SIEMENS

Data sheet

6ES7134-6HB00-0DA1



SIMATIC ET 200SP, Analog input module, Al 2x U/I 2-.4-wire High Speed, suitable for BU type A0, A1, Color code CC00, channel diagnostics, 16 bit, +/-0.3%

General information		
Product type designation	AI 2xU/I 2-/4-wire HS	
HW functional status	From FS07	
Firmware version		
FW update possible	Yes	
usable BaseUnits	BU type A0, A1	
Color code for module-specific color identification plate	CC00	
Product function		
 I&M data 	Yes; I&M0 to I&M3	
 Isochronous mode 	Yes	
 Measuring range scalable 	No	
 Scalable measured values 	No	
 Adjustment of measuring range 	No	
Engineering with		
 STEP 7 TIA Portal configurable/integrated from version 	V13 SP1	
 STEP 7 configurable/integrated from version 	V5.5 SP3 / -	
 PROFIBUS from GSD version/GSD revision 	One GSD file each, Revision 3 and 5 and higher	
 PROFINET from GSD version/GSD revision 	GSDML V2.3	
Operating mode		
Oversampling	Yes; 2 channels per module	
• MSI	No	
CiR - Configuration in RUN		
Reparameterization possible in RUN	Yes	
Calibration possible in RUN	No	
Supply voltage		
Rated value (DC)	24 V	
permissible range, lower limit (DC)	19.2 V	
permissible range, upper limit (DC)	28.8 V	
Reverse polarity protection	Yes	
Input current		
Current consumption (rated value)	39 mA; without sensor supply	
Encoder supply		
24 V encoder supply		
• 24 V	Yes; For current measurement	
 Short-circuit protection 	Yes	
 Output current, max. 	20 mA; max. 50 mA per channel for a duration < 10 s	
Power loss		
Power loss, typ.	0.95 W; without sensor supply	

Address area		
Address space per module		
Address space per module, max.	4 byte; + 1 byte for QI information (32 bytes in the oversampling operating mode)	
Hardware configuration		
Automatic encoding	Yes	
 Mechanical coding element 	Yes	
 Type of mechanical coding element 	Туре А	
Selection of BaseUnit for connection variants		
2-wire connection	BU type A0, A1	
 4-wire connection 	BU type A0, A1	
Analog inputs		
Number of analog inputs	2; Differential inputs	
 For current measurement 	2	
 For voltage measurement 	2	
permissible input voltage for voltage input (destruction limit), max.	30 V	
permissible input current for current input (destruction limit), max.	50 mA	
Cycle time (all channels), min.	125 µs	
Analog input with oversampling	Yes	
Values per cycle, max.	16	
Resolution, min.	50 µs	
Input ranges (rated values), voltages		
• 0 to +10 V	Yes; 15 bit	
— Input resistance (0 to 10 V)	75 kΩ	
• 1 V to 5 V	Yes; 13 bit	
— Input resistance (1 V to 5 V)	75 kΩ	
• -10 V to +10 V	Yes; 16 bit incl. sign	
 Input resistance (-10 V to +10 V) -5 V to +5 V 	75 kΩ	
- Input resistance (-5 V to +5 V)	Yes; 15 bit incl. sign 75 kΩ	
Input ranges (rated values), currents	10 102	
• 0 to 20 mA	Yes; 15 bit	
— Input resistance (0 to 20 mA)	130 Ω	
• -20 mA to +20 mA	Yes; 16 bit incl. sign	
- Input resistance (-20 mA to +20 mA)	130 Ω	
• 4 mA to 20 mA	Yes; 14 bit	
— Input resistance (4 mA to 20 mA)	130 Ω	
Cable length		
• shielded, max.	1 000 m; 200 m for voltage measurement	
Analog value generation for the inputs		
Measurement principle	Actual value encryption (successive approximation)	
Integration and conversion time/resolution per channel		
• Resolution with overrange (bit including sign), max.	16 bit	
 Interference voltage suppression for interference frequency f1 in Hz 	No	
Conversion time (per channel)	10 µs	
Smoothing of measured values		
 Number of smoothing levels 	7; none; 2-/4-/8-/16-/32-/64-fold	
parameterizable	Yes	
Encoder		
Connection of signal encoders		
 for voltage measurement 	Yes	
• for current measurement as 2-wire transducer	Yes	
— Burden of 2-wire transmitter, max.	650 Ω	
for current measurement as 4-wire transducer Errors/accuracies	Yes	
Linearity error (relative to input range), (+/-)	0.03 %	
Temperature error (relative to input range), (+/-)	0.01 %/K	

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Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.1 %
Operational error limit in overall temperature range	
 Voltage, relative to input range, (+/-) 	0.3 %
Current, relative to input range, (+/-)	0.3 %
Basic error limit (operational limit at 25 °C)	
 Voltage, relative to input range, (+/-) 	0.2 %
 Current, relative to input range, (+/-) 	0.2 %
Interference voltage suppression for $f = n x (f1 + -1 \%), f1 =$	interference frequency
 Common mode voltage, max. 	35 V
Common mode interference, min.	90 dB
Isochronous mode	
Filtering and processing time (TCI), min.	80 µs
Bus cycle time (TDP), min.	125 μs; Starting from firmware Version V2.0.1
Interrupts/diagnostics/status information	
Alarms	
Diagnostic alarm	Yes
Limit value alarm	Yes; two upper and two lower limit values in each case
Diagnoses	
Wire-break	Yes; channel-by-channel, at 4 to 20 mA only
Short-circuit	Yes; channel-by-channel, at 1 to 5 V or for current measuring ranges
	short-circuit in encoder supply
Group error	Yes
Overflow/underflow	Yes
Diagnostics indication LED	
 Monitoring of the supply voltage (PWR-LED) 	Yes; green PWR LED
Channel status display	Yes; green LED
 for channel diagnostics 	Yes; red LED
• for module diagnostics	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
between the channels	Yes
 between the channels and backplane bus 	Yes
 between the channels and the power supply of the 	Yes
electronics	
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
horizontal installation, min.	-30 °C
 horizontal installation, max. 	-30° C
vertical installation, min.	-30 °C
vertical installation, max.	50 °C
Altitude during operation relating to sea level	
Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Dimensions	45
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	32 g
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