## SIEMENS

## Data sheet

## 6ES7134-6PA00-0CU0



\*\*\* spare part \*\*\* SIMATIC ET 200SP, analog input module, AI Energy Meter 480VAC/CT HF for 1 A or 5 A current transformer, with network analysis functions, suitable for BU type U0, channel diagnostics

General information		
Product type designation	AI Energy Meter 480 VAC/CT HF	
Firmware version	V6.0	
<ul> <li>FW update possible</li> </ul>	Yes	
usable BaseUnits	BU type U0	
Color code for module-specific color identification plate	CC20	
Supported power supply systems	TT, TN, IT	
Product function		
<ul> <li>Voltage measurement</li> </ul>	Yes	
<ul> <li>— without voltage transformer</li> </ul>	Yes	
<ul> <li>— with voltage transformer</li> </ul>	Yes	
<ul> <li>Current measurement</li> </ul>	Yes	
<ul> <li>— without current transformer</li> </ul>	No	
— with current transformer	Yes; 1 A or 5 A current transformer	
— With Rogowski coil	No	
<ul> <li>With current-voltage-converter</li> </ul>	No	
<ul> <li>Energy measurement</li> </ul>	Yes	
<ul> <li>Frequency measurement</li> </ul>	Yes	
<ul> <li>Power measurement</li> </ul>	Yes	
<ul> <li>Active power measurement</li> </ul>	Yes	
<ul> <li>Reactive power measurement</li> </ul>	Yes	
<ul> <li>Power factor measurement</li> </ul>	Yes	
<ul> <li>Active factor measurement</li> </ul>	Yes	
<ul> <li>Reactive power compensation</li> </ul>	Yes	
Line analysis	Yes	
<ul> <li>Monitoring of instantaneous and half-wave values</li> </ul>	Yes	
<ul> <li>— THD measurement for current and voltage</li> </ul>	Yes	
— Harmonics for current and voltage	Yes	
— Voltage dip (DIP)	Yes	
— Voltage swell	Yes	
• I&M data	Yes; I&M0 to I&M3	
Isochronous mode	No	
Engineering with		
<ul> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	STEP 7 V15 or higher	
<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3 or higher	
<ul> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	One GSD file each, Revision 3 and 5 and higher	
<ul> <li>PROFINET from GSD version/GSD revision</li> </ul>	V2.3	
Operating mode		

<ul> <li>Switching between operating modes in RUN</li> </ul>	Yes; For module version 32 I/20 Q, it is possible to dynamically switch between 25 user data variants, 23 of which are pre-defined and 2 of which can be defined by the specific user
<ul> <li>Cyclic measured value access</li> </ul>	Yes
<ul> <li>Acyclic measured value access</li> </ul>	Yes
<ul> <li>Fixed measured value sets</li> </ul>	Yes
<ul> <li>Freely definable measured value sets</li> </ul>	Yes; For cyclic and acyclic measured value access
CiR - Configuration in RUN	
Reparameterization possible in RUN	Yes
Calibration possible in RUN	Yes
Installation type/mounting	
Mounting position	any
Supply voltage	uiy
Design of the power supply	DC
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
	20.0 V
Input current	
Current consumption (rated value)	12.5 mA
Current consumption, max.	17 mA
Power loss	
Power loss, typ.	1.4 W; 4x 5 A input current, 3x 230 V AC
Address area	
Address space per module	
Inputs	256 byte
Outputs	20 byte
Hardware configuration	
Automatic encoding	Yes
<ul> <li>Mechanical coding element</li> </ul>	Yes
Selection of BaseUnit for connection variants	
- Queira composition	BU type U0
<ul> <li>2-wire connection</li> </ul>	Do type oo
• 2-wire connection Time of day	
Time of day	Yes
Time of day Operating hours counter  • present	
Time of day Operating hours counter	
Time of day Operating hours counter • present Analog inputs	Yes 50 ms; Time for consistent update of all measured and calculated
Time of day Operating hours counter  • present Analog inputs Cycle time (all channels), typ.	Yes 50 ms; Time for consistent update of all measured and calculated
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data)
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Analog value generation for the inputs	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Analog value generation for the inputs         Sampling frequency, max.	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Analog value generation for the inputs         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Sampling frequency, max.         Interrupts/diagnostics/status information	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 2 048 kHz
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Analog value generation for the inputs         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 2 048 kHz Yes
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 2 048 kHz Yes Yes Yes; Monitoring of up to 16 freely selectable process values (exceeding
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 2 048 kHz Yes Yes Yes; Monitoring of up to 16 freely selectable process values (exceeding
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Analog value generation for the inputs         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 2 048 kHz Yes Yes Yes Yes; Monitoring of up to 16 freely selectable process values (exceeding or undershooting of value)
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Analog value generation for the inputs         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses         • Line quality	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 200 m 2 048 kHz Yes Yes Yes Yes; Monitoring of up to 16 freely selectable process values (exceeding or undershooting of value) Yes
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         • unshielded, max.         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses         • Line quality         • Supply voltage	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 200 m 2 048 kHz Yes Yes Yes; Monitoring of up to 16 freely selectable process values (exceeding or undershooting of value) Yes Yes
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         • unshielded, max.         • unshielded, max.         • unshielded, max.         • analog value generation for the inputs         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses         • Line quality         • Supply voltage         • Hardware interrupt lost	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 2 048 kHz Yes Yes Yes; Monitoring of up to 16 freely selectable process values (exceeding or undershooting of value) Yes Yes Yes Yes Yes Yes
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         • unshielded, max.         • unshielded, max.         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses         • Line quality         • Supply voltage         • Hardware interrupt lost         • Parameter assignment error	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         • unshielded, max.         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses         • Line quality         • Supply voltage         • Hardware interrupt lost         • Parameter assignment error         • Module fault	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 200 m 2 048 kHz Yes Yes Yes; Monitoring of up to 16 freely selectable process values (exceeding or undershooting of value) Yes Yes Yes Yes Yes Yes Yes
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         • unshielded, max.         • unshielded, max.         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses         • Line quality         • Supply voltage         • Hardware interrupt lost         • Parameter assignment error         • Module fault         • Channel not available	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         • analog value generation for the inputs         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses         • Line quality         • Supply voltage         • Hardware interrupt lost         • Parameter assignment error         • Module fault         • Channel not available         • Overflow/underflow         • Overload current	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 200 m 2 048 kHz Yes Yes Yes Yes; Monitoring of up to 16 freely selectable process values (exceeding or undershooting of value) Yes Yes Yes Yes Yes Yes Yes Yes
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         Analog value generation for the inputs         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses         • Line quality         • Supply voltage         • Hardware interrupt lost         • Parameter assignment error         • Module fault         • Channel not available         • Overlow/underflow         • Overload current         Diagnostics indication LED	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 200 m 2 048 kHz Yes Yes Yes Yes; Monitoring of up to 16 freely selectable process values (exceeding or undershooting of value) Yes Yes Yes Yes Yes Yes Yes Yes
Time of day         Operating hours counter         • present         Analog inputs         Cycle time (all channels), typ.         Cable length         • shielded, max.         • unshielded, max.         • analog value generation for the inputs         Sampling frequency, max.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Limit value alarm         • Hardware interrupt         Diagnoses         • Line quality         • Supply voltage         • Hardware interrupt lost         • Parameter assignment error         • Module fault         • Channel not available         • Overflow/underflow         • Overload current	Yes 50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m

<ul> <li>Nor channel diagnostics</li> <li>Ves, red FN LED</li> <li>Massuring functions</li> <li>Massuring functions</li> <li>Conductor for vulgage massurement</li> <li>Simulation of measured value acquisition</li> <li>Sumatical or distance</li> <li>Simulation of measured value acquisition</li> <li>Measuring inputs for voltage</li> <li>Measuring inputs for voltage between the line conductors</li> <li>Measured be inverting between the line conductors</li> <li>Measure acquisition of voltage between the line conductors</li> <li>Measure acquisition of voltage between the line conductor (N. M. Hellow 100 V</li> <li>Measure acquisition of voltage measurement (S. M. K. M. M.</li></ul>		
Integrated Functions Measuring procedure for current measurement Fige of measured value acquisition Curve shape of voltage Sub-offenging Curve shape of voltage Sub-offenging Curve shape of voltage Sub-offenging Curve shape of voltage Curve shape of voltage Sub-offenging Curve shape of voltage Sub-offenging Curve shape of voltage Sub-offenging Parameter length Sub-offenging Prequeery measurement, min. - Frequeery measurement, max. Conductors - Measurable bitw voltage between the line conductors - Measurable bitw voltage between phase and metral conductor, min. - Measurable bitw voltage between the line conductors, min.             - Measurable bitw voltage between the line             conductors, min.             - Measurable ine voltage between the line             conductors, min.             - Measurable to the voltage between the line             conductors, min.             - Measurable bitw current (AC), min.             - Measurable relative current (AC), min.             - Measurable relat	<ul> <li>for channel diagnostics</li> </ul>	
Measuring functions         TMKS           • Measuring procedure for outage measurement         TRKS           • Type of measured value acquisition         Survival acquisition           • Duration acquisition         Survival acquisition           • Buffering of measured value acquisition         3.2 MRS           • Parameter length         128 byte           • Bandwith of measured value acquisition         3.2 MRL; Harmonics: 63 / 50 Hz, 52 / 60 Hz           Measuring inputs for voltage         -           - Frequency measurement, max.         66 Hz           Measuring inputs for voltage between phase and metral conductor, min.         46 Hz           - Measurable line voltage between phase and metral conductor, min.         519 V           - Measurable line voltage between phase and metral conductor, min.         519 V           - Measurable line voltage between phase and metral conductor, min.         519 V           - Measurable line voltage between the line conductor and neutral conductor for phase end measurable relative current (AC), min.         519 V           - Measurable line voltage between the line conductor and neutral conductor         519 V           - Measurement category for voltage measurement tae (AC), max.         15 MC           - Measurement category for voltage measurement (AC), max.         15 MC           - Measurement category for voltage measurement the line conductor and neut	5	Yes; green/red DIAG LED
<ul> <li>Measuring products for vortage measurement</li> <li>TRMS</li> <li>Measuring products for unrent measurement</li> <li>Tays of measured value acquisition</li> <li>Sufficiency measurement value</li> <li>Bufficiency measurement value</li> <li>Bufficiency measurement, max.</li> <li>Status of the value acquisition</li> <li>Sufficiency measurement, max.</li> <li>Status of the value acquisition</li> <li>Sufficiency measurement, max.</li> <li>Status of the value acquisition</li> <li>Sufficiency measurement, max.</li> <li>Status of the value acquisition</li> <li>Measurable ine value acquisition</li> <li>Sufficiency measurement, max.</li> <li>Status of the value acquisition</li> <li>Sufficiency measurement, max.</li> <li>Status of the value acquisition</li> <li>Measurable ine value acquisition</li> <li>Measurad value acquisition</li> <l< td=""><td>Integrated Functions</td><td></td></l<></ul>	Integrated Functions	
<ul> <li>Measuring procedure for current measurement</li> <li>Type of measured value acquisition</li> <li>Curve shape of voltage</li> <li>Buffering of measured value acquisition</li> <li>22 Mi2</li> <li>Parameter length</li> <li>Trequency measurement, min.</li> <li>45 Hz</li> <li>Measuring inputs for voltage</li> <li>Measuring inputs for voltage between phase and neutral conductor, min.</li> <li>Measuring inputs for voltage between phase and neutral conductor, min.</li> <li>Measuring inputs for voltage between phase and neutral conductor, min.</li> <li>Measuring inputs for voltage between phase and neutral conductor, min.</li> <li>Measuring inputs for voltage between phase and neutral conductor, min.</li> <li>Measuring inputs for voltage between phase and neutral conductor, min.</li> <li>Measuring inputs for voltage between the line conductors, min.</li> <li>Measuring inputs for voltage between the line conductors, min.</li> <li>Measuring inputs for voltage between the line conductor, min.</li> <li>Measuring inputs for current (AC), max.</li> <li>Measured value short-line withstand current in accordance with IEC 61010-2- 030</li> <li>Measured value short-line withstand current in accordance with IEC 61010-2- 030</li> <li>Measured value shore measuring range 0 to 5 A</li> <li>Measured value shore f</li></ul>	Measuring functions	
<ul> <li>Type of measured value acquisition</li> <li>Corre shop of voltage</li> <li>Buffering of measured value acquisition</li> <li>28 byte</li> <li>Parameter length</li> <li>28 byte</li> <li>Bandwith of measured value acquisition</li> <li>28 byte</li> <li>Bandwith of measured value acquisition</li> <li>28 byte</li> <li>Bandwith of measured value acquisition</li> <li>Corpusition</li> <li>Frequency measurement, max.</li> <li>Besure and the voltage between phase and neutral conductors</li> <li>Measuring inguis for voltage between phase and neutral conductors, min.</li> <li>Measurable ine voltage between phase and neutral conductors, min.</li> <li>Measurable ine voltage between phase and neutral conductors, min.</li> <li>Measurable ine voltage between phase and neutral conductor, min.</li> <li>Measurable ine voltage between phase and neutral conductor, min.</li> <li>Measurable ine voltage between the line conductors, min.</li> <li>Measurable ine voltage between the line conductor, min.</li> <li>Measurable ine voltage between the line conductor and neutral conductor.</li> <li>Measurable ine voltage between the line conductor and neutral conductor.</li> <li>Measurable relative current (AC), min.</li> <li>Measurable relative c</li></ul>	<ul> <li>Measuring procedure for voltage measurement</li> </ul>	TRMS
<ul> <li>Curve shape of voltage</li> <li>Buildeling of measured variables</li> <li>Yes</li> <li>Parameter length</li> <li>22 M42, Harmonics: 63 / 50 H2, 52 / 50 H2</li> <li>Measuring range</li> <li>— Frequency measurement, min.</li> <li>45 Hz</li> <li>— Frequency measurement, min.</li> <li>45 Hz</li> <li>— Frequency measurement, min.</li> <li>46 Hz</li> <li>— Measuring inputs for voltage</li> <li>— Measurable inei voltage between phase and metrifal conductor, min.</li> <li>— Measurable inei voltage between phase and metrifal conductor, min.</li> <li>— Measurable inei voltage between phase and metrifal conductor, min.</li> <li>— Measurable inei voltage between phase and metrifal conductor, min.</li> <li>— Measurable inei voltage between phase and metrifal conductor, min.</li> <li>— Measurable inei voltage between phase and metrifal conductor, max.</li> <li>— Measurable inei voltage between the line conductor and neutral conductor, max.</li> <li>— Internal resistance line conductor and neutral conductor, max.</li> <li>— Internal resistance 12/500; 2.5 KV</li> <li>— Measurable relative current (AC), mix.</li> <li>— Measurable relative current (AC), mix.</li> <li>— Continuous current with AC, maximum permissible</li> <li>— Apparent power consumption per phase for measurable relative current (AC), mix.</li> <li>— Continuous current with AC, maximum permissible</li> <li>— Apparent power consumption per phase for measurable relative current (AC), mix.</li> <li>— Measured stort-line withstand current terminal thermal overload</li> <li>— Apparent power consumption per phase for measurable relative current (AC), mix.</li> <li>— Continuous current with AC, maximum permissible</li> <li>— Apparent power consumption per phase for measurable relative current (AC), mix.</li> <li>— Measured variable parent power</li> <li>— Measured variable parent power</li> <li>— Measured variable acurren</li></ul>	<ul> <li>Measuring procedure for current measurement</li> </ul>	TRMS
• Buffering of measured value acquisition       128 byte         • Parameter length       128 byte         • Eandwidth of measured value acquisition       3.2 kHz; Harmonice: 63 / 50 Hz, 52 / 60 Hz         Measuring range       5 Hz         - Frequency measurement, mix.       65 Hz         Measuring inputs for voltage between phase and neutral conductor       300 V         - Measurable line voltage between phase and neutral conductors.       300 V         - Measurable line voltage between phase and neutral conductors, mix.       519 V         - Measurable line voltage between the line conductors, mix.       6 V         - Measurable line voltage between the line conductors, mix.       6 V         - Measurable line voltage between the line conductors, mix.       6 V         - Measurable line voltage between the line conductors, mix.       519 V         - Internal resistance line conductor and neutral conductor.       519 V         - Measurable line voltage between the line conductors, mix.       15 MQ         - Measurable line voltage between the line conductors, mix.       6 V         - Measurable relative current (AC), mix.       15 MQ         - Measurable relative current (AC), mix.       100 W. Relative to the secondary rated current 5 A         - Continuos current with AC, maximum performance thermal overhoad       6 V A         - Measured vatable partern powe	<ul> <li>Type of measured value acquisition</li> </ul>	seamless
<ul> <li>Parameter length</li> <li>Bandwidth of measured value acquisition</li> <li>3.2 kHz; Harmonics: 63 / 50 Hz; 52 / 60 Hz</li> <li>Measuring range</li> <li>Frequency measurement, min.</li> <li>45 Hz</li> <li>Measuring inputs for voltage</li> <li>Measuring inputs for voltage between the line</li> <li>Conductors</li> <li>Measurable line voltage between phase and</li> <li>Measurable line voltage between the line</li> <li>Conductors, min.</li> <li>Measurable line voltage between the line</li> <li>Conductors, max.</li> <li>Internal resistance line conductor and neutral</li> <li>Measurable line voltage between the line</li> <li>Conductors, max.</li> <li>Internal resistance line conductor and neutral</li> <li>Measurable line voltage resistance 1,250µs</li> <li>2.5 kV</li> <li>Measurable line voltage resistance 1,250µs</li> <li>2.5 kV</li> <li>Measurable line voltage current (AC), min.</li> <li>Measurable line voltage current (AC), min.</li> <li>Measurable line voltage resistance 1,250µs</li> <li>S.A: 6 A permanent thermal overload</li> <li>Apparent power consumption per phase for measurable relative current (AC), min.</li> <li>Apparent power consumption per phase for measurable relative current (AC), min.</li> <li>Measured variable and current</li> <li>Apparent power consumption per phase for measurable relative current (AC), min.</li> <li>Measured variable and current</li> <li>Measured variable ange 0 to A</li> <li>Supparent power consumption per phase for measurable relative porter of A</li> <li>Meas</li></ul>	<ul> <li>Curve shape of voltage</li> </ul>	Sinusoidal or distorted
• Bandwidth of measured value acquisition       3.2 kHz; Hammonics: 63 / 50 Hz, 52 / 60 Hz         Measuring range       - Frequency measurement, min.       45 Hz         - Frequency measurement, max.       65 Hz         Measuring inputs for voltage between phase and neutral conductor       300 V         - Measurable line voltage between phase and neutral conductors       519 V         - Measurable line voltage between phase and neutral conductors, min.       519 V         - Measurable line voltage between phase and neutral conductor, min.       61 V         - Measurable line voltage between the line conductors, max.       61 V         - Measurable line voltage between the line conductors, max.       519 V         - Measurable ine voltage between the line conductors, max.       519 V         - Measurable line voltage between the line conductors, max.       519 V         - Measurable relative current (AC), max.       519 V         - Measurable relative current (AC), max.       510 V         - Measurable relative current (AC), max.       510 V         - Measurable relative current (AC), max.       51 Å A permanent thermal overload         - Measurable relative current (AC), max.       100 Å         - Apparent power consumption per phase for measurable relative current (AC), max.       0.6 VA         - Surge strength       10.6 VA         - Tated value shor	<ul> <li>Buffering of measured variables</li> </ul>	Yes
Measuring range       45 Hz         — Frequency measurement, min.       45 Hz         Measuring inputs for voltage       300 V         — Measurable line voltage between phase and neutral conductor       300 V         — Measurable line voltage between phase and neutral conductor, min.       519 V         — Measurable line voltage between phase and neutral conductor, min.       300 V         — Measurable line voltage between phase and neutral conductor, min.       300 V         — Measurable line voltage between phase and neutral conductor, max.       6 V         — Measurable line voltage between the line conductor, max.       6 V         — Measurable line voltage between the line conductor, max.       6 V         — Measurable line voltage between the line conductor, max.       519 V         — Measurable line voltage between the line conductor and neutral conductor.       1.5 MD.         — Measurable ine voltage restance 1.250µs       60 mW: 300 V AC         — Measurable restance current (AC), max.       10 MW: Relative to the secondary rated current 5 A         — measurable restance current (AC), max.       100 %: Relative to the secondary rated current 5 A         — Apparent power consumption per phase for measuring range 0 to 3       0.6 VA         — Accuracy class according to IEC 61557-12       0.6 VA         — Measured variable exitive powere       0.5 <td< td=""><td>Parameter length</td><td>128 byte</td></td<>	Parameter length	128 byte
Frequency measurement, min.       45 Hz         Resurable line voltage between phase and neutral conductors       300 V         Measurable line voltage between phase and neutral conductors, min.       300 V         Measurable line voltage between phase and neutral conductors, min.       31 V         Measurable line voltage between phase and neutral conductor, min.       300 V         Measurable line voltage between phase and neutral conductor, mas.       300 V         Measurable line voltage between phase and neutral conductor, mas.       619 V         Measurable line voltage between the line conductors, mas.       619 V         Measurable line voltage between the line conductors, mas.       619 V         Measurable line voltage between the line conductors, mas.       619 V         Internal resistance line conductor and neutral conductor, mas.       519 V         Measurable relative consumption per phase       80 mW; 300 V AC         Impulse voltage tresistance 1.250 µs       2.5 kV         Measurable relative current (AC), max.       100 %; Relative to the secondary rated current 5 A         measurable relative current (AC), max.       100 %; Relative to the secondary rated current 5 A         measurable relative current (AC), max.       100 Å         measurable relative current (AC), min.       1 %; Relative to the secondary rated current 5 A	<ul> <li>Bandwidth of measured value acquisition</li> </ul>	3.2 kHz; Harmonics: 63 / 50 Hz, 52 / 60 Hz
— Frequency measurement, max.         96 Hz           Measurable line voltage between phase and neutral conductor         300 V           — Measurable line voltage between phase and neutral conductor, min.         519 V           — Measurable line voltage between phase and neutral conductor, min.         300 V           — Measurable line voltage between phase and neutral conductor, min.         300 V           — Measurable line voltage between phase and neutral conductor, max.         6 V           — Measurable line voltage between the line conductors, min.         519 V           — Measurable line voltage between the line conductors, max.         519 V           — Internal resistance line conductor and neutral conductor         519 V           — Measurable line voltage between the line conductor         60 mW; 300 V AC           — Internal resistance 1:250 us         2.5 kV           — Measurement in accordance with IEC 61010-2- 300         CAT II           — measurable relative current (AC), min.         1 %, Relative to the secondary rated current 5 A           — Continuous current with AC, maximum permissible         0.6 VA           — Apperent power consumption per phase for measuring range 5 A         0.6 VA           — Reater value short-time withstand current estricted to 1 s         100 A           — Input resistance durated perfect         25 mQ: At the terminial           — Zero point suppress	Measuring range	
— Frequency measurement, max.         96 Hz           Measurable line voltage between phase and neutral conductor         300 V           — Measurable line voltage between phase and neutral conductor, min.         519 V           — Measurable line voltage between phase and neutral conductor, min.         300 V           — Measurable line voltage between phase and neutral conductor, min.         300 V           — Measurable line voltage between phase and neutral conductor, max.         6 V           — Measurable line voltage between the line conductors, min.         519 V           — Measurable line voltage between the line conductors, max.         519 V           — Internal resistance line conductor and neutral conductor         519 V           — Measurable line voltage between the line conductor         60 mW; 300 V AC           — Internal resistance 1:250 us         2.5 kV           — Measurement in accordance with IEC 61010-2- 300         CAT II           — measurable relative current (AC), min.         1 %, Relative to the secondary rated current 5 A           — Continuous current with AC, maximum permissible         0.6 VA           — Apperent power consumption per phase for measuring range 5 A         0.6 VA           — Reater value short-time withstand current estricted to 1 s         100 A           — Input resistance durated perfect         25 mQ: At the terminial           — Zero point suppress	— Frequency measurement, min.	45 Hz
Measuring inputs for voltage         300 V           — Measurable line voltage between phase and neutral conductors         300 V           — Measurable line voltage between phase and neutral conductors, rin.         519 V           — Measurable line voltage between phase and neutral conductor, rin.         300 V           — Measurable line voltage between phase and neutral conductor, rin.         300 V           — Measurable line voltage between the line conductors, rina.         6 V           — Measurable line voltage between the line conductors, rina.         6 V           — Internal resistance line conductor and neutral conductors, max.         519 V           — Measurable line voltage between the line conductors, max.         60 mW; 300 V AC           — Impulse voltage resistance 1.2/50µs         2.5 kV           — Measurable relative current (AC), max.         15 MQ           — Measurable relative current (AC), max.         100 %; Relative to the secondary rated current 5 A           — measurable relative current (AC), max.         100 %; Relative to the secondary rated current 5 A           — Continuous current with AC, max:         100 %; Relative to the secondary rated current 5 A           — Apparent power consumption per phase for measurable relative current (AC), max.         100 A           — Tested value short-time withstand current restricted to 1 s         25 mC). At the terminal 10 A, for 1 minute           — ated valuiab		65 Hz
	<ul> <li>Measurable line voltage between phase and</li> </ul>	300 V
	- Measurable line voltage between the line	519 V
	<ul> <li>Measurable line voltage between phase and</li> </ul>	3 V
conductors, min.       519 V         - Measurable line voltage between the line       519 V         - Internal resistance line conductor and neutral       1.5 MC         conductor       60 mW; 300 V AC         - Impulse voltage resistance 1/2/50µs       2.5 kV         - Measurement category for voltage measurement in accordance with IEC 61010-2-030       CAT II         Measurement category for voltage resistance (JCC), max.       100 %; Relative to the secondary rated current 5 A         - measurable relative current (AC), min.       1 %; Relative to the secondary rated current 5 A         - measurable relative current (AC), max.       100 %; Relative to the secondary rated current 5 A         - Continuous current with AC, maximum permissible       5 A; 6 A permanent thermal overload         - Agarent power consumption per phase for measuring range 5 A       0.6 VA         - Rated value short-time withstand current restricted to 1 s       100 A         - Surge strength       0.0 A         - Zero point suppression       0 20%, referred to the nominal current         Accuracy variable current       0.2         - Measured variable outinge       0.5         - Measured variable current       0.2         - Measured variable current       0.5         - Measured variable reactive power       0.5         - Measured variable reactive e		300 V
conductors, max.       I.5 MΩ         - Internal resistance line conductor and neutral conductor       1.5 MΩ         - Power consumption per phase       60 mW; 300 V AC         - Impulse voltage resistance 1.2/50µs       2.5 kV         - Measurement category for voltage measurement in accordance with IEC 61010-2-030       CAT II         Measuring inputs for current       -         - measurable relative current (AC), min.       1%; Relative to the secondary rated current 5 A         - Continuous current with AC, maximum permissible       5 A; 6 A permanent thermal overload         - Apparent power consumption per phase for measuring range 5 A       0.6 VA         - Rated value short-time withstand current restricted to 1 s       20 fmQ; At the terminal         - Surge strength       0.6 VA         - Surge strength       0.6 VA         - Surge strength       0.6 VA         - Measured variable rolative withstand current restricted to 1 s       20 fmQ; At the terminal         - Surge strength       0.4; for 1 minute         - Zero point suppression       0 20%, referred to the nominal current         - Measured variable current       0.2         - Measured variable parent power       0.5         - Measured variable current       0.5         - Measured variable reactive power       0.5 <td< td=""><td></td><td>6 V</td></td<>		6 V
conductorGo MW: 300 V AC— Power consumption per phase60 MW: 300 V AC— Impulse voltage resistance 1,2/50 µs2.5 kV— Measurement category for voltage measurement in accordance with IEC 61010-2- 030CAT IIMeasuring inputs for current1 %; Relative to the secondary rated current 5 A— measurable relative current (AC), min.1 %; Relative to the secondary rated current 5 A— measurable relative current (AC), max.100 %; Relative to the secondary rated current 5 A— Continuous current with AC, maximum permissible5 A; 6 A permanent thermal overload— Apparent power consumption per phase for measuring range 5 A0.6 VA— Rated value short-time withstand current restricted to 1 s100 A— Surge strength0.2 mC; At the terminal— Value short-time withstand current e Zero point suppression0 20%, referred to the nominal currentAccuracy class according to IEC 61557-12Measured variable current 0.2— Measured variable current measured variable active power0.5— Measured variable active power measured variable active power0.5— Measured variable active power measured variable active energy measured variable reactive energy measured variable reactive energy0.5— Measured variable pase angle measured variable phase angle measured variable frequency measured variable frequency0.5— Measured variable phase angle measured variable frequency0.5— Measured variable phase angle measured variable frequency0.5— Measured variable frequency measured variable frequency </td <td>conductors, max.</td> <td>519 V</td>	conductors, max.	519 V
- Impulse voltage resistance 1,2/50μs       2.5 kV         - Measurement in accordance with IEC 61010-2- 030       CAT II         Measuring inputs for current       -         - measurable relative current (AC), min.       1 %, Relative to the secondary rated current 5 A         - measurable relative current (AC), max.       100 %; Relative to the secondary rated current 5 A         - Continuous current with AC, maximum permissible       5 A; 6 A permanent thermal overload         - Apparent power consumption per phase for measuring range 5 A       0.6 VA         - Rated value short-time withstand current restricted to 1 s       100 A         - Input resistance measuring range 0 to 5 A       25 mΩ; At the terminal         - Zero point suppression       0 20%, referred to the nominal current         - Measured variable current       0,2         - Measured variable current       0,5         - Measured variable current       0,5         - Measured variable power       0,5         - Measured variable power       0,5         - Measured variable power factor       0,5         - Measured variable power factor		1.5 ΜΩ
Measurement category for voltage measurement in accordance with IEC 61010-2-030       CAT II         Measuring inputs for current       1 %; Relative to the secondary rated current 5 A         measurable relative current (AC), min.       1 %; Relative to the secondary rated current 5 A         Continuous current with AC, maximum permissible       5 A; 6 A permanent thermal overload         Apparent power consumption per phase for measuring range 5 A       0.6 VA         Input resistance measuring range 0 to 5 A       25 mΩ; At the terminal         Surge strength       100 A; referred to the nominal current         Measured variable rolling       0,2         Measured variable active power       0,5         Measured variable apparent power       0,5         Measured variable active power       0,5         Measured variable active energy       1         Measured variable active energy       0,5         Measured variable active energy       1         Measured variable active energy       1         Measured variable active energy       1         Measured variable neutral current       0,2         Measured variable active energy       1         Measured variable active energy       1         Measured variable fracetrive energy       1	<ul> <li>Power consumption per phase</li> </ul>	60 mW; 300 V AC
measurement in accordance with IEC 61010-2- 030         Measuring inputs for current	<ul> <li>Impulse voltage resistance 1,2/50µs</li> </ul>	2.5 kV
	measurement in accordance with IEC 61010-2-	CAT II
- measurable relative current (AC), max.       100 %; Relative to the secondary rated current 5 A         - Continuous current with AC, maximum permissible       5 A; 6 A permanent thermal overload         - Apparent power consumption per phase for measuring range 5 A       0.6 VA         - Rated value short-time withstand current restricted to 1 s       100 A         - Input resistance measuring range 0 to 5 A       25 mΩ; At the terminal         - Surge strength       10 A, for 1 minute         - Zero point suppression       0 20%, referred to the nominal current         Measured variable voltage       0,2         - Measured variable current       0,2         - Measured variable active power       0.5         - Measured variable reactive power       0.5         - Measured variable power factor       0.5         - Measured variable power factor       0.5         - Measured variable neutral current       0,2         - Measured variable neutral current       0,2         - Measured variable active power       1         - Measured variable neutral current       0,2         - Measured variable neutral current       0,2         - Measured variable neutral current       0,2         - Measured variable power factor       0.5         - Measured variable neutral current       0,2     <	Measuring inputs for current	
- Continuous current with AC, maximum permissible       5 A; 6 A permanent thermal overload         - Apparent power consumption per phase for measuring range 5 A       0.6 VA         - Rated value short-time withstand current restricted to 1 s       100 A         - Input resistance measuring range 0 to 5 A       25 mΩ; At the terminal         - Surge strength       10 A; for 1 minute         - Zero point suppression       0 20%, referred to the nominal current         Accuracy class according to IEC 61557-12       0.2         - Measured variable voltage       0.2         - Measured variable current       0.2         - Measured variable current       0.5         - Measured variable current       0.5         - Measured variable reactive power       0.5         - Measured variable reactive power       0.5         - Measured variable reactive power       0.5         - Measured variable neutral current       0.2         - Measured variable neutral current       0.5         - Measured variable neutral current       0.2         - Measured variable neutral current       0.2         - Measured variable phase angle       ±0.5 °; not covered by IEC 61557-12         - Measured variable frequency       0.05         - Measured variable frequency       0.05         - Me	— measurable relative current (AC), min.	1 %; Relative to the secondary rated current 5 A
permissible	— measurable relative current (AC), max.	100 %; Relative to the secondary rated current 5 A
measuring range 5 A		5 A; 6 A permanent thermal overload
restricted to 1 s— Input resistance measuring range 0 to 5 A25 mΩ; At the terminal— Surge strength10 A; for 1 minute— Zero point suppression0 20%, referred to the nominal currentAccuracy class according to IEC 61557-12— Measured variable voltage0,2— Measured variable current0,2— Measured variable apparent power0.5— Measured variable active power0.5— Measured variable power factor0.5— Measured variable reactive power0.5— Measured variable reactive energy0.5— Measured variable neutral current0,2— Measured variable phase angle±0.5 °; not covered by IEC 61557-12— Measured variable frequency0.05— Measured variable harmonic1— Measured variable HTDU1— Measured variable THDU1— Measured variable THDI1		0.6 VA
- Surge strength10 A; for 1 minute- Zero point suppression020%, referred to the nominal currentAccuracy class according to IEC 61557-12- Measured variable voltage0,2- Measured variable current0,2- Measured variable apparent power0.5- Measured variable active power0.5- Measured variable reactive power1- Measured variable power factor0.5- Measured variable active energy0.5- Measured variable neutral current0,2- Measured variable reactive energy1- Measured variable neutral current0,2- Measured variable neutral current0,2- Measured variable hase angle±0.5 °; not covered by IEC 61557-12- Measured variable frequency0.05- Measured variable harmonic1- Measured variable harmonic1- Measured variable harmonic1- Measured variable THDU1- Measured variable THDI1		100 A
Zero point suppression0 20%, referred to the nominal currentAccuracy class according to IEC 61557-12 Measured variable voltage0,2 Measured variable current0,2 Measured variable apparent power0.5 Measured variable active power0.5 Measured variable reactive power1 Measured variable power factor0.5 Measured variable active energy0.5 Measured variable reactive energy0.5 Measured variable reactive energy1 Measured variable neutral current0,2 Measured variable neutral current0,2 Measured variable harmonic1 Measured variable frequency0.05 Measured variable harmonic1 Measured variable harmonic1 Measured variable harmonic1 Measured variable harmonic1 Measured variable THDU1 Measured variable THDU1 Measured variable THDI1		
Accuracy class according to IEC 61557-12         — Measured variable voltage       0,2         — Measured variable current       0,2         — Measured variable apparent power       0.5         — Measured variable active power       0.5         — Measured variable reactive power       1         — Measured variable power factor       0.5         — Measured variable power factor       0.5         — Measured variable reactive energy       0.5         — Measured variable reactive energy       0.5         — Measured variable reactive energy       1         — Measured variable reactive energy       0.5         — Measured variable neutral current       0,2         — Measured variable phase angle       ±0.5 °; not covered by IEC 61557-12         — Measured variable frequency       0.05         — Measured variable harmonic       1         — Measured variable harmonic       1         — Measured variable harmonic       1         — Measured variable THDU       1         — Measured variable THDI       1         Accuracy class line analysis acc. to IEC 61000-4-30		
Measured variable voltage0,2Measured variable current0,2Measured variable apparent power0.5Measured variable active power0.5Measured variable reactive power1Measured variable power factor0.5Measured variable active energy0.5Measured variable reactive energy0.5Measured variable reactive energy1Measured variable reactive energy1Measured variable neutral current0,2Measured variable phase angle±0.5 °; not covered by IEC 61557-12Measured variable frequency0.05Measured variable harmonic1Measured variable THDU1Measured variable THDI1Measured variable THDI1		0 20%, referred to the nominal current
— Measured variable current0,2— Measured variable apparent power0.5— Measured variable active power0.5— Measured variable reactive power1— Measured variable power factor0.5— Measured variable active energy0.5— Measured variable reactive energy0.5— Measured variable neutral current0,2— Measured variable phase angle±0.5°; not covered by IEC 61557-12— Measured variable frequency0.05— Measured variable harmonic1— Measured variable THDU1— Measured variable THDI1Accuracy class line analysis acc. to IEC 61000-4-301		
- Measured variable apparent power0.5- Measured variable active power0.5- Measured variable reactive power1- Measured variable power factor0.5- Measured variable active energy0.5- Measured variable reactive energy1- Measured variable neutral current0.2- Measured variable phase angle±0.5°; not covered by IEC 61557-12- Measured variable frequency0.05- Measured variable harmonic1- Measured variable THDU1- Measured variable THDI1- Measured variable THDI1	-	
— Measured variable active power0.5— Measured variable reactive power1— Measured variable power factor0.5— Measured variable active energy0.5— Measured variable reactive energy1— Measured variable neutral current0,2— Measured variable phase angle±0.5°; not covered by IEC 61557-12— Measured variable frequency0.05— Measured variable harmonic1— Measured variable THDU1— Measured variable THDI1Accuracy class line analysis acc. to IEC 61000-4-30		
Measured variable reactive power1 Measured variable power factor0.5 Measured variable active energy0.5 Measured variable reactive energy1 Measured variable neutral current0,2 Measured variable phase angle±0.5°; not covered by IEC 61557-12 Measured variable frequency0.05 Measured variable harmonic1 Measured variable harmonic1 Measured variable THDU1 Measured variable THDU1 Measured variable THDU1		0.5
Measured variable power factor0.5Measured variable active energy0.5Measured variable reactive energy1Measured variable neutral current0.2Measured variable phase angle±0.5 °; not covered by IEC 61557-12Measured variable frequency0.05Measured variable harmonic1Measured variable THDU1Measured variable THDU1Accuracy class line analysis acc. to IEC 61000-4-30	<ul> <li>Measured variable active power</li> </ul>	0.5
— Measured variable active energy0.5— Measured variable reactive energy1— Measured variable neutral current0,2— Measured variable phase angle±0.5°; not covered by IEC 61557-12— Measured variable frequency0.05— Measured variable harmonic1— Measured variable THDU1— Measured variable THDI1Accuracy class line analysis acc. to IEC 61000-4-30	<ul> <li>Measured variable reactive power</li> </ul>	1
— Measured variable reactive energy1— Measured variable neutral current0,2— Measured variable phase angle±0.5°; not covered by IEC 61557-12— Measured variable frequency0.05— Measured variable harmonic1— Measured variable THDU1— Measured variable THDI1Accuracy class line analysis acc. to IEC 61000-4-30	<ul> <li>Measured variable power factor</li> </ul>	0.5
- Measured variable neutral current       0,2         - Measured variable phase angle       ±0.5°; not covered by IEC 61557-12         - Measured variable frequency       0.05         - Measured variable harmonic       1         - Measured variable THDU       1         - Measured variable THDI       1         Accuracy class line analysis acc. to IEC 61000-4-30       1	<ul> <li>Measured variable active energy</li> </ul>	0.5
- Measured variable phase angle       ±0.5 °; not covered by IEC 61557-12         - Measured variable frequency       0.05         - Measured variable harmonic       1         - Measured variable THDU       1         - Measured variable THDU       1         Accuracy class line analysis acc. to IEC 61000-4-30       1		1
— Measured variable frequency       0.05         — Measured variable harmonic       1         — Measured variable THDU       1         — Measured variable THDI       1         Accuracy class line analysis acc. to IEC 61000-4-30       1	<ul> <li>Measured variable neutral current</li> </ul>	0,2
— Measured variable harmonic       1         — Measured variable THDU       1         — Measured variable THDI       1         Accuracy class line analysis acc. to IEC 61000-4-30       1	<ul> <li>Measured variable phase angle</li> </ul>	±0.5 °; not covered by IEC 61557-12
— Measured variable THDU       1         — Measured variable THDI       1         Accuracy class line analysis acc. to IEC 61000-4-30       1	<ul> <li>Measured variable frequency</li> </ul>	0.05
— Measured variable THDI     1 Accuracy class line analysis acc. to IEC 61000-4-30	- Measured variable harmonic	1
Accuracy class line analysis acc. to IEC 61000-4-30	— Measured variable THDU	1
	— Measured variable THDI	1
— Measured variable voltage     Class S		
	— Measured variable voltage	Class S

<ul> <li>Measured variable current</li> </ul>	Class S
<ul> <li>Measured variable frequency</li> </ul>	Class S
— Measured variable voltage interruption	Class S
Measured variable voltage dip and swell	Class S
— Measured variable harmonic voltage	Class S
Measured variable harmonic current	Class S
Potential separation	
Potential separation channels	
<ul> <li>between the channels</li> </ul>	No
<ul> <li>between the channels and backplane bus</li> </ul>	Yes
<ul> <li>Between the channels and load voltage L+</li> </ul>	Yes; Including FE
Isolation	
Isolation tested with	Between channels and backplane bus, 24 V supply: Routine test, 1 920 V AC, 2 s; between backplane bus and 24 V supply: Type test, 707 V DC
Ambient conditions	
Ambient temperature during operation	
<ul> <li>horizontal installation, min.</li> </ul>	0 °C; On request: Ambient temperatures lower than 0 °C (without condensation)
<ul> <li>horizontal installation, max.</li> </ul>	60 °C
• vertical installation, min.	0 °C; On request: Ambient temperatures lower than 0 °C (without condensation)
<ul> <li>vertical installation, max.</li> </ul>	50 °C
Altitude during operation relating to sea level	
<ul> <li>Installation altitude above sea level, max.</li> </ul>	3 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm
Other	
Data for selecting a voltage transformer	
<ul> <li>Secondary side, max.</li> </ul>	300 V
Data for selecting a current transformer	
• Burden power current transformer x/1A, min.	As a function of cable length and cross section, see device manual
• Burden power current transformer x/5A, min.	As a function of cable length and cross section, see device manual
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