT	V	VT
306	Min. value Uln L2	10	SHORT	V	VT
307	Min. value Uln L3	10	SHORT	V	VT
308	Max. value Uln L1	10	SHORT	V	VT
309	Max. value Uln L2	10	SHORT	V	VT
310	Max. value Uln L3	10	SHORT	V	VT
311	Min. value Ull L1-L2	10	SHORT	V	VT
312	Min. value Ull L2-L3	10	SHORT	V	VT
313	Min. value Ull L3-L1	10	SHORT	V	VT
314	Max. value Ull L1-L2	10	SHORT	V	VT
315	Max. value Ull L2-L3	10	SHORT	V	VT

CT, VT: Current, voltage transformer — Scaling according the transformer ratio!

Address	Designation	Scaling Factor	Type	Unit	Remark
316	Max. value Ull L3-L1	10	SHORT	V	VT
317	Max. value I L1	1000	SHORT	mA	CT
318	Max. value I L2	1000	SHORT	mA	CT
319	Max. value I L3	1000	SHORT	mA	CT
320	Max_Mean value I L1	1000	SHORT	mA	CT
321	Max_Mean value I L2	1000	SHORT	mA	CT
322	Max_Mean value I L3	1000	SHORT	mA	CT
323	Max. value P L1	10	SHORT	W	CT VT
324	Max. value P L2	10	SHORT	W	CT VT
325	Max. value P L3	10	SHORT	W	CT VT
326	Max. value Q L1	10	SHORT	var	CT VT
327	Max. value Q L2	10	SHORT	var	CT VT
328	Max. value Q L3	10	SHORT	var	CT VT
329	Max. value S L1	10	SHORT	VA	CT VT
330	Max. value S L2	10	SHORT	VA	CT VT
331	Max. value S L3	10	SHORT	VA	CT VT
332	Max. value 1. Harmonic U L1	10	SHORT	V	VT
333	Max. value 3. Harmonic U L1	10	SHORT	V	VT
334	Max. value 5. Harmonic U L1	10	SHORT	V	VT
335	Max. value 7. Harmonic U L1	10	SHORT	V	VT
336	Max. value 9. Harmonic U L1	10	SHORT	V	VT
337	Max. value 11. Harmonic U L1	10	SHORT	V	VT
338	Max. value 13. Harmonic U L1	10	SHORT	V	VT
339	Max. value 15. Harmonic U L1	10	SHORT	V	VT
340	Max. value 1. Harmonic U L2	10	SHORT	V	VT
341	Max. value 3. Harmonic U L2	10	SHORT	V	VT
342	Max. value 5. Harmonic U L2	10	SHORT	V	VT
343	Max. value 7. Harmonic U L2	10	SHORT	V	VT
344	Max. value 9. Harmonic U L2	10	SHORT	V	VT
345	Max. value 11. Harmonic U L2	10	SHORT	V	VT
346	Max. value 13. Harmonic U L2	10	SHORT	V	VT
347	Max. value 15. Harmonic U L2	10	SHORT	V	VT
348	Max. value 1. Harmonic U L3	10	SHORT	V	VT
349	Max. value 3. Harmonic U L3	10	SHORT	V	VT
350	Max. value 5. Harmonic U L3	10	SHORT	V	VT
351	Max. value 7. Harmonic U L3	10	SHORT	V	VT
352	Max. value 9. Harmonic U L3	10	SHORT	V	VT
353	Max. value 11. Harmonic U L3	10	SHORT	V	VT
354	Max. value 13. Harmonic U L3	10	SHORT	V	VT
355	Max. value 15. Harmonic U L3	10	SHORT	V	VT
356	Max. value 1. Harmonic I L1	1000	SHORT	mA	CT
357	Max. value 3. Harmonic I L1	1000	SHORT	mA	CT
358	Max. value 5. Harmonic I L1	1000	SHORT	mA	CT
359	Max. value 7. Harmonic I L1	1000	SHORT	mA	CT
360	Max. value 9. Harmonic I L1	1000	SHORT	mA	CT
361	Max. value 11. Harmonic I L1	1000	SHORT	mA	CT
362	Max. value 13. Harmonic I L1	1000	SHORT	mA	CT
363	Max. value 15. Harmonic I L1	1000	SHORT	mA	CT
364	Max. value 1. Harmonic I L2	1000	SHORT	mA	CT
365	Max. value 3. Harmonic I L2	1000	SHORT	mA	CT
366	Max. value 5. Harmonic I L2	1000	SHORT	mA	CT
367	Max. value 7. Harmonic I L2	1000	SHORT	mA	CT
368	Max. value 9. Harmonic I L2	1000	SHORT	mA	CT
369	Max. value 11. Harmonic I L2	1000	SHORT	mA	CT
370	Max. value 13. Harmonic I L2	1000	SHORT	mA	CT
371	Max. value 15. Harmonic I L2	1000	SHORT	mA	CT
372	Max. value 1. Harmonic I L3	1000	SHORT	mA	CT
373	Max. value 3. Harmonic I L3	1000	SHORT	mA	CT
374	Max. value 5. Harmonic I L3	1000	SHORT	mA	CT

CT, VT: Current, voltage transformer — Scaling according the transformer ratio!

Address	Designation	Scaling Factor	Type	Unit	Remark
375	Max. value 7. Harmonic I L3	1000	SHORT	mA	CT
376	Max. value 9. Harmonic I L3	1000	SHORT	mA	CT
377	Max. value 11. Harmonic I L3	1000	SHORT	mA	CT
378	Max. value 13. Harmonic I L3	1000	SHORT	mA	CT
379	Max. value 15. Harmonic I L3	1000	SHORT	mA	CT
380	Max. value THD U L1	1	SHORT	%	
381	Max. value THD U L2	1	SHORT	%	
382	Max. value THD U L3	1	SHORT	%	
383	Max. value THD I L1	1	SHORT	%	
384	Max. value THD I L2	1	SHORT	%	
385	Max. value THD I L3	1	SHORT	%	
386	Comparator Result 1A	1	CHAR	-	
387	Comparator Result 1B	1	CHAR	-	
388	Comparator Result 1C	1	CHAR	-	
389	Comparator Group 1, total result	1	CHAR	-	
390	Comparator Result 2A	1	CHAR	-	
391	Comparator Result 2B	1	CHAR	-	
392	Comparator Result 2C	1	CHAR	-	
393	Comparator Group 2, total result	1	CHAR	-	
394	Operating Hour Counter	1	LONG	Sec.	
396	Total Run Time Comparator 1A	1	LONG	Sec.	
398	Total Run Time Comparator 1B	1	LONG	Sec.	
400	Total Run Time Comparator 1C	1	LONG	Sec.	
402	Total Run Time Comparator 2A	1	LONG	Sec.	
404	Total Run Time Comparator 2B	1	LONG	Sec.	
406	Total Run Time Comparator 2C	1	LONG	Sec.	
410	Time since the 1.1.1970	1	LONG	Sec.	
412	Mean value CosPhi Sum	100	SHORT	-	
413	Measuring range exceeded Bit 1 = I > 6,5A L1 Bit 2 = I > 6,5A L2 Bit 3 = I > 6,5A L3 Bit 4 = free Bit 5 = U > 300V L1-N Bit 6 = U > 300V L2-N Bit 7 = U > 300V L3-N Bit 8 = free	1	CHAR	-	
416	Real energy Sum without return travel block	1	LONG	Wh	CT VT
418	Reactive energy, Sum inductive	1	LONG	varh	CT VT
422	Real energy, consumed, Sum	1	LONG	Wh	CT VT
424	Real energy, delivered, Sum	1	LONG	Wh	CT VT
426	Reactive energy, capacitive, Sum	1	LONG	varh	CT VT
428	Reactive energy, Sum	1	LONG	varh	CT VT
430	Apparent energy, Sum	1	LONG	VAh	CT VT
432	Mean value UL1-N	10	SHORT	V	VT
433	Mean value UL2-N	10	SHORT	V	VT
434	Mean value UL3-N	10	SHORT	V	VT
435	Mean value UL1-L2	10	SHORT	V	VT
436	Mean value UL2-L3	10	SHORT	V	VT
437	Mean value UL3-L1	10	SHORT	V	VT

CT, VT: Current, voltage transformer — Scaling according the transformer ratio!

Address	Designation	Scaling Factor	Type	Unit	Remark
438	Over-range	-	LONG	status	

0000	0000	0000	0000	0000	0000	000**1**	= Current transients L1
0000	0000	0000	0000	0000	0000	0**1**00	= Current transients L2
0000	0000	0000	0000	0000	000**1**	0000	= Current transients L3
0000	0000	0000	0000	0000	0000	00**1**0	= Voltage transients L1
0000	0000	0000	0000	0000	0000	**1**000	= Voltage transients L2
0000	0000	0000	0000	0000	00**1**0	0000	= Voltage transients L3
0000	0000	0000	0000	000**1**	0000	0000	= Voltage effectiv L1-L2
0000	0000	0000	0000	00**1**0	0000	0000	= Voltage effectiv L2-L3
0000	0000	0000	0000	0**1**00	0000	0000	= Voltage effectiv L3-L1
0000	0000	000**1**	0000	0000	0000	0000	= Voltage effectiv L1
0000	0000	00**1**0	0000	0000	0000	0000	= Voltage effectiv L2
0000	0000	0**1**00	0000	0000	0000	0000	= Voltage effectiv L3
000**1**	0000	0000	0000	0000	0000	0000	= Current effectiv L1
00**1**0	0000	0000	0000	0000	0000	0000	= Current effectiv L2
0**1**00	0000	0000	0000	0000	0000	0000	= Current effectiv L3

600	**ct_prim**	**0**	**10000**	**SHORT**	A	Current transf., prim.
601	**ct_sec**	**1**	**5**	**SHORT**	A	Current transf., second.
602	**vt_prim**	**100**	**60000**	**USHORT**	V	Voltage transf., prim.
603	**vt_sec**	**100**	**400**	**SHORT**	V	Voltage transf., second.
800	Write in EEPROM Bit 1 = 1, Write calibration data Bit 2 = 1, Write programming data Bit 4 = 1, Write counter Bit 8 = 1, Write min-max values	1	SHORT			
860	Calibration Password	1	SHORT			
911	Serial number	1	LONG			
913	Firmware release	1	SHORT			
914	Hardware expansion	1	SHORT			
920	Calibration value U L1	1	FLOAT			
922	Calibration value U L2	1	FLOAT			
924	Calibration value U L3	1	FLOAT			
926	Calibration value I L1	1	FLOAT			
928	Calibration value I L2	1	FLOAT			
930	Calibration value I L3	1	FLOAT			
932	Calibration value Phase U L1	1	FLOAT			
934	Calibration value Phase U L2	1	FLOAT			
936	Calibration value Phase U L3	1	FLOAT			
938	Calibration value Phase I L1	1	FLOAT			
940	Calibration value Phase I L2	1	FLOAT			
942	Calibration value Phase I L3	1	FLOAT			
1000	U L1	1	FLOAT			
1002	U L2	1	FLOAT			
1004	U L3	1	FLOAT			
1006	U L1-L2	1	FLOAT			
1008	U L2-L3	1	FLOAT			
1010	U L3-L1	1	FLOAT			
1012	I L1	1	FLOAT			
1014	I L2	1	FLOAT			
1016	I L3	1	FLOAT			
1018	I Sum (converted current in N)	1	FLOAT			
1020	P L1	1	FLOAT			
1022	P L2	1	FLOAT			
1024	P L3	1	FLOAT			
1026	P Sum	1	FLOAT			
1028	Q L1	1	FLOAT			

Address	Designation	Scaling Factor	Type	Unit	Remark
1030	Q L2	1	FLOAT		
1032	Q L3	1	FLOAT		
1034	Q Sum	1	FLOAT		
1036	S L1	1	FLOAT		
1038	S L2	1	FLOAT		
1040	S L3	1	FLOAT		
1042	S Sum	1	FLOAT		
1044	CosPhi L1	1	FLOAT		
1046	CosPhi L2	1	FLOAT		
1048	CosPhi L3	1	FLOAT		
1050	CosPhi Sum	1	FLOAT		
1052	Real power, fundamental oscillation L1	1	FLOAT		
1054	Real power, fundamental oscillation L2	1	FLOAT		
1056	Real power, fundamental oscillation L3	1	FLOAT		
1058	1. Harmonic U L1	1	FLOAT		
1060	3. Harmonic U L1	1	FLOAT		
1062	5. Harmonic U L1	1	FLOAT		
1064	7. Harmonic U L1	1	FLOAT		
1066	9. Harmonic U L1	1	FLOAT		
1068	11. Harmonic U L1	1	FLOAT		
1070	13. Harmonic U L1	1	FLOAT		
1072	15. Harmonic U L1	1	FLOAT		
1074	17. Harmonic U L1	1	FLOAT		
1076	19. Harmonic U L1	1	FLOAT		
1078	21. Harmonic U L1	1	FLOAT		
1080	23. Harmonic U L1	1	FLOAT		
1082	25. Harmonic U L1	1	FLOAT		
1084	1. Harmonic U L2	1	FLOAT		
1086	3. Harmonic U L2	1	FLOAT		
1088	5. Harmonic U L2	1	FLOAT		
1090	7. Harmonic U L2	1	FLOAT		
1092	9. Harmonic U L2	1	FLOAT		
1094	11. Harmonic U L2	1	FLOAT		
1096	13. Harmonic U L2	1	FLOAT		
1098	15. Harmonic U L2	1	FLOAT		
1100	17. Harmonic U L2	1	FLOAT		
1102	19. Harmonic U L2	1	FLOAT		
1104	21. Harmonic U L2	1	FLOAT		
1106	23. Harmonic U L2	1	FLOAT		
1108	25. Harmonic U L2	1	FLOAT		
1110	1. Harmonic U L3	1	FLOAT		
1112	3. Harmonic U L3	1	FLOAT		
1114	5. Harmonic U L3	1	FLOAT		
1116	7. Harmonic U L3	1	FLOAT		
1118	9. Harmonic U L3	1	FLOAT		
1120	11. Harmonic U L3	1	FLOAT		
1122	13. Harmonic U L3	1	FLOAT		
1124	15. Harmonic U L3	1	FLOAT		
1126	17. Harmonic U L3	1	FLOAT		
1128	19. Harmonic U L3	1	FLOAT		
1130	21. Harmonic U L3	1	FLOAT		
1132	23. Harmonic U L3	1	FLOAT		
1134	25. Harmonic U L3	1	FLOAT		
1136	1. Harmonic I L1	1	FLOAT		
1138	3. Harmonic I L1	1	FLOAT		
1140	5. Harmonic I L1	1	FLOAT		
1142	7. Harmonic I L1	1	FLOAT		
1144	9. Harmonic I L1	1	FLOAT		
1146	11. Harmonic I L1	1	FLOAT		

Address	Designation	Scaling Factor	Type	Unit	Remark
1148	13. Harmonic I L1	1	FLOAT		
1150	15. Harmonic I L1	1	FLOAT		
1152	17. Harmonic I L1	1	FLOAT		
1154	19. Harmonic I L1	1	FLOAT		
1156	21. Harmonic I L1	1	FLOAT		
1158	23. Harmonic I L1	1	FLOAT		
1160	25. Harmonic I L1	1	FLOAT		
1162	1. Harmonic I L2	1	FLOAT		
1164	3. Harmonic I L2	1	FLOAT		
1166	5. Harmonic I L2	1	FLOAT		
1168	7. Harmonic I L2	1	FLOAT		
1170	9. Harmonic I L2	1	FLOAT		
1172	11. Harmonic I L2	1	FLOAT		
1174	13. Harmonic I L2	1	FLOAT		
1176	15. Harmonic I L2	1	FLOAT		
1178	17. Harmonic I L2	1	FLOAT		
1180	19. Harmonic I L2	1	FLOAT		
1182	21. Harmonic I L2	1	FLOAT		
1184	23. Harmonic I L2	1	FLOAT		
1186	25. Harmonic I L2	1	FLOAT		
1188	1. Harmonic I L3	1	FLOAT		
1190	3. Harmonic I L3	1	FLOAT		
1192	5. Harmonic I L3	1	FLOAT		
1194	7. Harmonic I L3	1	FLOAT		
1196	9. Harmonic I L3	1	FLOAT		
1198	11. Harmonic I L3	1	FLOAT		
1200	13. Harmonic I L3	1	FLOAT		
1202	15. Harmonic I L3	1	FLOAT		
1204	17. Harmonic I L3	1	FLOAT		
1206	19. Harmonic I L3	1	FLOAT		
1208	21. Harmonic I L3	1	FLOAT		
1210	23. Harmonic I L3	1	FLOAT		
1212	25. Harmonic I L3	1	FLOAT		
1214	THD U L1	1	FLOAT		
1216	THD U L2	1	FLOAT		
1218	THD U L3	1	FLOAT		
1220	THD I L1	1	FLOAT		
1222	THD I L2	1	FLOAT		
1224	THD I L3	1	FLOAT		
1226	Frequency	1	FLOAT		
1228	Zero sequence U	1	FLOAT		
1230	Postive sequence U	1	FLOAT		
1232	Negative sequence U	1	FLOAT		
1234	Zero sequence I	1	FLOAT		
1236	Postive sequence I	1	FLOAT		
1238	Negative sequence I	1	FLOAT		
1240	Distortion power L1	1	FLOAT		
1242	Distortion power L2	1	FLOAT		
1244	Distortion power L3	1	FLOAT		
1246	Distortion power Sum	1	FLOAT		
1248	Rotation field	1	FLOAT		+1= right rotary field 0= no rotary field -1= left rotary field
1250	Real part of the fundamental oscillation UL1	1	FLOAT		
1252	Imaginary part of the fund. oscillation UL1	1	FLOAT		
1254	Real part of the fund. oscillation UL2	1	FLOAT		
1256	Imaginary part of the fund. oscillation UL2	1	FLOAT		
1258	Real part of the fund. oscillation UL3	1	FLOAT		
1260	Imaginary part of the fund. oscillation UL3	1	FLOAT		

Address	Designation	Scaling Factor	Type	Unit	Remark
1262	Real part of the fund. oscillation IL1	1	FLOAT		
1264	Imaginary part of the fund. oscillation IL1	1	FLOAT		
1266	Real part of the fund. oscillation IL2	1	FLOAT		
1268	Imaginary part of the fund. oscillation IL2	1	FLOAT		
1270	Real part of the fund. oscillation IL3	1	FLOAT		
1272	Imaginary part of the fund. oscillation IL3	1	FLOAT		
2000	Mean value U L1	1	FLOAT		
2002	Mean value U L2	1	FLOAT		
2004	Mean value U L3	1	FLOAT		
2006	Mean value U L1-L2	1	FLOAT		
2008	Mean value U L2-L3	1	FLOAT		
2010	Mean value U L3-L1	1	FLOAT		
2012	Mean value I L1	1	FLOAT		
2014	Mean value I L2	1	FLOAT		
2016	Mean value I L3	1	FLOAT		
2018	Mean value I Sum	1	FLOAT		
2020	Mean value P L1	1	FLOAT		
2022	Mean value P L2	1	FLOAT		
2024	Mean value P L3	1	FLOAT		
2026	Mean value P Sum	1	FLOAT		
2028	Mean value Q L1	1	FLOAT		
2030	Mean value Q L2	1	FLOAT		
2032	Mean value Q L3	1	FLOAT		
2034	Mean value Q Sum	1	FLOAT		
2036	Mean value S L1	1	FLOAT		
2038	Mean value S L2	1	FLOAT		
2040	Mean value S L3	1	FLOAT		
2042	Mean value S Sum	1	FLOAT		
2044	Mean value CosPhi L1	1	FLOAT		
2046	Mean value CosPhi L2	1	FLOAT		
2048	Mean value CosPhi L3	1	FLOAT		
2050	Mean value CosPhi Sum	1	FLOAT		
2052	Mean value real power, fundamental osc. L1	1	FLOAT		
2054	Mean value real power, fundamental osc. L2	1	FLOAT		
2056	Mean value real power, fund. osz. L3	1	FLOAT		
2058	Mean value 1. Harmonic U L1	1	FLOAT		
2060	Mean value 3. Harmonic U L1	1	FLOAT		
2062	Mean value 5. Harmonic U L1	1	FLOAT		
2064	Mean value 7. Harmonic U L1	1	FLOAT		
2066	Mean value 9. Harmonic U L1	1	FLOAT		
2068	Mean value 11. Harmonic U L1	1	FLOAT		
2070	Mean value 13. Harmonic U L1	1	FLOAT		
2072	Mean value 15. Harmonic U L1	1	FLOAT		
2074	Mean value 17. Harmonic U L1	1	FLOAT		
2076	Mean value 19. Harmonic U L1	1	FLOAT		
2078	Mean value 21. Harmonic U L1	1	FLOAT		
2080	Mean value 23. Harmonic U L1	1	FLOAT		
2082	Mean value 25. Harmonic U L1	1	FLOAT		
2084	Mean value 1. Harmonic U L2	1	FLOAT		
2086	Mean value 3. Harmonic U L2	1	FLOAT		
2088	Mean value 5. Harmonic U L2	1	FLOAT		
2090	Mean value 7. Harmonic U L2	1	FLOAT		
2092	Mean value 9. Harmonic U L2	1	FLOAT		
2094	Mean value 11. Harmonic U L2	1	FLOAT		
2096	Mean value 13. Harmonic U L2	1	FLOAT		
2098	Mean value 15. Harmonic U L2	1	FLOAT		
2100	Mean value 17. Harmonic U L2	1	FLOAT		
2102	Mean value 19. Harmonic U L2	1	FLOAT		

Address	Designation	Scaling Factor	Type	Unit	Remark
2104	Mean value 21. Harmonic U L2	1	FLOAT		
2106	Mean value 23. Harmonic U L2	1	FLOAT		
2108	Mean value 25. Harmonic U L2	1	FLOAT		
2110	Mean value 1. Harmonic U L3	1	FLOAT		
2112	Mean value 3. Harmonic U L3	1	FLOAT		
2114	Mean value 5. Harmonic U L3	1	FLOAT		
2116	Mean value 7. Harmonic U L3	1	FLOAT		
2118	Mean value 9. Harmonic U L3	1	FLOAT		
2120	Mean value 11. Harmonic U L3	1	FLOAT		
2122	Mean value 13. Harmonic U L3	1	FLOAT		
2124	Mean value 15. Harmonic U L3	1	FLOAT		
2126	Mean value 17. Harmonic U L3	1	FLOAT		
2128	Mean value 19. Harmonic U L3	1	FLOAT		
2130	Mean value 21. Harmonic U L3	1	FLOAT		
2132	Mean value 23. Harmonic U L3	1	FLOAT		
2134	Mean value 25. Harmonic U L3	1	FLOAT		
2136	Mean value 1. Harmonic I L1	1	FLOAT		
2138	Mean value 3. Harmonic I L1	1	FLOAT		
2140	Mean value 5. Harmonic I L1	1	FLOAT		
2142	Mean value 7. Harmonic I L1	1	FLOAT		
2144	Mean value 9. Harmonic I L1	1	FLOAT		
2146	Mean value 11. Harmonic I L1	1	FLOAT		
2148	Mean value 13. Harmonic I L1	1	FLOAT		
2150	Mean value 15. Harmonic I L1	1	FLOAT		
2152	Mean value 17. Harmonic I L1	1	FLOAT		
2154	Mean value 19. Harmonic I L1	1	FLOAT		
2156	Mean value 21. Harmonic I L1	1	FLOAT		
2158	Mean value 23. Harmonic I L1	1	FLOAT		
2160	Mean value 25. Harmonic I L1	1	FLOAT		
2162	Mean value 1. Harmonic I L2	1	FLOAT		
2164	Mean value 3. Harmonic I L2	1	FLOAT		
2166	Mean value 5. Harmonic I L2	1	FLOAT		
2168	Mean value 7. Harmonic I L2	1	FLOAT		
2170	Mean value 9. Harmonic I L2	1	FLOAT		
2172	Mean value 11. Harmonic I L2	1	FLOAT		
2174	Mean value 13. Harmonic I L2	1	FLOAT		
2176	Mean value 15. Harmonic I L2	1	FLOAT		
2178	Mean value 17. Harmonic I L2	1	FLOAT		
2180	Mean value 19. Harmonic I L2	1	FLOAT		
2182	Mean value 21. Harmonic I L2	1	FLOAT		
2184	Mean value 23. Harmonic I L2	1	FLOAT		
2186	Mean value 25. Harmonic I L2	1	FLOAT		
2188	Mean value 1. Harmonic I L3	1	FLOAT		
2190	Mean value 3. Harmonic I L3	1	FLOAT		
2192	Mean value 5. Harmonic I L3	1	FLOAT		
2194	Mean value 7. Harmonic I L3	1	FLOAT		
2196	Mean value 9. Harmonic I L3	1	FLOAT		
2198	Mean value 11. Harmonic I L3	1	FLOAT		
2200	Mean value 13. Harmonic I L3	1	FLOAT		
2202	Mean value 15. Harmonic I L3	1	FLOAT		
2204	Mean value 17. Harmonic I L3	1	FLOAT		
2206	Mean value 19. Harmonic I L3	1	FLOAT		
2208	Mean value 21. Harmonic I L3	1	FLOAT		
2210	Mean value 23. Harmonic I L3	1	FLOAT		
2212	Mean value 25. Harmonic I L3	1	FLOAT		
2214	Mean value THD U L1	1	FLOAT		
2216	Mean value THD U L2	1	FLOAT		
2218	Mean value THD U L3	1	FLOAT		
2220	Mean value THD I L1	1	FLOAT		

Address	Designation	Scaling Factor	Type	Unit	Remark
2222	Mean value THD I L2	1	FLOAT		
2224	Mean value THD I L3	1	FLOAT		
2226	Mean value Frequency	1	FLOAT		
2228	Mean value Zero sequence U	1	FLOAT		
2230	Mean value postive sequence U	1	FLOAT		
2232	Mean value negative sequence U	1	FLOAT		
2234	Mean value Zero sequence I	1	FLOAT		
2236	Mean value postive sequence I	1	FLOAT		
2238	Mean value negative sequence I	1	FLOAT		
2240	Mean value distortion power L1	1	FLOAT		
2242	Mean value distortion power L2	1	FLOAT		
2244	Mean value distortion power L3	1	FLOAT		
2246	Mean value distortion power Sum	1	FLOAT		
3000	Max. value. U L1	1	FLOAT		
3002	Max. value. U L2	1	FLOAT		
3004	Max. value. U L3	1	FLOAT		
3006	Max. value. U L1-L2	1	FLOAT		
3008	Max. value. U L2-L3	1	FLOAT		
3010	Max. value. U L3-L1	1	FLOAT		
3012	Max. value. I L1	1	FLOAT		
3014	Max. value. I L2	1	FLOAT		
3016	Max. value. I L3	1	FLOAT		
3018	Max. value. I Sum (convert. Current in N)	1	FLOAT		
3020	Max. value. P L1	1	FLOAT		
3022	Max. value. P L2	1	FLOAT		
3024	Max. value. P L3	1	FLOAT		
3026	Max. value. P Sum	1	FLOAT		
3028	Max. value. Q L1	1	FLOAT		
3030	Max. value. Q L2	1	FLOAT		
3032	Max. value. Q L3	1	FLOAT		
3034	Max. value. Q Sum	1	FLOAT		
3036	Max. value. S L1	1	FLOAT		
3038	Max. value. S L2	1	FLOAT		
3040	Max. value. S L3	1	FLOAT		
3042	Max. value. S Sum	1	FLOAT		
3044	Max. value. CosPhi L1	1	FLOAT		
3046	Max. value. CosPhi L2	1	FLOAT		
3048	Max. value. CosPhi L3	1	FLOAT		
3050	Max. value. CosPhi Sum	1	FLOAT		
3052	Max. value. real power, fundamental osc. L1	1	FLOAT		
3054	Max. value. real power, fundamental osc. L2	1	FLOAT		
3056	Max. value. real power, fundamental osc. L3	1	FLOAT		
3058	Max. value. 1. Harmonic U L1	1	FLOAT		
3060	Max. value. 3. Harmonic U L1	1	FLOAT		
3062	Max. value. 5. Harmonic U L1	1	FLOAT		
3064	Max. value. 7. Harmonic U L1	1	FLOAT		
3066	Max. value. 9. Harmonic U L1	1	FLOAT		
3068	Max. value. 11. Harmonic U L1	1	FLOAT		
3070	Max. value. 13. Harmonic U L1	1	FLOAT		
3072	Max. value. 15. Harmonic U L1	1	FLOAT		
3074	Max. value. 17. Harmonic U L1	1	FLOAT		
3076	Max. value. 19. Harmonic U L1	1	FLOAT		
3078	Max. value. 21. Harmonic U L1	1	FLOAT		
3080	Max. value. 23. Harmonic U L1	1	FLOAT		
3082	Max. value. 25. Harmonic U L1	1	FLOAT		
3084	Max. value. 1. Harmonic U L2	1	FLOAT		
3086	Max. value. 3. Harmonic U L2	1	FLOAT		

Address	Designation	Scaling Factor	Type	Unit	Remark
3088	Max. value. 5. Harmonic U L2	1	FLOAT		
3090	Max. value. 7. Harmonic U L2	1	FLOAT		
3092	Max. value. 9. Harmonic U L2	1	FLOAT		
3094	Max. value. 11. Harmonic U L2	1	FLOAT		
3096	Max. value. 13. Harmonic U L2	1	FLOAT		
3098	Max. value. 15. Harmonic U L2	1	FLOAT		
3100	Max. value. 17. Harmonic U L2	1	FLOAT		
3102	Max. value. 19. Harmonic U L2	1	FLOAT		
2104	Max. value. 21. Harmonic U L2	1	FLOAT		
3106	Max. value. 23. Harmonic U L2	1	FLOAT		
3108	Max. value. 25. Harmonic U L2	1	FLOAT		
3110	Max. value. 1. Harmonic U L3	1	FLOAT		
3112	Max. value. 3. Harmonic U L3	1	FLOAT		
3114	Max. value. 5. Harmonic U L3	1	FLOAT		
3116	Max. value. 7. Harmonic U L3	1	FLOAT		
3118	Max. value. 9. Harmonic U L3	1	FLOAT		
3120	Max. value. 11. Harmonic U L3	1	FLOAT		
3122	Max. value. 13. Harmonic U L3	1	FLOAT		
3124	Max. value. 15. Harmonic U L3	1	FLOAT		
3126	Max. value. 17. Harmonic U L3	1	FLOAT		
3128	Max. value. 19. Harmonic U L3	1	FLOAT		
3130	Max. value. 21. Harmonic U L3	1	FLOAT		
3132	Max. value. 23. Harmonic U L3	1	FLOAT		
3134	Max. value. 25. Harmonic U L3	1	FLOAT		
3136	Max. value. 1. Harmonic I L1	1	FLOAT		
3138	Max. value. 3. Harmonic I L1	1	FLOAT		
3140	Max. value. 5. Harmonic I L1	1	FLOAT		
3142	Max. value. 7. Harmonic I L1	1	FLOAT		
3144	Max. value. 9. Harmonic I L1	1	FLOAT		
3146	Max. value. 11. Harmonic I L1	1	FLOAT		
3148	Max. value. 13. Harmonic I L1	1	FLOAT		
3150	Max. value. 15. Harmonic I L1	1	FLOAT		
3152	Max. value. 17. Harmonic I L1	1	FLOAT		
3154	Max. value. 19. Harmonic I L1	1	FLOAT		
3156	Max. value. 21. Harmonic I L1	1	FLOAT		
3158	Max. value. 23. Harmonic I L1	1	FLOAT		
3160	Max. value. 25. Harmonic I L1	1	FLOAT		
3162	Max. value. 1. Harmonic I L2	1	FLOAT		
3164	Max. value. 3. Harmonic I L2	1	FLOAT		
3166	Max. value. 5. Harmonic I L2	1	FLOAT		
3168	Max. value. 7. Harmonic I L2	1	FLOAT		
3170	Max. value. 9. Harmonic I L2	1	FLOAT		
3172	Max. value. 11. Harmonic I L2	1	FLOAT		
3174	Max. value. 13. Harmonic I L2	1	FLOAT		
3176	Max. value. 15. Harmonic I L2	1	FLOAT		
3178	Max. value. 17. Harmonic I L2	1	FLOAT		
3180	Max. value. 19. Harmonic I L2	1	FLOAT		
3182	Max. value. 21. Harmonic I L2	1	FLOAT		
3184	Max. value. 23. Harmonic I L2	1	FLOAT		
3186	Max. value. 25. Harmonic I L2	1	FLOAT		
3188	Max. value. 1. Harmonic I L3	1	FLOAT		
3190	Max. value. 3. Harmonic I L3	1	FLOAT		
3192	Max. value. 5. Harmonic I L3	1	FLOAT		
3194	Max. value. 7. Harmonic I L3	1	FLOAT		
3196	Max. value. 9. Harmonic I L3	1	FLOAT		
3198	Max. value. 11. Harmonic I L3	1	FLOAT		
3200	Max. value. 13. Harmonic I L3	1	FLOAT		
3202	Max. value. 15. Harmonic I L3	1	FLOAT		
3204	Max. value. 17. Harmonic I L3	1	FLOAT		

Address	Designation	Scaling Factor	Type	Unit	Remark
3206	Max. value. 19. Harmonic I L3	1	FLOAT		
3208	Max. value. 21. Harmonic I L3	1	FLOAT		
3210	Max. value. 23. Harmonic I L3	1	FLOAT		
3212	Max. value. 25. Harmonic I L3	1	FLOAT		
3214	Max. value. THD U L1	1	FLOAT		
3216	Max. value. THD U L2	1	FLOAT		
3218	Max. value. THD U L3	1	FLOAT		
3220	Max. value. THD I L1	1	FLOAT		
3222	Max. value. THD I L2	1	FLOAT		
3224	Max. value. THD I L3	1	FLOAT		
3226	Max. value. Frequency	1	FLOAT		
3228	Max. value U Zero sequence	1	FLOAT		
3230	Max. value U postive sequence	1	FLOAT		
3232	Max. value U negative sequence	1	FLOAT		
3234	Max. value I Zero sequence	1	FLOAT		
3236	Max. value I postive sequence	1	FLOAT		
3238	Max. value I negative sequence	1	FLOAT		
3240	Max. value Distortion power L1	1	FLOAT		
3242	Max. value Distortion power L2	1	FLOAT		
3244	Max. value Distortion power L3	1	FLOAT		
3246	Max. value Distortion power Sum	1	FLOAT		
3248	Max. value des Mean value I L1	1	FLOAT		
3250	Max. value des Mean value I L2	1	FLOAT		
3252	Max. value des Mean value I L3	1	FLOAT		
3254	Max. value des Mean value I Sum	1	FLOAT		
3256	Max. of Mean value P L1	1	FLOAT		
3258	Max. of Mean value P L2	1	FLOAT		
3260	Max. of Mean value P L3	1	FLOAT		
3262	Max. of Mean value P Sum.	1	FLOAT		
4000	Min. value U L1	1	FLOAT		
4002	Min. value U L2	1	FLOAT		
4004	Min. value U L3	1	FLOAT		
4006	Min. value U L1-L2	1	FLOAT		
4008	Min. value U L2-L3	1	FLOAT		
4010	Min. value U L3-L1	1	FLOAT		
4012	Min. value CosPhi L1	1	FLOAT		
4014	Min. value CosPhi L1	1	FLOAT		
4016	Min. value CosPhi L2	1	FLOAT		
4018	Min. value CosPhi L3	1	FLOAT		
4020	Min. value 1. Harmonic U L1	1	FLOAT		
4022	Min. value 3. Harmonic U L1	1	FLOAT		
4024	Min. value 5. Harmonic U L1	1	FLOAT		
4026	Min. value 7. Harmonic U L1	1	FLOAT		
4028	Min. value 9. Harmonic U L1	1	FLOAT		
4030	Min. value 11. Harmonic U L1	1	FLOAT		
4032	Min. value 13. Harmonic U L1	1	FLOAT		
4034	Min. value 15. Harmonic U L1	1	FLOAT		
4036	Min. value 17. Harmonic U L1	1	FLOAT		
4038	Min. value 19. Harmonic U L1	1	FLOAT		
4040	Min. value 21. Harmonic U L1	1	FLOAT		
4042	Min. value 23. Harmonic U L1	1	FLOAT		
4044	Min. value 25. Harmonic U L1	1	FLOAT		
4046	Min. value 1. Harmonic U L2	1	FLOAT		
4048	Min. value 3. Harmonic U L2	1	FLOAT		
4050	Min. value 5. Harmonic U L2	1	FLOAT		
4052	Min. value 7. Harmonic U L2	1	FLOAT		
4054	Min. value 9. Harmonic U L2	1	FLOAT		

Address	Designation	Scaling Factor	Type	Unit	Remark
4056	Min. value 11. Harmonic U L2	1	FLOAT		
4058	Min. value 13. Harmonic U L2	1	FLOAT		
4060	Min. value 15. Harmonic U L2	1	FLOAT		
4062	Min. value 17. Harmonic U L2	1	FLOAT		
4064	Min. value 19. Harmonic U L2	1	FLOAT		
4066	Min. value 21. Harmonic U L2	1	FLOAT		
4068	Min. value 23. Harmonic U L2	1	FLOAT		
4070	Min. value 25. Harmonic U L2	1	FLOAT		
4072	Min. value 1. Harmonic U L3	1	FLOAT		
4074	Min. value 3. Harmonic U L3	1	FLOAT		
4076	Min. value 5. Harmonic U L3	1	FLOAT		
4078	Min. value 7. Harmonic U L3	1	FLOAT		
4080	Min. value 9. Harmonic U L3	1	FLOAT		
4082	Min. value 11. Harmonic U L3	1	FLOAT		
4084	Min. value 13. Harmonic U L3	1	FLOAT		
4086	Min. value 15. Harmonic U L3	1	FLOAT		
4088	Min. value 17. Harmonic U L3	1	FLOAT		
4090	Min. value 19. Harmonic U L3	1	FLOAT		
4092	Min. value 21. Harmonic U L3	1	FLOAT		
4094	Min. value 23. Harmonic U L3	1	FLOAT		
4096	Min. value 25. Harmonic U L3	1	FLOAT		
4098	Min. value THD U L1	1	FLOAT		
4100	Min. value THD U L2	1	FLOAT		
4102	Min. value THD U L3	1	FLOAT		
4104	Min. value Frequency	1	FLOAT		
4106	Min. value U Zero sequence	1	FLOAT		
4108	Min. value U postive sequence	1	FLOAT		
4110	Min. value U negative sequence	1	FLOAT		
5000	Real energy L1, Consumption	1	FLOAT		
5002	Real energy L2, Consumption	1	FLOAT		
5004	Real energy L3, Consumption	1	FLOAT		
5006	Real energy Sum, Consumption	1	FLOAT		
5008	Real energy L1, Consumption, HT	1	FLOAT		
5010	Real energy L2, Consumption, HT	1	FLOAT		
5012	Real energy L3, Consumption, HT	1	FLOAT		
5014	Real energy Sum, Consumption, HT	1	FLOAT		
5016	Real energy L1, Consumption, NT	1	FLOAT		
5018	Real energy L2, Consumption, NT	1	FLOAT		
5020	Real energy L3, Consumption, NT	1	FLOAT		
5022	Real energy Sum, Consumption, NT	1	FLOAT		
5024	Apparent energy L1	1	FLOAT		
5026	Apparent energy L2	1	FLOAT		
5028	Apparent energy L3	1	FLOAT		
5030	Apparent energy Sum	1	FLOAT		
5032	Apparent energy L1, HT	1	FLOAT		
5034	Apparent energy L2, HT	1	FLOAT		
5036	Apparent energy L3, HT	1	FLOAT		
5038	Apparent energy Sum, HT	1	FLOAT		
5040	Apparent energy L1, NT	1	FLOAT		
5042	Apparent energy L2, NT	1	FLOAT		
5044	Apparent energy L3, NT	1	FLOAT		
5046	Apparent energy Sum, NT	1	FLOAT		
5048	Reactive energy L1, ind.	1	FLOAT		
5050	Reactive energy L2, ind.	1	FLOAT		
5052	Reactive energy L3, ind.	1	FLOAT		
5054	Reactive energy Sum, ind.	1	FLOAT		
5056	Reactive energy L1, ind. HT	1	FLOAT		
5058	Reactive energy L2, ind. HT	1	FLOAT		

Address	Designation	Scaling Factor	Type	Unit	Remark
5060	Reactive energy L3, ind. HT	1	FLOAT		
5062	Reactive energy Sum, ind. HT	1	FLOAT		
5064	Reactive energy L1, ind. NT	1	FLOAT		
5066	Reactive energy L2, ind. NT	1	FLOAT		
5068	Reactive energy L3, ind. NT	1	FLOAT		
5070	Reactive energy Sum, ind. NT	1	FLOAT		
5072	Real energy L1, Supply	1	FLOAT		
5074	Real energy L2, Supply	1	FLOAT		
5076	Real energy L3, Supply	1	FLOAT		
5078	Real energy Sum, Supply	1	FLOAT		
5080	Reactive energy L1, capacitive	1	FLOAT		
5082	Reactive energy L2, capacitive	1	FLOAT		
5084	Reactive energy L3, capacitive	1	FLOAT		
5086	Reactive energy Sum, capacitive	1	FLOAT		
5088	Real energy Sum, without return travel block	1	FLOAT		
5090	Reactive energy Sum, without ret. tra. block	1	FLOAT		
6000	Real energy L1, Consumption	1	DOUBLE		
6004	Real energy L2, Consumption	1	DOUBLE		
6008	Real energy L3, Consumption	1	DOUBLE		
6012	Real energy Sum, Consumption	1	DOUBLE		
6016	Real energy L1, Consumption, HT	1	DOUBLE		
6020	Real energy L2, Consumption, HT	1	DOUBLE		
6024	Real energy L3, Consumption, HT	1	DOUBLE		
6028	Real energy Sum, Consumption, HT	1	DOUBLE		
6032	Real energy L1, Consumption, NT	1	DOUBLE		
6036	Real energy L2, Consumption, NT	1	DOUBLE		
6040	Real energy L3, Consumption, NT	1	DOUBLE		
6044	Real energy Sum, Consumption, NT	1	DOUBLE		
6048	Apparent energy L1	1	DOUBLE		
6052	Apparent energy L2	1	DOUBLE		
6056	Apparent energy L3	1	DOUBLE		
6060	Apparent energy Sum	1	DOUBLE		
6064	Apparent energy L1, HT	1	DOUBLE		
6068	Apparent energy L2, HT	1	DOUBLE		
6072	Apparent energy L3, HT	1	DOUBLE		
6076	Apparent energy Sum, HT	1	DOUBLE		
6080	Apparent energy L1, NT	1	DOUBLE		
6084	Apparent energy L2, NT	1	DOUBLE		
6088	Apparent energy L3, NT	1	DOUBLE		
6092	Apparent energy Sum, NT	1	DOUBLE		
6096	Reactive energy L1, ind.	1	DOUBLE		
6100	Reactive energy L2, ind.	1	DOUBLE		
6104	Reactive energy L3, ind.	1	DOUBLE		
6108	Reactive energy Sum, ind.	1	DOUBLE		
6112	Reactive energy L1, ind. HT	1	DOUBLE		
6116	Reactive energy L2, ind. HT	1	DOUBLE		
6120	Reactive energy L3, ind. HT	1	DOUBLE		
6124	Reactive energy Sum, ind. HT	1	DOUBLE		
6128	Reactive energy L1, ind. NT	1	DOUBLE		
6132	Reactive energy L2, ind. NT	1	DOUBLE		
6136	Reactive energy L3, ind. NT	1	DOUBLE		
6140	Reactive energy Sum, ind. NT	1	DOUBLE		
6144	Real energy L1, Supply	1	DOUBLE		
6148	Real energy L2, Supply	1	DOUBLE		
6152	Real energy L3, Supply	1	DOUBLE		
6156	Real energy Sum, Supply	1	DOUBLE		
6160	Reactive energy L1, capacitive	1	DOUBLE		
6164	Reactive energy L2, capacitive	1	DOUBLE		

Address	Designation	Scaling Factor	Type	Unit	Remark
6168	Reactive energy L3, capacitive	1	DOUBLE		
6172	Reactive energy Sum, capacitive	1	DOUBLE		
6176	Real energy Sum, without return travel block	1	DOUBLE		
6180	Reactive energy Sum, without ret. tra. block	1	DOUBLE		
11000	U L1	10	SHORT		VT
11001	U L2	10	SHORT		VT
11002	U L3	10	SHORT		VT
11003	U L1-L2	10	SHORT		VT
11004	U L2-L3	10	SHORT		VT
11005	U L3-L1	10	SHORT		VT
11006	I L1	1000	SHORT		CT
11007	I L2	1000	SHORT		CT
11008	I L3	1000	SHORT		CT
11009	I Sum	1000	SHORT		CT
11010	P L1	10	SHORT		CT VT
11011	P L2	10	SHORT		CT VT
11012	P L3	10	SHORT		CT VT
11013	P Sum	1	SHORT		CT VT
11014	Q L1	10	SHORT		CT VT
11015	Q L2	10	SHORT		CT VT
11016	Q L3	10	SHORT		CT VT
11017	Q Sum	1	SHORT		CT VT
11018	S L1	10	SHORT		CT VT
11019	S L2	10	SHORT		CT VT
11020	S L3	10	SHORT		CT VT
11021	S Sum	1	SHORT		CT VT
11022	CosPhi L1	1	SHORT		
11023	CosPhi L2	1	SHORT		
11024	CosPhi L3	1	SHORT		
11025	CosPhi Sum	1	SHORT		
11026	Real power, fundamental oscillation, L1	10	SHORT		CT VT
11027	Real power, fundamental oscillation, L2	10	SHORT		CT VT
11028	Real power, fundamental oscillation, L3	10	SHORT		CT VT
11029	1. Harmonic U L1	10	SHORT		VT
11030	3. Harmonic U L1	10	SHORT		VT
11031	5. Harmonic U L1	10	SHORT		VT
11032	7. Harmonic U L1	10	SHORT		VT
11033	9. Harmonic U L1	10	SHORT		VT
11034	11. Harmonic U L1	10	SHORT		VT
11035	13. Harmonic U L1	10	SHORT		VT
11036	15. Harmonic U L1	10	SHORT		VT
11037	17. Harmonic U L1	10	SHORT		VT
11038	19. Harmonic U L1	10	SHORT		VT
11039	21. Harmonic U L1	10	SHORT		VT
11040	23. Harmonic U L1	10	SHORT		VT
11041	25. Harmonic U L1	10	SHORT		VT
11042	1. Harmonic U L2	10	SHORT		VT
11043	3. Harmonic U L2	10	SHORT		VT
11044	5. Harmonic U L2	10	SHORT		VT
11045	7. Harmonic U L2	10	SHORT		VT
11046	9. Harmonic U L2	10	SHORT		VT
11047	11. Harmonic U L2	10	SHORT		VT
11048	13. Harmonic U L2	10	SHORT		VT
11049	15. Harmonic U L2	10	SHORT		VT
11050	17. Harmonic U L2	10	SHORT		VT
11051	19. Harmonic U L2	10	SHORT		VT
11052	21. Harmonic U L2	10	SHORT		VT
11053	23. Harmonic U L2	10	SHORT		VT

Address	Designation	Scaling Factor	Type	Unit	Remark
11054	25. Harmonic U L2	10	SHORT		VT
11055	1. Harmonic U L3	10	SHORT		VT
11056	3. Harmonic U L3	10	SHORT		VT
11057	5. Harmonic U L3	10	SHORT		VT
11058	7. Harmonic U L3	10	SHORT		VT
11059	9. Harmonic U L3	10	SHORT		VT
11060	11. Harmonic U L3	10	SHORT		VT
11061	13. Harmonic U L3	10	SHORT		VT
11062	15. Harmonic U L3	10	SHORT		VT
11063	17. Harmonic U L3	10	SHORT		VT
11064	19. Harmonic U L3	10	SHORT		VT
11065	21. Harmonic U L3	10	SHORT		VT
11066	23. Harmonic U L3	10	SHORT		VT
11067	25. Harmonic U L3	10	SHORT		VT
11068	1. Harmonic I L1	1000	SHORT		CT
11069	3. Harmonic I L1	1000	SHORT		CT
11070	5. Harmonic I L1	1000	SHORT		CT
11071	7. Harmonic I L1	1000	SHORT		CT
11072	9. Harmonic I L1	1000	SHORT		CT
11073	11. Harmonic I L1	1000	SHORT		CT
11074	13. Harmonic I L1	1000	SHORT		CT
11075	15. Harmonic I L1	1000	SHORT		CT
11076	17. Harmonic I L1	1000	SHORT		CT
11077	19. Harmonic I L1	1000	SHORT		CT
11078	21. Harmonic I L1	1000	SHORT		CT
11079	23. Harmonic I L1	1000	SHORT		CT
11080	25. Harmonic I L1	1000	SHORT		CT
11081	1. Harmonic I L2	1000	SHORT		CT
11082	3. Harmonic I L2	1000	SHORT		CT
11083	5. Harmonic I L2	1000	SHORT		CT
11084	7. Harmonic I L2	1000	SHORT		CT
11085	9. Harmonic I L2	1000	SHORT		CT
11086	11. Harmonic I L2	1000	SHORT		CT
11087	13. Harmonic I L2	1000	SHORT		CT
11088	15. Harmonic I L2	1000	SHORT		CT
11089	17. Harmonic I L2	1000	SHORT		CT
11090	19. Harmonic I L2	1000	SHORT		CT
11091	22. Harmonic I L2	1000	SHORT		CT
11092	23. Harmonic I L2	1000	SHORT		CT
11093	25. Harmonic I L2	1000	SHORT		CT
11094	1. Harmonic I L3	1000	SHORT		CT
11095	3. Harmonic I L3	1000	SHORT		CT
11096	5. Harmonic I L3	1000	SHORT		CT
11097	7. Harmonic I L3	1000	SHORT		CT
11098	9. Harmonic I L3	1000	SHORT		CT
11099	11. Harmonic I L3	1000	SHORT		CT
11100	13. Harmonic I L3	1000	SHORT		CT
11101	15. Harmonic I L3	1000	SHORT		CT
11102	17. Harmonic I L3	1000	SHORT		CT
11103	19. Harmonic I L3	1000	SHORT		CT
11108	21. Harmonic I L3	1000	SHORT		CT
11109	23. Harmonic I L3	1000	SHORT		CT
11110	25. Harmonic I L3	1000	SHORT		CT
11111	THD U L1	100	SHORT		
11112	THD U L2	100	SHORT		
11113	THD U L3	100	SHORT		
11114	THD I L1	100	SHORT		
11115	THD I L2	100	SHORT		
11116	THD I L3	100	SHORT		

Address	Designation	Scaling Factor	Type	Unit	Remark
11117	Frequency	100	SHORT		
11118	Zero sequence U	10	SHORT		VT
11119	Postive sequence U	10	SHORT		VT
11120	Negative sequence U	10	SHORT		VT
11121	Zero sequence I	1000	SHORT		CT
11122	Postive sequence I	1000	SHORT		CT
11123	Negative sequence I	1000	SHORT		CT
11124	Distortion power L1	10	SHORT		CT VT
11125	Distortion power L2	10	SHORT		CT VT
11126	Distortion power L3	10	SHORT		CT VT
11127	Distortion power Sum	1	SHORT		CT VT
11128	Rotation field	1	SHORT		+1= right rotary fieldd 0= no rotary field -1= left rotary field
11130	Comparator 1A Lead Time	1	LONG		
11132	Comparator 1B Lead Time	1	LONG		
11134	Comparator 1C Lead Time	1	LONG		
11136	Comparator 2A Lead Time	1	LONG		
11138	Comparator 2B Lead Time	1	LONG		
11140	Comparator 2C Lead Time	1	LONG		
11142	Operating hours counter	1	LONG		
12000	Mean value U L1	10	SHORT		VT
12001	Mean value U L2	10	SHORT		VT
12002	Mean value U L3	10	SHORT		VT
12003	Mean value U L1-L2	10	SHORT		VT
12004	Mean value U L2-L3	10	SHORT		VT
12005	Mean value U L3-L1	10	SHORT		VT
12006	Mean value I L1	1000	SHORT		CT
12007	Mean value I L2	1000	SHORT		CT
12008	Mean value I L3	1000	SHORT		CT
12009	Mean value I Sum	1000	SHORT		CT
12010	Mean value P L1	10	SHORT		CT VT
12011	Mean value P L2	10	SHORT		CT VT
12012	Mean value P L3	10	SHORT		CT VT
12013	Mean value P Sum	1	SHORT		CT VT
12014	Mean value Q L1	10	SHORT		CT VT
12015	Mean value Q L2	10	SHORT		CT VT
12016	Mean value Q L3	10	SHORT		CT VT
12017	Mean value Q Sum	1	SHORT		CT VT
12018	Mean value S[0]	10	SHORT		CT VT
12019	Mean value S[1]	10	SHORT		CT VT
12020	Mean value S[2]	10	SHORT		CT VT
12021	Mean value S[3]	1	SHORT		CT VT
12022	Mean value Cosphi L1	1	SHORT		
12023	Mean value Cosphi L2	1	SHORT		
12024	Mean value Cosphi L3	1	SHORT		
12025	Mean value Cosphi Sum	1	SHORT		
12026	Mean value P L1	10	SHORT		CT VT
12027	Mean value P L2	10	SHORT		CT VT
12028	Mean value P L3	10	SHORT		CT VT
12029	Mean value 1. Harmonic U L1	10	SHORT		VT
12030	Mean value 3. Harmonic U L1	10	SHORT		VT
12031	Mean value 5. Harmonic U L1	10	SHORT		VT
12032	Mean value 7. Harmonic U L1	10	SHORT		VT
12033	Mean value 9. Harmonic U L1	10	SHORT		VT
12034	Mean value 11. Harmonic U L1	10	SHORT		VT
12035	Mean value 13. Harmonic U L1	10	SHORT		VT

Address	Designation	Scaling Factor	Type	Unit	Remark
12036	Mean value 15. Harmonic U L1	10	SHORT		VT
12037	Mean value 17. Harmonic U L1	10	SHORT		VT
12038	Mean value 19. Harmonic U L1	10	SHORT		VT
12039	Mean value 21. Harmonic U L1	10	SHORT		VT
12040	Mean value 23. Harmonic U L1	10	SHORT		VT
12041	Mean value 25. Harmonic U L1	10	SHORT		VT
12042	Mean value 1. Harmonic U L2	10	SHORT		VT
12043	Mean value 3. Harmonic U L2	10	SHORT		VT
12044	Mean value 5. Harmonic U L2	10	SHORT		VT
12045	Mean value 7. Harmonic U L2	10	SHORT		VT
12046	Mean value 9. Harmonic U L2	10	SHORT		VT
12047	Mean value 11. Harmonic U L2	10	SHORT		VT
12048	Mean value 13. Harmonic U L2	10	SHORT		VT
12049	Mean value 15. Harmonic U L2	10	SHORT		VT
12050	Mean value 17. Harmonic U L2	10	SHORT		VT
12051	Mean value 19. Harmonic U L2	10	SHORT		VT
12052	Mean value 21. Harmonic U L2	10	SHORT		VT
12053	Mean value 23. Harmonic U L2	10	SHORT		VT
12054	Mean value 25. Harmonic U L2	10	SHORT		VT
12055	Mean value 1. Harmonic U L3	10	SHORT		VT
12056	Mean value 3. Harmonic U L3	10	SHORT		VT
12057	Mean value 5. Harmonic U L3	10	SHORT		VT
12058	Mean value 7. Harmonic U L3	10	SHORT		VT
12059	Mean value 9. Harmonic U L3	10	SHORT		VT
12060	Mean value 11. Harmonic U L3	10	SHORT		VT
12061	Mean value 13. Harmonic U L3	10	SHORT		VT
12062	Mean value 15. Harmonic U L3	10	SHORT		VT
12063	Mean value 17. Harmonic U L3	10	SHORT		VT
12064	Mean value 19. Harmonic U L3	10	SHORT		VT
12065	Mean value 21. Harmonic U L3	10	SHORT		VT
12066	Mean value 23. Harmonic U L3	10	SHORT		VT
12067	Mean value 25. Harmonic U L3	10	SHORT		VT
12068	Mean value 1. Harmonic I L1	1000	SHORT		CT
12069	Mean value 3. Harmonic I L1	1000	SHORT		CT
12070	Mean value 5. Harmonic I L1	1000	SHORT		CT
12071	Mean value 7. Harmonic I L1	1000	SHORT		CT
12072	Mean value 9. Harmonic I L1	1000	SHORT		CT
12073	Mean value 11. Harmonic I L1	1000	SHORT		CT
12074	Mean value 13. Harmonic I L1	1000	SHORT		CT
12075	Mean value 15. Harmonic I L1	1000	SHORT		CT
12076	Mean value 17. Harmonic I L1	1000	SHORT		CT
12077	Mean value 19. Harmonic I L1	1000	SHORT		CT
12078	Mean value 21. Harmonic I L1	1000	SHORT		CT
12079	Mean value 23. Harmonic I L1	1000	SHORT		CT
12080	Mean value 25. Harmonic I L1	1000	SHORT		CT
12081	Mean value 1. Harmonic I L1	1000	SHORT		CT
12082	Mean value 3. Harmonic I L1	1000	SHORT		CT
12083	Mean value 5. Harmonic I L1	1000	SHORT		CT
12084	Mean value 7. Harmonic I L1	1000	SHORT		CT
12085	Mean value 9. Harmonic I L1	1000	SHORT		CT
12086	Mean value 11. Harmonic I L1	1000	SHORT		CT
12087	Mean value 13. Harmonic I L1	1000	SHORT		CT
12088	Mean value 15. Harmonic I L1	1000	SHORT		CT
12089	Mean value 17. Harmonic I L1	1000	SHORT		CT
12090	Mean value 19. Harmonic I L1	1000	SHORT		CT
12091	Mean value 21. Harmonic I L1	1000	SHORT		CT
12092	Mean value 23. Harmonic I L1	1000	SHORT		CT
12093	Mean value 25. Harmonic I L1	1000	SHORT		CT
12094	Mean value 1. Harmonic I L2	1000	SHORT		CT

Address	Designation	Scaling Factor	Type	Unit	Remark
12095	Mean value 3. Harmonic I L2	1000	SHORT		CT
12096	Mean value 5. Harmonic I L2	1000	SHORT		CT
12097	Mean value 7. Harmonic I L2	1000	SHORT		CT
12098	Mean value 9. Harmonic I L2	1000	SHORT		CT
12099	Mean value 11. Harmonic I L2	1000	SHORT		CT
12100	Mean value 13. Harmonic I L2	1000	SHORT		CT
12101	Mean value 15. Harmonic I L2	1000	SHORT		CT
12102	Mean value 17. Harmonic I L2	1000	SHORT		CT
12103	Mean value 19. Harmonic I L2	1000	SHORT		CT
12104	Mean value 21. Harmonic I L2	1000	SHORT		CT
12105	Mean value 23. Harmonic I L2	1000	SHORT		CT
12106	Mean value 25. Harmonic I L2	1000	SHORT		CT
12107	Mean value THD U L1	100	SHORT		
12108	Mean value THD U L2	100	SHORT		
12109	Mean value THD U L3	100	SHORT		
12110	Mean value THD I L1	100	SHORT		
12111	Mean value THD I L2	100	SHORT		
12112	Mean value THD I L3	100	SHORT		
12113	Mean value Frequency	100	SHORT		
12114	Mean value Zero sequence U	10	SHORT		VT
12115	Mean value Postive sequence U	10	SHORT		VT
12116	Mean value Negative sequence U	10	SHORT		VT
12117	Mean value Zero sequence I	1000	SHORT		CT
12118	Mean value Postive sequence I	1000	SHORT		CT
12119	Mean value Negative sequence I	1000	SHORT		CT
12120	Mean value Distortion power L1	10	SHORT		CT VT
12121	Mean value Distortion power L2	10	SHORT		CT VT
12122	Mean value Distortion power L3	10	SHORT		CT VT
12123	Mean value Distortion power L4	1	SHORT		CT VT
13000	Max. value U L1	10	SHORT		VT
13002	Max. value U L2	10	SHORT		VT
13004	Max. value U L3	10	SHORT		VT
13006	Max. value U L1-L2	10	SHORT		VT
13008	Max. value U L2-L3	10	SHORT		VT
13010	Max. value U L3-L1	10	SHORT		VT
13012	Max. value I L1	1000	SHORT		CT
13014	Max. value I L2	1000	SHORT		CT
13016	Max. value I L3	1000	SHORT		CT
13018	Max. value I Sum	1000	SHORT		CT
13020	Max. value P L1	10	SHORT		CT VT
13022	Max. value P L2	10	SHORT		CT VT
13024	Max. value P L3	10	SHORT		CT VT
13026	Max. value P Sum	1	SHORT		CT VT
13028	Max. value Q L1	10	SHORT		CT VT
13030	Max. value Q L2	10	SHORT		CT VT
13032	Max. value Q L3	10	SHORT		CT VT
13034	Max. value Q Sum	1	SHORT		CT VT
13036	Max. value S L1	10	SHORT		CT VT
13038	Max. value S L2	10	SHORT		CT VT
13040	Max. value S L3	10	SHORT		CT VT
13042	Max. value S Sum	10	SHORT		CT VT
13044	Max. value CosPhi L1	100	SHORT		
13046	Max. value CosPhi L2	100	SHORT		
13048	Max. value CosPhi L3	100	SHORT		
13050	Max. value CosPhi Sum	100	SHORT		
13052	Max. value real power, fund. oscillation L1	10	SHORT		CT VT
13054	Max. value real power, fund. oscillation L2	10	SHORT		CT VT
13056	Max. value real power, fund. oscillation L3	10	SHORT		CT VT

Address	Designation	Scaling Factor	Type	Unit	Remark
13058	Max. value 1. Harmonic U L1	10	SHORT		VT
13060	Max. value 3. Harmonic U L1	10	SHORT		VT
13062	Max. value 5. Harmonic U L1	10	SHORT		VT
13064	Max. value 7. Harmonic U L1	10	SHORT		VT
13066	Max. value 9. Harmonic U L1	10	SHORT		VT
13068	Max. value 11. Harmonic U L1	10	SHORT		VT
13070	Max. value 13. Harmonic U L1	10	SHORT		VT
13072	Max. value 15. Harmonic U L1	10	SHORT		VT
13074	Max. value 17. Harmonic U L1	10	SHORT		VT
13076	Max. value 19. Harmonic U L1	10	SHORT		VT
13078	Max. value 21. Harmonic U L1	10	SHORT		VT
13080	Max. value 23. Harmonic U L1	10	SHORT		VT
13082	Max. value 25. Harmonic U L1	10	SHORT		VT
13084	Max. value 1. Harmonic U L2	10	SHORT		VT
13086	Max. value 3. Harmonic U L2	10	SHORT		VT
13088	Max. value 5. Harmonic U L2	10	SHORT		VT
13090	Max. value 7. Harmonic U L2	10	SHORT		VT
13092	Max. value 9. Harmonic U L2	10	SHORT		VT
13094	Max. value 11. Harmonic U L2	10	SHORT		VT
13096	Max. value 13. Harmonic U L2	10	SHORT		VT
13098	Max. value 15. Harmonic U L2	10	SHORT		VT
13100	Max. value 17. Harmonic U L2	10	SHORT		VT
13102	Max. value 19. Harmonic U L2	10	SHORT		VT
12104	Max. value 21. Harmonic U L2	10	SHORT		VT
13106	Max. value 23. Harmonic U L2	10	SHORT		VT
13108	Max. value 25. Harmonic U L2	10	SHORT		VT
13110	Max. value 1. Harmonic U L3	10	SHORT		VT
13112	Max. value 3. Harmonic U L3	10	SHORT		VT
13114	Max. value 5. Harmonic U L3	10	SHORT		VT
13116	Max. value 7. Harmonic U L3	10	SHORT		VT
13118	Max. value 9. Harmonic U L3	10	SHORT		VT
13120	Max. value 11. Harmonic U L3	10	SHORT		VT
13122	Max. value 13. Harmonic U L3	10	SHORT		VT
13124	Max. value 15. Harmonic U L3	10	SHORT		VT
13126	Max. value 17. Harmonic U L3	10	SHORT		VT
13128	Max. value 19. Harmonic U L3	10	SHORT		VT
13130	Max. value 21. Harmonic U L3	10	SHORT		VT
13132	Max. value 23. Harmonic U L3	10	SHORT		VT
13134	Max. value 25. Harmonic U L3	10	SHORT		VT
13136	Max. value 1. Harmonic I L1	1000	SHORT		CT
13138	Max. value 3. Harmonic I L1	1000	SHORT		CT
13140	Max. value 5. Harmonic I L1	1000	SHORT		CT
13142	Max. value 7. Harmonic I L1	1000	SHORT		CT
13144	Max. value 9. Harmonic I L1	1000	SHORT		CT
13146	Max. value 11. Harmonic I L1	1000	SHORT		CT
13148	Max. value 13. Harmonic I L1	1000	SHORT		CT
13150	Max. value 15. Harmonic I L1	1000	SHORT		CT
13152	Max. value 17. Harmonic I L1	1000	SHORT		CT
13154	Max. value 19. Harmonic I L1	1000	SHORT		CT
13156	Max. value 21. Harmonic I L1	1000	SHORT		CT
13158	Max. value 23. Harmonic I L1	1000	SHORT		CT
13160	Max. value 25. Harmonic I L1	1000	SHORT		CT
13162	Max. value 1. Harmonic I L2	1000	SHORT		CT
13164	Max. value 3. Harmonic I L2	1000	SHORT		CT
13166	Max. value 5. Harmonic I L2	1000	SHORT		CT
13168	Max. value 7. Harmonic I L2	1000	SHORT		CT
13170	Max. value 9. Harmonic I L2	1000	SHORT		CT
13172	Max. value 11. Harmonic I L2	1000	SHORT		CT
13174	Max. value 13. Harmonic I L2	1000	SHORT		CT
13176	Max. value 15. Harmonic I L2	1000	SHORT		CT

Address	Designation	Scaling Factor	Type	Unit	Remark
13178	Max. value 17. Harmonic I L2	1000	SHORT		CT
13180	Max. value 19. Harmonic I L2	1000	SHORT		CT
13182	Max. value 21. Harmonic I L2	1000	SHORT		CT
13184	Max. value 23. Harmonic I L2	1000	SHORT		CT
13186	Max. value 25. Harmonic I L2	1000	SHORT		CT
13188	Max. value 1. Harmonic I L3	1000	SHORT		CT
13190	Max. value 3. Harmonic I L3	1000	SHORT		CT
13192	Max. value 5. Harmonic I L3	1000	SHORT		CT
13194	Max. value 7. Harmonic I L3	1000	SHORT		CT
13196	Max. value 9. Harmonic I L3	1000	SHORT		CT
13198	Max. value 11. Harmonic I L3	1000	SHORT		CT
13200	Max. value 13. Harmonic I L3	1000	SHORT		CT
13202	Max. value 15. Harmonic I L3	1000	SHORT		CT
13204	Max. value 17. Harmonic I L3	1000	SHORT		CT
13206	Max. value 19. Harmonic I L3	1000	SHORT		CT
13208	Max. value 21. Harmonic I L3	1000	SHORT		CT
13210	Max. value 23. Harmonic I L3	1000	SHORT		CT
13212	Max. value 25. Harmonic I L3	1000	SHORT		CT
13214	Max. value THD U L1	100	SHORT		
13216	Max. value THD U L2	100	SHORT		
13218	Max. value THD U L3	100	SHORT		
13220	Max. value THD I L1	100	SHORT		
13222	Max. value THD I L2	100	SHORT		
13224	Max. value THD I L3	100	SHORT		
13226	Max. value Frequency	100	SHORT		
13228	Max. value Zero sequence	10	SHORT		VT
13230	Max. value Postive sequence	10	SHORT		VT
13232	Max. value Negative sequence	10	SHORT		VT
13234	Max. value Zero sequence	1000	SHORT		CT
13236	Max. value Postive sequence	1000	SHORT		CT
13238	Max. value Negative sequence	1000	SHORT		CT
13240	Max. value distortion power L1	10	SHORT		CT VT
13242	Max. value Distortion power L2	10	SHORT		CT VT
13244	Max. value Distortion power L3	10	SHORT		CT VT
13246	Max. value Distortion power L4	1	SHORT		CT VT
13248	Max. value Mean value, I L1	1000	SHORT		CT
13250	Max. value Mean value, I L2	1000	SHORT		CT
13252	Max. value Mean value, I L3	1000	SHORT		CT
13254	Max. value Mean value, I Sum (N)	1	SHORT		CT
13256	Max. of Mean value P L1	10	SHORT		CT VT
13258	Max. of Mean value P L2	10	SHORT		CT VT
13260	Max. of Mean value P L3	10	SHORT		CT VT
13262	Max. of Mean value P Sum	1	SHORT		CT VT
14000	Min. value U L1	10	SHORT		VT
14001	Min. value U L2	10	SHORT		VT
14002	Min. value U L3	10	SHORT		VT
14003	Min. value U L1-L2	10	SHORT		VT
14004	Min. value U L2-L3	10	SHORT		VT
14005	Min. value U L3-L1	10	SHORT		VT
14006	Min. value CosPhi L1	1	SHORT		
14007	Min. value CosPhi L2	1	SHORT		
14008	Min. value CosPhi L3	1	SHORT		
14009	Min. value CosPhi Sum	1	SHORT		
14010	Min. value 1. Harmonic U L1	10	SHORT		VT
14011	Min. value 3. Harmonic U L1	10	SHORT		VT
14012	Min. value 5. Harmonic U L1	10	SHORT		VT
14013	Min. value 7. Harmonic U L1	10	SHORT		VT
14014	Min. value 9. Harmonic U L1	10	SHORT		VT

Address	Designation	Scaling Factor	Type	Unit	Remark
14015	Min. value 11. Harmonic U L1	10	SHORT		VT
14016	Min. value 13. Harmonic U L1	10	SHORT		VT
14017	Min. value 15. Harmonic U L1	10	SHORT		VT
14018	Min. value 17. Harmonic U L1	10	SHORT		VT
14019	Min. value 19. Harmonic U L1	10	SHORT		VT
14020	Min. value 21. Harmonic U L1	10	SHORT		VT
14021	Min. value 23. Harmonic U L1	10	SHORT		VT
14022	Min. value 25. Harmonic U L1	10	SHORT		VT
14023	Min. value 1. Harmonic U L2	10	SHORT		VT
14024	Min. value 3. Harmonic U L2	10	SHORT		VT
14025	Min. value 5. Harmonic U L2	10	SHORT		VT
14026	Min. value 7. Harmonic U L2	10	SHORT		VT
14027	Min. value 9. Harmonic U L2	10	SHORT		VT
14028	Min. value 11. Harmonic U L2	10	SHORT		VT
14029	Min. value 13. Harmonic U L2	10	SHORT		VT
14030	Min. value 15. Harmonic U L2	10	SHORT		VT
14031	Min. value 17. Harmonic U L2	10	SHORT		VT
14032	Min. value 19. Harmonic U L2	10	SHORT		VT
14033	Min. value 23. Harmonic U L2	10	SHORT		VT
14034	Min. value 25. Harmonic U L2	10	SHORT		VT
14035	Min. value 1. Harmonic U L3	10	SHORT		VT
14036	Min. value 3. Harmonic U L3	10	SHORT		VT
14037	Min. value 5. Harmonic U L3	10	SHORT		VT
14038	Min. value 7. Harmonic U L3	10	SHORT		VT
14039	Min. value 9. Harmonic U L3	10	SHORT		VT
14040	Min. value 11. Harmonic U L3	10	SHORT		VT
14041	Min. value 13. Harmonic U L3	10	SHORT		VT
14042	Min. value 15. Harmonic U L3	10	SHORT		VT
14043	Min. value 17. Harmonic U L3	10	SHORT		VT
14044	Min. value 19. Harmonic U L3	10	SHORT		VT
14045	Min. value 21. Harmonic U L3	10	SHORT		VT
14046	Min. value 23. Harmonic U L3	10	SHORT		VT
14047	Min. value 23. Harmonic U L3	10	SHORT		VT
14048	Min. value 25. Harmonic U L3	10	SHORT		VT
14049	Min. value THD U L1	100	SHORT		
14050	Min. value THD U L2	100	SHORT		
14051	Min. value THD U L3	100	SHORT		
14052	Min. value Frequency	100	SHORT		
14053	Min. value Zero sequence U	10	SHORT		VT
14054	Min. value Postive sequence U	10	SHORT		VT
14055	Min. value Negative sequence U	10	SHORT		VT
15000	Real energy consumption L1	1	LONG		
15002	Real energy consumption L2	1	LONG		
15004	Real energy consumption L3	1	LONG		
15006	Real energy consumption Sum	1	LONG		
15008	Real energy consumption HT L1	1	LONG		
15010	Real energy consumption HT L2	1	LONG		
15012	Real energy consumption HT L3	1	LONG		
15014	Real energy consumption HT Sum	1	LONG		
15016	Real energy consumption NT L1	1	LONG		
15018	Real energy consumption NT L1	1	LONG		
15020	Real energy consumption NT L1	1	LONG		
15022	Real energy consumption NT L1	1	LONG		
15024	Apparent energy L1	1	LONG		
15026	Apparent energy L2	1	LONG		
15028	Apparent energy L3	1	LONG		
15030	Apparent energy Sum	1	LONG		
15032	Apparent energy HT L1	1	LONG		

Address	Designation	Scaling Factor	Type	Unit	Remark
15034	Apparent energy HT L2	1	LONG		
15036	Apparent energy HT L3	1	LONG		
15038	Apparent energy HT Sum	1	LONG		
15040	Apparent energy NT L1	1	LONG		
15042	Apparent energy NT L2	1	LONG		
15044	Apparent energy NT L3	1	LONG		
15046	Apparent energy NT Sum	1	LONG		
15048	Reactive energy induktiv L1	1	LONG		
15050	Reactive energy induktiv L2	1	LONG		
15052	Reactive energy induktiv L3	1	LONG		
15054	Reactive energy induktiv Sum	1	LONG		
15056	Reactive energy induktiv HT L1	1	LONG		
15058	Reactive energy induktiv HT L2	1	LONG		
15060	Reactive energy induktiv HT L3	1	LONG		
15062	Reactive energy induktiv HT Sum	1	LONG		
15064	Reactive energy induktiv NT L1	1	LONG		
15066	Reactive energy induktiv NT L2	1	LONG		
15068	Reactive energy induktiv NT L3	1	LONG		
15070	Reactive energy induktiv NT Sum	1	LONG		
15072	Real energy geliefert L1	1	LONG		
15074	Real energy geliefert L2	1	LONG		
15076	Real energy geliefert L3	1	LONG		
15078	Real energy geliefert Sum	1	LONG		
15080	Reactive energy capacitive L1	1	LONG		
15082	Reactive energy capacitive L2	1	LONG		
15084	Reactive energy capacitive L3	1	LONG		
15086	Reactive energy capacitive Sum	1	LONG		
15088	Real energy Sum, without return travel block	1	LONG		
15090	Reactive energy Sum, without ret. trav. block	1	LONG		

Address	Designation	Scaling Factor	Type	Unit	Remark