

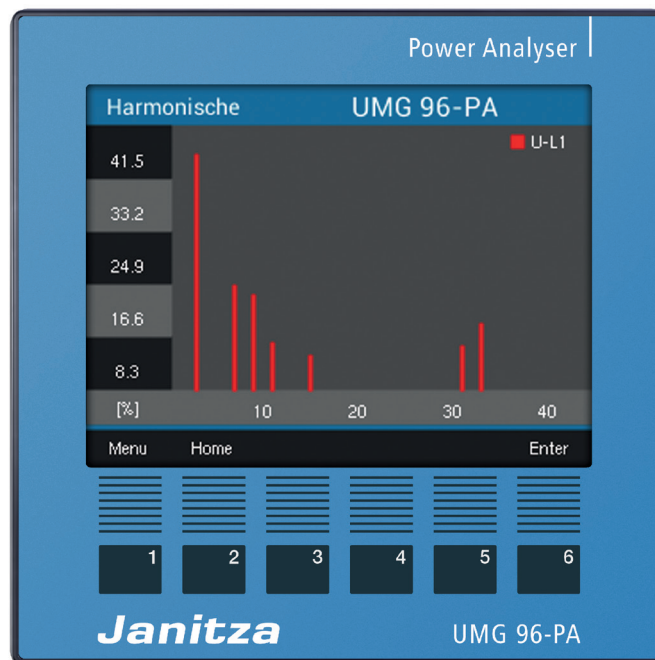
Power Analyser

**UMG 96-PA**

**UMG 96-PA<sup>MID+</sup>**

ab Firmware-Version 3.43

Modbus-Adressenliste und  
Formelsammlung



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# Modbus

## Modbus-Funktionen

Das UMG 96-PA unterstützt als Slave folgende Modbus-Funktionen:

### 02 Read Input Status

Dieser Funktionscode wird verwendet, um den zusammenhängenden Status von 1 bis 2000 diskreten Eingängen in einem entfernten Gerät auszulesen. Die Anforderungs-PDU gibt die Startadresse, d. h. die Adresse des ersten angegebenen Eingangs, und die Anzahl der Eingänge an. In der PDU werden die diskreten Eingänge beginnend bei Null adressiert. Daher werden die diskreten Eingänge mit den Nummern 1-16 als 0-15 adressiert. Die diskreten Eingänge in der Antwortnachricht werden als ein Eingang pro Bit des Datenfeldes gepackt.

### 03 Read Holding Registers

Liest den Binärinhalt von „Holding-Registern“ (4X-Referenzen) im Slave-Gerät aus.

### 04 Read Input Registers

Liest den Binärinhalt von Eingangsregistern (3X Referenzen) im Slave-Gerät aus.

### 06 Preset Single Register

Setzt einen Wert in ein einzelnes „Holding-Register“ (4X-Referenz). Beim Broadcast setzt die Funktion bei allen angeschlossenen Slaves die gleichen Register-Referenzen.

### 08 Diagnostic function

Der MODBUS-Funktionscode 08 bietet eine Reihe von Tests zur Überprüfung des Kommunikationssystems zwischen einem Client-Gerät (Master) und einem Server (Slave) oder zur Überprüfung verschiedener interner Fehlerbedingungen innerhalb eines Servers.

Die Funktion verwendet ein Zwei-Byte-Unterfunktionscode-Feld in der Abfrage, um die Art des durchzuführenden Tests zu definieren.

Die folgenden Diagnosefunktionen sind für Geräte mit serieller Schnittstelle bestimmt. Die normale Antwort auf die Abfrage Return Query Data ist ein Loopback der gleichen Daten. Der Funktionscode und die Unterfunktionscodes werden ebenfalls zurückgesendet.

Sub-function code		Name
Hex	Dec	
00	00	Return Query Data
01	01	Restart Communications Option
0A	10	Clear Counters and Diagnostic Register
0B	11	Return Bus Message Count
0C	12	Return Bus Communication Error Count
0D	13	Return Bus Exception Error Count
0E	14	Return Slave Message Count
0F	15	Return Slave No Response Count
10	16	Return Slave NAK Count
11	17	Return Slave Busy Count

### 16 (10Hex) Preset Multiple Registers

Setzt Werte in einer Sequenz von „Holding-Registern“ (4X Referenzen). Beim Broadcast setzt die Funktion in allen angeschlossenen Slaves die gleichen Register-Referenzen.

### 23 (17Hex) Read/Write 4X Registers

Führt eine Kombination aus einem Lese- und einem Schreibvorgang in einer einzigen Modbus-Transaktion durch. Die Funktion kann neue Inhalte in eine Gruppe von 4XXXX Registern schreiben und dann den Inhalt einer anderen Gruppe von 4XXXX Registern zurückgeben. Broadcast wird nicht unterstützt.

## RS485 Übertragungsparameter

Das UMG 96-PA unterstützt folgende Übertragungsparameter:

Baudrate	: 9600, 19200, 38400, 57600 und 115200 Baud
Datenbits	: 8
Framing:	: 1 Stoppbit & keine Parität 1 Stoppbit & Parität even 1 Stoppbit & Parität odd 2 Stoppbits & keine Parität

## Byte-Reihenfolge

Die Daten in der Modbus-Adressenliste können im Format

- Big-Endian (High-Byte vor Low-Byte) und im Format
- Little-Endian (Low-Byte vor High-Byte)

abgerufen werden.

Die in dieser Adressenliste beschriebenen Adressen liefern die Daten im Format „Big-Endian“ zurück.

Wenn Sie Daten im Format „Little-Endian“ benötigen, müssen Sie zur Adresse den Wert 32768 addieren.

## Aktualisierungsrate

Die Modbus-Registeradressen werden alle 200 ms aktualisiert.

## Messwerte

- Messwerte im **Short-Format** berücksichtigen **nicht** die eingestellten Wandlerverhältnisse, d.h. diese Messwerte sind mit dem entsprechenden Wandlerverhältnis zu multiplizieren!
- Messwerte im **Float oder Integer-Format** berücksichtigen die entsprechenden Wandlerverhältnisse!

## Zahlenformate

Typ	Größe	Minimum	Maximum
char	8 bit	0	255
byte	8 bit	-128	127
short	16 bit	$-2^{15}$	$2^{15} - 1$
ushort	16 bit	0	$2^{16} - 1$
int	32 bit	$-2^{31}$	$2^{31} - 1$
uint	32 bit	0	$2^{32} - 1$
long	64 bit	$-2^{63}$	$2^{63} - 1$
ulong	64 bit	0	$2^{64} - 1$
float	32 bit	IEEE 754	IEEE 754
double	64 bit	IEEE 754	IEEE 754

## Symbole und Definitionen

N	Gesamtzahl der Abtastpunkte je Periode (Zum Beispiel in einer Periode von 20ms)
k	Abtastwert oder Anzahl der Abtastwerte je Periode ( $0 \leq k < N$ )
p	Nummer bzw. Kennung des Außenleiters ( $p = 1, 2$ oder $3$ )
$i_{pk}$	Abtastwert k des Stroms von Außenleiter p
$u_{pNk}$	Abtastwert k der Neutralspannung von Außenleiter p
$P_p$	Wirkleistung für Außenleiter p

# Erläuterungen zu den Messwerten

## Messwert

- Ein Messwert ist ein Effektivwert der über einen Zeitraum (Messfenster) von 200 ms gebildet wird.
- Ein Messfenster im 50 Hz Netz beträgt 10 Perioden und im 60 Hz Netz 12 Perioden.
- Ein Messfenster hat einen Startzeitpunkt und einen Endzeitpunkt.
- Die Auflösung von Startzeitpunkt und Endzeitpunkt betragen ca. 2 ns.
- Die Genauigkeit von Startzeitpunkt und Endzeitpunkt hängt von der Genauigkeit der internen Uhr ab. (Typisch +/- 1 Minute/Monat)
- Um die Genauigkeit der internen Uhr zu verbessern empfiehlt es sich die Uhrzeit im Gerät mit der eines Zeitserverns zu vergleichen und nachzuführen.

## Mittelwert des Messwertes

- Für jeden Messwert wird über den gewählten Mittelungszeitraum ein gleitender Mittelwert berechnet.
- Der Mittelwert wird alle 200 ms berechnet.
- Die möglichen Mittelungszeiten können Sie der Tabelle entnehmen.

n	Mittelungszeit / Sekunden
0	5
1	10
2	15
3	30
4	60
5	300
6	480
7	600
8	900

## Maximalwert des Messwertes

- Der *Maximalwert des Messwertes* ist der größte Messwert der seit der letzten Löschung aufgetreten ist.

## Minimalwert des Messwertes

- Der *Minimalwert des Messwertes* ist der kleinste Messwert der seit der letzten Löschung aufgetreten ist.

## Maximalwert des Mittelwertes

- Ein *Maximalwert des Mittelwertes* ist der größte Mittelwert der seit der letzten Löschung aufgetreten ist.

## Nominal-Strom, -Spannung, -Frequenz

- Die Grenzwerte für Ereignisse und Transienten werden in Prozent vom Nominalwert eingestellt.

## Nennstrom $I_{\text{rated}}$

- Der  $I_{\text{rated}}$  ist der Nennstrom des Transformators und wird für die Berechnung des K-Faktors benötigt.

## Peakwert negativ

- Höchster negativer Abtastwert aus dem letzten 200 ms Messfenster.

## Peakwert positiv

- Höchster positiver Abtastwert aus dem letzten 200 ms Messfenster.

## Crest-Faktor

- Der Crest-Faktor beschreibt das Verhältnis zwischen Spitzenwert und Effektivwert einer Wechselgröße. Er dient als Kennwert zur groben Beschreibung der Kurvenform einer Wechselgröße. Eine weitere Größe zur Charakterisierung der Abweichung von der reinen Sinusform ist zum Beispiel der Klirrfaktor.

### Beispiel:

Eine sinusförmige Wechselspannung mit einem Effektivwert von 230 V hat einen Spitzenwert von ca. 325 V. Der Crest-Faktor beträgt dann  $325 \text{ V} / 230 \text{ V} = 1,414$ .

Effektivwert des Stroms für Außenleiter p

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

Effektivwert des Neutralleiterstroms

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

Effektivspannung L-N

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

Effektivspannung L-L

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

Sternpunktspannung (vektoriell)

$$U_{\text{Sternpunktspannung}} = U_{1_{ms}} + U_{2_{ms}} + U_{3_{ms}}$$

Wirkleistung für Außenleiter

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

Scheinleistung für Außenleiter p

- Die Scheinleistung ist vorzeichenlos.

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

Gesamt-Scheinleistung (arithmetisch)

- Die Scheinleistung ist vorzeichenlos.

$$S_A = S_1 + S_2 + S_3$$

Peak demand  $P_{\max}$

- T = Periodendauer
- $t_n$  = n-te Intervallzeit
- $P_n$  = n-te Leistungsmesswert
- N = Anzahl der Messintervalle in der Periodendauer T

$$P_{\max} = \max \left( P_{\max}; \frac{1}{T} \sum_{n=1}^N (t_n \cdot P_n) \right)$$

## Ordnungsnummern der Oberschwingungen

xxx[0] = Grundschiwingung (50 Hz/60 Hz)  
 xxx[1] = 1.te Oberschwingung (100 Hz/120 Hz)  
 xxx[2] = 2.te Oberschwingung (150 Hz/180 Hz)  
 usw.

## THD

- THD (Total Harmonic Distortion) ist der Verzerrungsfaktor und gibt das Verhältnis der harmonischen Anteile einer Schwingung zur Grundschiwingung an.

### Verzerrungsfaktor THD (U) für die Spannung

- M = 40 (UMG 604, UMG 508, UMG 96RM)
- M = 50 (UMG 605, UMG 511)
- fund entspricht n=1

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

### Verzerrungsfaktor THD (I) für den Strom

- M = 40 (UMG 604, UMG 508, UMG 96RM)
- M = 50 (UMG 605, UMG 511)
- fund entspricht n=1

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

## ZHD

- THD für die Zwischenharmonischen.
- Wird in den Geräteserien UMG 511 und UMG 605 berechnet.

## Zwischenharmonische

- Sinusförmige Schwingungen, deren Frequenzen kein ganzzahliges Vielfaches der Netzfrequenz (Grundschiwingung) sind.
- Wird in den Geräteserien UMG 511 und UMG 605 berechnet.
- Berechnungs- und Messverfahren entsprechen der DIN EN 61000-4-30.
- Die Ordnungsnummer einer Zwischenharmonischen entspricht der nächst kleineren Oberschiwingung. Es liegt also zum Beispiel zwischen der 3-ten und 4-ten Oberschiwingung die 3-te Zwischenharmonische.

## TDD (I)

- TDD (Total Demand Distortion) gibt das Verhältnis zwischen den Stromoberschwingungen (THDi) und den Stromeffektivwert bei Vollast an.
- IL = Voll-Laststrom
- M = 40 (UMG 604, UMG 508, UMG 96RM)
- M = 50 (UMG 605, UMG 511)

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

## Rundsteuersignal U (IEC61000-4-30)

Das Rundsteuersignal U, ist eine Spannung (200 ms Messwert), die zu einer vom Nutzer festgelegten Trägerfrequenz gemessen wurde. Es werden nur Frequenzen unterhalb 3 kHz betrachtet.

## Rundsteuersignal I

Das Rundsteuersignal I, ist ein Strom (200 ms Messwert), die zu einer vom Nutzer festgelegten Trägerfrequenz gemessen wurde. Es werden nur Frequenzen unterhalb 3 kHz betrachtet.



## Mitsystem-Gegensystem-Nullsystem

- Das Ausmaß einer Spannungs- oder Strom-Unsymmetrie in einem dreiphasigen System wird mittels der Komponenten Mitsystem, Gegensystem und Nullsystem gekennzeichnet.
- Die im Normalbetrieb angestrebte Symmetrie des Drehstromsystems wird durch unsymmetrische Lasten, Fehler und Betriebsmittel gestört.
- Ein dreiphasiges System wird symmetrisch genannt, wenn die drei Außenleiterspannungen und -ströme gleich groß und gegeneinander um  $120^\circ$  phasenverschoben sind. Wenn eine oder beide Bedingungen nicht erfüllt sind, wird das System als unsymmetrisch bezeichnet. Durch die Berechnung der symmetrischen Komponenten bestehend aus Mitsystem, Gegensystem und Nullsystem ist eine vereinfachte Analyse eines unbalancierten Fehlers in einem Drehstromsystem möglich.
- Unsymmetrie ist ein Merkmal der Netzqualität für die in internationalen Normen (zum Beispiel EN 50160) Grenzwerte festgelegt wurden.

### Mitsystem

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

### Gegensystem

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

### Nullsystem

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

Eine Nullkomponente kann nur dann auftreten, wenn über den Mittelpunktsteiter eine Summenstrom zurückfließen kann.

### Spannungsunsymmetrie

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

### Unterabweichung U (IEC 61000-4-30)

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

### Unterabweichung I

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

## K-Faktor

- Der K-Faktor beschreibt den Anstieg der Wirbelstromverluste bei Belastung mit Oberschwingungen. Bei einer sinusförmigen Belastung des Transformators ist der K-Faktor =1. Je größer der K-Faktor ist, desto stärker kann ein Transformator mit Oberschwingungen belastet werden ohne zu überhitzen.

## Leistungsfaktor - Power Factor (arithmetisch)

- Der Leistungsfaktor ist vorzeichenlos.

$$PF_x = \frac{|P_x|}{S_x}$$

$$x = L1, L2, L3, L4$$

## Cos(φ) - Fundamental Power Factor

- Für die Berechnung des cos(φ) wird nur der Grundschwingungsanteil verwendet.
- Vorzeichen Cos(φ):
  - = für Lieferung von Wirkleistung
  - + = für Bezug von Wirkleistung

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

## Cos(φ) Summe

- Vorzeichen Cos(φ):
  - = für Lieferung von Wirkleistung
  - + = für Bezug von Wirkleistung

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

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

## Phasenwinkel φ

- Der Phasenwinkel zwischen Strom und Spannung von Außenleiter p wird gemäß DIN EN 61557-12 berechnet und dargestellt.
- Das Vorzeichen des Phasenwinkels entspricht dem Vorzeichen der Blindleistung.

## Grundschiwungs-Blindleistung

Die Grundschiwungs-Blindleistung ist die Blindleistung der Grundschiwung und wird über die Fourieranalyse (FFT) berechnet. Spannung und Strom müssen nicht sinusförmig sein. Alle im Gerät berechneten Blindleistungen sind Grundschiwungs-Blindleistungen.

### Vorzeichen der Blindleistung

- Vorzeichen  $Q = +1$  für  $\varphi$  im Bereich  $0^\circ \dots 180^\circ$  (induktiv)
- Vorzeichen  $Q = -1$  für  $\varphi$  im Bereich  $180^\circ \dots 360^\circ$  (kapazitiv)

$$\text{Vorzeichen } Q(\varphi_p) = +1 \text{ falls } \varphi_p \in [0^\circ - 180^\circ]$$

$$\text{Vorzeichen } Q(\varphi_p) = -1 \text{ falls } \varphi_p \in [180^\circ - 360^\circ]$$

### Blindleistung für Außenleiter p

- Blindleistung der Grundschiwung.

$$Q_{fundp} = \text{Vorzeichen } Q(\varphi_p) \cdot \sqrt{S_{fundp}^2 - P_{fundp}^2}$$

### Gesamt-Blindleistung

- Blindleistungen der Grundschiwung.

$$Q_V = Q_1 + Q_2 + Q_3$$

### Verzerrungs-Blindleistung

- Die Verzerrungs-Blindleistung ist die Blindleistung aller Oberschiwungen und wird über die Fourieranalyse (FFT) berechnet.

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

- Die Scheinleistung  $S$  enthält die Grundschiwung und alle Oberschiwungsanteile bis zur M-ten Oberschiwung.
- Die Wirkleistung  $P$  enthält die Grundschiwung und alle Oberschiwungsanteile bis zur M-ten Oberschiwung.
- $M = 40$  (UMG 96-PA)
- $M = 63$  (UMG 605, UMG 605-PRO, UMG 511, UMG 512-PRO)

### Blindarbeit pro Phase

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

### Blindarbeit pro Phase, induktiv

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

### Blindarbeit pro Phase, kapazitiv

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

### Blindarbeit, Summe L1-L3

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

### Blindarbeit, Summe L1-L3, induktiv

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

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

### Blindarbeit, Summe L1-L3, kapazitiv

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

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

# Adressenliste UMG 96-PA und PA<sup>MID+</sup>

## Häufig benötigte Messwerte

Adresse	Format	RD/WR	Variable	Einheit	Bemerkung
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	Current, L1
19014	float	RD	_ILN[1]	A	Current, L2
19016	float	RD	_ILN[2]	A	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, Cos( $\varphi$ ); UL1 IL1
19046	float	RD	_COS_PHI[1]		Fund.power factor, Cos( $\varphi$ ); UL2 IL2
19048	float	RD	_COS_PHI[2]		Fund.power factor, Cos( $\varphi$ ); 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.
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.

\* Die Belegung der markierten Geräteadressen entspricht nicht der Belegung von anderen Geräten der UMG-Serie.

Adresse	Format	RD/WR	Variable	Einheit	Bemerkung
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

## Messwerte, Typ Float

Adresse	Format	RD/WR	Bemerkung
991	float	RD	the current maximum value for current RMS of all 3 phases
993	ushort	RD	the corresponding phase number (1...3)
1000	float	RD	voltage L1-N
1002	float	RD	voltage L2-N
1004	float	RD	voltage L3-N
1006	float	RD	voltage L1-L2
1008	float	RD	voltage L2-L3
1010	float	RD	voltage L3-L1
1012	float	RD	current L1
1014	float	RD	current L2
1016	float	RD	current L3
1018	float	RD	current sum (calculated current in N)
1020	float	RD	active power L1
1022	float	RD	active power L2
1024	float	RD	active power L3
1026	float	RD	active power sum
1028	float	RD	reactive power L1
1030	float	RD	reactive power L2
1032	float	RD	reactive power L3
1034	float	RD	reactive power sum
1036	float	RD	apparent power L1
1038	float	RD	apparent power L2
1040	float	RD	apparent power L3
1042	float	RD	apparent power sum
1044	float	RD	cos( $\varphi$ ) L1
1046	float	RD	cos( $\varphi$ ) L2
1048	float	RD	cos( $\varphi$ ) L3
1050	float	RD	cos( $\varphi$ ) sum
1052	float	RD	active power of the fundamental oscillation L1
1054	float	RD	active power of the fundamental oscillation L2
1056	float	RD	active power of the fundamental oscillation L3
1214	float	RD	THD voltage L1 [%]
1216	float	RD	THD voltage L2 [%]
1218	float	RD	THD voltage L3 [%]
1220	float	RD	THD current L1 [%]
1222	float	RD	THD current L2 [%]
1224	float	RD	THD current L3 [%]
1226	float	RD	frequency
1228	float	RD	zero sequence voltage
1230	float	RD	positive sequence voltage
1232	float	RD	negative sequence voltage
1234	float	RD	zero sequence current
1236	float	RD	positive sequence current
1238	float	RD	negative sequence current
1240	float	RD	distortion power L1
1242	float	RD	distortion power L2
1244	float	RD	distortion power L3
1246	float	RD	distortion power sum
1248	float	RD	Rotation field; 1=right, 0=none, -1=left
1250	float	RD	real part of the fundamental oscillation voltage L1
1252	float	RD	imaginary part of the fundamental oscillation voltage L1
1254	float	RD	real part of the fundamental oscillation voltage L2
1256	float	RD	imaginary part of the fundamental oscillation voltage L2
1258	float	RD	real part of the fundamental oscillation voltage L3
1260	float	RD	imaginary part of the fundamental oscillation voltage L3
1262	float	RD	real part of the fundamental oscillation current L1

Adresse	Format	RD/WR	Bemerkung
1264	float	RD	imaginary part of the fundamental oscillation current L1
1266	float	RD	real part of the fundamental oscillation current L2
1268	float	RD	imaginary part of the fundamental oscillation current L2
1270	float	RD	real part of the fundamental oscillation current L3
1272	float	RD	imaginary part of the fundamental oscillation current L3
1274	float	RD	frequency (200ms)
1276	float	RD	TDD (total demand distortion) current L1
1278	float	RD	TDD (total demand distortion) current L2
1280	float	RD	TDD (total demand distortion) current L3
1282	float	RD	crest factor voltageL1
1284	float	RD	crest factor voltageL2
1286	float	RD	crest factor voltageL3
1288	float	RD	crest factor current L1
1290	float	RD	crest factor current L2
1292	float	RD	crest factor current L3
1294	float	RD	power factor L1
1296	float	RD	power factor L2
1298	float	RD	power factor L3
1300	float	RD	power factor sum3= $P_{sum3}/S_{sum3}$
1329	float	RD	voltage asymmetry [%]
1331	float	RD	current asymmetry [%]

## Messwerte, Typ Short

Adresse	Format	RD/WR	Bemerkung
11000	short (x10)	RD	voltage L1-N
11001	short (x10)	RD	voltage L2-N
11002	short (x10)	RD	voltage L3-N
11003	short (x10)	RD	voltage L1-L2
11004	short (x10)	RD	voltage L2-L3
11005	short (x10)	RD	voltage L3-L1
11006	short (x1000)	RD	current L1
11007	short (x1000)	RD	current L2
11008	short (x1000)	RD	current L3
11009	short (x1000)	RD	current sum
11010	short (x10)	RD	active power L1
11011	short (x10)	RD	active power L2
11012	short (x10)	RD	active power L3
11013	short	RD	active power sum
11014	short (x10)	RD	reactive power L1
11015	short (x10)	RD	reactive power L2
11016	short (x10)	RD	reactive power L3
11017	short	RD	reactive power sum
11018	short (x10)	RD	apparent power L1
11019	short (x10)	RD	apparent power L2
11020	short (x10)	RD	apparent power L3
11021	short	RD	apparent power sum
11022	short (x100)	RD	cos( $\varphi$ ) L1
11023	short (x100)	RD	cos( $\varphi$ ) L2
11024	short (x100)	RD	cos( $\varphi$ ) L3
11025	short (x100)	RD	cos( $\varphi$ ) sum
11026	short (x10)	RD	active power fundamental oscillation L1
11027	short (x10)	RD	active power fundamental oscillation L2
11028	short (x10)	RD	active power fundamental oscillation L3
11111	short (x100)	RD	THD voltage L1-N [%]
11112	short (x100)	RD	THD voltage L2-N [%]
11113	short (x100)	RD	THD voltage L3-N [%]
11114	short (x100)	RD	THD current L1 [%]
11115	short (x100)	RD	THD current L2 [%]
11116	short (x100)	RD	THD current L3 [%]
11117	short (x10)	RD	frequency
11118	short (x10)	RD	zero sequence voltage
11119	short (x10)	RD	positive sequence voltage
11120	short (x10)	RD	negative sequence voltage
11121	short (x1000)	RD	zero sequence current
11122	short (x1000)	RD	positive sequence current
11123	short (x1000)	RD	negative sequence current
11124	short (x10)	RD	distortion power L1
11125	short (x10)	RD	distortion power L2
11126	short (x10)	RD	distortion power L3
11127	short	RD	distortion power sum
11128	short	RD	Rotation field: > 0 = right, 0 = none, < 0 = left
11168	ushort (x1000)	RD	crest factor voltage L1-N
11169	ushort (x1000)	RD	crest factor voltage L2-N
11170	ushort (x1000)	RD	crest factor voltage L3-N
11171	ushort (x1000)	RD	crest factor current L1
11172	ushort (x1000)	RD	crest factor current L2
11173	ushort (x1000)	RD	crest factor current L3



## Mittelwerte, Typ Float

Adresse	Format	RD/WR	Bemerkung
2000	float	RD	mean value voltage L1
2002	float	RD	mean value voltage L2
2004	float	RD	mean value voltage L3
2006	float	RD	mean value voltage L1-L2
2008	float	RD	mean value voltage L2-L3
2010	float	RD	mean value voltage L3-L1
2012	float	RD	mean value current L1
2014	float	RD	mean value current L2
2016	float	RD	mean value current L3
2018	float	RD	mean value current sum
2020	float	RD	mean value active power L1
2022	float	RD	mean value active power L2
2024	float	RD	mean value active power L3
2026	float	RD	mean value active power sum
2028	float	RD	mean value reactive power L1
2030	float	RD	mean value reactive power L2
2032	float	RD	mean value reactive power L3
2034	float	RD	mean value reactive power sum
2036	float	RD	mean value apparent power L1
2038	float	RD	mean value apparent power L2
2040	float	RD	mean value apparent power L3
2042	float	RD	mean value apparent power sum
2044	float	RD	mean value $\cos(\varphi)$ L1
2046	float	RD	mean value $\cos(\varphi)$ L2
2048	float	RD	mean value $\cos(\varphi)$ L3
2050	float	RD	mean value $\cos(\varphi)$ sum
2052	float	RD	mean value active power, fundamental oscillation L1
2054	float	RD	mean value active power, fundamental oscillation L2
2056	float	RD	mean value active power, fundamental oscillation L3
2214	float	RD	mean value THD voltage L1 [%]
2216	float	RD	mean value THD voltage L2 [%]
2218	float	RD	mean value THD voltage L3 [%]
2220	float	RD	mean value THD current L1 [%]
2222	float	RD	mean value THD current L2 [%]
2224	float	RD	mean value THD current L3 [%]
2226	float	RD	mean value frequency
2228	float	RD	mean value zero sequence voltage
2230	float	RD	mean value positive sequence voltage
2232	float	RD	mean value negative sequence voltage
2234	float	RD	mean value zero sequence current
2236	float	RD	mean value positive sequence current
2238	float	RD	mean value negative sequence current
2240	float	RD	mean value distortion power L1
2242	float	RD	mean value distortion power L2
2244	float	RD	mean value distortion power L3
2246	float	RD	mean value distortion power sum
2248	float	RD	mean value TDD (total demand distortion) current L1 [%]
2250	float	RD	mean value TDD (total demand distortion) current L2 [%]
2252	float	RD	mean value TDD (total demand distortion) current L3 [%]
2254	float	RD	mean value power factor L1
2256	float	RD	mean value power factor L2
2258	float	RD	mean value power factor L3
2260	float	RD	mean value power factor $\text{sum3}=\text{Psum3}/\text{Ssum3}$
2294	float	RD	voltage asymmetry [%] (avg)
2296	float	RD	current asymmetry [%] (avg)

## Mittelwerte, Typ Short

Adresse	Format	RD/WR	Bemerkung
12000	short (x10)	RD	mean value voltage L1-N
12001	short (x10)	RD	mean value voltage L2-N
12002	short (x10)	RD	mean value voltage L3-N
12003	short (x10)	RD	mean value voltage L1-L2
12004	short (x10)	RD	mean value voltage L2-L3
12005	short (x10)	RD	mean value voltage L3-L1
12006	short (x1000)	RD	mean value current L1
12007	short (x1000)	RD	mean value current L2
12008	short (x1000)	RD	mean value current L3
12009	short (x1000)	RD	mean value current sum
12010	short (x10)	RD	mean value active power L1
12011	short (x10)	RD	mean value active power L2
12012	short (x10)	RD	mean value active power L3
12013	short	RD	mean value active power sum
12014	short (x10)	RD	mean value reactive power L1
12015	short (x10)	RD	mean value reactive power L2
12016	short (x10)	RD	mean value reactive power L3
12017	short	RD	mean value reactive power sum
12018	short (x10)	RD	mean value apparent power L1
12019	short (x10)	RD	mean value apparent power L2
12020	short (x10)	RD	mean value apparent power L3
12021	short	RD	mean value apparent power sum
12022	short (x1000)	RD	mean value $\cos(\varphi)$ L1
12023	short (x1000)	RD	mean value $\cos(\varphi)$ L2
12024	short (x1000)	RD	mean value $\cos(\varphi)$ L3
12025	short (x1000)	RD	mean value $\cos(\varphi)$ sum
12026	short (x10)	RD	mean value active power of fundamental oscillation L1
12027	short (x10)	RD	mean value active power of fundamental oscillation L2
12028	short (x10)	RD	mean value active power of fundamental oscillation L3
12107	short (x100)	RD	mean value THD voltage L1
12108	short (x100)	RD	mean value THD voltage L2
12109	short (x100)	RD	mean value THD voltage L3
12110	short (x100)	RD	mean value THD current L1
12111	short (x100)	RD	mean value THD current L2
12112	short (x100)	RD	mean value THD current L3
12113	short (x100)	RD	mean value frequency
12114	short (x10)	RD	mean value zero sequence voltage
12115	short (x10)	RD	mean value positive sequence voltage
12116	short (x10)	RD	mean value negative sequence voltage
12117	short (x1000)	RD	mean value zero sequence current
12118	short (x1000)	RD	mean value positive sequence current
12119	short (x1000)	RD	mean value negative sequence current
12120	short (x10)	RD	mean value distortion power L1
12121	short (x10)	RD	mean value distortion power L2
12122	short (x10)	RD	mean value distortion power L3
12123	short	RD	mean value distortion power sum

## Minimalwerte, Typ Float

Adresse	Format	RD/WR	Bemerkung
4000	float	RD	min. value, voltage L1-N
4002	float	RD	min. value, voltage L2-N
4004	float	RD	min. value, voltage L3-N
4006	float	RD	min. value, voltage L1-L2
4008	float	RD	min. value, voltage L1-L3
4010	float	RD	min. value, voltage L3-L1
4012	float	RD	min. value, cos( $\varphi$ ) L1
4014	float	RD	min. value, cos( $\varphi$ ) L2
4016	float	RD	min. value, cos( $\varphi$ ) L3
4018	float	RD	min. value, cos( $\varphi$ ) sum
4098	float	RD	min. value, THD voltage L1 [%]
4100	float	RD	min. value, THD voltage L2 [%]
4102	float	RD	min. value, THD voltage L3 [%]
4104	float	RD	min. value, frequency
4106	float	RD	min. value, voltage zero sequence
4108	float	RD	min. value, voltage positive sequence
4110	float	RD	min. value, voltage negative sequence
4112	float	RD	min. value, active power L1
4114	float	RD	min. value, active power L2
4116	float	RD	min. value, active power L3
4118	float	RD	min. value, active power sum
4120	float	RD	min. value, power factor L1
4122	float	RD	min. value, power factor L2
4124	float	RD	min. value, power factor L3
4126	float	RD	min. value, power factor sum3= $P_{sum3}/S_{sum3}$
4128	float	RD	min. value, THD current L1 [%]
4130	float	RD	min. value, THD current L2 [%]
4132	float	RD	min. value, THD current L3 [%]
4134	float	RD	min. value, current L1
4136	float	RD	min. value, current L2
4138	float	RD	min. value, current L3
4140	float	RD	min. value, current sum
4142	float	RD	min. value, reactive power L1
4144	float	RD	min. value, reactive power L2
4146	float	RD	min. value, reactive power L3
4148	float	RD	min. value, reactive power sum
4150	float	RD	min. value, apparent power L1
4152	float	RD	min. value, apparent power L2
4154	float	RD	min. value, apparent power L3
4156	float	RD	min. value, apparent power sum
4158	float	RD	voltage asymmetry [%] (min)
4160	float	RD	current asymmetry [%] (min)

## Minimalwerte, Typ Short

Adresse	Format	RD/WR	Bemerkung
14000	short (x10)	RD	min. value, voltage L1-N
14001	short (x10)	RD	min. value, voltage L2-N
14002	short (x10)	RD	min. value, voltage L3-N
14003	short (x10)	RD	min. value, voltage L1-L2
14004	short (x10)	RD	min. value, voltage L1-L3
14005	short (x10)	RD	min. value, voltage L3-L1
14006	short (x1000)	RD	min. value, cos( $\varphi$ ) L1
14007	short (x1000)	RD	min. value, cos( $\varphi$ ) L2
14008	short (x1000)	RD	min. value, cos( $\varphi$ ) L3
14009	short (x1000)	RD	min. value, cos( $\varphi$ ) sum
14049	short (x100)	RD	min. value, THD voltage L1 [%]
14050	short (x100)	RD	min. value, THD voltage L2 [%]
14051	short (x100)	RD	min. value, THD voltage L3 [%]
14052	short (x100)	RD	min. value, frequency
14053	short (x10)	RD	min. value, voltage zero sequence
14054	short (x10)	RD	min. value, voltage positive sequence
14055	short (x10)	RD	min. value, voltage negative sequence
14056	short (x10)	RD	min. value, active power L1
14057	short (x10)	RD	min. value, active power L2
14058	short (x10)	RD	min. value, active power L3
14059	short (x10)	RD	min. value, active power sum

## Maximalwerte, Typ Float

Adresse	Format	RD/WR	Bemerkung
3000	float	RD	max. value, voltage L1-N
3002	float	RD	max. value, voltage L2-N
3004	float	RD	max. value, voltage L3-N
3006	float	RD	max. value, voltage L1-L2
3008	float	RD	max. value, voltage L2-L3
3010	float	RD	max. value, voltage L3-L1
3012	float	RD	max. value, current L1
3014	float	RD	max. value, current L2
3016	float	RD	max. value, current L3
3018	float	RD	max. value, current sum
3020	float	RD	max. value, active power L1
3022	float	RD	max. value, active power L2
3024	float	RD	max. value, active power L3
3026	float	RD	max. value, active power sum
3028	float	RD	max. value, reactive power L1
3030	float	RD	max. value, reactive power L2
3032	float	RD	max. value, reactive power L3
3034	float	RD	max. value, reactive power sum
3036	float	RD	max. value, apparent power L1
3038	float	RD	max. value, apparent power L2
3040	float	RD	max. value, apparent power L3
3042	float	RD	max. value, apparent power sum
3044	float	RD	max. value, $\cos(\varphi)$ L1
3046	float	RD	max. value, $\cos(\varphi)$ L2
3048	float	RD	max. value, $\cos(\varphi)$ L3
3050	float	RD	max. value, $\cos(\varphi)$ sum
3052	float	RD	max. value, active power, fundamental oscillation L1
3054	float	RD	max. value, active power, fundamental oscillation L2
3056	float	RD	max. value, active power, fundamental oscillation L3
3214	float	RD	max. value, THD voltage L1
3216	float	RD	max. value, THD voltage L2
3218	float	RD	max. value, THD voltage L3
3220	float	RD	max. value, THD current L1
3222	float	RD	max. value, THD current L2
3224	float	RD	max. value, THD current L3
3226	float	RD	max. value, frequency
3228	float	RD	max. value, voltage zero sequence
3230	float	RD	max. value, voltage positive sequence
3232	float	RD	max. value, voltage negative sequence
3234	float	RD	max. value, current zero sequence
3236	float	RD	max. value, current positive sequence
3238	float	RD	max. value, current negative sequence
3240	float	RD	max. value, distortion power L1
3242	float	RD	max. value, distortion power L2
3244	float	RD	max. value, distortion power L3
3246	float	RD	max. value, distortion power sum
3264	float	RD	max. value, TDD current L1 [%]
3266	float	RD	max. value, TDD current L2 [%]
3268	float	RD	max. value, TDD current L3 [%]
3270	float	RD	max. value power factor L1
3272	float	RD	max. value power factor L2
3274	float	RD	max. value power factor L3
3276	float	RD	max. value power factor $\text{sum3}=\text{Psum3}/\text{Ssum3}$
3278	float	RD	voltage asymmetry [%] (max)
3280	float	RD	current asymmetry [%] (max)

## Maximalwerte, Type Short

Adresse	Format	RD/WR	Bemerkung
13000	short (x10)	RD	max. value, voltage L1-N
13001	short (x10)	RD	max. value, voltage L2-N
13002	short (x10)	RD	max. value, voltage L3-N
13003	short (x10)	RD	max. value, voltage L1-L2
13004	short (x10)	RD	max. value, voltage L2-L3
13005	short (x10)	RD	max. value, voltage L3-L1
13006	short (x1000)	RD	max. value, current L1
13007	short (x1000)	RD	max. value, current L2
13008	short (x1000)	RD	max. value, current L3
13009	short (x1000)	RD	max. value, current sum
13010	short (x10)	RD	max. value, active power L1
13011	short (x10)	RD	max. value, active power L2
13012	short (x10)	RD	max. value, active power L3
13013	short	RD	max. value, active power sum
13014	short (x10)	RD	max. value, reactive power L1
13015	short (x10)	RD	max. value, reactive power L2
13016	short (x10)	RD	max. value, reactive power L3
13017	short	RD	max. value, reactive power sum
13018	short (x10)	RD	max. value, apparent power L1
13019	short (x10)	RD	max. value, apparent power L2
13020	short (x10)	RD	max. value, apparent power L3
13021	short	RD	max. value, apparent power sum
13022	short (x1000)	RD	max. value, $\cos(\varphi)$ L1
13023	short (x1000)	RD	max. value, $\cos(\varphi)$ L2
13024	short (x1000)	RD	max. value, $\cos(\varphi)$ L3
13025	short (x1000)	RD	max. value, $\cos(\varphi)$ sum
13026	short (x10)	RD	max. value, active power of fundamental oscillation L1
13027	short (x10)	RD	max. value, active power of fundamental oscillation L2
13028	short (x10)	RD	max. value, active power of fundamental oscillation L3
13107	short (x100)	RD	max. value, THD voltage L1
13108	short (x100)	RD	max. value, THD voltage L2
13109	short (x100)	RD	max. value, THD voltage L3
13110	short (x100)	RD	max. value, THD current L1
13111	short (x100)	RD	max. value, THD current L2
13112	short (x100)	RD	max. value, THD current L3
13113	short (x100)	RD	max. value, frequency
13114	short (x10)	RD	max. value, voltage zero sequence
13115	short (x10)	RD	max. value, voltage positive sequence
13116	short (x10)	RD	max. value, voltage negative sequence
13117	short (x1000)	RD	max. value, current zero sequence
13118	short (x1000)	RD	max. value, current positive sequence
13119	short (x1000)	RD	max. value, current negative sequence
13120	short (x10)	RD	max. value, distortion power L1
13121	short (x10)	RD	max. value, distortion power L2
13122	short (x10)	RD	max. value, distortion power L3
13123	short (x10)	RD	max. value, distortion power sum

**Maximalwerte der Mittelwerte, Typ Float**

Adresse	Format	RD/WR	Bemerkung
3248	float	RD	max. of mean value current L1
3250	float	RD	max. of mean value current L2
3252	float	RD	max. of mean value current L3
3254	float	RD	max. of mean value current sum
3256	float	RD	max. of mean value active power L1
3258	float	RD	max. of mean value active power L2
3260	float	RD	max. of mean value active power L3
3262	float	RD	max. of mean value active power sum

**Maximalwerte der Mittelwerte, Type Short**

Adresse	Format	RD/WR	Bemerkung
13124	short (x1000)	RD	max. of mean value current L1
13125	short (x1000)	RD	max. of mean value current L2
13126	short (x1000)	RD	max. of mean value current L3
13127	short (x1000)	RD	max. of mean value current sum
13128	short (x10)	RD	max. of mean values active power L1
13129	short (x10)	RD	max. of mean values active power L2
13130	short (x10)	RD	max. of mean values active power L3
13131	short (x10)	RD	max. of mean values active power sum

## Gerasterte Mittelwerte, Type float

Adresse	Format	RD/WR	Bemerkung
32000	float	RD	gridded mean values: maximum voltage L1
32002	float	RD	gridded mean values: maximum voltage L2
32004	float	RD	gridded mean values: maximum voltage L3
32008	float	RD	gridded mean values: maximum voltage L1-L2
32010	float	RD	gridded mean values: maximum voltage L2-L3
32012	float	RD	gridded mean values: maximum voltage L3-L1
32016	float	RD	gridded mean values: maximum current L1
32018	float	RD	gridded mean values: maximum current L2
32020	float	RD	gridded mean values: maximum current L3
32022	float	RD	gridded mean values: maximum current L4
32024	float	RD	gridded mean values: sum maximum current L1-L3
32026	float	RD	gridded mean values: sum maximum current L1-L4
32028	float	RD	gridded mean values: maximum active power L1
32030	float	RD	gridded mean values: maximum active power L2
32032	float	RD	gridded mean values: maximum active power L3
32036	float	RD	gridded mean values: maximum total active power
32040	float	RD	gridded mean values: maximum reactive power L1
32042	float	RD	gridded mean values: maximum reactive power L2
32044	float	RD	gridded mean values: maximum reactive power L3
32048	float	RD	gridded mean values: maximum total reactive power
32052	float	RD	gridded mean values: maximum apparent power L1
32054	float	RD	gridded mean values: maximum apparent power L2
32056	float	RD	gridded mean values: maximum apparent power L3
32060	float	RD	gridded mean values: maximum total apparent power
32064	float	RD	gridded mean values: maximum cos(phi) L1
32066	float	RD	gridded mean values: maximum cos(phi) L2
32068	float	RD	gridded mean values: maximum cos(phi) L3
32072	float	RD	gridded mean values: maximum cos(phi)
32076	float	RD	gridded mean values: minimum voltage L1
32078	float	RD	gridded mean values: minimum voltage L2
32080	float	RD	gridded mean values: minimum voltage L3
32084	float	RD	gridded mean values: minimum voltage L1-L2
32086	float	RD	gridded mean values: minimum voltage L2-L3
32088	float	RD	gridded mean values: minimum voltage L3-L1
32092	float	RD	gridded mean values: minimum current L1
32094	float	RD	gridded mean values: minimum current L2
32096	float	RD	gridded mean values: minimum current L3
32098	float	RD	gridded mean values: minimum current L4
32100	float	RD	gridded mean values: sum minimum current L1-L3
32102	float	RD	gridded mean values: sum minimum current L1-L4
32104	float	RD	gridded mean values: minimum active power L1
32106	float	RD	gridded mean values: minimum active power L2
32108	float	RD	gridded mean values: minimum active power L3
32112	float	RD	gridded mean values: minimum total active power
32116	float	RD	gridded mean values: minimum reactive power L1
32118	float	RD	gridded mean values: minimum reactive power L2
32120	float	RD	gridded mean values: minimum reactive power L3
32124	float	RD	gridded mean values: minimum total reactive power
32128	float	RD	gridded mean values: minimum apparent power L1
32130	float	RD	gridded mean values: minimum apparent power L2
32132	float	RD	gridded mean values: minimum apparent power L3
32136	float	RD	gridded mean values: minimum total apparent power
32140	float	RD	gridded mean values: minimum cos(phi) L1
32142	float	RD	gridded mean values: minimum cos(phi) L2
32144	float	RD	gridded mean values: minimum cos(phi) L3
32148	float	RD	gridded mean values: minimum cos(phi)



Adresse	Format	RD/WR	Bemerkung
32152	float	RD	gridded mean values: average voltage L1
32154	float	RD	gridded mean values: average voltage L2
32156	float	RD	gridded mean values: average voltage L3
32160	float	RD	gridded mean values: average voltage L1-L2
32162	float	RD	gridded mean values: average voltage L2-L3
32164	float	RD	gridded mean values: average voltage L3-L1
32168	float	RD	gridded mean values: average current L1
32170	float	RD	gridded mean values: average current L2
32172	float	RD	gridded mean values: average current L3
32174	float	RD	gridded mean values: average current L4
32176	float	RD	gridded mean values: sum average current L1-L3
32178	float	RD	gridded mean values: sum average current L1-L4
32180	float	RD	gridded mean values: average active power L1
32182	float	RD	gridded mean values: average active power L2
32184	float	RD	gridded mean values: average active power L3
32188	float	RD	gridded mean values: average total active power
32192	float	RD	gridded mean values: average reactive power L1
32194	float	RD	gridded mean values: average reactive power L2
32196	float	RD	gridded mean values: average reactive power L3
32200	float	RD	gridded mean values: average total reactive power
32204	float	RD	gridded mean values: average apparent power L1
32206	float	RD	gridded mean values: average apparent power L2
32208	float	RD	gridded mean values: average apparent power L3
32212	float	RD	gridded mean values: average total apparent power
32216	float	RD	gridded mean values: average cos(phi) L1
32218	float	RD	gridded mean values: average cos(phi) L2
32220	float	RD	gridded mean values: average cos(phi) L3
32224	float	RD	gridded mean values: average cos(phi)

## Energie, Typ Float

Adresse	Format	RD/WR	Bemerkung
5000	float	RD	active energy L1, consumed
5002	float	RD	active energy L2, consumed
5004	float	RD	active energy L3, consumed
5006	float	RD	active energy sum, consumed
5008	float	RD	active energy L1, consumed, HT
5010	float	RD	active energy L2, consumed, HT
5012	float	RD	active energy L3, consumed, HT
5014	float	RD	active energy sum, consumed, HT
5016	float	RD	active energy L1, consumed, NT
5018	float	RD	active energy L2, consumed, NT
5020	float	RD	active energy L3, consumed, NT
5022	float	RD	active energy sum, consumed, NT
5024	float	RD	apparent energy L1
5026	float	RD	apparent energy L2
5028	float	RD	apparent energy L3
5030	float	RD	apparent energy, total
5032	float	RD	apparent energy L1, HT
5034	float	RD	apparent energy L2, HT
5036	float	RD	apparent energy L3, HT
5038	float	RD	apparent energy, total, HT
5040	float	RD	apparent energy L1, NT
5042	float	RD	apparent energy L2, NT
5044	float	RD	apparent energy L3, NT
5046	float	RD	apparent energy, total, NT
5048	float	RD	reactive energy L1, inductive
5050	float	RD	reactive energy L2, inductive
5052	float	RD	reactive energy L3, inductive
5054	float	RD	reactive energy sum, inductive
5056	float	RD	reactive energy L1, inductive, HT
5058	float	RD	reactive energy L2, inductive, HT
5060	float	RD	reactive energy L3, inductive, HT
5062	float	RD	reactive energy, total, inductive, HT
5064	float	RD	reactive energy L1, inductive, NT
5066	float	RD	reactive energy L2, inductive, NT
5068	float	RD	reactive energy L3, inductive, NT
5070	float	RD	reactive energy, total, inductive, NT
5072	float	RD	active energy L1, delivered
5074	float	RD	active energy L2, delivered
5076	float	RD	active energy L3, delivered
5078	float	RD	active energy sum, delivered
5080	float	RD	reactive energy L1, capacitive
5082	float	RD	reactive energy L2, capacitive
5084	float	RD	reactive energy L3, capacitive
5086	float	RD	reactive energy sum, capacitive
5088	float	RD	active energy sum, without return travel block
5090	float	RD	reactive energy sum, without return travel block
5092	float	RD	reactive energy L1, inductive, consumed
5094	float	RD	reactive energy L2, inductive, consumed
5096	float	RD	reactive energy L3, inductive, consumed
5098	float	RD	reactive energy sum, inductive, consumed
5100	float	RD	reactive energy L1, capacitive, consumed
5102	float	RD	reactive energy L2, capacitive, consumed
5104	float	RD	reactive energy L3, capacitive, consumed
5106	float	RD	reactive energy sum, capacitive, consumed
5108	float	RD	reactive energy L1, inductive, delivered
5110	float	RD	reactive energy L2, inductive, delivered
5112	float	RD	reactive energy L3, inductive, delivered
5114	float	RD	reactive energy sum, inductive, delivered
5116	float	RD	reactive energy L1, capacitive, delivered

Adresse	Format	RD/WR	Bemerkung
5118	float	RD	reactive energy L2, capacitive, delivered
5120	float	RD	reactive energy L3, capacitive, delivered
5122	float	RD	reactive energy sum, capacitive, delivered
5124	float	RD	active energy (consumed), max. monthly value, jan., even year
5126	float	RD	active energy (consumed), max. monthly value, feb., even year
5128	float	RD	active energy (consumed), max. monthly value, mar., even year
5130	float	RD	active energy (consumed), max. monthly value, apr., even year
5132	float	RD	active energy (consumed), max. monthly value, may., even year
5134	float	RD	active energy (consumed), max. monthly value, jun., even year
5136	float	RD	active energy (consumed), max. monthly value, jul., even year
5138	float	RD	active energy (consumed), max. monthly value, aug., even year
5140	float	RD	active energy (consumed), max. monthly value, sep., even year
5142	float	RD	active energy (consumed), max. monthly value, oct., even year
5144	float	RD	active energy (consumed), max. monthly value, nov., even year
5146	float	RD	active energy (consumed), max. monthly value, dec., even year
5148	float	RD	active energy (consumed), max. monthly value, jan., uneven year
5150	float	RD	active energy (consumed), max. monthly value, feb., uneven year
5152	float	RD	active energy (consumed), max. monthly value, mar., uneven year
5154	float	RD	active energy (consumed), max. monthly value, apr., uneven year
5156	float	RD	active energy (consumed), max. monthly value, may., uneven year
5158	float	RD	active energy (consumed), max. monthly value, jun., uneven year
5160	float	RD	active energy (consumed), max. monthly value, jul., uneven year
5162	float	RD	active energy (consumed), max. monthly value, aug., uneven year
5164	float	RD	active energy (consumed), max. monthly value, sep., uneven year
5166	float	RD	active energy (consumed), max. monthly value, oct., uneven year
5168	float	RD	active energy (consumed), max. monthly value, nov., uneven year
5170	float	RD	active energy (consumed), max. monthly value, dec., uneven year
5172	float	RD	apparent energy, max. monthly value, jan., even year
5174	float	RD	apparent energy, max. monthly value, feb., even year
5176	float	RD	apparent energy, max. monthly value, mar., even year
5178	float	RD	apparent energy, max. monthly value, apr., even year
5180	float	RD	apparent energy, max. monthly value, may., even year
5182	float	RD	apparent energy, max. monthly value, jun., even year
5184	float	RD	apparent energy, max. monthly value, jul., even year
5186	float	RD	apparent energy, max. monthly value, aug., even year
5188	float	RD	apparent energy, max. monthly value, sep., even year
5190	float	RD	apparent energy, max. monthly value, oct., even year
5192	float	RD	apparent energy, max. monthly value, nov., even year
5194	float	RD	apparent energy, max. monthly value, dec., even year
5196	float	RD	apparent energy, max. monthly value, jan., uneven year
5198	float	RD	apparent energy, max. monthly value, feb., uneven year
5200	float	RD	apparent energy, max. monthly value, mar., uneven year
5202	float	RD	apparent energy, max. monthly value, apr., uneven year
5204	float	RD	apparent energy, max. monthly value, may., uneven year
5206	float	RD	apparent energy, max. monthly value, jun., uneven year
5208	float	RD	apparent energy, max. monthly value, jul., uneven year
5210	float	RD	apparent energy, max. monthly value, aug., uneven year
5212	float	RD	apparent energy, max. monthly value, sep., uneven year
5214	float	RD	apparent energy, max. monthly value, oct., uneven year
5216	float	RD	apparent energy, max. monthly value, nov., uneven year
5218	float	RD	apparent energy, max. monthly value, dec., uneven year
5220	float	RD	reactive energy (ind.), max. monthly value, jan., even year
5222	float	RD	reactive energy (ind.), max. monthly value, feb., even year
5224	float	RD	reactive energy (ind.), max. monthly value, mar., even year
5226	float	RD	reactive energy (ind.), max. monthly value, apr., even year
5228	float	RD	reactive energy (ind.), max. monthly value, may., even year
5230	float	RD	reactive energy (ind.), max. monthly value, jun., even year
5232	float	RD	reactive energy (ind.), max. monthly value, jul., even year
5234	float	RD	reactive energy (ind.), max. monthly value, aug., even year

Adresse	Format	RD/WR	Bemerkung
5236	float	RD	reactive energy (ind.), max. monthly value, sep., even year
5238	float	RD	reactive energy (ind.), max. monthly value, oct., even year
5240	float	RD	reactive energy (ind.), max. monthly value, nov., even year
5242	float	RD	reactive energy (ind.), max. monthly value, dec., even year
5244	float	RD	reactive energy (ind.), max. monthly value, jan., uneven year
5246	float	RD	reactive energy (ind.), max. monthly value, feb., uneven year
5248	float	RD	reactive energy (ind.), max. monthly value, mar., uneven year
5250	float	RD	reactive energy (ind.), max. monthly value, apr., uneven year
5252	float	RD	reactive energy (ind.), max. monthly value, may., uneven year
5254	float	RD	reactive energy (ind.), max. monthly value, jun., uneven year
5256	float	RD	reactive energy (ind.), max. monthly value, jul., uneven year
5258	float	RD	reactive energy (ind.), max. monthly value, aug., uneven year
5260	float	RD	reactive energy (ind.), max. monthly value, sep., uneven year
5262	float	RD	reactive energy (ind.), max. monthly value, oct., uneven year
5264	float	RD	reactive energy (ind.), max. monthly value, nov., uneven year
5266	float	RD	reactive energy (ind.), max. monthly value, dec., uneven year

## Energie, Typ Integer

Die Energiewerte im Integer-Format enthalten keine Strom- und Spannungswandlerverhältnisse.

Adresse	Format	RD/WR	Bemerkung
15000	int	RD	active energy L1, consumed
15002	int	RD	active energy L2, consumed
15004	int	RD	active energy L3, consumed
15006	int	RD	active energy sum, consumed
15008	int	RD	active energy L1, consumed, HT
15010	int	RD	active energy L2, consumed, HT
15012	int	RD	active energy L3, consumed, HT
15014	int	RD	active energy sum, consumed, HT
15016	int	RD	active energy L1, consumed, NT
15018	int	RD	active energy L2, consumed, NT
15020	int	RD	active energy L3, consumed, NT
15022	int	RD	active energy sum, consumed, NT
15024	int	RD	apparent energy L1
15026	int	RD	apparent energy L2
15028	int	RD	apparent energy L3
15030	int	RD	apparent energy, total
15032	int	RD	apparent energy L1, HT
15034	int	RD	apparent energy L2, HT
15036	int	RD	apparent energy L3, HT
15038	int	RD	apparent energy, total, HT
15040	int	RD	apparent energy L1, NT
15042	int	RD	apparent energy L2, NT
15044	int	RD	apparent energy L3, NT
15046	int	RD	apparent energy, total, NT
15048	int	RD	reactive energy L1, inductive
15050	int	RD	reactive energy L2, inductive
15052	int	RD	reactive energy L3, inductive
15054	int	RD	reactive energy sum, inductive
15056	int	RD	reactive energy L1, inductive, HT
15058	int	RD	reactive energy L2, inductive, HT
15060	int	RD	reactive energy L3, inductive, HT
15062	int	RD	reactive energy, total, inductive, HT
15064	int	RD	reactive energy L1, inductive, NT
15066	int	RD	reactive energy L2, inductive, NT
15068	int	RD	reactive energy L3, inductive, NT
15070	int	RD	reactive energy, total, inductive, NT
15072	int	RD	active energy, delivered
15074	int	RD	active energy L2, delivered
15076	int	RD	active energy L3, delivered
15078	int	RD	active energy sum, delivered
15080	int	RD	reactive energy L1, inductive, consumed
15082	int	RD	reactive energy L2, inductive, consumed
15084	int	RD	reactive energy L3, inductive, consumed
15086	int	RD	reactive energy sum, inductive, consumed
15088	int	RD	active energy sum, without return travel block
15090	int	RD	reactive energy sum, without return travel block
15092	int	RD	reactive energy L1, inductive, consumed
15094	int	RD	reactive energy L2, inductive, consumed
15096	int	RD	reactive energy L3, inductive, consumed
15098	int	RD	reactive energy sum, inductive, consumed
15100	int	RD	reactive energy L1, capacitive, consumed
15102	int	RD	reactive energy L2, capacitive, consumed
15104	int	RD	reactive energy L3, capacitive, consumed
15106	int	RD	reactive energy sum, capacitive, consumed
15108	int	RD	reactive energy L1, inductive, delivered
15110	int	RD	reactive energy L2, inductive, delivered
15112	int	RD	reactive energy L3, inductive, delivered
15114	int	RD	reactive energy sum, inductive, delivered
15116	int	RD	reactive energy L1, capacitive, delivered

Adresse	Format	RD/WR	Bemerkung
15118	int	RD	reactive energy L2, capacitive, delivered
15120	int	RD	reactive energy L3, capacitive, delivered
15122	int	RD	reactive energy sum, capacitive, delivered
15124	int	RD	active energy (consumed), max. monthly value, jan., even year
15126	int	RD	active energy (consumed), max. monthly value, feb., even year
15128	int	RD	active energy (consumed), max. monthly value, mar., even year
15130	int	RD	active energy (consumed), max. monthly value, apr., even year
15132	int	RD	active energy (consumed), max. monthly value, may., even year
15134	int	RD	active energy (consumed), max. monthly value, jun., even year
15136	int	RD	active energy (consumed), max. monthly value, jul., even year
15138	int	RD	active energy (consumed), max. monthly value, aug., even year
15140	int	RD	active energy (consumed), max. monthly value, sep., even year
15142	int	RD	active energy (consumed), max. monthly value, oct., even year
15144	int	RD	active energy (consumed), max. monthly value, nov., even year
15146	int	RD	active energy (consumed), max. monthly value, dec., even year
15148	int	RD	active energy (consumed), max. monthly value, jan., uneven year
15150	int	RD	active energy (consumed), max. monthly value, feb., uneven year
15152	int	RD	active energy (consumed), max. monthly value, mar., uneven year
15154	int	RD	active energy (consumed), max. monthly value, apr., uneven year
15156	int	RD	active energy (consumed), max. monthly value, may., uneven year
15158	int	RD	active energy (consumed), max. monthly value, jun., uneven year
15160	int	RD	active energy (consumed), max. monthly value, jul., uneven year
15162	int	RD	active energy (consumed), max. monthly value, aug., uneven year
15164	int	RD	active energy (consumed), max. monthly value, sep., uneven year
15166	int	RD	active energy (consumed), max. monthly value, oct., uneven year
15168	int	RD	active energy (consumed), max. monthly value, nov., uneven year
15170	int	RD	active energy (consumed), max. monthly value, dec., uneven year
15192	int	RD	apparent energy, max. monthly value, jan., even year
15194	int	RD	apparent energy, max. monthly value, feb., even year
15196	int	RD	apparent energy, max. monthly value, mar., even year
15198	int	RD	apparent energy, max. monthly value, apr., even year
15200	int	RD	apparent energy, max. monthly value, may., even year
15202	int	RD	apparent energy, max. monthly value, jun., even year
15204	int	RD	apparent energy, max. monthly value, jul., even year
15206	int	RD	apparent energy, max. monthly value, aug., even year
15208	int	RD	apparent energy, max. monthly value, sep., even year
15210	int	RD	apparent energy, max. monthly value, oct., even year
15212	int	RD	apparent energy, max. monthly value, nov., even year
15214	int	RD	apparent energy, max. monthly value, dec., even year
15216	int	RD	apparent energy, max. monthly value, jan., uneven year
15218	int	RD	apparent energy, max. monthly value, feb., uneven year
15220	int	RD	apparent energy, max. monthly value, mar., uneven year
15222	int	RD	apparent energy, max. monthly value, apr., uneven year
15224	int	RD	apparent energy, max. monthly value, may., uneven year
15226	int	RD	apparent energy, max. monthly value, jun., uneven year
15228	int	RD	apparent energy, max. monthly value, jul., uneven year
15230	int	RD	apparent energy, max. monthly value, aug., uneven year
15232	int	RD	apparent energy, max. monthly value, sep., uneven year
15234	int	RD	apparent energy, max. monthly value, oct., uneven year
15236	int	RD	apparent energy, max. monthly value, nov., uneven year
15238	int	RD	apparent energy, max. monthly value, dec., uneven year
15240	int	RD	reactive energy (ind.), max. monthly value, jan., even year
15242	int	RD	reactive energy (ind.), max. monthly value, feb., even year
15244	int	RD	reactive energy (ind.), max. monthly value, mar., even year
15246	int	RD	reactive energy (ind.), max. monthly value, apr., even year
15248	int	RD	reactive energy (ind.), max. monthly value, may., even year
15250	int	RD	reactive energy (ind.), max. monthly value, jun., even year
15252	int	RD	reactive energy (ind.), max. monthly value, jul., even year
15254	int	RD	reactive energy (ind.), max. monthly value, aug., even year

Adresse	Format	RD/WR	Bemerkung
15256	int	RD	reactive energy (ind.), max. monthly value, sep., even year
15258	int	RD	reactive energy (ind.), max. monthly value, oct., even year
15260	int	RD	reactive energy (ind.), max. monthly value, nov., even year
15262	int	RD	reactive energy (ind.), max. monthly value, dec., even year
15264	int	RD	reactive energy (ind.), max. monthly value, jan., uneven year
15266	int	RD	reactive energy (ind.), max. monthly value, feb., uneven year
15268	int	RD	reactive energy (ind.), max. monthly value, mar., uneven year
15270	int	RD	reactive energy (ind.), max. monthly value, apr., uneven year
15272	int	RD	reactive energy (ind.), max. monthly value, may., uneven year
15274	int	RD	reactive energy (ind.), max. monthly value, jun., uneven year
15276	int	RD	reactive energy (ind.), max. monthly value, jul., uneven year
15278	int	RD	reactive energy (ind.), max. monthly value, aug., uneven year
15280	int	RD	reactive energy (ind.), max. monthly value, sep., uneven year
15282	int	RD	reactive energy (ind.), max. monthly value, oct., uneven year
15284	int	RD	reactive energy (ind.), max. monthly value, nov., uneven year
15286	int	RD	reactive energy (ind.), max. monthly value, dec., uneven year



## Energie, Typ Double

Adresse	Format	RD/WR	Bemerkung
6000	double	RD/WR	active energy L1, consumed
6004	double	RD/WR	active energy L2, consumed
6008	double	RD/WR	active energy L3, consumed
6012	double	RD/WR	active energy sum, consumed
6016	double	RD/WR	active energy L1, consumed, HT
6020	double	RD/WR	active energy L2, consumed, HT
6024	double	RD/WR	active energy L3, consumed, HT
6028	double	RD/WR	active energy sum, consumed, HT
6032	double	RD/WR	active energy L1, consumed, NT
6036	double	RD/WR	active energy L2, consumed, NT
6040	double	RD/WR	active energy L3, consumed, NT
6044	double	RD/WR	active energy sum, consumed, NT
6048	double	RD/WR	apparent energy L1
6052	double	RD/WR	apparent energy L2
6056	double	RD/WR	apparent energy L3
6060	double	RD/WR	apparent energy, total
6064	double	RD/WR	apparent energy L1, HT
6068	double	RD/WR	apparent energy L2, HT
6072	double	RD/WR	apparent energy L3, HT
6076	double	RD/WR	apparent energy, total, HT
6080	double	RD/WR	apparent energy L1, NT
6084	double	RD/WR	apparent energy L2, NT
6088	double	RD/WR	apparent energy L3, NT
6092	double	RD/WR	apparent energy, total, NT
6096	double	RD/WR	reactive energy L1, inductive
6100	double	RD/WR	reactive energy L2, inductive
6104	double	RD/WR	reactive energy L3, inductive
6108	double	RD/WR	reactive energy sum, inductive
6112	double	RD/WR	reactive energy L1, inductive, HT
6116	double	RD/WR	reactive energy L2, inductive, HT
6120	double	RD/WR	reactive energy L3, inductive, HT
6124	double	RD/WR	reactive energy, total, inductive, HT
6128	double	RD/WR	reactive energy L1, inductive, NT
6132	double	RD/WR	reactive energy L2, inductive, NT
6136	double	RD/WR	reactive energy L3, inductive, NT
6140	double	RD/WR	reactive energy, total, inductive, NT
6144	double	RD/WR	active energy, delivered
6148	double	RD/WR	active energy L2, delivered
6152	double	RD/WR	active energy L3, delivered
6156	double	RD/WR	active energy sum, delivered
6160	double	RD/WR	reactive energy L1, capacitive
6164	double	RD/WR	reactive energy L2, capacitive
6168	double	RD/WR	reactive energy L3, capacitive
6172	double	RD/WR	reactive energy sum, capacitive
6176	double	RD/WR	active energy sum, without return travel block
6180	double	RD/WR	reactive energy sum, without return travel block
6184	double	RD/WR	reactive energy L1, inductive, consumed
6188	double	RD/WR	reactive energy L2, inductive, consumed
6192	double	RD/WR	reactive energy L3, inductive, consumed
6196	double	RD/WR	reactive energy sum, inductive, consumed
6200	double	RD/WR	reactive energy L1, capacitive, consumed
6204	double	RD/WR	reactive energy L2, capacitive, consumed
6208	double	RD/WR	reactive energy L3, capacitive, consumed
6212	double	RD/WR	reactive energy sum, capacitive, consumed
6216	double	RD/WR	reactive energy L1, inductive, delivered
6220	double	RD/WR	reactive energy L2, inductive, delivered
6224	double	RD/WR	reactive energy L3, inductive, delivered
6228	double	RD/WR	reactive energy sum, inductive, delivered
6232	double	RD/WR	reactive energy L1, capacitive, delivered



Adresse	Format	RD/WR	Bemerkung
6236	double	RD/WR	reactive energy L2, capacitive, delivered
6240	double	RD/WR	reactive energy L3, capacitive, delivered
6244	double	RD/WR	reactive energy sum, capacitive, delivered
6248	double	RD	active energy (consumed), max. monthly value, jan., even year
6252	double	RD	active energy (consumed), max. monthly value, feb., even year
6256	double	RD	active energy (consumed), max. monthly value, mar., even year
6260	double	RD	active energy (consumed), max. monthly value, apr., even year
6264	double	RD	active energy (consumed), max. monthly value, may., even year
6268	double	RD	active energy (consumed), max. monthly value, jun., even year
6272	double	RD	active energy (consumed), max. monthly value, jul., even year
6276	double	RD	active energy (consumed), max. monthly value, aug., even year
6280	double	RD	active energy (consumed), max. monthly value, sep., even year
6284	double	RD	active energy (consumed), max. monthly value, oct., even year
6288	double	RD	active energy (consumed), max. monthly value, nov., even year
6292	double	RD	active energy (consumed), max. monthly value, dec., even year
6296	double	RD	active energy (consumed), max. monthly value, jan., uneven year
6300	double	RD	active energy (consumed), max. monthly value, feb., uneven year
6304	double	RD	active energy (consumed), max. monthly value, mar., uneven year
6308	double	RD	active energy (consumed), max. monthly value, apr., uneven year
6312	double	RD	active energy (consumed), max. monthly value, may., uneven year
6316	double	RD	active energy (consumed), max. monthly value, jun., uneven year
6320	double	RD	active energy (consumed), max. monthly value, jul., uneven year
6324	double	RD	active energy (consumed), max. monthly value, aug., uneven year
6328	double	RD	active energy (consumed), max. monthly value, sep., uneven year
6332	double	RD	active energy (consumed), max. monthly value, oct., uneven year
6336	double	RD	active energy (consumed), max. monthly value, nov., uneven year
6340	double	RD	active energy (consumed), max. monthly value, dec., uneven year
6344	double	RD	apparent energy, max. monthly value, jan., even year
6348	double	RD	apparent energy, max. monthly value, feb., even year
6352	double	RD	apparent energy, max. monthly value, mar., even year
6356	double	RD	apparent energy, max. monthly value, apr., even year
6360	double	RD	apparent energy, max. monthly value, may., even year
6364	double	RD	apparent energy, max. monthly value, jun., even year
6368	double	RD	apparent energy, max. monthly value, jul., even year
6372	double	RD	apparent energy, max. monthly value, aug., even year
6376	double	RD	apparent energy, max. monthly value, sep., even year
6380	double	RD	apparent energy, max. monthly value, oct., even year
6384	double	RD	apparent energy, max. monthly value, nov., even year
6388	double	RD	apparent energy, max. monthly value, dec., even year
6392	double	RD	apparent energy, max. monthly value, jan., uneven year
6396	double	RD	apparent energy, max. monthly value, feb., uneven year
6400	double	RD	apparent energy, max. monthly value, mar., uneven year
6404	double	RD	apparent energy, max. monthly value, apr., uneven year
6408	double	RD	apparent energy, max. monthly value, may., uneven year
6412	double	RD	apparent energy, max. monthly value, jun., uneven year
6416	double	RD	apparent energy, max. monthly value, jul., uneven year
6420	double	RD	apparent energy, max. monthly value, aug., uneven year
6424	double	RD	apparent energy, max. monthly value, sep., uneven year
6428	double	RD	apparent energy, max. monthly value, oct., uneven year
6432	double	RD	apparent energy, max. monthly value, nov., uneven year
6436	double	RD	apparent energy, max. monthly value, dec., uneven year
6900	double	RD	reactive energy (ind.), max. monthly value, jan., even year
6904	double	RD	reactive energy (ind.), max. monthly value, feb., even year
6908	double	RD	reactive energy (ind.), max. monthly value, mar., even year
6912	double	RD	reactive energy (ind.), max. monthly value, apr., even year
6916	double	RD	reactive energy (ind.), max. monthly value, may., even year
6920	double	RD	reactive energy (ind.), max. monthly value, jun., even year

Adresse	Format	RD/WR	Bemerkung
6924	double	RD	reactive energy (ind.), max. monthly value, jul., even year
6928	double	RD	reactive energy (ind.), max. monthly value, aug., even year
6932	double	RD	reactive energy (ind.), max. monthly value, sep., even year
6936	double	RD	reactive energy (ind.), max. monthly value, oct., even year
6940	double	RD	reactive energy (ind.), max. monthly value, nov., even year
6944	double	RD	reactive energy (ind.), max. monthly value, dec., even year
6948	double	RD	reactive energy (ind.), max. monthly value, jan., uneven year
6952	double	RD	reactive energy (ind.), max. monthly value, feb., uneven year
6956	double	RD	reactive energy (ind.), max. monthly value, mar., uneven year
6960	double	RD	reactive energy (ind.), max. monthly value, apr., uneven year
6964	double	RD	reactive energy (ind.), max. monthly value, may., uneven year
6968	double	RD	reactive energy (ind.), max. monthly value, jun., uneven year
6972	double	RD	reactive energy (ind.), max. monthly value, jul., uneven year
6976	double	RD	reactive energy (ind.), max. monthly value, aug., uneven year
6980	double	RD	reactive energy (ind.), max. monthly value, sep., uneven year
6984	double	RD	reactive energy (ind.), max. monthly value, oct., uneven year
6988	double	RD	reactive energy (ind.), max. monthly value, nov., uneven year
6992	double	RD	reactive energy (ind.), max. monthly value, dec., uneven year

### Energie (relevant nach MID Richtlinie)

Adresse	Format	RD/WR	Bemerkung
6444	double	RD	active energy sum, consumed
6448	double	RD	active energy sum, delivered
6602	double	RD	active energy, consumed, meter reading cycle last value, 15 min values
6606	double	RD	active energy, delivered, meter reading cycle last value, 15 min values
6610	uint	RD	utc time, meter reading cycle last value
6612	short	RD	status flag, meter reading cycle last value



## Schleppzeigerwerte

Adresse	Format	RD/WR	Bemerkung
7000	float	RD	highest value current L1
7002	float	RD	highest value current L2
7004	float	RD	highest value current L3
7006	int	RD	point in time [UTC], highest value current L1
7008	int	RD	point in time [UTC], highest value current L2
7010	int	RD	point in time [UTC], highest value current L3
7012	float	RD	highest value apparent power L1
7014	float	RD	highest value apparent power L2
7016	float	RD	highest value apparent power L3
7018	float	RD	highest value apparent power sum
7020	int	RD	point in time [UTC], highest value apparent power L1
7022	int	RD	point in time [UTC], highest value apparent power L2
7024	int	RD	point in time [UTC], highest value apparent power L3
7026	int	RD	point in time [UTC], highest value apparent power sum
7028	float	RD	highest value active power L1, consumed
7030	float	RD	highest value active power L2, consumed
7032	float	RD	highest value active power L3, consumed
7034	float	RD	highest value active power sum, consumed
7036	int	RD	point in time [UTC], highest value active power L1, consumed
7038	int	RD	point in time [UTC], highest value active power L2, consumed
7040	int	RD	point in time [UTC], highest value active power L3, consumed
7042	int	RD	point in time [UTC], highest value active power sum, consumed
7044	float	RD	highest value active power L1, delivered
7046	float	RD	highest value active power L2, delivered
7048	float	RD	highest value active power L3, delivered
7050	float	RD	highest value active power sum, delivered
7052	int	RD	point in time [UTC], highest value active power L1, delivered
7054	int	RD	point in time [UTC], highest value active power L2, delivered
7056	int	RD	point in time [UTC], highest value active power L3, delivered
7058	int	RD	point in time [UTC], highest value active power sum, delivered
7060	float	RD	2. highest value current L1
7062	float	RD	2. highest value current L2
7064	float	RD	2. highest value current L3
7066	int	RD	point in time [UTC], 2. highest value current L1
7068	int	RD	point in time [UTC], 2. highest value current L2
7070	int	RD	point in time [UTC], 2. highest value current L3
7072	float	RD	2. highest value apparent power L1
7074	float	RD	2. highest value apparent power L2
7076	float	RD	2. highest value apparent power L3
7078	float	RD	2. highest value apparent power sum
7080	int	RD	point in time [UTC], 2. highest value apparent power L1
7082	int	RD	point in time [UTC], 2. highest value apparent power L2
7084	int	RD	point in time [UTC], 2. highest value apparent power L3
7086	int	RD	point in time [UTC], 2. highest value apparent power sum
7088	float	RD	2. highest value active power L1, consumed
7090	float	RD	2. highest value active power L2, consumed
7092	float	RD	2. highest value active power L3, consumed
7094	float	RD	2. highest value active power sum, consumed
7096	int	RD	point in time [UTC], 2. highest value active power L1, consumed
7098	int	RD	point in time [UTC], 2. highest value active power L2, consumed
7100	int	RD	point in time [UTC], 2. highest value active power L3, consumed
7102	int	RD	point in time [UTC], 2. highest value active power sum, consumed
7104	float	RD	2. highest value active power L1, delivered
7106	float	RD	2. highest value active power L2, delivered
7108	float	RD	2. highest value active power L3, delivered
7110	float	RD	2. highest value active power sum, delivered
7112	int	RD	point in time [UTC], 2. highest value active power L1, delivered
7114	int	RD	point in time [UTC], 2. highest value active power L2, delivered
7116	int	RD	point in time [UTC], 2. highest value active power L3, delivered

Adresse	Format	RD/WR	Bemerkung
7118	int	RD	point in time [UTC], 2. highest value active power sum, delivered
7120	float	RD	3. highest value current L1
7122	float	RD	3. highest value current L2
7124	float	RD	3. highest value current L3
7126	int	RD	point in time [UTC], 3. highest value current L1
7128	int	RD	point in time [UTC], 3. highest value current L2
7130	int	RD	point in time [UTC], 3. highest value current L3
7132	float	RD	3. highest value apparent power L1
7134	float	RD	3. highest value apparent power L2
7136	float	RD	3. highest value apparent power L3
7138	float	RD	3. highest value apparent power sum
7140	int	RD	point in time [UTC], 3. highest value apparent power L1
7142	int	RD	point in time [UTC], 3. highest value apparent power L2
7144	int	RD	point in time [UTC], 3. highest value apparent power L3
7146	int	RD	point in time [UTC], 3. highest value apparent power sum
7148	float	RD	3. highest value active power L1, consumed
7150	float	RD	3. highest value active power L2, consumed
7152	float	RD	3. highest value active power L3, consumed
7154	float	RD	3. highest value active power sum, consumed
7156	int	RD	point in time [UTC], 3. highest value active power L1, consumed
7158	int	RD	point in time [UTC], 3. highest value active power L2, consumed
7160	int	RD	point in time [UTC], 3. highest value active power L3, consumed
7162	int	RD	point in time [UTC], 3. highest value active power sum, consumed
7164	float	RD	3. highest value active power L1, delivered
7166	float	RD	3. highest value active power L2, delivered
7168	float	RD	3. highest value active power L3, delivered
7170	float	RD	3. highest value active power sum, delivered
7172	int	RD	point in time [UTC], 3. highest value active power L1, delivered
7174	int	RD	point in time [UTC], 3. highest value active power L2, delivered
7176	int	RD	point in time [UTC], 3. highest value active power L3, delivered
7178	int	RD	point in time [UTC], 3. highest value active power sum, delivered

## Minimalwerte, Zeitstempel

Adresse	Format	RD/WR	Bemerkung
4200	int	RD	point in time [UTC], min. value, voltage L1-N
4202	int	RD	point in time [UTC], min. value, voltage L2-N
4204	int	RD	point in time [UTC], min. value, voltage L3-N
4206	int	RD	point in time [UTC], min. value, voltage L1-L2
4208	int	RD	point in time [UTC], min. value, voltage L2-L3
4210	int	RD	point in time [UTC], min. value, voltage L3-L1
4212	int	RD	point in time [UTC], min. value, cos( $\varphi$ ) L1
4214	int	RD	point in time [UTC], min. value, cos( $\varphi$ ) L2
4216	int	RD	point in time [UTC], min. value, cos( $\varphi$ ) L3
4218	int	RD	point in time [UTC], min. value, cos( $\varphi$ ) sum
4298	int	RD	point in time [UTC], min. value, THD voltage L1
4300	int	RD	point in time [UTC], min. value, THD voltage L2
4302	int	RD	point in time [UTC], min. value, THD voltage L3
4304	int	RD	point in time [UTC], max. value, frequency
4306	int	RD	point in time [UTC], min. value, voltage zero sequence
4308	int	RD	point in time [UTC], min. value, voltage positive sequence
4310	int	RD	point in time [UTC], min. value, voltage negative sequence
4312	int	RD	point in time [UTC], min. value, active power L1
4314	int	RD	point in time [UTC], min. value, active power L2
4316	int	RD	point in time [UTC], min. value, active power L3
4318	int	RD	point in time [UTC], min. value, active power sum
4320	int	RD	point in time [UTC], min. value, power factor L1
4322	int	RD	point in time [UTC], min. value, power factor L2
4324	int	RD	point in time [UTC], min. value, power factor L3
4326	int	RD	point in time [UTC], min. value, power factor sum
4328	int	RD	point in time [UTC], min. value, THD current L1
4330	int	RD	point in time [UTC], min. value, THD current L2
4332	int	RD	point in time [UTC], min. value, THD current L3
4334	int	RD	point in time [UTC], min. value, current L1
4336	int	RD	point in time [UTC], min. value, current L2
4338	int	RD	point in time [UTC], min. value, current L3
4340	int	RD	point in time [UTC], min. value, current sum
4342	int	RD	point in time [UTC], min. value, reactive power L1
4344	int	RD	point in time [UTC], min. value, reactive power L2
4346	int	RD	point in time [UTC], min. value, reactive power L3
4348	int	RD	point in time [UTC], min. value, reactive power sum
4350	int	RD	point in time [UTC], min. value, apparent power L1
4352	int	RD	point in time [UTC], min. value, apparent power L2
4354	int	RD	point in time [UTC], min. value, apparent power L3
4356	int	RD	point in time [UTC], min. value, apparent power sum
4358	int	RD	point in time [UTC], min. value, Voltage asymmetry
4360	int	RD	point in time [UTC], min. value, Current asymmetry

## Maximalwerte, Zeitstempel

Adresse	Format	RD/WR	Bemerkung
3300	int	RD	point in time [UTC], max. value, voltage L1-N
3302	int	RD	point in time [UTC], max. value, voltage L2-N
3304	int	RD	point in time [UTC], max. value, voltage L3-N
3306	int	RD	point in time [UTC], max. value, voltage L1-L2
3308	int	RD	point in time [UTC], max. value, voltage L2-L3
3310	int	RD	point in time [UTC], max. value, voltage L3-L1
3312	int	RD	point in time [UTC], max. value, current L1
3314	int	RD	point in time [UTC], max. value, current L2

Adresse	Format	RD/WR	Bemerkung
3316	int	RD	point in time [UTC], max. value, current L3
3318	int	RD	point in time [UTC], max. value, current sum
3320	int	RD	point in time [UTC], max. value, active power L1
3322	int	RD	point in time [UTC], max. value, active power L2
3324	int	RD	point in time [UTC], max. value, active power L3
3326	int	RD	point in time [UTC], max. value, active power sum
3328	int	RD	point in time [UTC], max. value, reactive power L1
3330	int	RD	point in time [UTC], max. value, reactive power L2
3332	int	RD	point in time [UTC], max. value, reactive power L3
3334	int	RD	point in time [UTC], max. value, reactive power sum
3336	int	RD	point in time [UTC], max. value, apparent power L1
3338	int	RD	point in time [UTC], max. value, apparent power L2
3340	int	RD	point in time [UTC], max. value, apparent power L3
3342	int	RD	point in time [UTC], max. value, apparent power sum
3344	int	RD	point in time [UTC], max. value, cos( $\varphi$ ) L1
3346	int	RD	point in time [UTC], max. value, cos( $\varphi$ ) L2
3348	int	RD	point in time [UTC], max. value, cos( $\varphi$ ) L3
3350	int	RD	point in time [UTC], max. value, cos( $\varphi$ ) sum
3352	int	RD	point in time [UTC], max. value, active power (fundamental oscillation) L1
3354	int	RD	point in time [UTC], max. value, active power (fundamental oscillation) L2
3356	int	RD	point in time [UTC], max. value, active power (fundamental oscillation) L3
3514	int	RD	point in time [UTC], max. value, THD voltage L1
3516	int	RD	point in time [UTC], max. value, THD voltage L2
3518	int	RD	point in time [UTC], max. value, THD voltage L3
3520	int	RD	point in time [UTC], max. value, THD current L1
3522	int	RD	point in time [UTC], max. value, THD current L2
3524	int	RD	point in time [UTC], max. value, THD current L3
3526	int	RD	point in time [UTC], max. value, frequency
3528	int	RD	point in time [UTC], max. value, voltage zero sequence
3530	int	RD	point in time [UTC], max. value, voltage positive sequence
3532	int	RD	point in time [UTC], max. value, voltage negative sequence
3534	int	RD	point in time [UTC], max. value, current zero sequence
3536	int	RD	point in time [UTC], max. value, current positive sequence
3538	int	RD	point in time [UTC], max. value, current negative sequence
3540	int	RD	point in time [UTC], max. value, distortion power L1
3542	int	RD	point in time [UTC], max. value, distortion power L2
3544	int	RD	point in time [UTC], max. value, distortion power L3
3546	int	RD	point in time [UTC], max. value, distortion power sum
3548	int	RD	point in time [UTC], max. value, mean value current L1
3550	int	RD	point in time [UTC], max. value, mean value current L2
3552	int	RD	point in time [UTC], max. value, mean value current L3
3554	int	RD	point in time [UTC], max. value, mean value current sum
3556	int	RD	point in time [UTC], max. value, mean value active power L1
3558	int	RD	point in time [UTC], max. value, mean value active power L2
3560	int	RD	point in time [UTC], max. value, mean value active power L3
3562	int	RD	point in time [UTC], max. value, mean value active power sum
3564	int	RD	point in time [UTC], max. value, TDD current L1
3566	int	RD	point in time [UTC], max. value, TDD current L2
3568	int	RD	point in time [UTC], max. value, TDD current L3
3570	int	RD	point in time [UTC], max. value, power factor L1
3572	int	RD	point in time [UTC], max. value, power factor L2
3574	int	RD	point in time [UTC], max. value, power factor L3
3576	int	RD	point in time [UTC], max. value, power factor sum3=Psum3/Ssum3
3578	int	RD	point in time [UTC], max. value, Voltage asymmetry
3580	int	RD	point in time [UTC], max. value, Current asymmetry



## Digitale Ein- und Ausgänge

Adresse	Format	RD/WR	Bemerkung
30565	long64	RD	timestamp [UTC], event 1, input 1
30569	long64	RD	timestamp [UTC], event 1, input 2
30573	long64	RD	timestamp [UTC], event 1, input 3
30577	short	RD	status, event 1, input 1 (0=off, 1=on)
30578	short	RD	status, event 1, input 2 (0=off, 1=on)
30579	short	RD	status, event 1, input 3 (0=off, 1=on)
30580	long64	RD	timestamp [UTC], event 2, input 1
30584	long64	RD	timestamp [UTC], event 2, input 2
30588	long64	RD	timestamp [UTC], event 2, input 3
30592	short	RD	status, event 2, input 1 (0=off, 1=on)
30593	short	RD	status, event 2, input 2 (0=off, 1=on)
30594	short	RD	status, event 2, input 3 (0=off, 1=on)
30595	long64	RD	timestamp [UTC], event 3, input 1
30599	long64	RD	timestamp [UTC], event 3, input 2
30603	long64	RD	timestamp [UTC], event 3, input 3
30607	short	RD	status, event 3, input 1 (0=off, 1=on)
30608	short	RD	status, event 3, input 2 (0=off, 1=on)
30609	short	RD	status, event 3, input 3 (0=off, 1=on)
30610	long64	RD	timestamp [UTC], event 4, input 1
30614	long64	RD	timestamp [UTC], event 4, input 2
30618	long64	RD	timestamp [UTC], event 4, input 3
30622	short	RD	status, event 4, input 1 (0=off, 1=on)
30623	short	RD	status, event 4, input 2 (0=off, 1=on)
30624	short	RD	status, event 4, input 3 (0=off, 1=on)
30625	long64	RD	timestamp [UTC], event 5, input 1
30629	long64	RD	timestamp [UTC], event 5, input 2
30633	long64	RD	timestamp [UTC], event 5, input 3
30637	short	RD	status, event 5, input 1 (0=off, 1=on)
30638	short	RD	status, event 5, input 2 (0=off, 1=on)
30639	short	RD	status, event 5, input 3 (0=off, 1=on)
30640	long64	RD	timestamp [UTC], event 6, input 1
30644	long64	RD	timestamp [UTC], event 6, input 2
30648	long64	RD	timestamp [UTC], event 6, input 3
30652	short	RD	status, event 6, input 1 (0=off, 1=on)
30653	short	RD	status, event 6, input 2 (0=off, 1=on)
30654	short	RD	status, event 6, input 3 (0=off, 1=on)
30655	long64	RD	timestamp [UTC], event 7, input 1
30659	long64	RD	timestamp [UTC], event 7, input 2
30663	long64	RD	timestamp [UTC], event 7, input 3
30667	short	RD	status, event 7, input 1 (0=off, 1=on)
30668	short	RD	status, event 7, input 2 (0=off, 1=on)
30669	short	RD	status, event 7, input 3 (0=off, 1=on)
30670	long64	RD	timestamp [UTC], event 8, input 1
30674	long64	RD	timestamp [UTC], event 8, input 2
30678	long64	RD	timestamp [UTC], event 8, input 3
30682	short	RD	status, event 8, input 1 (0=off, 1=on)
30683	short	RD	status, event 8, input 2 (0=off, 1=on)
30684	short	RD	status, event 8, input 3 (0=off, 1=on)
30685	long64	RD	timestamp [UTC], event 9, input 1
30689	long64	RD	timestamp [UTC], event 9, input 2
30693	long64	RD	timestamp [UTC], event 9, input 3
30697	short	RD	status, event 9, input 1 (0=off, 1=on)
30698	short	RD	status, event 9, input 2 (0=off, 1=on)
30699	short	RD	status, event 9, input 3 (0=off, 1=on)
30700	long64	RD	timestamp [UTC], event 10, input 1
30704	long64	RD	timestamp [UTC], event 10, input 2
30708	long64	RD	timestamp [UTC], event 10, input 3
30712	short	RD	status, event 10, input 1 (0=off, 1=on)
30713	short	RD	status, event 10, input 2 (0=off, 1=on)
30714	short	RD	status, event 10, input 3 (0=off, 1=on)



Adresse	Format	RD/WR	Bemerkung
30715	long64	RD	timestamp [UTC], event 11, input 1
30719	long64	RD	timestamp [UTC], event 11, input 2
30723	long64	RD	timestamp [UTC], event 11, input 3
30727	short	RD	status, event 11, input 1 (0=off, 1=on)
30728	short	RD	status, event 11, input 2 (0=off, 1=on)
30729	short	RD	status, event 11, input 3 (0=off, 1=on)
30730	long64	RD	timestamp [UTC], event 12, input 1
30734	long64	RD	timestamp [UTC], event 12, input 2
30738	long64	RD	timestamp [UTC], event 12, input 3
30742	short	RD	status, event 12, input 1 (0=off, 1=on)
30743	short	RD	status, event 12, input 2 (0=off, 1=on)
30744	short	RD	status, event 12, input 3 (0=off, 1=on)
30745	long64	RD	timestamp [UTC], event 13, input 1
30749	long64	RD	timestamp [UTC], event 13, input 2
30753	long64	RD	timestamp [UTC], event 13, input 3
30757	short	RD	status, event 13, input 1 (0=off, 1=on)
30758	short	RD	status, event 13, input 2 (0=off, 1=on)
30759	short	RD	status, event 13, input 3 (0=off, 1=on)
30760	long64	RD	timestamp [UTC], event 14, input 1
30764	long64	RD	timestamp [UTC], event 14, input 2
30768	long64	RD	timestamp [UTC], event 14, input 3
30772	short	RD	status, event 14, input 1 (0=off, 1=on)
30773	short	RD	status, event 14, input 2 (0=off, 1=on)
30774	short	RD	status, event 14, input 3 (0=off, 1=on)
30775	long64	RD	timestamp [UTC], event 15, input 1
30779	long64	RD	timestamp [UTC], event 15, input 2
30783	long64	RD	timestamp [UTC], event 15, input 3
30787	short	RD	status, event 15, input 1 (0=off, 1=on)
30788	short	RD	status, event 15, input 2 (0=off, 1=on)
30789	short	RD	status, event 15, input 3 (0=off, 1=on)
30790	long64	RD	timestamp [UTC], event 16, input 1
30794	long64	RD	timestamp [UTC], event 16, input 2
30798	long64	RD	timestamp [UTC], event 16, input 3
30802	short	RD	status, event 16, input 1 (0=off, 1=on)
30803	short	RD	status, event 16, input 2 (0=off, 1=on)
30804	short	RD	status, event 16, input 3 (0=off, 1=on)
30400	short	RD	status digital Input 1
30401	short	RD	status digital Input 2
30402	short	RD	status digital Input 3
30406	short	RD	Status digital Output 1
30407	short	RD	Status digital Output 2
30408	short	RD	Status digital Output 3
30409	short	RD/WR	setting output 1
30410	short	RD/WR	setting output 2
30411	short	RD/WR	setting output 3
30412	float	RD	power values S0 input 1
30414	float	RD	power values S0 input 2
30416	float	RD	power values S0 input 3
30418	long64	RD/WR	pulse counter, input 1
30422	long64	RD/WR	pulse counter, input 2
30426	long64	RD/WR	pulse counter, input 3
30430	int	RD	pulse counter, input 1
30432	int	RD	pulse counter, input 2
30434	int	RD	pulse counter, input 3
30436	double	RD	pulse count x scaling, input 1
30440	double	RD	pulse count x scaling, input 2
30444	double	RD	pulse count x scaling, input 3
30448	float	RD	pulse count x scaling, input 1
30450	float	RD	pulse count x scaling, input 2
30452	float	RD	pulse count x scaling, input 3

## Fourieranalyse

### Messwerte, Typ Float, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
1058	float	RD	1. harmonic voltage L1
1060	float	RD	3. harmonic voltage L1
1062	float	RD	5. harmonic voltage L1
1064	float	RD	7. harmonic voltage L1
1066	float	RD	9. harmonic voltage L1
1068	float	RD	11. harmonic voltage L1
1070	float	RD	13. harmonic voltage L1
1072	float	RD	15. harmonic voltage L1
1074	float	RD	17. harmonic voltage L1
1076	float	RD	19. harmonic voltage L1
1078	float	RD	21. harmonic voltage L1
1080	float	RD	23. harmonic voltage L1
1082	float	RD	25. harmonic voltage L1
1084	float	RD	1. harmonic voltage L2
1086	float	RD	3. harmonic voltage L2
1088	float	RD	5. harmonic voltage L2
1090	float	RD	7. harmonic voltage L2
1092	float	RD	9. harmonic voltage L2
1094	float	RD	11. harmonic voltage L2
1096	float	RD	13. harmonic voltage L2
1098	float	RD	15. harmonic voltage L2
1100	float	RD	17. harmonic voltage L2
1102	float	RD	19. harmonic voltage L2
1104	float	RD	21. harmonic voltage L2
1106	float	RD	23. harmonic voltage L2
1108	float	RD	25. harmonic voltage L2
1110	float	RD	1. harmonic voltage L3
1112	float	RD	3. harmonic voltage L3
1114	float	RD	5. harmonic voltage L3
1116	float	RD	7. harmonic voltage L3
1118	float	RD	9. harmonic voltage L3
1120	float	RD	11. harmonic voltage L3
1122	float	RD	13. harmonic voltage L3
1124	float	RD	15. harmonic voltage L3
1126	float	RD	17. harmonic voltage L3
1128	float	RD	19. harmonic voltage L3
1130	float	RD	21. harmonic voltage L3
1132	float	RD	23. harmonic voltage L3
1134	float	RD	25. harmonic voltage L3
1136	float	RD	1. harmonic current L1
1138	float	RD	3. harmonic current L1
1140	float	RD	5. harmonic current L1
1142	float	RD	7. harmonic current L1
1144	float	RD	9. harmonic current L1
1146	float	RD	11. harmonic current L1
1148	float	RD	13. harmonic current L1
1150	float	RD	15. harmonic current L1
1152	float	RD	17. harmonic current L1
1154	float	RD	19. harmonic current L1
1156	float	RD	21. harmonic current L1
1158	float	RD	23. harmonic current L1
1160	float	RD	25. harmonic current L1
1162	float	RD	1. harmonic current L2
1164	float	RD	3. harmonic current L2
1166	float	RD	5. harmonic current L2
1168	float	RD	7. harmonic current L2
1170	float	RD	9. harmonic current L2
1172	float	RD	11. harmonic current L2
1174	float	RD	13. harmonic current L2

Adresse	Format	RD/WR	Bemerkung
1176	float	RD	15. harmonic current L2
1178	float	RD	17. harmonic current L2
1180	float	RD	19. harmonic current L2
1182	float	RD	21. harmonic current L2
1184	float	RD	23. harmonic current L2
1186	float	RD	25. harmonic current L2
1188	float	RD	1. harmonic current L3
1190	float	RD	3. harmonic current L3
1192	float	RD	5. harmonic current L3
1194	float	RD	7. harmonic current L3
1196	float	RD	9. harmonic current L3
1198	float	RD	11. harmonic current L3
1200	float	RD	13. harmonic current L3
1202	float	RD	15. harmonic current L3
1204	float	RD	17. harmonic current L3
1206	float	RD	19. harmonic current L3
1208	float	RD	21. harmonic current L3
1210	float	RD	23. harmonic current L3
1212	float	RD	25. harmonic current L3
8000	float	RD	1. harmonic voltage L1
8002	float	RD	2. harmonic voltage L1
8004	float	RD	3. harmonic voltage L1
8006	float	RD	4. harmonic voltage L1
8008	float	RD	5. harmonic voltage L1
8010	float	RD	6. harmonic voltage L1
8012	float	RD	7. harmonic voltage L1
8014	float	RD	8. harmonic voltage L1
8016	float	RD	9. harmonic voltage L1
8018	float	RD	10. harmonic voltage L1
8020	float	RD	11. harmonic voltage L1
8022	float	RD	12. harmonic voltage L1
8024	float	RD	13. harmonic voltage L1
8026	float	RD	14. harmonic voltage L1
8028	float	RD	15. harmonic voltage L1
8030	float	RD	16. harmonic voltage L1
8032	float	RD	17. harmonic voltage L1
8034	float	RD	18. harmonic voltage L1
8036	float	RD	19. harmonic voltage L1
8038	float	RD	20. harmonic voltage L1
8040	float	RD	21. harmonic voltage L1
8042	float	RD	22. harmonic voltage L1
8044	float	RD	23. harmonic voltage L1
8046	float	RD	24. harmonic voltage L1
8048	float	RD	25. harmonic voltage L1
8050	float	RD	26. harmonic voltage L1
8052	float	RD	27. harmonic voltage L1
8054	float	RD	28. harmonic voltage L1
8056	float	RD	29. harmonic voltage L1
8058	float	RD	30. harmonic voltage L1
8060	float	RD	31. harmonic voltage L1
8062	float	RD	32. harmonic voltage L1
8064	float	RD	33. harmonic voltage L1
8066	float	RD	34. harmonic voltage L1
8068	float	RD	35. harmonic voltage L1
8070	float	RD	36. harmonic voltage L1
8072	float	RD	37. harmonic voltage L1
8074	float	RD	38. harmonic voltage L1
8076	float	RD	39. harmonic voltage L1
8078	float	RD	40. harmonic voltage L1

Adresse	Format	RD/WR	Bemerkung
8080	float	RD	1. harmonic voltage L2
8082	float	RD	2. harmonic voltage L2
8084	float	RD	3. harmonic voltage L2
8086	float	RD	4. harmonic voltage L2
8088	float	RD	5. harmonic voltage L2
8090	float	RD	6. harmonic voltage L2
8092	float	RD	7. harmonic voltage L2
8094	float	RD	8. harmonic voltage L2
8096	float	RD	9. harmonic voltage L2
8098	float	RD	10. harmonic voltage L2
8100	float	RD	11. harmonic voltage L2
8102	float	RD	12. harmonic voltage L2
8104	float	RD	13. harmonic voltage L2
8106	float	RD	14. harmonic voltage L2
8108	float	RD	15. harmonic voltage L2
8110	float	RD	16. harmonic voltage L2
8112	float	RD	17. harmonic voltage L2
8114	float	RD	18. harmonic voltage L2
8116	float	RD	19. harmonic voltage L2
8118	float	RD	20. harmonic voltage L2
8120	float	RD	21. harmonic voltage L2
8122	float	RD	22. harmonic voltage L2
8124	float	RD	23. harmonic voltage L2
8126	float	RD	24. harmonic voltage L2
8128	float	RD	25. harmonic voltage L2
8130	float	RD	26. harmonic voltage L2
8132	float	RD	27. harmonic voltage L2
8134	float	RD	28. harmonic voltage L2
8136	float	RD	29. harmonic voltage L2
8138	float	RD	30. harmonic voltage L2
8140	float	RD	31. harmonic voltage L2
8142	float	RD	32. harmonic voltage L2
8144	float	RD	33. harmonic voltage L2
8146	float	RD	34. harmonic voltage L2
8148	float	RD	35. harmonic voltage L2
8150	float	RD	36. harmonic voltage L2
8152	float	RD	37. harmonic voltage L2
8150	float	RD	38. harmonic voltage L2
8156	float	RD	39. harmonic voltage L2
8158	float	RD	40. harmonic voltage L2
8160	float	RD	1. harmonic voltage L3
8162	float	RD	2. harmonic voltage L3
8164	float	RD	3. harmonic voltage L3
8166	float	RD	4. harmonic voltage L3
8168	float	RD	5. harmonic voltage L3
8170	float	RD	6. harmonic voltage L3
8172	float	RD	7. harmonic voltage L3
8174	float	RD	8. harmonic voltage L3
8176	float	RD	9. harmonic voltage L3
8178	float	RD	10. harmonic voltage L3
8180	float	RD	11. harmonic voltage L3
8182	float	RD	12. harmonic voltage L3
8184	float	RD	13. harmonic voltage L3
8186	float	RD	14. harmonic voltage L3
8188	float	RD	15. harmonic voltage L3
8190	float	RD	16. harmonic voltage L3
8192	float	RD	17. harmonic voltage L3
8194	float	RD	18. harmonic voltage L3

Adresse	Format	RD/WR	Bemerkung
8196	float	RD	19. harmonic voltage L3
8198	float	RD	20. harmonic voltage L3
8200	float	RD	21. harmonic voltage L3
8202	float	RD	22. harmonic voltage L3
8204	float	RD	23. harmonic voltage L3
8206	float	RD	24. harmonic voltage L3
8208	float	RD	25. harmonic voltage L3
8210	float	RD	26. harmonic voltage L3
8212	float	RD	27. harmonic voltage L3
8214	float	RD	28. harmonic voltage L3
8216	float	RD	29. harmonic voltage L3
8218	float	RD	30. harmonic voltage L3
8220	float	RD	31. harmonic voltage L3
8222	float	RD	32. harmonic voltage L3
8224	float	RD	33. harmonic voltage L3
8226	float	RD	34. harmonic voltage L3
8228	float	RD	35. harmonic voltage L3
8230	float	RD	36. harmonic voltage L3
8232	float	RD	37. harmonic voltage L3
8230	float	RD	38. harmonic voltage L3
8236	float	RD	39. harmonic voltage L3
8238	float	RD	40. harmonic voltage L3
8240	float	RD	1. harmonic current L1
8242	float	RD	2. harmonic current L1
8244	float	RD	3. harmonic current L1
8246	float	RD	4. harmonic current L1
8248	float	RD	5. harmonic current L1
8250	float	RD	6. harmonic current L1
8252	float	RD	7. harmonic current L1
8254	float	RD	8. harmonic current L1
8256	float	RD	9. harmonic current L1
8258	float	RD	10. harmonic current L1
8260	float	RD	11. harmonic current L1
8262	float	RD	12. harmonic current L1
8264	float	RD	13. harmonic current L1
8266	float	RD	14. harmonic current L1
8268	float	RD	15. harmonic current L1
8270	float	RD	16. harmonic current L1
8272	float	RD	17. harmonic current L1
8274	float	RD	18. harmonic current L1
8276	float	RD	19. harmonic current L1
8278	float	RD	20. harmonic current L1
8280	float	RD	21. harmonic current L1
8282	float	RD	22. harmonic current L1
8284	float	RD	23. harmonic current L1
8286	float	RD	24. harmonic current L1
8288	float	RD	25. harmonic current L1
8290	float	RD	26. harmonic current L1
8292	float	RD	27. harmonic current L1
8294	float	RD	28. harmonic current L1
8296	float	RD	29. harmonic current L1
8298	float	RD	30. harmonic current L1
8300	float	RD	31. harmonic current L1
8302	float	RD	32. harmonic current L1
8304	float	RD	33. harmonic current L1
8306	float	RD	34. harmonic current L1
8308	float	RD	35. harmonic current L1
8310	float	RD	36. harmonic current L1

Adresse	Format	RD/WR	Bemerkung
8312	float	RD	37. harmonic current L1
8314	float	RD	38. harmonic current L1
8316	float	RD	39. harmonic current L1
8318	float	RD	40. harmonic current L1
8320	float	RD	1. harmonic current L2
8322	float	RD	2. harmonic current L2
8324	float	RD	3. harmonic current L2
8326	float	RD	4. harmonic current L2
8328	float	RD	5. harmonic current L2
8330	float	RD	6. harmonic current L2
8332	float	RD	7. harmonic current L2
8334	float	RD	8. harmonic current L2
8336	float	RD	9. harmonic current L2
8338	float	RD	10. harmonic current L2
8340	float	RD	11. harmonic current L2
8342	float	RD	12. harmonic current L2
8344	float	RD	13. harmonic current L2
8346	float	RD	14. harmonic current L2
8348	float	RD	15. harmonic current L2
8350	float	RD	16. harmonic current L2
8352	float	RD	17. harmonic current L2
8354	float	RD	18. harmonic current L2
8356	float	RD	19. harmonic current L2
8358	float	RD	20. harmonic current L2
8360	float	RD	21. harmonic current L2
8362	float	RD	22. harmonic current L2
8364	float	RD	23. harmonic current L2
8366	float	RD	24. harmonic current L2
8368	float	RD	25. harmonic current L2
8370	float	RD	26. harmonic current L2
8372	float	RD	27. harmonic current L2
8374	float	RD	28. harmonic current L2
8376	float	RD	29. harmonic current L2
8378	float	RD	30. harmonic current L2
8380	float	RD	31. harmonic current L2
8382	float	RD	32. harmonic current L2
8384	float	RD	33. harmonic current L2
8386	float	RD	34. harmonic current L2
8388	float	RD	35. harmonic current L2
8390	float	RD	36. harmonic current L2
8392	float	RD	37. harmonic current L2
8394	float	RD	38. harmonic current L2
8396	float	RD	39. harmonic current L2
8398	float	RD	40. harmonic current L2
8400	float	RD	1. harmonic current L3
8402	float	RD	2. harmonic current L3
8404	float	RD	3. harmonic current L3
8406	float	RD	4. harmonic current L3
8408	float	RD	5. harmonic current L3
8410	float	RD	6. harmonic current L3
8412	float	RD	7. harmonic current L3
8414	float	RD	8. harmonic current L3
8416	float	RD	9. harmonic current L3
8418	float	RD	10. harmonic current L3
8420	float	RD	11. harmonic current L3
8422	float	RD	12. harmonic current L3
8424	float	RD	13. harmonic current L3
8426	float	RD	14. harmonic current L3

Adresse	Format	RD/WR	Bemerkung
8428	float	RD	15. harmonic current L3
8430	float	RD	16. harmonic current L3
8432	float	RD	17. harmonic current L3
8434	float	RD	18. harmonic current L3
8436	float	RD	19. harmonic current L3
8438	float	RD	20. harmonic current L3
8440	float	RD	21. harmonic current L3
8442	float	RD	22. harmonic current L3
8444	float	RD	23. harmonic current L3
8446	float	RD	24. harmonic current L3
8448	float	RD	25. harmonic current L3
8450	float	RD	26. harmonic current L3
8452	float	RD	27. harmonic current L3
8454	float	RD	28. harmonic current L3
8456	float	RD	29. harmonic current L3
8458	float	RD	30. harmonic current L3
8460	float	RD	31. harmonic current L3
8462	float	RD	32. harmonic current L3
8464	float	RD	33. harmonic current L3
8466	float	RD	34. harmonic current L3
8468	float	RD	35. harmonic current L3
8470	float	RD	36. harmonic current L3
8472	float	RD	37. harmonic current L3
8474	float	RD	38. harmonic current L3
8476	float	RD	39. harmonic current L3
8478	float	RD	40. harmonic current L3



## Messwerte, Typ Short, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
11029	short (x10)	RD	1. harmonic voltage L1
11030	short (x10)	RD	3. harmonic voltage L1
11031	short (x10)	RD	5. harmonic voltage L1
11032	short (x10)	RD	7. harmonic voltage L1
11033	short (x10)	RD	9. harmonic voltage L1
11034	short (x10)	RD	11. harmonic voltage L1
11035	short (x10)	RD	13. harmonic voltage L1
11036	short (x10)	RD	15. harmonic voltage L1
11037	short (x10)	RD	17. harmonic voltage L1
11038	short (x10)	RD	19. harmonic voltage L1
11039	short (x10)	RD	21. harmonic voltage L1
11040	short (x10)	RD	23. harmonic voltage L1
11041	short (x10)	RD	25. harmonic voltage L1
11042	short (x10)	RD	1. harmonic voltage L2
11043	short (x10)	RD	3. harmonic voltage L2
11044	short (x10)	RD	5. harmonic voltage L2
11045	short (x10)	RD	7. harmonic voltage L2
11046	short (x10)	RD	9. harmonic voltage L2
11047	short (x10)	RD	11. harmonic voltage L2
11048	short (x10)	RD	13. harmonic voltage L2
11049	short (x10)	RD	15. harmonic voltage L2
11050	short (x10)	RD	17. harmonic voltage L2
11051	short (x10)	RD	19. harmonic voltage L2
11052	short (x10)	RD	21. harmonic voltage L2
11053	short (x10)	RD	23. harmonic voltage L2
11054	short (x10)	RD	25. harmonic voltage L2
11055	short (x10)	RD	1. harmonic voltage L3
11056	short (x10)	RD	3. harmonic voltage L3
11057	short (x10)	RD	5. harmonic voltage L3
11058	short (x10)	RD	7. harmonic voltage L3
11059	short (x10)	RD	9. harmonic voltage L3
11060	short (x10)	RD	11. harmonic voltage L3
11061	short (x10)	RD	13. harmonic voltage L3
11062	short (x10)	RD	15. harmonic voltage L3
11063	short (x10)	RD	17. harmonic voltage L3
11064	short (x10)	RD	19. harmonic voltage L3
11065	short (x10)	RD	21. harmonic voltage L3
11066	short (x10)	RD	23. harmonic voltage L3
11067	short (x10)	RD	25. harmonic voltage L3
11068	short (x10)	RD	1. harmonic current L1
11069	short (x10)	RD	3. harmonic current L1
11070	short (x10)	RD	5. harmonic current L1
11071	short (x10)	RD	7. harmonic current L1
11072	short (x10)	RD	9. harmonic current L1
11073	short (x10)	RD	11. harmonic current L1
11074	short (x10)	RD	13. harmonic current L1
11075	short (x10)	RD	15. harmonic current L1
11076	short (x10)	RD	17. harmonic current L1
11077	short (x10)	RD	19. harmonic current L1
11078	short (x10)	RD	21. harmonic current L1
11079	short (x10)	RD	23. harmonic current L1
11080	short (x10)	RD	25. harmonic current L1
11081	short (x10)	RD	1. harmonic current L2
11082	short (x10)	RD	3. harmonic current L2
11083	short (x10)	RD	5. harmonic current L2
11084	short (x10)	RD	7. harmonic current L2
11085	short (x10)	RD	9. harmonic current L2
11086	short (x10)	RD	11. harmonic current L2
11087	short (x10)	RD	13. harmonic current L2



Adresse	Format	RD/WR	Bemerkung
11088	short (x10)	RD	15. harmonic current L2
11089	short (x10)	RD	17. harmonic current L2
11090	short (x10)	RD	19. harmonic current L2
11091	short (x10)	RD	21. harmonic current L2
11092	short (x10)	RD	23. harmonic current L2
11093	short (x10)	RD	25. harmonic current L2
11094	short (x10)	RD	1. harmonic current L3
11095	short (x10)	RD	3. harmonic current L3
11096	short (x10)	RD	5. harmonic current L3
11097	short (x10)	RD	7. harmonic current L3
11098	short (x10)	RD	9. harmonic current L3
11099	short (x10)	RD	11. harmonic current L3
11100	short (x10)	RD	13. harmonic current L3
11101	short (x10)	RD	15. harmonic current L3
11102	short (x10)	RD	17. harmonic current L3
11103	short (x10)	RD	19. harmonic current L3
11104	short (x10)	RD	21. harmonic current L3
11105	short (x10)	RD	23. harmonic current L3
11106	short (x10)	RD	25. harmonic current L3

## Mittelwerte, Typ Float, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
2058	float	RD	mean value, 1. harmonic voltage L1
2060	float	RD	mean value, 3. harmonic voltage L1
2062	float	RD	mean value, 5. harmonic voltage L1
2064	float	RD	mean value, 7. harmonic voltage L1
2066	float	RD	mean value, 9. harmonic voltage L1
2068	float	RD	mean value, 11. harmonic voltage L1
2070	float	RD	mean value, 13. harmonic voltage L1
2072	float	RD	mean value, 15. harmonic voltage L1
2074	float	RD	mean value, 17. harmonic voltage L1
2076	float	RD	mean value, 19. harmonic voltage L1
2078	float	RD	mean value, 21. harmonic voltage L1
2080	float	RD	mean value, 23. harmonic voltage L1
2082	float	RD	mean value, 25. harmonic voltage L1
2084	float	RD	mean value, 1. harmonic voltage L2
2086	float	RD	mean value, 3. harmonic voltage L2
2088	float	RD	mean value, 5. harmonic voltage L2
2090	float	RD	mean value, 7. harmonic voltage L2
2092	float	RD	mean value, 9. harmonic voltage L2
2094	float	RD	mean value, 11. harmonic voltage L2
2096	float	RD	mean value, 13. harmonic voltage L2
2098	float	RD	mean value, 15. harmonic voltage L2
2100	float	RD	mean value, 17. harmonic voltage L2
2102	float	RD	mean value, 19. harmonic voltage L2
2104	float	RD	mean value, 21. harmonic voltage L2
2106	float	RD	mean value, 23. harmonic voltage L2
2108	float	RD	mean value, 25. harmonic voltage L2
2110	float	RD	mean value, 1. harmonic voltage L3
2112	float	RD	mean value, 3. harmonic voltage L3
2114	float	RD	mean value, 5. harmonic voltage L3
2116	float	RD	mean value, 7. harmonic voltage L3
2118	float	RD	mean value, 9. harmonic voltage L3
2120	float	RD	mean value, 11. harmonic voltage L3
2122	float	RD	mean value, 13. harmonic voltage L3
2124	float	RD	mean value, 15. harmonic voltage L3
2126	float	RD	mean value, 17. harmonic voltage L3
2128	float	RD	mean value, 19. harmonic voltage L3
2130	float	RD	mean value, 21. harmonic voltage L3
2132	float	RD	mean value, 23. harmonic voltage L3
2134	float	RD	mean value, 25. harmonic voltage L3
2136	float	RD	mean value, 1. harmonic current L1
2138	float	RD	mean value, 3. harmonic current L1
2140	float	RD	mean value, 5. harmonic current L1
2142	float	RD	mean value, 7. harmonic current L1
2144	float	RD	mean value, 9. harmonic current L1
2146	float	RD	mean value, 11. harmonic current L1
2148	float	RD	mean value, 13. harmonic current L1
2150	float	RD	mean value, 15. harmonic current L1
2152	float	RD	mean value, 17. harmonic current L1
2154	float	RD	mean value, 19. harmonic current L1
2156	float	RD	mean value, 21. harmonic current L1
2158	float	RD	mean value, 23. harmonic current L1
2160	float	RD	mean value, 25. harmonic current L1
2162	float	RD	mean value, 1. harmonic current L2
2164	float	RD	mean value, 3. harmonic current L2
2166	float	RD	mean value, 5. harmonic current L2
2168	float	RD	mean value, 7. harmonic current L2
2170	float	RD	mean value, 9. harmonic current L2
2172	float	RD	mean value, 11. harmonic current L2
2174	float	RD	mean value, 13. harmonic current L2

Adresse	Format	RD/WR	Bemerkung
2176	float	RD	mean value, 15. harmonic current L2
2178	float	RD	mean value, 17. harmonic current L2
2180	float	RD	mean value, 19. harmonic current L2
2182	float	RD	mean value, 21. harmonic current L2
2184	float	RD	mean value, 23. harmonic current L2
2186	float	RD	mean value, 25. harmonic current L2
2188	float	RD	mean value, 1. harmonic current L3
2190	float	RD	mean value, 3. harmonic current L3
2192	float	RD	mean value, 5. harmonic current L3
2194	float	RD	mean value, 7. harmonic current L3
2196	float	RD	mean value, 9. harmonic current L3
2198	float	RD	mean value, 11. harmonic current L3
2200	float	RD	mean value, 13. harmonic current L3
2202	float	RD	mean value, 15. harmonic current L3
2204	float	RD	mean value, 17. harmonic current L3
2206	float	RD	mean value, 19. harmonic current L3
2208	float	RD	mean value, 21. harmonic current L3
2210	float	RD	mean value, 23. harmonic current L3
2212	float	RD	mean value, 25. harmonic current L3
8480	float	RD	mean value, 1. harmonic voltage L1
8482	float	RD	mean value, 2. harmonic voltage L1
8484	float	RD	mean value, 3. harmonic voltage L1
8486	float	RD	mean value, 4. harmonic voltage L1
8488	float	RD	mean value, 5. harmonic voltage L1
8490	float	RD	mean value, 6. harmonic voltage L1
8492	float	RD	mean value, 7. harmonic voltage L1
8494	float	RD	mean value, 8. harmonic voltage L1
8496	float	RD	mean value, 9. harmonic voltage L1
8498	float	RD	mean value, 10. harmonic voltage L1
8500	float	RD	mean value, 11. harmonic voltage L1
8502	float	RD	mean value, 12. harmonic voltage L1
8504	float	RD	mean value, 13. harmonic voltage L1
8506	float	RD	mean value, 14. harmonic voltage L1
8508	float	RD	mean value, 15. harmonic voltage L1
8510	float	RD	mean value, 16. harmonic voltage L1
8512	float	RD	mean value, 17. harmonic voltage L1
8514	float	RD	mean value, 18. harmonic voltage L1
8516	float	RD	mean value, 19. harmonic voltage L1
8518	float	RD	mean value, 20. harmonic voltage L1
8520	float	RD	mean value, 21. harmonic voltage L1
8522	float	RD	mean value, 22. harmonic voltage L1
8524	float	RD	mean value, 23. harmonic voltage L1
8526	float	RD	mean value, 24. harmonic voltage L1
8528	float	RD	mean value, 25. harmonic voltage L1
8530	float	RD	mean value, 26. harmonic voltage L1
8532	float	RD	mean value, 27. harmonic voltage L1
8534	float	RD	mean value, 28. harmonic voltage L1
8536	float	RD	mean value, 29. harmonic voltage L1
8538	float	RD	mean value, 30. harmonic voltage L1
8540	float	RD	mean value, 31. harmonic voltage L1
8542	float	RD	mean value, 32. harmonic voltage L1
8544	float	RD	mean value, 33. harmonic voltage L1
8546	float	RD	mean value, 34. harmonic voltage L1
8548	float	RD	mean value, 35. harmonic voltage L1
8550	float	RD	mean value, 36. harmonic voltage L1
8552	float	RD	mean value, 37. harmonic voltage L1
8554	float	RD	mean value, 38. harmonic voltage L1
8556	float	RD	mean value, 39. harmonic voltage L1

Adresse	Format	RD/WR	Bemerkung
8558	float	RD	mean value, 40. harmonic voltage L1
8560	float	RD	mean value, 1. harmonic voltage L2
8562	float	RD	mean value, 2. harmonic voltage L2
8564	float	RD	mean value, 3. harmonic voltage L2
8566	float	RD	mean value, 4. harmonic voltage L2
8568	float	RD	mean value, 5. harmonic voltage L2
8570	float	RD	mean value, 6. harmonic voltage L2
8572	float	RD	mean value, 7. harmonic voltage L2
8574	float	RD	mean value, 8. harmonic voltage L2
8576	float	RD	mean value, 9. harmonic voltage L2
8578	float	RD	mean value, 10. harmonic voltage L2
8580	float	RD	mean value, 11. harmonic voltage L2
8582	float	RD	mean value, 12. harmonic voltage L2
8584	float	RD	mean value, 13. harmonic voltage L2
8586	float	RD	mean value, 14. harmonic voltage L2
8588	float	RD	mean value, 15. harmonic voltage L2
8590	float	RD	mean value, 16. harmonic voltage L2
8592	float	RD	mean value, 17. harmonic voltage L2
8594	float	RD	mean value, 18. harmonic voltage L2
8596	float	RD	mean value, 19. harmonic voltage L2
8598	float	RD	mean value, 20. harmonic voltage L2
8600	float	RD	mean value, 21. harmonic voltage L2
8602	float	RD	mean value, 22. harmonic voltage L2
8604	float	RD	mean value, 23. harmonic voltage L2
8606	float	RD	mean value, 24. harmonic voltage L2
8608	float	RD	mean value, 25. harmonic voltage L2
8610	float	RD	mean value, 26. harmonic voltage L2
8612	float	RD	mean value, 27. harmonic voltage L2
8614	float	RD	mean value, 28. harmonic voltage L2
8616	float	RD	mean value, 29. harmonic voltage L2
8618	float	RD	mean value, 30. harmonic voltage L2
8620	float	RD	mean value, 31. harmonic voltage L2
8622	float	RD	mean value, 32. harmonic voltage L2
8624	float	RD	mean value, 33. harmonic voltage L2
8626	float	RD	mean value, 34. harmonic voltage L2
8628	float	RD	mean value, 35. harmonic voltage L2
8630	float	RD	mean value, 36. harmonic voltage L2
8632	float	RD	mean value, 37. harmonic voltage L2
8634	float	RD	mean value, 38. harmonic voltage L2
8636	float	RD	mean value, 39. harmonic voltage L2
8638	float	RD	mean value, 40. harmonic voltage L2
8640	float	RD	mean value, 1. harmonic voltage L3
8642	float	RD	mean value, 2. harmonic voltage L3
8644	float	RD	mean value, 3. harmonic voltage L3
8646	float	RD	mean value, 4. harmonic voltage L3
8648	float	RD	mean value, 5. harmonic voltage L3
8650	float	RD	mean value, 6. harmonic voltage L3
8652	float	RD	mean value, 7. harmonic voltage L3
8654	float	RD	mean value, 8. harmonic voltage L3
8656	float	RD	mean value, 9. harmonic voltage L3
8658	float	RD	mean value, 10. harmonic voltage L3
8660	float	RD	mean value, 11. harmonic voltage L3
8662	float	RD	mean value, 12. harmonic voltage L3
8664	float	RD	mean value, 13. harmonic voltage L3
8666	float	RD	mean value, 14. harmonic voltage L3
8668	float	RD	mean value, 15. harmonic voltage L3
8670	float	RD	mean value, 16. harmonic voltage L3
8672	float	RD	mean value, 17. harmonic voltage L3
8674	float	RD	mean value, 18. harmonic voltage L3

Adresse	Format	RD/WR	Bemerkung
8676	float	RD	mean value, 19. harmonic voltage L3
8678	float	RD	mean value, 20. harmonic voltage L3
8680	float	RD	mean value, 21. harmonic voltage L3
8682	float	RD	mean value, 22. harmonic voltage L3
8684	float	RD	mean value, 23. harmonic voltage L3
8686	float	RD	mean value, 24. harmonic voltage L3
8688	float	RD	mean value, 25. harmonic voltage L3
8690	float	RD	mean value, 26. harmonic voltage L3
8692	float	RD	mean value, 27. harmonic voltage L3
8694	float	RD	mean value, 28. harmonic voltage L3
8696	float	RD	mean value, 29. harmonic voltage L3
8698	float	RD	mean value, 30. harmonic voltage L3
8700	float	RD	mean value, 31. harmonic voltage L3
8702	float	RD	mean value, 32. harmonic voltage L3
8704	float	RD	mean value, 33. harmonic voltage L3
8706	float	RD	mean value, 34. harmonic voltage L3
8708	float	RD	mean value, 35. harmonic voltage L3
8710	float	RD	mean value, 36. harmonic voltage L3
8712	float	RD	mean value, 37. harmonic voltage L3
8714	float	RD	mean value, 38. harmonic voltage L3
8716	float	RD	mean value, 39. harmonic voltage L3
8718	float	RD	mean value, 40. harmonic voltage L3
8720	float	RD	mean value, 1. harmonic current L1
8722	float	RD	mean value, 2. harmonic current L1
8724	float	RD	mean value, 3. harmonic current L1
8726	float	RD	mean value, 4. harmonic current L1
8728	float	RD	mean value, 5. harmonic current L1
8730	float	RD	mean value, 6. harmonic current L1
8732	float	RD	mean value, 7. harmonic current L1
8734	float	RD	mean value, 8. harmonic current L1
8736	float	RD	mean value, 9. harmonic current L1
8738	float	RD	mean value, 10. harmonic current L1
8740	float	RD	mean value, 11. harmonic current L1
8742	float	RD	mean value, 12. harmonic current L1
8744	float	RD	mean value, 13. harmonic current L1
8746	float	RD	mean value, 14. harmonic current L1
8748	float	RD	mean value, 15. harmonic current L1
8750	float	RD	mean value, 16. harmonic current L1
8752	float	RD	mean value, 17. harmonic current L1
8754	float	RD	mean value, 18. harmonic current L1
8756	float	RD	mean value, 19. harmonic current L1
8758	float	RD	mean value, 20. harmonic current L1
8760	float	RD	mean value, 21. harmonic current L1
8762	float	RD	mean value, 22. harmonic current L1
8764	float	RD	mean value, 23. harmonic current L1
8766	float	RD	mean value, 24. harmonic current L1
8768	float	RD	mean value, 25. harmonic current L1
8770	float	RD	mean value, 26. harmonic current L1
8772	float	RD	mean value, 27. harmonic current L1
8774	float	RD	mean value, 28. harmonic current L1
8776	float	RD	mean value, 29. harmonic current L1
8778	float	RD	mean value, 30. harmonic current L1
8780	float	RD	mean value, 31. harmonic current L1
8782	float	RD	mean value, 32. harmonic current L1
8784	float	RD	mean value, 33. harmonic current L1
8786	float	RD	mean value, 34. harmonic current L1
8788	float	RD	mean value, 35. harmonic current L1
8790	float	RD	mean value, 36. harmonic current L1
8792	float	RD	mean value, 37. harmonic current L1

Adresse	Format	RD/WR	Bemerkung
8794	float	RD	mean value, 38. harmonic current L1
8796	float	RD	mean value, 39. harmonic current L1
8798	float	RD	mean value, 40. harmonic current L1
8800	float	RD	mean value, 1. harmonic current L2
8802	float	RD	mean value, 2. harmonic current L2
8804	float	RD	mean value, 3. harmonic current L2
8806	float	RD	mean value, 4. harmonic current L2
8808	float	RD	mean value, 5. harmonic current L2
8810	float	RD	mean value, 6. harmonic current L2
8812	float	RD	mean value, 7. harmonic current L2
8814	float	RD	mean value, 8. harmonic current L2
8816	float	RD	mean value, 9. harmonic current L2
8818	float	RD	mean value, 10. harmonic current L2
8820	float	RD	mean value, 11. harmonic current L2
8822	float	RD	mean value, 12. harmonic current L2
8824	float	RD	mean value, 13. harmonic current L2
8826	float	RD	mean value, 14. harmonic current L2
8828	float	RD	mean value, 15. harmonic current L2
8830	float	RD	mean value, 16. harmonic current L2
8832	float	RD	mean value, 17. harmonic current L2
8834	float	RD	mean value, 18. harmonic current L2
8836	float	RD	mean value, 19. harmonic current L2
8838	float	RD	mean value, 20. harmonic current L2
8840	float	RD	mean value, 21. harmonic current L2
8842	float	RD	mean value, 22. harmonic current L2
8844	float	RD	mean value, 23. harmonic current L2
8846	float	RD	mean value, 24. harmonic current L2
8848	float	RD	mean value, 25. harmonic current L2
8850	float	RD	mean value, 26. harmonic current L2
8852	float	RD	mean value, 27. harmonic current L2
8854	float	RD	mean value, 28. harmonic current L2
8856	float	RD	mean value, 29. harmonic current L2
8858	float	RD	mean value, 30. harmonic current L2
8860	float	RD	mean value, 31. harmonic current L2
8862	float	RD	mean value, 32. harmonic current L2
8864	float	RD	mean value, 33. harmonic current L2
8866	float	RD	mean value, 34. harmonic current L2
8868	float	RD	mean value, 35. harmonic current L2
8870	float	RD	mean value, 36. harmonic current L2
8872	float	RD	mean value, 37. harmonic current L2
8874	float	RD	mean value, 38. harmonic current L2
8876	float	RD	mean value, 39. harmonic current L2
8878	float	RD	mean value, 40. harmonic current L2
8880	float	RD	mean value, 1. harmonic current L3
8882	float	RD	mean value, 2. harmonic current L3
8884	float	RD	mean value, 3. harmonic current L3
8886	float	RD	mean value, 4. harmonic current L3
8888	float	RD	mean value, 5. harmonic current L3
8890	float	RD	mean value, 6. harmonic current L3
8892	float	RD	mean value, 7. harmonic current L3
8894	float	RD	mean value, 8. harmonic current L3
8896	float	RD	mean value, 9. harmonic current L3
8898	float	RD	mean value, 10. harmonic current L3
8900	float	RD	mean value, 11. harmonic current L3
8902	float	RD	mean value, 12. harmonic current L3
8904	float	RD	mean value, 13. harmonic current L3
8906	float	RD	mean value, 14. harmonic current L3
8908	float	RD	mean value, 15. harmonic current L3
8910	float	RD	mean value, 16. harmonic current L3

Adresse	Format	RD/WR	Bemerkung
8912	float	RD	mean value, 17. harmonic current L3
8914	float	RD	mean value, 18. harmonic current L3
8916	float	RD	mean value, 19. harmonic current L3
8918	float	RD	mean value, 20. harmonic current L3
8920	float	RD	mean value, 21. harmonic current L3
8922	float	RD	mean value, 22. harmonic current L3
8924	float	RD	mean value, 23. harmonic current L3
8926	float	RD	mean value, 24. harmonic current L3
8928	float	RD	mean value, 25. harmonic current L3
8930	float	RD	mean value, 26. harmonic current L3
8932	float	RD	mean value, 27. harmonic current L3
8934	float	RD	mean value, 28. harmonic current L3
8936	float	RD	mean value, 29. harmonic current L3
8938	float	RD	mean value, 30. harmonic current L3
8940	float	RD	mean value, 31. harmonic current L3
8942	float	RD	mean value, 32. harmonic current L3
8944	float	RD	mean value, 33. harmonic current L3
8946	float	RD	mean value, 34. harmonic current L3
8948	float	RD	mean value, 35. harmonic current L3
8950	float	RD	mean value, 36. harmonic current L3
8952	float	RD	mean value, 37. harmonic current L3
8954	float	RD	mean value, 38. harmonic current L3
8956	float	RD	mean value, 39. harmonic current L3
8958	float	RD	mean value, 40. harmonic current L3



## Mittelwerte, Typ Short, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
12029	short (x10)	RD	mean value 1. harmonic voltage L1
12030	short (x10)	RD	mean value 3. harmonic voltage L1
12031	short (x10)	RD	mean value 5. harmonic voltage L1
12032	short (x10)	RD	mean value 7. harmonic voltage L1
12033	short (x10)	RD	mean value 9. harmonic voltage L1
12034	short (x10)	RD	mean value 11. harmonic voltage L1
12035	short (x10)	RD	mean value 13. harmonic voltage L1
12036	short (x10)	RD	mean value 15. harmonic voltage L1
12037	short (x10)	RD	mean value 17. harmonic voltage L1
12038	short (x10)	RD	mean value 19. harmonic voltage L1
12039	short (x10)	RD	mean value 21. harmonic voltage L1
12040	short (x10)	RD	mean value 23. harmonic voltage L1
12041	short (x10)	RD	mean value 25. harmonic voltage L1
12042	short (x10)	RD	mean value 1. harmonic voltage L2
12043	short (x10)	RD	mean value 3. harmonic voltage L2
12044	short (x10)	RD	mean value 5. harmonic voltage L2
12045	short (x10)	RD	mean value 7. harmonic voltage L2
12046	short (x10)	RD	mean value 9. harmonic voltage L2
12047	short (x10)	RD	mean value 11. harmonic voltage L2
12048	short (x10)	RD	mean value 13. harmonic voltage L2
12049	short (x10)	RD	mean value 15. harmonic voltage L2
12050	short (x10)	RD	mean value 17. harmonic voltage L2
12051	short (x10)	RD	mean value 19. harmonic voltage L2
12052	short (x10)	RD	mean value 21. harmonic voltage L2
12053	short (x10)	RD	mean value 23. harmonic voltage L2
12054	short (x10)	RD	mean value 25. harmonic voltage L2
12055	short (x10)	RD	mean value 1. harmonic voltage L3
12056	short (x10)	RD	mean value 3. harmonic voltage L3
12057	short (x10)	RD	mean value 5. harmonic voltage L3
12058	short (x10)	RD	mean value 7. harmonic voltage L3
12059	short (x10)	RD	mean value 9. harmonic voltage L3
12060	short (x10)	RD	mean value 11. harmonic voltage L3
12061	short (x10)	RD	mean value 13. harmonic voltage L3
12062	short (x10)	RD	mean value 15. harmonic voltage L3
12063	short (x10)	RD	mean value 17. harmonic voltage L3
12064	short (x10)	RD	mean value 19. harmonic voltage L3
12065	short (x10)	RD	mean value 21. harmonic voltage L3
12066	short (x10)	RD	mean value 23. harmonic voltage L3
12067	short (x10)	RD	mean value 25. harmonic voltage L3
12068	short (x1000)	RD	mean value 1. harmonic current L1
12069	short (x1000)	RD	mean value 3. harmonic current L1
12070	short (x1000)	RD	mean value 5. harmonic current L1
12071	short (x1000)	RD	mean value 7. harmonic current L1
12072	short (x1000)	RD	mean value 9. harmonic current L1
12073	short (x1000)	RD	mean value 11. harmonic current L1
12074	short (x1000)	RD	mean value 13. harmonic current L1
12075	short (x1000)	RD	mean value 15. harmonic current L1
12076	short (x1000)	RD	mean value 17. harmonic current L1
12077	short (x1000)	RD	mean value 19. harmonic current L1
12078	short (x1000)	RD	mean value 21. harmonic current L1
12079	short (x1000)	RD	mean value 23. harmonic current L1
12080	short (x1000)	RD	mean value 25. harmonic current L1
12081	short (x1000)	RD	mean value 1. harmonic current L2
12082	short (x1000)	RD	mean value 3. harmonic current L2
12083	short (x1000)	RD	mean value 5. harmonic current L2
12084	short (x1000)	RD	mean value 7. harmonic current L2
12085	short (x1000)	RD	mean value 9. harmonic current L2
12086	short (x1000)	RD	mean value 11. harmonic current L2
12087	short (x1000)	RD	mean value 13. harmonic current L2



Adresse	Format	RD/WR	Bemerkung
12088	short (x1000)	RD	mean value 15. harmonic current L2
12089	short (x1000)	RD	mean value 17. harmonic current L2
12090	short (x1000)	RD	mean value 19. harmonic current L2
12091	short (x1000)	RD	mean value 21. harmonic current L2
12092	short (x1000)	RD	mean value 23. harmonic current L2
12093	short (x1000)	RD	mean value 25. harmonic current L2
12094	short (x1000)	RD	mean value 1. harmonic current L3
12095	short (x1000)	RD	mean value 3. harmonic current L3
12096	short (x1000)	RD	mean value 5. harmonic current L3
12097	short (x1000)	RD	mean value 7. harmonic current L3
12098	short (x1000)	RD	mean value 9. harmonic current L3
12099	short (x1000)	RD	mean value 11. harmonic current L3
12100	short (x1000)	RD	mean value 13. harmonic current L3
12101	short (x1000)	RD	mean value 15. harmonic current L3
12102	short (x1000)	RD	mean value 17. harmonic current L3
12103	short (x1000)	RD	mean value 19. harmonic current L3
12104	short (x1000)	RD	mean value 21. harmonic current L3
12105	short (x1000)	RD	mean value 23. harmonic current L3
12106	short (x1000)	RD	mean value 25. harmonic current L3

## Maximalwerte, Typ Float, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
3058	float	RD	max. value, 1. harmonic voltage L1
3060	float	RD	max. value, 3. harmonic voltage L1
3062	float	RD	max. value, 5. harmonic voltage L1
3064	float	RD	max. value, 7. harmonic voltage L1
3066	float	RD	max. value, 9. harmonic voltage L1
3068	float	RD	max. value, 11. harmonic voltage L1
3070	float	RD	max. value, 13. harmonic voltage L1
3072	float	RD	max. value, 15. harmonic voltage L1
3074	float	RD	max. value, 17. harmonic voltage L1
3076	float	RD	max. value, 19. harmonic voltage L1
3078	float	RD	max. value, 21. harmonic voltage L1
3080	float	RD	max. value, 23. harmonic voltage L1
3082	float	RD	max. value, 25. harmonic voltage L1
3084	float	RD	max. value, 1. harmonic voltage L2
3086	float	RD	max. value, 3. harmonic voltage L2
3088	float	RD	max. value, 5. harmonic voltage L2
3090	float	RD	max. value, 7. harmonic voltage L2
3092	float	RD	max. value, 9. harmonic voltage L2
3094	float	RD	max. value, 11. harmonic voltage L2
3096	float	RD	max. value, 13. harmonic voltage L2
3098	float	RD	max. value, 15. harmonic voltage L2
3100	float	RD	max. value, 17. harmonic voltage L2
3102	float	RD	max. value, 19. harmonic voltage L2
3104	float	RD	max. value, 21. harmonic voltage L2
3106	float	RD	max. value, 23. harmonic voltage L2
3108	float	RD	max. value, 25. harmonic voltage L2
3110	float	RD	max. value, 1. harmonic voltage L3
3112	float	RD	max. value, 3. harmonic voltage L3
3114	float	RD	max. value, 5. harmonic voltage L3
3116	float	RD	max. value, 7. harmonic voltage L3
3118	float	RD	max. value, 9. harmonic voltage L3
3120	float	RD	max. value, 11. harmonic voltage L3
3122	float	RD	max. value, 13. harmonic voltage L3
3124	float	RD	max. value, 15. harmonic voltage L3
3126	float	RD	max. value, 17. harmonic voltage L3
3128	float	RD	max. value, 19. harmonic voltage L3
3130	float	RD	max. value, 21. harmonic voltage L3
3132	float	RD	max. value, 23. harmonic voltage L3
3134	float	RD	max. value, 25. harmonic voltage L3
3136	float	RD	max. value, 1. harmonic current L1
3138	float	RD	max. value, 3. harmonic current L1
3140	float	RD	max. value, 5. harmonic current L1
3142	float	RD	max. value, 7. harmonic current L1
3144	float	RD	max. value, 9. harmonic current L1
3146	float	RD	max. value, 11. harmonic current L1
3148	float	RD	max. value, 13. harmonic current L1
3150	float	RD	max. value, 15. harmonic current L1
3152	float	RD	max. value, 17. harmonic current L1
3154	float	RD	max. value, 19. harmonic current L1
3156	float	RD	max. value, 21. harmonic current L1
3158	float	RD	max. value, 23. harmonic current L1
3160	float	RD	max. value, 25. harmonic current L1
3162	float	RD	max. value, 1. harmonic current L2
3164	float	RD	max. value, 3. harmonic current L2
3166	float	RD	max. value, 5. harmonic current L2
3168	float	RD	max. value, 7. harmonic current L2
3170	float	RD	max. value, 9. harmonic current L2
3172	float	RD	max. value, 11. harmonic current L2
3174	float	RD	max. value, 13. harmonic current L2

Adresse	Format	RD/WR	Bemerkung
3176	float	RD	max. value, 15. harmonic current L2
3178	float	RD	max. value, 17. harmonic current L2
3180	float	RD	max. value, 19. harmonic current L2
3182	float	RD	max. value, 21. harmonic current L2
3184	float	RD	max. value, 23. harmonic current L2
3186	float	RD	max. value, 25. harmonic current L2
3188	float	RD	max. value, 1. harmonic current L3
3190	float	RD	max. value, 3. harmonic current L3
3192	float	RD	max. value, 5. harmonic current L3
3194	float	RD	max. value, 7. harmonic current L3
3196	float	RD	max. value, 9. harmonic current L3
3198	float	RD	max. value, 11. harmonic current L3
3200	float	RD	max. value, 13. harmonic current L3
3202	float	RD	max. value, 15. harmonic current L3
3204	float	RD	max. value, 17. harmonic current L3
3206	float	RD	max. value, 19. harmonic current L3
3208	float	RD	max. value, 21. harmonic current L3
3210	float	RD	max. value, 23. harmonic current L3
3212	float	RD	max. value, 25. harmonic current L3
8960	float	RD	max.value, 1. harmonic voltage L1
8962	float	RD	max.value, 2. harmonic voltage L1
8964	float	RD	max.value, 3. harmonic voltage L1
8966	float	RD	max.value, 4. harmonic voltage L1
8968	float	RD	max.value, 5. harmonic voltage L1
8970	float	RD	max.value, 6. harmonic voltage L1
8972	float	RD	max.value, 7. harmonic voltage L1
8974	float	RD	max.value, 8. harmonic voltage L1
8976	float	RD	max.value, 9. harmonic voltage L1
8978	float	RD	max.value, 10. harmonic voltage L1
8980	float	RD	max.value, 11. harmonic voltage L1
8982	float	RD	max.value, 12. harmonic voltage L1
8984	float	RD	max.value, 13. harmonic voltage L1
8986	float	RD	max.value, 14. harmonic voltage L1
8988	float	RD	max.value, 15. harmonic voltage L1
8990	float	RD	max.value, 16. harmonic voltage L1
8992	float	RD	max.value, 17. harmonic voltage L1
8994	float	RD	max.value, 18. harmonic voltage L1
8996	float	RD	max.value, 19. harmonic voltage L1
8998	float	RD	max.value, 20. harmonic voltage L1
9000	float	RD	max.value, 21. harmonic voltage L1
9002	float	RD	max.value, 22. harmonic voltage L1
9004	float	RD	max.value, 23. harmonic voltage L1
9006	float	RD	max.value, 24. harmonic voltage L1
9008	float	RD	max.value, 25. harmonic voltage L1
9010	float	RD	max.value, 26. harmonic voltage L1
9012	float	RD	max.value, 27. harmonic voltage L1
9014	float	RD	max.value, 28. harmonic voltage L1
9016	float	RD	max.value, 29. harmonic voltage L1
9018	float	RD	max.value, 30. harmonic voltage L1
9020	float	RD	max.value, 31. harmonic voltage L1
9022	float	RD	max.value, 32. harmonic voltage L1
9024	float	RD	max.value, 33. harmonic voltage L1
9026	float	RD	max.value, 34. harmonic voltage L1
9028	float	RD	max.value, 35. harmonic voltage L1
9030	float	RD	max.value, 36. harmonic voltage L1
9032	float	RD	max.value, 37. harmonic voltage L1
9034	float	RD	max.value, 38. harmonic voltage L1
9036	float	RD	max.value, 39. harmonic voltage L1

Adresse	Format	RD/WR	Bemerkung
9038	float	RD	max.value, 40. harmonic voltage L1
9040	float	RD	max.value, 1. harmonic voltage L2
9042	float	RD	max.value, 2. harmonic voltage L2
9044	float	RD	max.value, 3. harmonic voltage L2
9046	float	RD	max.value, 4. harmonic voltage L2
9048	float	RD	max.value, 5. harmonic voltage L2
9050	float	RD	max.value, 6. harmonic voltage L2
9052	float	RD	max.value, 7. harmonic voltage L2
9054	float	RD	max.value, 8. harmonic voltage L2
9056	float	RD	max.value, 9. harmonic voltage L2
9058	float	RD	max.value, 10. harmonic voltage L2
9060	float	RD	max.value, 11. harmonic voltage L2
9062	float	RD	max.value, 12. harmonic voltage L2
9064	float	RD	max.value, 13. harmonic voltage L2
9066	float	RD	max.value, 14. harmonic voltage L2
9068	float	RD	max.value, 15. harmonic voltage L2
9070	float	RD	max.value, 16. harmonic voltage L2
9072	float	RD	max.value, 17. harmonic voltage L2
9074	float	RD	max.value, 18. harmonic voltage L2
9076	float	RD	max.value, 19. harmonic voltage L2
9078	float	RD	max.value, 20. harmonic voltage L2
9080	float	RD	max.value, 21. harmonic voltage L2
9082	float	RD	max.value, 22. harmonic voltage L2
9084	float	RD	max.value, 23. harmonic voltage L2
9086	float	RD	max.value, 24. harmonic voltage L2
9088	float	RD	max.value, 25. harmonic voltage L2
9090	float	RD	max.value, 26. harmonic voltage L2
9092	float	RD	max.value, 27. harmonic voltage L2
9094	float	RD	max.value, 28. harmonic voltage L2
9096	float	RD	max.value, 29. harmonic voltage L2
9098	float	RD	max.value, 30. harmonic voltage L2
9100	float	RD	max.value, 31. harmonic voltage L2
9102	float	RD	max.value, 32. harmonic voltage L2
9104	float	RD	max.value, 33. harmonic voltage L2
9106	float	RD	max.value, 34. harmonic voltage L2
9108	float	RD	max.value, 35. harmonic voltage L2
9110	float	RD	max.value, 36. harmonic voltage L2
9112	float	RD	max.value, 37. harmonic voltage L2
9114	float	RD	max.value, 38. harmonic voltage L2
9116	float	RD	max.value, 39. harmonic voltage L2
9118	float	RD	max.value, 40. harmonic voltage L2
9120	float	RD	max.value, 1. harmonic voltage L3
9122	float	RD	max.value, 2. harmonic voltage L3
9124	float	RD	max.value, 3. harmonic voltage L3
9126	float	RD	max.value, 4. harmonic voltage L3
9128	float	RD	max.value, 5. harmonic voltage L3
9130	float	RD	max.value, 6. harmonic voltage L3
9132	float	RD	max.value, 7. harmonic voltage L3
9134	float	RD	max.value, 8. harmonic voltage L3
9136	float	RD	max.value, 9. harmonic voltage L3
9138	float	RD	max.value, 10. harmonic voltage L3
9140	float	RD	max.value, 11. harmonic voltage L3
9142	float	RD	max.value, 12. harmonic voltage L3
9144	float	RD	max.value, 13. harmonic voltage L3
9146	float	RD	max.value, 14. harmonic voltage L3
9148	float	RD	max.value, 15. harmonic voltage L3
9150	float	RD	max.value, 16. harmonic voltage L3
9152	float	RD	max.value, 17. harmonic voltage L3
9154	float	RD	max.value, 18. harmonic voltage L3

Adresse	Format	RD/WR	Bemerkung
9156	float	RD	max.value, 19. harmonic voltage L3
9158	float	RD	max.value, 20. harmonic voltage L3
9160	float	RD	max.value, 21. harmonic voltage L3
9162	float	RD	max.value, 22. harmonic voltage L3
9164	float	RD	max.value, 23. harmonic voltage L3
9166	float	RD	max.value, 24. harmonic voltage L3
9168	float	RD	max.value, 25. harmonic voltage L3
9170	float	RD	max.value, 26. harmonic voltage L3
9172	float	RD	max.value, 27. harmonic voltage L3
9174	float	RD	max.value, 28. harmonic voltage L3
9176	float	RD	max.value, 29. harmonic voltage L3
9178	float	RD	max.value, 30. harmonic voltage L3
9180	float	RD	max.value, 31. harmonic voltage L3
9182	float	RD	max.value, 32. harmonic voltage L3
9184	float	RD	max.value, 33. harmonic voltage L3
9186	float	RD	max.value, 34. harmonic voltage L3
9188	float	RD	max.value, 35. harmonic voltage L3
9190	float	RD	max.value, 36. harmonic voltage L3
9192	float	RD	max.value, 37. harmonic voltage L3
9194	float	RD	max.value, 38. harmonic voltage L3
9196	float	RD	max.value, 39. harmonic voltage L3
9198	float	RD	max.value, 40. harmonic voltage L3
9200	float	RD	max.value, 1. harmonic current L1
9202	float	RD	max.value, 2. harmonic current L1
9204	float	RD	max.value, 3. harmonic current L1
9206	float	RD	max.value, 4. harmonic current L1
9208	float	RD	max.value, 5. harmonic current L1
9210	float	RD	max.value, 6. harmonic current L1
9212	float	RD	max.value, 7. harmonic current L1
9214	float	RD	max.value, 8. harmonic current L1
9216	float	RD	max.value, 9. harmonic current L1
9218	float	RD	max.value, 10. harmonic current L1
9220	float	RD	max.value, 11. harmonic current L1
9222	float	RD	max.value, 12. harmonic current L1
9224	float	RD	max.value, 13. harmonic current L1
9226	float	RD	max.value, 14. harmonic current L1
9228	float	RD	max.value, 15. harmonic current L1
9230	float	RD	max.value, 16. harmonic current L1
9232	float	RD	max.value, 17. harmonic current L1
9234	float	RD	max.value, 18. harmonic current L1
9236	float	RD	max.value, 19. harmonic current L1
9238	float	RD	max.value, 20. harmonic current L1
9240	float	RD	max.value, 21. harmonic current L1
9242	float	RD	max.value, 22. harmonic current L1
9244	float	RD	max.value, 23. harmonic current L1
9246	float	RD	max.value, 24. harmonic current L1
9248	float	RD	max.value, 25. harmonic current L1
9250	float	RD	max.value, 26. harmonic current L1
9252	float	RD	max.value, 27. harmonic current L1
9254	float	RD	max.value, 28. harmonic current L1
9256	float	RD	max.value, 29. harmonic current L1
9258	float	RD	max.value, 30. harmonic current L1
9260	float	RD	max.value, 31. harmonic current L1
9262	float	RD	max.value, 32. harmonic current L1
9264	float	RD	max.value, 33. harmonic current L1
9266	float	RD	max.value, 34. harmonic current L1
9268	float	RD	max.value, 35. harmonic current L1
9270	float	RD	max.value, 36. harmonic current L1
9272	float	RD	max.value, 37. harmonic current L1

Adresse	Format	RD/WR	Bemerkung
9274	float	RD	max.value, 38. harmonic current L1
9276	float	RD	max.value, 39. harmonic current L1
9278	float	RD	max.value, 40. harmonic current L1
9280	float	RD	max.value, 1. harmonic current L2
9282	float	RD	max.value, 2. harmonic current L2
9284	float	RD	max.value, 3. harmonic current L2
9286	float	RD	max.value, 4. harmonic current L2
9288	float	RD	max.value, 5. harmonic current L2
9290	float	RD	max.value, 6. harmonic current L2
9292	float	RD	max.value, 7. harmonic current L2
9294	float	RD	max.value, 8. harmonic current L2
9296	float	RD	max.value, 9. harmonic current L2
9298	float	RD	max.value, 10. harmonic current L2
9300	float	RD	max.value, 11. harmonic current L2
9302	float	RD	max.value, 12. harmonic current L2
9304	float	RD	max.value, 13. harmonic current L2
9306	float	RD	max.value, 14. harmonic current L2
9308	float	RD	max.value, 15. harmonic current L2
9310	float	RD	max.value, 16. harmonic current L2
9312	float	RD	max.value, 17. harmonic current L2
9314	float	RD	max.value, 18. harmonic current L2
9316	float	RD	max.value, 19. harmonic current L2
9318	float	RD	max.value, 20. harmonic current L2
9320	float	RD	max.value, 21. harmonic current L2
9322	float	RD	max.value, 22. harmonic current L2
9324	float	RD	max.value, 23. harmonic current L2
9326	float	RD	max.value, 24. harmonic current L2
9328	float	RD	max.value, 25. harmonic current L2
9330	float	RD	max.value, 26. harmonic current L2
9332	float	RD	max.value, 27. harmonic current L2
9334	float	RD	max.value, 28. harmonic current L2
9336	float	RD	max.value, 29. harmonic current L2
9338	float	RD	max.value, 30. harmonic current L2
9340	float	RD	max.value, 31. harmonic current L2
9342	float	RD	max.value, 32. harmonic current L2
9344	float	RD	max.value, 33. harmonic current L2
9346	float	RD	max.value, 34. harmonic current L2
9348	float	RD	max.value, 35. harmonic current L2
9350	float	RD	max.value, 36. harmonic current L2
9352	float	RD	max.value, 37. harmonic current L2
9354	float	RD	max.value, 38. harmonic current L2
9356	float	RD	max.value, 39. harmonic current L2
9358	float	RD	max.value, 40. harmonic current L2
9360	float	RD	max.value, 1. harmonic current L3
9362	float	RD	max.value, 2. harmonic current L3
9364	float	RD	max.value, 3. harmonic current L3
9366	float	RD	max.value, 4. harmonic current L3
9368	float	RD	max.value, 5. harmonic current L3
9370	float	RD	max.value, 6. harmonic current L3
9372	float	RD	max.value, 7. harmonic current L3
9374	float	RD	max.value, 8. harmonic current L3
9376	float	RD	max.value, 9. harmonic current L3
9378	float	RD	max.value, 10. harmonic current L3
9380	float	RD	max.value, 11. harmonic current L3
9382	float	RD	max.value, 12. harmonic current L3
9384	float	RD	max.value, 13. harmonic current L3
9386	float	RD	max.value, 14. harmonic current L3
9388	float	RD	max.value, 15. harmonic current L3
9390	float	RD	max.value, 16. harmonic current L3

Adresse	Format	RD/WR	Bemerkung
9392	float	RD	max.value, 17. harmonic current L3
9394	float	RD	max.value, 18. harmonic current L3
9396	float	RD	max.value, 19. harmonic current L3
9398	float	RD	max.value, 20. harmonic current L3
9400	float	RD	max.value, 21. harmonic current L3
9402	float	RD	max.value, 22. harmonic current L3
9404	float	RD	max.value, 23. harmonic current L3
9406	float	RD	max.value, 24. harmonic current L3
9408	float	RD	max.value, 25. harmonic current L3
9410	float	RD	max.value, 26. harmonic current L3
9412	float	RD	max.value, 27. harmonic current L3
9414	float	RD	max.value, 28. harmonic current L3
9416	float	RD	max.value, 29. harmonic current L3
9418	float	RD	max.value, 30. harmonic current L3
9420	float	RD	max.value, 31. harmonic current L3
9422	float	RD	max.value, 32. harmonic current L3
9424	float	RD	max.value, 33. harmonic current L3
9426	float	RD	max.value, 34. harmonic current L3
9428	float	RD	max.value, 35. harmonic current L3
9430	float	RD	max.value, 36. harmonic current L3
9432	float	RD	max.value, 37. harmonic current L3
9434	float	RD	max.value, 38. harmonic current L3
9436	float	RD	max.value, 39. harmonic current L3
9438	float	RD	max.value, 40. harmonic current L3



## Maximalwerte, Typ Short, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
13029	short (x10)	RD	max. value, 1. harmonic voltage L1
13030	short (x10)	RD	max. value, 3. harmonic voltage L1
13031	short (x10)	RD	max. value, 5. harmonic voltage L1
13032	short (x10)	RD	max. value, 7. harmonic voltage L1
13033	short (x10)	RD	max. value, 9. harmonic voltage L1
13034	short (x10)	RD	max. value, 11. harmonic voltage L1
13035	short (x10)	RD	max. value, 13. harmonic voltage L1
13036	short (x10)	RD	max. value, 15. harmonic voltage L1
13037	short (x10)	RD	max. value, 17. harmonic voltage L1
13038	short (x10)	RD	max. value, 19. harmonic voltage L1
13039	short (x10)	RD	max. value, 21. harmonic voltage L1
13040	short (x10)	RD	max. value, 23. harmonic voltage L1
13041	short (x10)	RD	max. value, 25. harmonic voltage L1
13042	short (x10)	RD	max. value, 1. harmonic voltage L2
13043	short (x10)	RD	max. value, 3. harmonic voltage L2
13044	short (x10)	RD	max. value, 5. harmonic voltage L2
13045	short (x10)	RD	max. value, 7. harmonic voltage L2
13046	short (x10)	RD	max. value, 9. harmonic voltage L2
13047	short (x10)	RD	max. value, 11. harmonic voltage L2
13048	short (x10)	RD	max. value, 13. harmonic voltage L2
13049	short (x10)	RD	max. value, 15. harmonic voltage L2
13050	short (x10)	RD	max. value, 17. harmonic voltage L2
13051	short (x10)	RD	max. value, 19. harmonic voltage L2
13052	short (x10)	RD	max. value, 21. harmonic voltage L2
13053	short (x10)	RD	max. value, 23. harmonic voltage L2
13054	short (x10)	RD	max. value, 25. harmonic voltage L2
13055	short (x10)	RD	max. value, 1. harmonic voltage L3
13056	short (x10)	RD	max. value, 3. harmonic voltage L3
13057	short (x10)	RD	max. value, 5. harmonic voltage L3
13058	short (x10)	RD	max. value, 7. harmonic voltage L3
13059	short (x10)	RD	max. value, 9. harmonic voltage L3
13060	short (x10)	RD	max. value, 11. harmonic voltage L3
13061	short (x10)	RD	max. value, 13. harmonic voltage L3
13062	short (x10)	RD	max. value, 15. harmonic voltage L3
13063	short (x10)	RD	max. value, 17. harmonic voltage L3
13064	short (x10)	RD	max. value, 19. harmonic voltage L3
13065	short (x10)	RD	max. value, 21. harmonic voltage L3
13066	short (x10)	RD	max. value, 23. harmonic voltage L3
13067	short (x10)	RD	max. value, 25. harmonic voltage L3
13068	short (x1000)	RD	max. value, 1. harmonic current L1
13069	short (x1000)	RD	max. value, 3. harmonic current L1
13070	short (x1000)	RD	max. value, 5. harmonic current L1
13071	short (x1000)	RD	max. value, 7. harmonic current L1
13072	short (x1000)	RD	max. value, 9. harmonic current L1
13073	short (x1000)	RD	max. value, 11. harmonic current L1
13074	short (x1000)	RD	max. value, 13. harmonic current L1
13075	short (x1000)	RD	max. value, 15. harmonic current L1
13076	short (x1000)	RD	max. value, 17. harmonic current L1
13077	short (x1000)	RD	max. value, 19. harmonic current L1
13078	short (x1000)	RD	max. value, 21. harmonic current L1
13079	short (x1000)	RD	max. value, 23. harmonic current L1
13080	short (x1000)	RD	max. value, 25. harmonic current L1
13081	short (x1000)	RD	max. value, 1. harmonic current L2
13082	short (x1000)	RD	max. value, 3. harmonic current L2
13083	short (x1000)	RD	max. value, 5. harmonic current L2
13084	short (x1000)	RD	max. value, 7. harmonic current L2
13085	short (x1000)	RD	max. value, 9. harmonic current L2
13086	short (x1000)	RD	max. value, 11. harmonic current L2
13087	short (x1000)	RD	max. value, 13. harmonic current L2



Adresse	Format	RD/WR	Bemerkung
13088	short (x1000)	RD	max. value, 15. harmonic current L2
13089	short (x1000)	RD	max. value, 17. harmonic current L2
13090	short (x1000)	RD	max. value, 19. harmonic current L2
13091	short (x1000)	RD	max. value, 21. harmonic current L2
13092	short (x1000)	RD	max. value, 23. harmonic current L2
13093	short (x1000)	RD	max. value, 25. harmonic current L2
13094	short (x1000)	RD	max. value, 1. harmonic current L3
13095	short (x1000)	RD	max. value, 3. harmonic current L3
13096	short (x1000)	RD	max. value, 5. harmonic current L3
13097	short (x1000)	RD	max. value, 7. harmonic current L3
13098	short (x1000)	RD	max. value, 9. harmonic current L3
13099	short (x1000)	RD	max. value, 11. harmonic current L3
13100	short (x1000)	RD	max. value, 13. harmonic current L3
13101	short (x1000)	RD	max. value, 15. harmonic current L3
13102	short (x1000)	RD	max. value, 17. harmonic current L3
13103	short (x1000)	RD	max. value, 19. harmonic current L3
13104	short (x1000)	RD	max. value, 21. harmonic current L3
13105	short (x1000)	RD	max. value, 23. harmonic current L3
13106	short (x1000)	RD	max. value, 25. harmonic current L3

## Minimalwerte, Typ Float, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
4020	float	RD	min. value, 1. harmonic voltage L1
4022	float	RD	min. value, 3. harmonic voltage L1
4024	float	RD	min. value, 5. harmonic voltage L1
4026	float	RD	min. value, 7. harmonic voltage L1
4028	float	RD	min. value, 9. harmonic voltage L1
4030	float	RD	min. value, 11. harmonic voltage L1
4032	float	RD	min. value, 13. harmonic voltage L1
4034	float	RD	min. value, 15. harmonic voltage L1
4036	float	RD	min. value, 17. harmonic voltage L1
4038	float	RD	min. value, 19. harmonic voltage L1
4040	float	RD	min. value, 21. harmonic voltage L1
4042	float	RD	min. value, 23. harmonic voltage L1
4044	float	RD	min. value, 25. harmonic voltage L1
4046	float	RD	min. value, 1. harmonic voltage L2
4048	float	RD	min. value, 3. harmonic voltage L2
4050	float	RD	min. value, 5. harmonic voltage L2
4052	float	RD	min. value, 7. harmonic voltage L2
4054	float	RD	min. value, 9. harmonic voltage L2
4056	float	RD	min. value, 11. harmonic voltage L2
4058	float	RD	min. value, 13. harmonic voltage L2
4060	float	RD	min. value, 15. harmonic voltage L2
4062	float	RD	min. value, 17. harmonic voltage L2
4064	float	RD	min. value, 19. harmonic voltage L2
4066	float	RD	min. value, 21. harmonic voltage L2
4068	float	RD	min. value, 23. harmonic voltage L2
4070	float	RD	min. value, 25. harmonic voltage L2
4072	float	RD	min. value, 1. harmonic voltage L3
4074	float	RD	min. value, 3. harmonic voltage L3
4076	float	RD	min. value, 5. harmonic voltage L3
4078	float	RD	min. value, 7. harmonic voltage L3
4080	float	RD	min. value, 9. harmonic voltage L3
4082	float	RD	min. value, 11. harmonic voltage L3
4084	float	RD	min. value, 13. harmonic voltage L3
4086	float	RD	min. value, 15. harmonic voltage L3
4088	float	RD	min. value, 17. harmonic voltage L3
4090	float	RD	min. value, 19. harmonic voltage L3
4092	float	RD	min. value, 21. harmonic voltage L3
4094	float	RD	min. value, 23. harmonic voltage L3
4096	float	RD	min. value, 25. harmonic voltage L3
9920	float	RD	min. value, 1. harmonic voltage L1
9922	float	RD	min. value, 2. harmonic voltage L1
9924	float	RD	min. value, 3. harmonic voltage L1
9926	float	RD	min. value, 4. harmonic voltage L1
9928	float	RD	min. value, 5. harmonic voltage L1
9930	float	RD	min. value, 6. harmonic voltage L1
9932	float	RD	min. value, 7. harmonic voltage L1
9934	float	RD	min. value, 8. harmonic voltage L1
9936	float	RD	min. value, 9. harmonic voltage L1
9938	float	RD	min. value, 10. harmonic voltage L1
9940	float	RD	min. value, 11. harmonic voltage L1
9942	float	RD	min. value, 12. harmonic voltage L1
9944	float	RD	min. value, 13. harmonic voltage L1
9946	float	RD	min. value, 14. harmonic voltage L1
9948	float	RD	min. value, 15. harmonic voltage L1
9950	float	RD	min. value, 16. harmonic voltage L1
9952	float	RD	min. value, 17. harmonic voltage L1
9954	float	RD	min. value, 18. harmonic voltage L1
9956	float	RD	min. value, 19. harmonic voltage L1

Adresse	Format	RD/WR	Bemerkung
9958	float	RD	min. value, 20. harmonic voltage L1
9960	float	RD	min. value, 21. harmonic voltage L1
9962	float	RD	min. value, 22. harmonic voltage L1
9964	float	RD	min. value, 23. harmonic voltage L1
9966	float	RD	min. value, 24. harmonic voltage L1
9968	float	RD	min. value, 25. harmonic voltage L1
9970	float	RD	min. value, 26. harmonic voltage L1
9972	float	RD	min. value, 27. harmonic voltage L1
9974	float	RD	min. value, 28. harmonic voltage L1
9976	float	RD	min. value, 29. harmonic voltage L1
9978	float	RD	min. value, 30. harmonic voltage L1
9980	float	RD	min. value, 31. harmonic voltage L1
9982	float	RD	min. value, 32. harmonic voltage L1
9984	float	RD	min. value, 33. harmonic voltage L1
9986	float	RD	min. value, 34. harmonic voltage L1
9988	float	RD	min. value, 35. harmonic voltage L1
9990	float	RD	min. value, 36. harmonic voltage L1
9992	float	RD	min. value, 37. harmonic voltage L1
9994	float	RD	min. value, 38. harmonic voltage L1
9996	float	RD	min. value, 39. harmonic voltage L1
9998	float	RD	min. value, 40. harmonic voltage L1
10000	float	RD	min. value, 1. harmonic voltage L2
10002	float	RD	min. value, 2. harmonic voltage L2
10004	float	RD	min. value, 3. harmonic voltage L2
10006	float	RD	min. value, 4. harmonic voltage L2
10008	float	RD	min. value, 5. harmonic voltage L2
10010	float	RD	min. value, 6. harmonic voltage L2
10012	float	RD	min. value, 7. harmonic voltage L2
10014	float	RD	min. value, 8. harmonic voltage L2
10016	float	RD	min. value, 9. harmonic voltage L2
10018	float	RD	min. value, 10. harmonic voltage L2
10020	float	RD	min. value, 11. harmonic voltage L2
10022	float	RD	min. value, 12. harmonic voltage L2
10024	float	RD	min. value, 13. harmonic voltage L2
10026	float	RD	min. value, 14. harmonic voltage L2
10028	float	RD	min. value, 15. harmonic voltage L2
10030	float	RD	min. value, 16. harmonic voltage L2
10032	float	RD	min. value, 17. harmonic voltage L2
10034	float	RD	min. value, 18. harmonic voltage L2
10036	float	RD	min. value, 19. harmonic voltage L2
10038	float	RD	min. value, 20. harmonic voltage L2
10040	float	RD	min. value, 21. harmonic voltage L2
10042	float	RD	min. value, 22. harmonic voltage L2
10044	float	RD	min. value, 23. harmonic voltage L2
10046	float	RD	min. value, 24. harmonic voltage L2
10048	float	RD	min. value, 25. harmonic voltage L2
10050	float	RD	min. value, 26. harmonic voltage L2
10052	float	RD	min. value, 27. harmonic voltage L2
10054	float	RD	min. value, 28. harmonic voltage L2
10056	float	RD	min. value, 29. harmonic voltage L2
10058	float	RD	min. value, 30. harmonic voltage L2
10060	float	RD	min. value, 31. harmonic voltage L2
10062	float	RD	min. value, 32. harmonic voltage L2
10064	float	RD	min. value, 33. harmonic voltage L2
10066	float	RD	min. value, 34. harmonic voltage L2
10068	float	RD	min. value, 35. harmonic voltage L2
10070	float	RD	min. value, 36. harmonic voltage L2
10072	float	RD	min. value, 37. harmonic voltage L2
10074	float	RD	min. value, 38. harmonic voltage L2

Adresse	Format	RD/WR	Bemerkung
10076	float	RD	min. value, 39. harmonic voltage L2
10078	float	RD	min. value, 40. harmonic voltage L2
10080	float	RD	min. value, 1. harmonic voltage L3
10082	float	RD	min. value, 2. harmonic voltage L3
10084	float	RD	min. value, 3. harmonic voltage L3
10086	float	RD	min. value, 4. harmonic voltage L3
10088	float	RD	min. value, 5. harmonic voltage L3
10090	float	RD	min. value, 6. harmonic voltage L3
10092	float	RD	min. value, 7. harmonic voltage L3
10094	float	RD	min. value, 8. harmonic voltage L3
10096	float	RD	min. value, 9. harmonic voltage L3
10098	float	RD	min. value, 10. harmonic voltage L3
10100	float	RD	min. value, 11. harmonic voltage L3
10102	float	RD	min. value, 12. harmonic voltage L3
10104	float	RD	min. value, 13. harmonic voltage L3
10106	float	RD	min. value, 14. harmonic voltage L3
10108	float	RD	min. value, 15. harmonic voltage L3
10110	float	RD	min. value, 16. harmonic voltage L3
10112	float	RD	min. value, 17. harmonic voltage L3
10114	float	RD	min. value, 18. harmonic voltage L3
10116	float	RD	min. value, 19. harmonic voltage L3
10118	float	RD	min. value, 20. harmonic voltage L3
10120	float	RD	min. value, 21. harmonic voltage L3
10122	float	RD	min. value, 22. harmonic voltage L3
10124	float	RD	min. value, 23. harmonic voltage L3
10126	float	RD	min. value, 24. harmonic voltage L3
10128	float	RD	min. value, 25. harmonic voltage L3
10130	float	RD	min. value, 26. harmonic voltage L3
10132	float	RD	min. value, 27. harmonic voltage L3
10134	float	RD	min. value, 28. harmonic voltage L3
10136	float	RD	min. value, 29. harmonic voltage L3
10138	float	RD	min. value, 30. harmonic voltage L3
10140	float	RD	min. value, 31. harmonic voltage L3
10142	float	RD	min. value, 32. harmonic voltage L3
10144	float	RD	min. value, 33. harmonic voltage L3
10146	float	RD	min. value, 34. harmonic voltage L3
10148	float	RD	min. value, 35. harmonic voltage L3
10150	float	RD	min. value, 36. harmonic voltage L3
10152	float	RD	min. value, 37. harmonic voltage L3
10154	float	RD	min. value, 38. harmonic voltage L3
10156	float	RD	min. value, 39. harmonic voltage L3
10158	float	RD	min. value, 40. harmonic voltage L3

## Minimalwerte, Typ Short, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
14010	short (x10)	RD	min. value, 1. harmonic voltage L1
14011	short (x10)	RD	min. value, 3. harmonic voltage L1
14012	short (x10)	RD	min. value, 5. harmonic voltage L1
14013	short (x10)	RD	min. value, 7. harmonic voltage L1
14014	short (x10)	RD	min. value, 9. harmonic voltage L1
14015	short (x10)	RD	min. value, 11. harmonic voltage L1
14016	short (x10)	RD	min. value, 13. harmonic voltage L1
14017	short (x10)	RD	min. value, 15. harmonic voltage L1
14018	short (x10)	RD	min. value, 17. harmonic voltage L1
14019	short (x10)	RD	min. value, 19. harmonic voltage L1
14020	short (x10)	RD	min. value, 21. harmonic voltage L1
14021	short (x10)	RD	min. value, 23. harmonic voltage L1
14022	short (x10)	RD	min. value, 25. harmonic voltage L1
14023	short (x10)	RD	min. value, 1. harmonic voltage L2
14024	short (x10)	RD	min. value, 3. harmonic voltage L2
14025	short (x10)	RD	min. value, 5. harmonic voltage L2
14026	short (x10)	RD	min. value, 7. harmonic voltage L2
14027	short (x10)	RD	min. value, 9. harmonic voltage L2
14028	short (x10)	RD	min. value, 11. harmonic voltage L2
14029	short (x10)	RD	min. value, 13. harmonic voltage L2
14030	short (x10)	RD	min. value, 15. harmonic voltage L2
14031	short (x10)	RD	min. value, 17. harmonic voltage L2
14032	short (x10)	RD	min. value, 19. harmonic voltage L2
14033	short (x10)	RD	min. value, 21. harmonic voltage L2
14034	short (x10)	RD	min. value, 23. harmonic voltage L2
14035	short (x10)	RD	min. value, 25. harmonic voltage L2
14036	short (x10)	RD	min. value, 1. harmonic voltage L3
14037	short (x10)	RD	min. value, 3. harmonic voltage L3
14038	short (x10)	RD	min. value, 5. harmonic voltage L3
14039	short (x10)	RD	min. value, 7. harmonic voltage L3
14040	short (x10)	RD	min. value, 9. harmonic voltage L3
14041	short (x10)	RD	min. value, 11. harmonic voltage L3
14042	short (x10)	RD	min. value, 13. harmonic voltage L3
14043	short (x10)	RD	min. value, 15. harmonic voltage L3
14044	short (x10)	RD	min. value, 17. harmonic voltage L3
14045	short (x10)	RD	min. value, 19. harmonic voltage L3
14046	short (x10)	RD	min. value, 21. harmonic voltage L3
14047	short (x10)	RD	min. value, 23. harmonic voltage L3
14048	short (x10)	RD	min. value, 25. harmonic voltage L3

## Minimalwerte, Zeitstempel, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
4220	int	RD	point in time [UTC], min. value, 1. harmonic voltage L1
4222	int	RD	point in time [UTC], min. value, 3. harmonic voltage L1
4224	int	RD	point in time [UTC], min. value, 5. harmonic voltage L1
4226	int	RD	point in time [UTC], min. value, 7. harmonic voltage L1
4228	int	RD	point in time [UTC], min. value, 9. harmonic voltage L1
4230	int	RD	point in time [UTC], min. value, 11. harmonic voltage L1
4232	int	RD	point in time [UTC], min. value, 13. harmonic voltage L1
4234	int	RD	point in time [UTC], min. value, 15. harmonic voltage L1
4236	int	RD	point in time [UTC], min. value, 17. harmonic voltage L1
4238	int	RD	point in time [UTC], min. value, 19. harmonic voltage L1
4240	int	RD	point in time [UTC], min. value, 21. harmonic voltage L1
4242	int	RD	point in time [UTC], min. value, 23. harmonic voltage L1
4244	int	RD	point in time [UTC], min. value, 25. harmonic voltage L1
4246	int	RD	point in time [UTC], min. value, 1. harmonic voltage L2
4248	int	RD	point in time [UTC], min. value, 3. harmonic voltage L2
4250	int	RD	point in time [UTC], min. value, 5. harmonic voltage L2
4252	int	RD	point in time [UTC], min. value, 7. harmonic voltage L2
4254	int	RD	point in time [UTC], min. value, 9. harmonic voltage L2
4256	int	RD	point in time [UTC], min. value, 11. harmonic voltage L2
4258	int	RD	point in time [UTC], min. value, 13. harmonic voltage L2
4260	int	RD	point in time [UTC], min. value, 15. harmonic voltage L2
4262	int	RD	point in time [UTC], min. value, 17. harmonic voltage L2
4264	int	RD	point in time [UTC], min. value, 19. harmonic voltage L2
4266	int	RD	point in time [UTC], min. value, 21. harmonic voltage L2
4268	int	RD	point in time [UTC], min. value, 23. harmonic voltage L2
4270	int	RD	point in time [UTC], min. value, 25. harmonic voltage L2
4272	int	RD	point in time [UTC], min. value, 1. harmonic voltage L3
4274	int	RD	point in time [UTC], min. value, 3. harmonic voltage L3
4276	int	RD	point in time [UTC], min. value, 5. harmonic voltage L3
4278	int	RD	point in time [UTC], min. value, 7. harmonic voltage L3
4280	int	RD	point in time [UTC], min. value, 9. harmonic voltage L3
4282	int	RD	point in time [UTC], min. value, 11. harmonic voltage L3
4284	int	RD	point in time [UTC], min. value, 13. harmonic voltage L3
4286	int	RD	point in time [UTC], min. value, 15. harmonic voltage L3
4288	int	RD	point in time [UTC], min. value, 17. harmonic voltage L3
4290	int	RD	point in time [UTC], min. value, 19. harmonic voltage L3
4292	int	RD	point in time [UTC], min. value, 21. harmonic voltage L3
4294	int	RD	point in time [UTC], min. value, 23. harmonic voltage L3
4296	int	RD	point in time [UTC], min. value, 25. harmonic voltage L3
10160	float	RD	point in time [UTC], min. value, 1. harmonic voltage L1
10162	float	RD	point in time [UTC], min. value, 2. harmonic voltage L1
10164	float	RD	point in time [UTC], min. value, 3. harmonic voltage L1
10166	float	RD	point in time [UTC], min. value, 4. harmonic voltage L1
10168	float	RD	point in time [UTC], min. value, 5. harmonic voltage L1
10170	float	RD	point in time [UTC], min. value, 6. harmonic voltage L1
10172	float	RD	point in time [UTC], min. value, 7. harmonic voltage L1
10174	float	RD	point in time [UTC], min. value, 8. harmonic voltage L1
10176	float	RD	point in time [UTC], min. value, 9. harmonic voltage L1
10178	float	RD	point in time [UTC], min. value, 10. harmonic voltage L1
10180	float	RD	point in time [UTC], min. value, 11. harmonic voltage L1
10182	float	RD	point in time [UTC], min. value, 12. harmonic voltage L1
10184	float	RD	point in time [UTC], min. value, 13. harmonic voltage L1
10186	float	RD	point in time [UTC], min. value, 14. harmonic voltage L1
10188	float	RD	point in time [UTC], min. value, 15. harmonic voltage L1
10190	float	RD	point in time [UTC], min. value, 16. harmonic voltage L1
10192	float	RD	point in time [UTC], min. value, 17. harmonic voltage L1
10194	float	RD	point in time [UTC], min. value, 18. harmonic voltage L1
10196	float	RD	point in time [UTC], min. value, 19. harmonic voltage L1





Adresse	Format	RD/WR	Bemerkung
10316	float	RD	point in time [UTC], min. value, 39. harmonic voltage L2
10318	float	RD	point in time [UTC], min. value, 40. harmonic voltage L2
10320	float	RD	point in time [UTC], min. value, 1. harmonic voltage L3
10322	float	RD	point in time [UTC], min. value, 2. harmonic voltage L3
10324	float	RD	point in time [UTC], min. value, 3. harmonic voltage L3
10326	float	RD	point in time [UTC], min. value, 4. harmonic voltage L3
10328	float	RD	point in time [UTC], min. value, 5. harmonic voltage L3
10330	float	RD	point in time [UTC], min. value, 6. harmonic voltage L3
10332	float	RD	point in time [UTC], min. value, 7. harmonic voltage L3
10334	float	RD	point in time [UTC], min. value, 8. harmonic voltage L3
10336	float	RD	point in time [UTC], min. value, 9. harmonic voltage L3
10338	float	RD	point in time [UTC], min. value, 10. harmonic voltage L3
10340	float	RD	point in time [UTC], min. value, 11. harmonic voltage L3
10342	float	RD	point in time [UTC], min. value, 12. harmonic voltage L3
10344	float	RD	point in time [UTC], min. value, 13. harmonic voltage L3
10346	float	RD	point in time [UTC], min. value, 14. harmonic voltage L3
10348	float	RD	point in time [UTC], min. value, 15. harmonic voltage L3
10350	float	RD	point in time [UTC], min. value, 16. harmonic voltage L3
10352	float	RD	point in time [UTC], min. value, 17. harmonic voltage L3
10354	float	RD	point in time [UTC], min. value, 18. harmonic voltage L3
10356	float	RD	point in time [UTC], min. value, 19. harmonic voltage L3
10358	float	RD	point in time [UTC], min. value, 20. harmonic voltage L3
10360	float	RD	point in time [UTC], min. value, 21. harmonic voltage L3
10362	float	RD	point in time [UTC], min. value, 22. harmonic voltage L3
10364	float	RD	point in time [UTC], min. value, 23. harmonic voltage L3
10366	float	RD	point in time [UTC], min. value, 24. harmonic voltage L3
10368	float	RD	point in time [UTC], min. value, 25. harmonic voltage L3
10370	float	RD	point in time [UTC], min. value, 26. harmonic voltage L3
10372	float	RD	point in time [UTC], min. value, 27. harmonic voltage L3
10374	float	RD	point in time [UTC], min. value, 28. harmonic voltage L3
10376	float	RD	point in time [UTC], min. value, 29. harmonic voltage L3
10378	float	RD	point in time [UTC], min. value, 30. harmonic voltage L3
10380	float	RD	point in time [UTC], min. value, 31. harmonic voltage L3
10382	float	RD	point in time [UTC], min. value, 32. harmonic voltage L3
10384	float	RD	point in time [UTC], min. value, 33. harmonic voltage L3
10386	float	RD	point in time [UTC], min. value, 34. harmonic voltage L3
10388	float	RD	point in time [UTC], min. value, 35. harmonic voltage L3
10390	float	RD	point in time [UTC], min. value, 36. harmonic voltage L3
10392	float	RD	point in time [UTC], min. value, 37. harmonic voltage L3
10394	float	RD	point in time [UTC], min. value, 38. harmonic voltage L3
10396	float	RD	point in time [UTC], min. value, 39. harmonic voltage L3
10398	float	RD	point in time [UTC], min. value, 40. harmonic voltage L3



## Gruppenvergleich

Adresse	Format	RD/WR	Bemerkung
386	short	RD	comparator group 1 comparator A
387	short	RD	comparator group 1 comparator B
388	short	RD	comparator group 1 comparator C
389	short	RD	comparator group 1 group comparator 1
390	short	RD	comparator group 2 comparator A
391	short	RD	comparator group 2 comparator B
392	short	RD	comparator group 2 comparator C
393	short	RD	comparator group 2 group comparator 2

## Maximalwerte, Zeitstempel, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
3358	int	RD	point in time [UTC], max. value, 1. harmonic voltage L1
3360	int	RD	point in time [UTC], max. value, 3. harmonic voltage L1
3362	int	RD	point in time [UTC], max. value, 5. harmonic voltage L1
3364	int	RD	point in time [UTC], max. value, 7. harmonic voltage L1
3366	int	RD	point in time [UTC], max. value, 9. harmonic voltage L1
3368	int	RD	point in time [UTC], max. value, 11. harmonic voltage L1
3370	int	RD	point in time [UTC], max. value, 13. harmonic voltage L1
3372	int	RD	point in time [UTC], max. value, 15. harmonic voltage L1
3374	int	RD	point in time [UTC], max. value, 17. harmonic voltage L1
3376	int	RD	point in time [UTC], max. value, 19. harmonic voltage L1
3378	int	RD	point in time [UTC], max. value, 21. harmonic voltage L1
3380	int	RD	point in time [UTC], max. value, 23. harmonic voltage L1
3382	int	RD	point in time [UTC], max. value, 25. harmonic voltage L1
3384	int	RD	point in time [UTC], max. value, 1. harmonic voltage L2
3386	int	RD	point in time [UTC], max. value, 3. harmonic voltage L2
3388	int	RD	point in time [UTC], max. value, 5. harmonic voltage L2
3390	int	RD	point in time [UTC], max. value, 7. harmonic voltage L2
3392	int	RD	point in time [UTC], max. value, 9. harmonic voltage L2
3394	int	RD	point in time [UTC], max. value, 11. harmonic voltage L2
3396	int	RD	point in time [UTC], max. value, 13. harmonic voltage L2
3398	int	RD	point in time [UTC], max. value, 15. harmonic voltage L2
3400	int	RD	point in time [UTC], max. value, 17. harmonic voltage L2
3402	int	RD	point in time [UTC], max. value, 19. harmonic voltage L2
3404	int	RD	point in time [UTC], max. value, 21. harmonic voltage L2
3406	int	RD	point in time [UTC], max. value, 23. harmonic voltage L2
3408	int	RD	point in time [UTC], max. value, 25. harmonic voltage L2
3410	int	RD	point in time [UTC], max. value, 1. harmonic voltage L3
3412	int	RD	point in time [UTC], max. value, 3. harmonic voltage L3
3414	int	RD	point in time [UTC], max. value, 5. harmonic voltage L3
3416	int	RD	point in time [UTC], max. value, 7. harmonic voltage L3
3418	int	RD	point in time [UTC], max. value, 9. harmonic voltage L3
3420	int	RD	point in time [UTC], max. value, 11. harmonic voltage L3
3422	int	RD	point in time [UTC], max. value, 13. harmonic voltage L3
3424	int	RD	point in time [UTC], max. value, 15. harmonic voltage L3
3426	int	RD	point in time [UTC], max. value, 17. harmonic voltage L3
3428	int	RD	point in time [UTC], max. value, 19. harmonic voltage L3
3430	int	RD	point in time [UTC], max. value, 21. harmonic voltage L3
3432	int	RD	point in time [UTC], max. value, 23. harmonic voltage L3
3434	int	RD	point in time [UTC], max. value, 25. harmonic voltage L3
3436	int	RD	point in time [UTC], max. value, 1. harmonic current L1
3438	int	RD	point in time [UTC], max. value, 3. harmonic current L1
3440	int	RD	point in time [UTC], max. value, 5. harmonic current L1
3442	int	RD	point in time [UTC], max. value, 7. harmonic current L1
3444	int	RD	point in time [UTC], max. value, 9. harmonic current L1
3446	int	RD	point in time [UTC], max. value, 11. harmonic current L1
3448	int	RD	point in time [UTC], max. value, 13. harmonic current L1
3450	int	RD	point in time [UTC], max. value, 15. harmonic current L1
3452	int	RD	point in time [UTC], max. value, 17. harmonic current L1
3454	int	RD	point in time [UTC], max. value, 19. harmonic current L1
3456	int	RD	point in time [UTC], max. value, 21. harmonic current L1
3458	int	RD	point in time [UTC], max. value, 23. harmonic current L1
3460	int	RD	point in time [UTC], max. value, 25. harmonic current L1
3462	int	RD	point in time [UTC], max. value, 1. harmonic current L2
3464	int	RD	point in time [UTC], max. value, 3. harmonic current L2
3466	int	RD	point in time [UTC], max. value, 5. harmonic current L2
3468	int	RD	point in time [UTC], max. value, 7. harmonic current L2
3470	int	RD	point in time [UTC], max. value, 9. harmonic current L2
3472	int	RD	point in time [UTC], max. value, 11. harmonic current L2
3474	int	RD	point in time [UTC], max. value, 13. harmonic current L2

Adresse	Format	RD/WR	Bemerkung
3476	int	RD	point in time [UTC], max. value, 15. harmonic current L2
3478	int	RD	point in time [UTC], max. value, 17. harmonic current L2
3480	int	RD	point in time [UTC], max. value, 19. harmonic current L2
3482	int	RD	point in time [UTC], max. value, 21. harmonic current L2
3484	int	RD	point in time [UTC], max. value, 23. harmonic current L2
3486	int	RD	point in time [UTC], max. value, 25. harmonic current L2
3488	int	RD	point in time [UTC], max. value, 1. harmonic current L3
3490	int	RD	point in time [UTC], max. value, 3. harmonic current L3
3492	int	RD	point in time [UTC], max. value, 5. harmonic current L3
3494	int	RD	point in time [UTC], max. value, 7. harmonic current L3
3496	int	RD	point in time [UTC], max. value, 9. harmonic current L3
3498	int	RD	point in time [UTC], max. value, 11. harmonic current L3
3500	int	RD	point in time [UTC], max. value, 13. harmonic current L3
3502	int	RD	point in time [UTC], max. value, 15. harmonic current L3
3504	int	RD	point in time [UTC], max. value, 17. harmonic current L3
3506	int	RD	point in time [UTC], max. value, 19. harmonic current L3
3508	int	RD	point in time [UTC], max. value, 21. harmonic current L3
3510	int	RD	point in time [UTC], max. value, 23. harmonic current L3
3512	int	RD	point in time [UTC], max. value, 25. harmonic current L3
9440	float	RD	point in time [UTC], max.value, 1. harmonic voltage L1
9442	float	RD	point in time [UTC], max.value, 2. harmonic voltage L1
9444	float	RD	point in time [UTC], max.value, 3. harmonic voltage L1
9446	float	RD	point in time [UTC], max.value, 4. harmonic voltage L1
9448	float	RD	point in time [UTC], max.value, 5. harmonic voltage L1
9450	float	RD	point in time [UTC], max.value, 6. harmonic voltage L1
9452	float	RD	point in time [UTC], max.value, 7. harmonic voltage L1
9454	float	RD	point in time [UTC], max.value, 8. harmonic voltage L1
9456	float	RD	point in time [UTC], max.value, 9. harmonic voltage L1
9458	float	RD	point in time [UTC], max.value, 10. harmonic voltage L1
9460	float	RD	point in time [UTC], max.value, 11. harmonic voltage L1
9462	float	RD	point in time [UTC], max.value, 12. harmonic voltage L1
9464	float	RD	point in time [UTC], max.value, 13. harmonic voltage L1
9466	float	RD	point in time [UTC], max.value, 14. harmonic voltage L1
9468	float	RD	point in time [UTC], max.value, 15. harmonic voltage L1
9470	float	RD	point in time [UTC], max.value, 16. harmonic voltage L1
9472	float	RD	point in time [UTC], max.value, 17. harmonic voltage L1
9474	float	RD	point in time [UTC], max.value, 18. harmonic voltage L1
9476	float	RD	point in time [UTC], max.value, 19. harmonic voltage L1
9478	float	RD	point in time [UTC], max.value, 20. harmonic voltage L1
9480	float	RD	point in time [UTC], max.value, 21. harmonic voltage L1
9482	float	RD	point in time [UTC], max.value, 22. harmonic voltage L1
9484	float	RD	point in time [UTC], max.value, 23. harmonic voltage L1
9486	float	RD	point in time [UTC], max.value, 24. harmonic voltage L1
9488	float	RD	point in time [UTC], max.value, 25. harmonic voltage L1
9490	float	RD	point in time [UTC], max.value, 26. harmonic voltage L1
9492	float	RD	point in time [UTC], max.value, 27. harmonic voltage L1
9494	float	RD	point in time [UTC], max.value, 28. harmonic voltage L1
9496	float	RD	point in time [UTC], max.value, 29. harmonic voltage L1
9498	float	RD	point in time [UTC], max.value, 30. harmonic voltage L1
9500	float	RD	point in time [UTC], max.value, 31. harmonic voltage L1
9502	float	RD	point in time [UTC], max.value, 32. harmonic voltage L1
9504	float	RD	point in time [UTC], max.value, 33. harmonic voltage L1
9506	float	RD	point in time [UTC], max.value, 34. harmonic voltage L1
9508	float	RD	point in time [UTC], max.value, 35. harmonic voltage L1
9510	float	RD	point in time [UTC], max.value, 36. harmonic voltage L1
9512	float	RD	point in time [UTC], max.value, 37. harmonic voltage L1
9514	float	RD	point in time [UTC], max.value, 38. harmonic voltage L1
9516	float	RD	point in time [UTC], max.value, 39. harmonic voltage L1









Adresse	Format	RD/WR	Bemerkung
9872	float	RD	point in time [UTC], max.value, 17. harmonic current L3
9874	float	RD	point in time [UTC], max.value, 18. harmonic current L3
9876	float	RD	point in time [UTC], max.value, 19. harmonic current L3
9878	float	RD	point in time [UTC], max.value, 20. harmonic current L3
9880	float	RD	point in time [UTC], max.value, 21. harmonic current L3
9882	float	RD	point in time [UTC], max.value, 22. harmonic current L3
9884	float	RD	point in time [UTC], max.value, 23. harmonic current L3
9886	float	RD	point in time [UTC], max.value, 24. harmonic current L3
9888	float	RD	point in time [UTC], max.value, 25. harmonic current L3
9890	float	RD	point in time [UTC], max.value, 26. harmonic current L3
9892	float	RD	point in time [UTC], max.value, 27. harmonic current L3
9894	float	RD	point in time [UTC], max.value, 28. harmonic current L3
9896	float	RD	point in time [UTC], max.value, 29. harmonic current L3
9898	float	RD	point in time [UTC], max.value, 30. harmonic current L3
9900	float	RD	point in time [UTC], max.value, 31. harmonic current L3
9902	float	RD	point in time [UTC], max.value, 32. harmonic current L3
9904	float	RD	point in time [UTC], max.value, 33. harmonic current L3
9906	float	RD	point in time [UTC], max.value, 34. harmonic current L3
9908	float	RD	point in time [UTC], max.value, 35. harmonic current L3
9910	float	RD	point in time [UTC], max.value, 36. harmonic current L3
9912	float	RD	point in time [UTC], max.value, 37. harmonic current L3
9914	float	RD	point in time [UTC], max.value, 38. harmonic current L3
9916	float	RD	point in time [UTC], max.value, 39. harmonic current L3
9918	float	RD	point in time [UTC], max.value, 40. harmonic current L3

### Sonstige Parameter

911	uint	RD	serial number
20012	uint	RD	production number
20016	uint	RD	article number
20047	ushort	RD	device type id: UMG 96-PA = 19 UMG 96-PA-MID+ = 30 UMG 96-PQ-L = 32 UMG 96-PQ-L (IT) = 34
25000	string	RD/WR	freely programmable device name. Up to 127 characters
25128	string	RD/WR	device description. Up to 239 characters
31064	short	RD	identifies extern connection type (0 = RS485, 1 = Ethernet)
31498	ushort	RD/WR	clock synchronisation validation Interval in Hours, set to zero to deactivate validation“.
31499	ushort	RD	validation result
31500	ushort	RD/WR	EN60870 Time structure, Millisecond
31501	ushort	RD/WR	EN60870 Time structure, Minutes & Hour
31502	ushort	RD/WR	EN60870 Time structure, Day, Weekday & Month
31503	ushort	RD/WR	EN60870 Time structure, Year
31504	ushort	RD/WR	averaging interval for Gridded Mean Values in Seconds
32604	short	RD/WR	enable Modbus Broadcast, device will receive Messages with Slave Address 0, 1 = enable

# Erweiterte Adressenliste UMG 96-PA<sup>MID+</sup>

## Zählerstandgang Schieberegister-Werte gelieferte Arbeit

Adresse	Format	RD/WR	Bemerkung
19122	double	RD	last meter reading value delivered work
19126	double	RD	meter reading value -15 minute delivered work
19130	double	RD	meter reading value -30 minute delivered work
19134	double	RD	meter reading value -45 minute delivered work
19138	double	RD	meter reading value -1 hour delivered work
19142	double	RD	meter reading value -1 hour 15 minute delivered work
19146	double	RD	meter reading value -1 hour 30 minute delivered work
19150	double	RD	meter reading value -1 hour 45 minute delivered work
19154	double	RD	meter reading value -2 hour delivered work
19158	double	RD	meter reading value -2 hour 15 minute delivered work
19162	double	RD	meter reading value -2 hour 30 minute delivered work
19166	double	RD	meter reading value -2 hour 45 minute delivered work
19170	double	RD	meter reading value -3 hour delivered work
19174	double	RD	meter reading value -3 hour 15 minute delivered work
19178	double	RD	meter reading value -3 hour 30 minute delivered work
19182	double	RD	meter reading value -3 hour 45 minute delivered work
19186	double	RD	meter reading value -4 hour delivered work
19190	double	RD	meter reading value -4 hour 15 minute delivered work
19194	double	RD	meter reading value -4 hour 30 minute delivered work
19198	double	RD	meter reading value -4 hour 45 minute delivered work
19202	double	RD	meter reading value -5 hour delivered work
19206	double	RD	meter reading value -5 hour 15 minute delivered work
19210	double	RD	meter reading value -5 hour 30 minute delivered work
19214	double	RD	meter reading value -5 hour 45 minute delivered work
19218	double	RD	meter reading value -6 hour delivered work
19222	double	RD	meter reading value -6 hour 15 minute delivered work
19226	double	RD	meter reading value -6 hour 30 minute delivered work
19230	double	RD	meter reading value -6 hour 45 minute delivered work
19234	double	RD	meter reading value -7 hour delivered work
19238	double	RD	meter reading value -7 hour 15 minute delivered work
19242	double	RD	meter reading value -7 hour 30 minute delivered work
19246	double	RD	meter reading value -7 hour 45 minute delivered work
19250	double	RD	meter reading value -8 hour delivered work
19254	double	RD	meter reading value -8 hour 15 minute delivered work
19258	double	RD	meter reading value -8 hour 30 minute delivered work
19262	double	RD	meter reading value -8 hour 45 minute delivered work
19266	double	RD	meter reading value -9 hour delivered work
19270	double	RD	meter reading value -9 hour 15 minute delivered work
19274	double	RD	meter reading value -9 hour 30 minute delivered work
19278	double	RD	meter reading value -9 hour 45 minute delivered work
19282	double	RD	meter reading value -10 hour delivered work
19286	double	RD	meter reading value -10 hour 15 minute delivered work
19290	double	RD	meter reading value -10 hour 30 minute delivered work
19294	double	RD	meter reading value -10 hour 45 minute delivered work
19298	double	RD	meter reading value -11 hour delivered work
19302	double	RD	meter reading value -11 hour 15 minute delivered work
19306	double	RD	meter reading value -11 hour 30 minute delivered work
19310	double	RD	meter reading value -11 hour 45 minute delivered work
19314	double	RD	meter reading value -12 hour delivered work
19318	double	RD	meter reading value -12 hour 15 minute delivered work
19322	double	RD	meter reading value -12 hour 30 minute delivered work
19326	double	RD	meter reading value -12 hour 45 minute delivered work
19330	double	RD	meter reading value -13 hour delivered work
19334	double	RD	meter reading value -13 hour 15 minute delivered work
19338	double	RD	meter reading value -13 hour 30 minute delivered work
19342	double	RD	meter reading value -13 hour 45 minute delivered work
19346	double	RD	meter reading value -14 hour delivered work
19350	double	RD	meter reading value -14 hour 15 minute delivered work
19354	double	RD	meter reading value -14 hour 30 minute delivered work
19358	double	RD	meter reading value -14 hour 45 minute delivered work



Adresse	Format	RD/WR	Bemerkung
19362	double	RD	meter reading value -15 hour delivered work
19366	double	RD	meter reading value -15 hour 15 minute delivered work
19370	double	RD	meter reading value -15 hour 30 minute delivered work
19374	double	RD	meter reading value -15 hour 45 minute delivered work
19378	double	RD	meter reading value -16 hour delivered work
19382	double	RD	meter reading value -16 hour 15 minute delivered work
19386	double	RD	meter reading value -16 hour 30 minute delivered work
19390	double	RD	meter reading value -16 hour 45 minute delivered work
19394	double	RD	meter reading value -17 hour delivered work
19398	double	RD	meter reading value -17 hour 15 minute delivered work
19402	double	RD	meter reading value -17 hour 30 minute delivered work
19406	double	RD	meter reading value -17 hour 45 minute delivered work
19410	double	RD	meter reading value -18 hour delivered work
19414	double	RD	meter reading value -18 hour 15 minute delivered work
19418	double	RD	meter reading value -18 hour 30 minute delivered work
19422	double	RD	meter reading value -18 hour 45 minute delivered work
19426	double	RD	meter reading value -19 hour delivered work
19430	double	RD	meter reading value -19 hour 15 minute delivered work
19434	double	RD	meter reading value -19 hour 30 minute delivered work
19438	double	RD	meter reading value -19 hour 45 minute delivered work
19442	double	RD	meter reading value -20 hour delivered work
19446	double	RD	meter reading value -20 hour 15 minute delivered work
19450	double	RD	meter reading value -20 hour 30 minute delivered work
19454	double	RD	meter reading value -20 hour 45 minute delivered work
19458	double	RD	meter reading value -21 hour delivered work
19462	double	RD	meter reading value -21 hour 15 minute delivered work
19466	double	RD	meter reading value -21 hour 30 minute delivered work
19470	double	RD	meter reading value -21 hour 45 minute delivered work
19474	double	RD	meter reading value -22 hour delivered work
19478	double	RD	meter reading value -22 hour 15 minute delivered work
19482	double	RD	meter reading value -22 hour 30 minute delivered work
19486	double	RD	meter reading value -22 hour 45 minute delivered work
19490	double	RD	meter reading value -23 hour delivered work
19494	double	RD	meter reading value -23 hour 15 minute delivered work
19498	double	RD	meter reading value -23 hour 30 minute delivered work
19502	double	RD	meter reading value -23 hour 45 minute delivered work

## Zählerstandgang Schieberegister-Werte bezogene Arbeit

Adresse	Format	RD/WR	Bemerkung
19506	double	RD	last meter reading value related work
19510	double	RD	meter reading value -15 minute related work
19514	double	RD	meter reading value -30 minute related work
19518	double	RD	meter reading value -45 minute related work
19522	double	RD	meter reading value -1 hour related work
19526	double	RD	meter reading value -1 hour 15 minute related work
19530	double	RD	meter reading value -1 hour 30 minute related work
19534	double	RD	meter reading value -1 hour 45 minute related work
19538	double	RD	meter reading value -2 hour related work
19542	double	RD	meter reading value -2 hour 15 minute related work
19546	double	RD	meter reading value -2 hour 30 minute related work
19550	double	RD	meter reading value -2 hour 45 minute related work
19554	double	RD	meter reading value -3 hour related work
19558	double	RD	meter reading value -3 hour 15 minute related work
19562	double	RD	meter reading value -3 hour 30 minute related work
19566	double	RD	meter reading value -3 hour 45 minute related work
19570	double	RD	meter reading value -4 hour related work
19574	double	RD	meter reading value -4 hour 15 minute related work
19578	double	RD	meter reading value -4 hour 30 minute related work
19582	double	RD	meter reading value -4 hour 45 minute related work
19586	double	RD	meter reading value -5 hour related work
19590	double	RD	meter reading value -5 hour 15 minute related work
19594	double	RD	meter reading value -5 hour 30 minute related work
19598	double	RD	meter reading value -5 hour 45 minute related work
19602	double	RD	meter reading value -6 hour related work
19606	double	RD	meter reading value -6 hour 15 minute related work
19610	double	RD	meter reading value -6 hour 30 minute related work
19614	double	RD	meter reading value -6 hour 45 minute related work
19618	double	RD	meter reading value -7 hour related work
19622	double	RD	meter reading value -7 hour 15 minute related work
19626	double	RD	meter reading value -7 hour 30 minute related work
19630	double	RD	meter reading value -7 hour 45 minute related work
19634	double	RD	meter reading value -8 hour related work
19638	double	RD	meter reading value -8 hour 15 minute related work
19642	double	RD	meter reading value -8 hour 30 minute related work
19646	double	RD	meter reading value -8 hour 45 minute related work
19650	double	RD	meter reading value -9 hour related work
19654	double	RD	meter reading value -9 hour 15 minute related work
19658	double	RD	meter reading value -9 hour 30 minute related work
19662	double	RD	meter reading value -9 hour 45 minute related work
19666	double	RD	meter reading value -10 hour related work
19670	double	RD	meter reading value -10 hour 15 minute related work
19674	double	RD	meter reading value -10 hour 30 minute related work
19678	double	RD	meter reading value -10 hour 45 minute related work
19682	double	RD	meter reading value -11 hour related work
19686	double	RD	meter reading value -11 hour 15 minute related work
19690	double	RD	meter reading value -11 hour 30 minute related work
19694	double	RD	meter reading value -11 hour 45 minute related work
19698	double	RD	meter reading value -12 hour related work
19702	double	RD	meter reading value -12 hour 15 minute related work
19706	double	RD	meter reading value -12 hour 30 minute related work
19710	double	RD	meter reading value -12 hour 45 minute related work
19714	double	RD	meter reading value -13 hour related work
19718	double	RD	meter reading value -13 hour 15 minute related work
19722	double	RD	meter reading value -13 hour 30 minute related work
19726	double	RD	meter reading value -13 hour 45 minute related work
19730	double	RD	meter reading value -14 hour related work
19734	double	RD	meter reading value -14 hour 15 minute related work
19738	double	RD	meter reading value -14 hour 30 minute related work
19742	double	RD	meter reading value -14 hour 45 minute related work

Adresse	Format	RD/WR	Bemerkung
19746	double	RD	meter reading value -15 hour related work
19750	double	RD	meter reading value -15 hour 15 minute related work
19754	double	RD	meter reading value -15 hour 30 minute related work
19758	double	RD	meter reading value -15 hour 45 minute related work
19762	double	RD	meter reading value -16 hour related work
19766	double	RD	meter reading value -16 hour 15 minute related work
19770	double	RD	meter reading value -16 hour 30 minute related work
19774	double	RD	meter reading value -16 hour 45 minute related work
19778	double	RD	meter reading value -17 hour related work
19782	double	RD	meter reading value -17 hour 15 minute related work
19786	double	RD	meter reading value -17 hour 30 minute related work
19790	double	RD	meter reading value -17 hour 45 minute related work
19794	double	RD	meter reading value -18 hour related work
19798	double	RD	meter reading value -18 hour 15 minute related work
19802	double	RD	meter reading value -18 hour 30 minute related work
19806	double	RD	meter reading value -18 hour 45 minute related work
19810	double	RD	meter reading value -19 hour related work
19814	double	RD	meter reading value -19 hour 15 minute related work
19818	double	RD	meter reading value -19 hour 30 minute related work
19822	double	RD	meter reading value -19 hour 45 minute related work
19826	double	RD	meter reading value -20 hour related work
19830	double	RD	meter reading value -20 hour 15 minute related work
19834	double	RD	meter reading value -20 hour 30 minute related work
19838	double	RD	meter reading value -20 hour 45 minute related work
19842	double	RD	meter reading value -21 hour related work
19846	double	RD	meter reading value -21 hour 15 minute related work
19850	double	RD	meter reading value -21 hour 30 minute related work
19854	double	RD	meter reading value -21 hour 45 minute related work
19858	double	RD	meter reading value -22 hour related work
19862	double	RD	meter reading value -22 hour 15 minute related work
19866	double	RD	meter reading value -22 hour 30 minute related work
19870	double	RD	meter reading value -22 hour 45 minute related work
19874	double	RD	meter reading value -23 hour related work
19878	double	RD	meter reading value -23 hour 15 minute related work
19882	double	RD	meter reading value -23 hour 30 minute related work
19886	double	RD	meter reading value -23 hour 45 minute related work

**Zählerstandgang Schieberegister-Werte Statusflag**

Adresse	Format	RD/WR	Bemerkung
19890	short	RD	last meter reading value status flag statusflag: 0 = valid 1 = changed time 4 = unsynchronized time 10 = invalid
19891	short	RD	meter reading value -15 minute Status flag
19892	short	RD	meter reading value -30 minute Status flag
19893	short	RD	meter reading value -45 minute Status flag
19894	short	RD	meter reading value -1 hour Status flag
19895	short	RD	meter reading value -1 hour 15 minute Status flag
19896	short	RD	meter reading value -1 hour 30 minute Status flag
19897	short	RD	meter reading value -1 hour 45 minute Status flag
19898	short	RD	meter reading value -2 hour Status flag
19899	short	RD	meter reading value -2 hour 15 minute Status flag
19900	short	RD	meter reading value -2 hour 30 minute Status flag
19901	short	RD	meter reading value -2 hour 45 minute Status flag
19902	short	RD	meter reading value -3 hour Status flag
19903	short	RD	meter reading value -3 hour 15 minute Status flag
19904	short	RD	meter reading value -3 hour 30 minute Status flag
19905	short	RD	meter reading value -3 hour 45 minute Status flag
19906	short	RD	meter reading value -4 hour Status flag
19907	short	RD	meter reading value -4 hour 15 minute Status flag
19908	short	RD	meter reading value -4 hour 30 minute Status flag
19909	short	RD	meter reading value -4 hour 45 minute Status flag
19910	short	RD	meter reading value -5 hour Status flag
19911	short	RD	meter reading value -5 hour 15 minute Status flag
19912	short	RD	meter reading value -5 hour 30 minute Status flag
19913	short	RD	meter reading value -5 hour 45 minute Status flag
19914	short	RD	meter reading value -6 hour Status flag
19915	short	RD	meter reading value -6 hour 15 minute Status flag
19916	short	RD	meter reading value -6 hour 30 minute Status flag
19917	short	RD	meter reading value -6 hour 45 minute Status flag
19918	short	RD	meter reading value -7 hour Status flag
19919	short	RD	meter reading value -7 hour 15 minute Status flag
19920	short	RD	meter reading value -7 hour 30 minute Status flag
19921	short	RD	meter reading value -7 hour 45 minute Status flag
19922	short	RD	meter reading value -8 hour Status flag
19923	short	RD	meter reading value -8 hour 15 minute Status flag
19924	short	RD	meter reading value -8 hour 30 minute Status flag
19925	short	RD	meter reading value -8 hour 45 minute Status flag
19926	short	RD	meter reading value -9 hour Status flag
19927	short	RD	meter reading value -9 hour 15 minute Status flag
19928	short	RD	meter reading value -9 hour 30 minute Status flag
19929	short	RD	meter reading value -9 hour 45 minute Status flag
19930	short	RD	meter reading value -10 hour Status flag
19931	short	RD	meter reading value -10 hour 15 minute Status flag
19932	short	RD	meter reading value -10 hour 30 minute Status flag
19933	short	RD	meter reading value -10 hour 45 minute Status flag
19934	short	RD	meter reading value -11 hour Status flag
19935	short	RD	meter reading value -11 hour 15 minute Status flag
19936	short	RD	meter reading value -11 hour 30 minute Status flag
19937	short	RD	meter reading value -11 hour 45 minute Status flag
19938	short	RD	meter reading value -12 hour Status flag
19939	short	RD	meter reading value -12 hour 15 minute Status flag
19940	short	RD	meter reading value -12 hour 30 minute Status flag
19941	short	RD	meter reading value -12 hour 45 minute Status flag
19942	short	RD	meter reading value -13 hour Status flag
19943	short	RD	meter reading value -13 hour 15 minute Status flag
19944	short	RD	meter reading value -13 hour 30 minute Status flag

Adresse	Format	RD/WR	Bemerkung
19945	short	RD	meter reading value -13 hour 45 minute Status flag
19946	short	RD	meter reading value -14 hour Status flag
19947	short	RD	meter reading value -14 hour 15 minute Status flag
19948	short	RD	meter reading value -14 hour 30 minute Status flag
19949	short	RD	meter reading value -14 hour 45 minute Status flag
19950	short	RD	meter reading value -15 hour Status flag
19951	short	RD	meter reading value -15 hour 15 minute Status flag
19952	short	RD	meter reading value -15 hour 30 minute Status flag
19953	short	RD	meter reading value -15 hour 45 minute Status flag
19954	short	RD	meter reading value -16 hour Status flag
19955	short	RD	meter reading value -16 hour 15 minute Status flag
19956	short	RD	meter reading value -16 hour 30 minute Status flag
19957	short	RD	meter reading value -16 hour 45 minute Status flag
19958	short	RD	meter reading value -17 hour Status flag
19959	short	RD	meter reading value -17 hour 15 minute Status flag
19960	short	RD	meter reading value -17 hour 30 minute Status flag
19961	short	RD	meter reading value -17 hour 45 minute Status flag
19962	short	RD	meter reading value -18 hour Status flag
19963	short	RD	meter reading value -18 hour 15 minute Status flag
19964	short	RD	meter reading value -18 hour 30 minute Status flag
19965	short	RD	meter reading value -18 hour 45 minute Status flag
19966	short	RD	meter reading value -19 hour Status flag
19967	short	RD	meter reading value -19 hour 15 minute Status flag
19968	short	RD	meter reading value -19 hour 30 minute Status flag
19969	short	RD	meter reading value -19 hour 45 minute Status flag
19970	short	RD	meter reading value -20 hour Status flag
19971	short	RD	meter reading value -20 hour 15 minute Status flag
19972	short	RD	meter reading value -20 hour 30 minute Status flag
19973	short	RD	meter reading value -20 hour 45 minute Status flag
19974	short	RD	meter reading value -21 hour Status flag
19975	short	RD	meter reading value -21 hour 15 minute Status flag
19976	short	RD	meter reading value -21 hour 30 minute Status flag
19977	short	RD	meter reading value -21 hour 45 minute Status flag
19978	short	RD	meter reading value -22 hour Status flag
19979	short	RD	meter reading value -22 hour 15 minute Status flag
19980	short	RD	meter reading value -22 hour 30 minute Status flag
19981	short	RD	meter reading value -22 hour 45 minute Status flag
19982	short	RD	meter reading value -23 hour Status flag
19983	short	RD	meter reading value -23 hour 15 minute Status flag
19984	short	RD	meter reading value -23 hour 30 minute Status flag
19985	short	RD	meter reading value -23 hour 45 minute Status flag

## Adressenliste Modul 96-PA-RCM (EL)

### Messwerte, Typ Float

Adresse	Format	RD/WR	Bemerkung
20053	float	RD	current L4
20055	float	RD	current RCM1 (I5)
20057	float	RD	current RCM2 (I6)
20059	float	RD	current RCM2 (I6 prop. U6)
20061	float	RD	ext. temperature
20303	float	RD	DC power ( $P=I5 \cdot U6$ )

### Mittelwerte, Typ Float

Adresse	Format	RD/WR	Bemerkung
20305	float	RD	mean value, current L4
20307	float	RD	mean value, current RCM1 (I5)
20309	float	RD	mean value, current RCM2 (I6)
20311	float	RD	mean value, current RCM2 (I6 prop. U6)
20313	float	RD	mean value, ext. temperature

### Minimalwerte, Typ Float

Adresse	Format	RD/WR	Bemerkung
20315	float	RD	min. value, current L4
20317	float	RD	min. value, current RCM1 (I5)
20319	float	RD	min. value, current RCM2 (I6)
20321	float	RD	min. value, current RCM2 (I6 prop. U6)
20323	float	RD	min. value, ext. temperature

### Maximalwerte, Typ Float

Adresse	Format	RD/WR	Bemerkung
20325	float	RD	max. value, current L4
20327	float	RD	max. value, current RCM1 (I5)
20329	float	RD	max. value, current RCM2 (I6)
20331	float	RD	max. value, current RCM2 (I6 prop. U6)
20333	float	RD	max. value, ext. temperature

**Minimalwerte, Zeitstempel**

Adresse	Format	RD/WR	Bemerkung
20335	int	RD	point in time [UTC], min. value, current L4
20337	int	RD	point in time [UTC], min. value, current RCM1 (I5)
20339	int	RD	point in time [UTC], min. value, current RCM2 (I6)
20341	int	RD	point in time [UTC], min. value, current RCM2 (I6 prop. U6)
20343	int	RD	point in time [UTC], min. value, ext. temperature

**Maximalwerte, Zeitstempel**

Adresse	Format	RD/WR	Bemerkung
20345	int	RD	point in time [UTC], max. value, current L4
20347	int	RD	point in time [UTC], max. value, current RCM1 (I5)
20349	int	RD	point in time [UTC], max. value, current RCM2 (I6)
20351	int	RD	point in time [UTC], max. value, current RCM2 (I6 prop. U6)
20353	int	RD	point in time [UTC], max. value, ext. temperature

**Energie, Typ Float**

Adresse	Format	RD/WR	Bemerkung
20359	float	RD	active energy, DC (I5 * U6)

**Energie, Typ Double**

Adresse	Format	RD/WR	Bemerkung
20355	double	RD	active energy, DC (I5 * U6)



## Fourieranalyse

### Messwerte, Typ Float, Fourieranalyse

Adresse	Format	RD/WR	Bemerkung
20063	float	RD	1. harmonic current L4
20065	float	RD	2. harmonic current L4
20067	float	RD	3. harmonic current L4
20069	float	RD	4. harmonic current L4
20071	float	RD	5. harmonic current L4
20073	float	RD	6. harmonic current L4
20075	float	RD	7. harmonic current L4
20077	float	RD	8. harmonic current L4
20079	float	RD	9. harmonic current L4
20081	float	RD	10. harmonic current L4
20083	float	RD	11. harmonic current L4
20085	float	RD	12. harmonic current L4
20087	float	RD	13. harmonic current L4
20089	float	RD	14. harmonic current L4
20091	float	RD	15. harmonic current L4
20093	float	RD	16. harmonic current L4
20095	float	RD	17. harmonic current L4
20097	float	RD	18. harmonic current L4
20099	float	RD	19. harmonic current L4
20101	float	RD	20. harmonic current L4
20103	float	RD	21. harmonic current L4
20105	float	RD	22. harmonic current L4
20107	float	RD	23. harmonic current L4
20109	float	RD	24. harmonic current L4
20111	float	RD	25. harmonic current L4
20113	float	RD	26. harmonic current L4
20115	float	RD	27. harmonic current L4
20117	float	RD	28. harmonic current L4
20119	float	RD	29. harmonic current L4
20121	float	RD	30. harmonic current L4
20123	float	RD	31. harmonic current L4
20125	float	RD	32. harmonic current L4
20127	float	RD	33. harmonic current L4
20129	float	RD	34. harmonic current L4
20131	float	RD	35. harmonic current L4
20133	float	RD	36. harmonic current L4
20135	float	RD	37. harmonic current L4
20137	float	RD	38. harmonic current L4
20139	float	RD	39. harmonic current L4
20141	float	RD	40. harmonic current L4
20143	float	RD	1. harmonic current rcm1 (I5)
20145	float	RD	2. harmonic current rcm1 (I5)
20147	float	RD	3. harmonic current rcm1 (I5)
20149	float	RD	4. harmonic current rcm1 (I5)
20151	float	RD	5. harmonic current rcm1 (I5)
20153	float	RD	6. harmonic current rcm1 (I5)
20155	float	RD	7. harmonic current rcm1 (I5)
20157	float	RD	8. harmonic current rcm1 (I5)
20159	float	RD	9. harmonic current rcm1 (I5)
20161	float	RD	10. harmonic current rcm1 (I5)
20163	float	RD	11. harmonic current rcm1 (I5)
20165	float	RD	12. harmonic current rcm1 (I5)
20167	float	RD	13. harmonic current rcm1 (I5)
20169	float	RD	14. harmonic current rcm1 (I5)
20171	float	RD	15. harmonic current rcm1 (I5)
20173	float	RD	16. harmonic current rcm1 (I5)
20175	float	RD	17. harmonic current rcm1 (I5)
20177	float	RD	18. harmonic current rcm1 (I5)



Adresse	Format	RD/WR	Bemerkung
20179	float	RD	19. harmonic current rcm1 (l5)
20181	float	RD	20. harmonic current rcm1 (l5)
20183	float	RD	21. harmonic current rcm1 (l5)
20185	float	RD	22. harmonic current rcm1 (l5)
20187	float	RD	23. harmonic current rcm1 (l5)
20189	float	RD	24. harmonic current rcm1 (l5)
20191	float	RD	25. harmonic current rcm1 (l5)
20193	float	RD	26. harmonic current rcm1 (l5)
20195	float	RD	27. harmonic current rcm1 (l5)
20197	float	RD	28. harmonic current rcm1 (l5)
20199	float	RD	29. harmonic current rcm1 (l5)
20201	float	RD	30. harmonic current rcm1 (l5)
20203	float	RD	31. harmonic current rcm1 (l5)
20205	float	RD	32. harmonic current rcm1 (l5)
20207	float	RD	33. harmonic current rcm1 (l5)
20209	float	RD	34. harmonic current rcm1 (l5)
20211	float	RD	35. harmonic current rcm1 (l5)
20213	float	RD	36. harmonic current rcm1 (l5)
20215	float	RD	37. harmonic current rcm1 (l5)
20217	float	RD	38. harmonic current rcm1 (l5)
20219	float	RD	39. harmonic current rcm1 (l5)
20221	float	RD	40. harmonic current rcm1 (l5)
20223	float	RD	1. harmonic current rcm2 (l6)
20225	float	RD	2. harmonic current rcm2 (l6)
20227	float	RD	3. harmonic current rcm2 (l6)
20229	float	RD	4. harmonic current rcm2 (l6)
20231	float	RD	5. harmonic current rcm2 (l6)
20233	float	RD	6. harmonic current rcm2 (l6)
20235	float	RD	7. harmonic current rcm2 (l6)
20237	float	RD	8. harmonic current rcm2 (l6)
20239	float	RD	9. harmonic current rcm2 (l6)
20241	float	RD	10. harmonic current rcm2 (l6)
20243	float	RD	11. harmonic current rcm2 (l6)
20245	float	RD	12. harmonic current rcm2 (l6)
20247	float	RD	13. harmonic current rcm2 (l6)
20249	float	RD	14. harmonic current rcm2 (l6)
20251	float	RD	15. harmonic current rcm2 (l6)
20253	float	RD	16. harmonic current rcm2 (l6)
20255	float	RD	17. harmonic current rcm2 (l6)
20257	float	RD	18. harmonic current rcm2 (l6)
20259	float	RD	19. harmonic current rcm2 (l6)
20261	float	RD	20. harmonic current rcm2 (l6)
20263	float	RD	21. harmonic current rcm2 (l6)
20265	float	RD	22. harmonic current rcm2 (l6)
20267	float	RD	23. harmonic current rcm2 (l6)
20269	float	RD	24. harmonic current rcm2 (l6)
20271	float	RD	25. harmonic current rcm2 (l6)
20273	float	RD	26. harmonic current rcm2 (l6)
20275	float	RD	27. harmonic current rcm2 (l6)
20277	float	RD	28. harmonic current rcm2 (l6)
20279	float	RD	29. harmonic current rcm2 (l6)
20281	float	RD	30. harmonic current rcm2 (l6)
20283	float	RD	31. harmonic current rcm2 (l6)
20285	float	RD	32. harmonic current rcm2 (l6)
20287	float	RD	33. harmonic current rcm2 (l6)
20289	float	RD	34. harmonic current rcm2 (l6)
20291	float	RD	35. harmonic current rcm2 (l6)
20293	float	RD	36. harmonic current rcm2 (l6)
20295	float	RD	37. harmonic current rcm2 (l6)

Adresse	Format	RD/WR	Bemerkung
20297	float	RD	38. harmonic current rcm2 (I6)
20299	float	RD	39. harmonic current rcm2 (I6)
20301	float	RD	40. harmonic current rcm2 (I6)

## Sonstige Parameter

20051	short	RD/WR	RCM1 (I5): CT connection monitoring (AC only) 0=disable; 1=enable
20052	short	RD/WR	RCM2 (I6): CT connection monitoring (AC only) 0=disable; 1=enable
20418	short	RD/WR	RCM1 (I5): CT connections (AC only), currently 0=error-free; 1=error
20419	short	RD/WR	RCM1 (I5): CT connections (AC only), previously 0=error-free/delete error; 1=error
20618	short	RD/WR	RCM2 (I6): CT connections (AC only), currently 0=error-free; 1=error
20619	short	RD/WR	RCM2 (I6): CT connections (AC only), previously 0=error-free/delete error; 1=error
20414	short	RD	RCM1 (I5): status (pre-)warning, currently 0=no warning available; 1=warning available
20415	short	RD/WR	RCM1 (I5): status (pre-)warning, previously 0=no warning available/delete alarm; 1=warning available
20416	short	RD	RCM1 (I5): status alarm, currently 0=no alarm available; 1=alarm available
20417	short	RD/WR	RCM1 (I5): status alarm, previously 0=no alarm available/delete alarm; 1=alarm available
20614	short	RD	RCM2 (I6): status (pre-)warning, currently 0=no warning available; 1=warning available
20615	short	RD/WR	RCM2 (I6): status (pre-)warning, previously 0=no warning available/delete alarm; 1=warning available
20616	short	RD	RCM2 (I6): status alarm, currently 0=no alarm available; 1=alarm available
20617	short	RD/WR	RCM2 (I6): status alarm, previously 0=no alarm available/delete alarm; 1=alarm available
20393	short	RD	<i>RCM1 (I5): status overcurrent, currently 0= no available; 1= available</i>
20394	short	RD	<i>RCM1 (I5): status overcurrent, previously 0= no available; 1= available</i>
20593	short	RD	<i>RCM2 (I6): status overcurrent, currently 0= no available; 1= available</i>
20594	short	RD	<i>RCM2 (I6): status overcurrent, previously 0= no available; 1= available</i>
20395	short	RD	<i>RCM1 (I5): status rcm Bit 0=1 warning, currently available Bit 1=1 warning, previously available Bit 2=1 alarm currently, available Bit 3=1: alarm previously, available Bit 4=1: CT connection break, currently available Bit 5=1: CT connection break, previously available Bit 6=1: overcurrent, currently available Bit 7=1: overcurrent, previously available</i>

Adresse	Format	RD/WR	Bemerkung
20396	float	RD	RCM1 (I5): current limit (in A) for alarms
20398	int	RD	RCM1 (I5): alarm run time (in ms)
20595	short	RD	RCM2 (I6): status Bit 0=1 warning, currently available Bit 1=1 warning, previously available Bit 2=1 alarm currently, available Bit 3=1: alarm previously, available Bit 4=1: CT connection break, currently available Bit 5=1: CT connection break, previously available Bit 6=1: overcurrent, currently available Bit 7=1: overcurrent, previously available
20596	float	RD	RCM2 (I6): current limit (in A) for alarms
20598	int	RD	RCM2 (I6): alarm run time (in ms)
20413	short	RD/WR	RCM1 (I5): status overcurrent Bit 0=1 warning, currently available Bit 1=1 warning, previously available Bit 2=1 alarm currently, available Bit 3=1: alarm previously, available Bit 4=1: CT connection break, currently available Bit 5=1: CT connection break, previously available Bit 6=1: overcurrent, currently available Bit 7=1: overcurrent, previously available
20613	short	RD/WR	RCM2 (I6): status overcurrent Bit 0=1 warning, currently available Bit 1=1 warning, previously available Bit 2=1 alarm currently, available Bit 3=1: alarm previously, available Bit 4=1: CT connection break, currently available Bit 5=1: CT connection break, previously available Bit 6=1: overcurrent, currently available Bit 7=1: overcurrent, previously available
20701	short	RD	Warning (3 days - not synchronized) - only MID+
20702	short	RD	Alarm (7 days - not synchronized) - only MID+

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