

Spare part SIPLUS ET 200SP -40...+70°C start up -25 °C with conformal coating based on 6ES7134-6PA00-0BD0. Analog input module, AI energy meter ST, suitable for BU type D0, Color code CC00, channel diagnostics



General information	
Product type designation	AI energy meter 400VAC ST
usable BaseUnits	BU type D0
Color code for module-specific color identification plate	CC00
Product function	
• Voltage measurement	Yes
• Current measurement	Yes
• Energy measurement	Yes
• Frequency measurement	Yes
• Active power measurement	Yes
• Reactive power measurement	Yes
• I&M data	Yes
• Isochronous mode	No
Operating mode	
• cyclic measurement	Yes
• acyclic measurement	Yes
Installation type/mounting	

Mounting position	Horizontal
Supply voltage	
Design of the power supply	Supply via voltage measurement channel L1
Type of supply voltage	100 - 240 V AC
permissible range, lower limit (AC)	90 V
permissible range, upper limit (AC)	264 V
relative symmetrical tolerance of the supply voltage	10 %
Line frequency	
• permissible range, lower limit	47 Hz
• permissible range, upper limit	63 Hz
Power	
Power consumption without expansion module, typ.	0.6 V·A
Address area	
Address space per module	
• Address space per module, max.	44 byte; 32 byte input / 12 byte output
Analog inputs	
Cycle time (all channels), typ.	50 ms
Analog value generation for the inputs	
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	24 bit; Sigma-delta converter, 1.024 MHz
Interrupts/diagnostics/status information	
Alarms	
• Diagnostic alarm	Yes
• Limit value alarm	No
Diagnostics indication LED	
• Monitoring of the supply voltage (PWR-LED)	Yes
• Channel status display	Yes
• for channel diagnostics	Yes
• for module diagnostics	Yes
Integrated Functions	
Measuring functions	
• 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	No
• Parameter length	44 byte
Measuring range	

— Frequency measurement, min.	45 Hz
— Frequency measurement, max.	65 Hz
Measuring inputs for voltage	
— Measurable line voltage between phase and neutral conductor	230 V
— Measurable line voltage between the line conductors	400 V
— Measurable line voltage between phase and neutral conductor, min.	90 V
— Measurable line voltage between phase and neutral conductor, max.	264 V
— Measurable line voltage between the line conductors, min.	155 V
— Measurable line voltage between the line conductors, max.	460 V
— Power consumption per phase	20 mW
— Measurement category for voltage measurement	CAT III acc. to IEC 61010 Part 1
Measuring inputs for current	
— measurable relative current (AC), min.	5 %; Relative to the secondary rated current; 1 A, 5 A
— measurable relative current (AC), max.	100 %; Relative to the secondary rated current; 1 A, 5 A
— Continuous current with AC, maximum permissible	5 A
— Apparent power consumption per phase for measuring range 5 A	0.6 V·A
— Rated value short-time withstand current restricted to 1 s	100 A
— Surge strength	10 A; for 1 minute
— Zero point suppression	50 mA
Error limits	
— Reference condition for measurement accuracy	Symmetric load, rated current: 20-100%, 50 Hz; active power: LF = 1, reactive power: LF = 0
— for measured variable voltage	±1.0%
— for measured variable current	±1.0%
— for measured variable power	±1.0%
— for measured variable active power	±1.0%
— for measured variable reactive power	±1.0%
— for measured variable total active energy	Class 1 acc. to IEC 62053-21:2003
— for measured variable total reactive energy	Class 2 acc. to IEC 62053-23:2003
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min.	-40 °C; = Tmin; < -25 °C min. permissible supply voltage 110 V AC

• horizontal installation, max. • vertical installation, min. • vertical installation, max.	70 °C; = Tmax; > +60 °C max. permissible current 1 A per phase -40 °C; = Tmin; Startup @ -25 °C 50 °C; = Tmax
Altitude during operation relating to sea level	
• Installation altitude above sea level, max. • Ambient air temperature-barometric pressure-altitude	3 000 m Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... Tmax -5K at 795 hPa ... 701 hPa (+2 000 m ... +3 000 m)
Relative humidity	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
Remark	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
Dimensions	
Width	20 mm
Weights	
Weight, approx.	45 g
Other	
Data for selecting a current transformer	
• Burden power current transformer x/1A, min. • Burden power current transformer x/5A, min. • Cable length (terminal-transformer) dependent on Zn and Imax	1.25 V·A 1.5 V·A 200 m
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