SIEMENS

Data sheet

6ES7134-6PA01-0CU0



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

General information		
Product type designation	AI Energy Meter CT HF	
Firmware version	V8.0	
 FW update possible 	Yes	
usable BaseUnits	BU type U0	
Color code for module-specific color identification plate	CC20	
Supported power supply systems	TT, TN, IT	
Product function		
 Voltage measurement 	Yes	
 — without voltage transformer 	Yes	
 — with voltage transformer 	Yes	
 Current measurement 	Yes; Max. 4	
 — without current transformer 	No	
— with current transformer	Yes; 1 A or 5 A current transformer	
— With Rogowski coil	No	
 With current-voltage-converter 	No	
 Energy measurement 	Yes	
 Frequency measurement 	Yes	
 Power measurement 	Yes	
 Active power measurement 	Yes	
 Reactive power measurement 	Yes	
 Power factor measurement 	Yes	
 Active factor measurement 	Yes	
 Reactive power compensation 	Yes	
Line analysis	Yes	
 Monitoring of instantaneous and half-wave 	Yes	
values		
 — THD measurement for current and voltage 	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		
 STEP 7 TIA Portal configurable/integrated from 	STEP 7 V16 or higher with HSP	
version		
STEP 7 configurable/integrated from version	V5.5 SP3 or higher	
PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher	
PROFINET from GSD version/GSD revision	V2.3	
Operating mode		
 Switching between operating modes in RUN 	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	

 Cyclic measured value access 	Yes
Acyclic measured value access	Yes
Fixed measured value sets	Yes
 Freely definable measured value sets 	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	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption (rated value)	12.5 mA
Current consumption, max.	17 mA
Power loss	
Power loss, typ.	1.4 W; 4x 6 A input current, 3x 230 V AC
Address area	
Address space per module	
Inputs	256 byte
Outputs	20 byte
Hardware configuration	
Automatic encoding	Yes
Mechanical coding element	Yes
 Type of mechanical coding element 	type C
Selection of BaseUnit for connection variants	
2-wire connection	BU type U0
Time of day	
Uperating nours counter	
Operating hours counter • present	Yes
present	Yes
present Analog inputs	
present	50 ms; Time for consistent update of all measured and calculated
present Analog inputs Cycle time (all channels), typ.	
present Analog inputs Cycle time (all channels), typ. Cable length	50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data)
present Analog inputs Cycle time (all channels), typ.	50 ms; Time for consistent update of all measured and calculated
present Analog inputs Cycle time (all channels), typ. Cable length shielded, max. unshielded, max.	50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m
present Analog inputs Cycle time (all channels), typ. Cable length shielded, max. unshielded, max. Analog value generation for the inputs	50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m
present Analog inputs Cycle time (all channels), typ. Cable length shielded, max. unshielded, max. Analog value generation for the inputs Sampling frequency, max.	50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m
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	50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m
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	50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 2 048 kHz
present Analog inputs Cycle time (all channels), typ. Cable length o shielded, max. unshielded, max. Analog value generation for the inputs Sampling frequency, max. Interrupts/diagnostics/status information Alarms o Diagnostic alarm	50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 2 048 kHz Yes
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 present Analog inputs Cycle time (all channels), typ. Cable length shielded, 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 	50 ms; Time for consistent update of all measured and calculated values (cyclic und acyclic data) 200 m 200 m 2 048 kHz Yes
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	7040
Measuring procedure for voltage measurement	TRMS
 Measuring procedure for current measurement 	TRMS
 Type of measured value acquisition 	seamless
 Curve shape of voltage 	Sinusoidal or distorted
 Buffering of measured variables 	Yes
 Parameter length 	128 byte
 Bandwidth of measured value acquisition 	3.2 kHz; Harmonics: 63 / 50 Hz, 52 / 60 Hz
Measuring range	
 Frequency measurement, min. 	40 Hz
 Frequency measurement, max. 	70 Hz
Measuring inputs for voltage	
 Measurable line voltage between phase and 	277 V
neutral conductor	
 Measurable line voltage between the line conductors 	480 V
 Measurable line voltage between phase and neutral conductor, min. 	3 V
 Measurable line voltage between phase and 	300 V
neutral conductor, max. — Measurable line voltage between the line	6 V
conductors, min. — Measurable line voltage between the line	519 V
conductors, max. — Internal resistance line conductor and neutral	1.5 ΜΩ
conductor	
 Power consumption per phase 	60 mW; 300 V AC
 Impulse voltage resistance 1,2/50µs 	2.5 kV
 Measurement category for voltage 	CAT II
measurement in accordance with IEC 61010-2- 030	
Measuring inputs for current	
— measurable relative current (AC), min.	1 %; Relative to measuring range; 1 A, 5 A
— measurable relative current (AC), max.	120 %; Relative to the secondary rated current 5 A
— Continuous current with AC, maximum	5 A; 6 A permanent thermal overload
permissible	o ri, o ri politiciti di cittati ovolioda
— 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 m Ω : 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	0.0
— 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 active energy 	0.5
 Measured variable reactive energy 	1
 Measured variable neutral current 	0,2
 Measured variable phase angle 	±0.5 °; not covered by IEC 61557-12
 Measured variable frequency 	0.05; only valid for the permissible voltage measuring range
- Measured variable harmonic	1
— Measured variable THDU	1
— Measured variable THDI	1
Accuracy class line analysis acc. to IEC 61000-4-30	
— Measured variable voltage	Class S
— Measured variable current	Class S
— Measured variable frequency	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	
 between the channels 	No
 between the channels and backplane bus 	Yes
 Between the channels and load voltage L+ 	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	
 horizontal installation, min. 	-30 °C
 horizontal installation, max. 	60 °C
 vertical installation, min. 	-30 °C
 vertical installation, max. 	50 °C
Altitude during operation relating to sea level	
 Installation altitude above sea level, max. 	3 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	45 g
Other	
Data for selecting a voltage transformer	
 Secondary side, max. 	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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