6ES7134-6GB00-0BA1

Data sheet



SIMATIC ET 200SP, Analog input module, AI 2xI 2-/4-wire Standard, Pack quantity: 1 unit, suitable for BU type A0, A1, Color code CC05, Module diagnostics, 16 bit

General information		
Product type designation	Al 2xl 2-/4-wire ST	
HW functional status	from FS04	
Firmware version		
 FW update possible 	Yes	
usable BaseUnits	BU type A0, A1	
Color code for module-specific color identification plate	CC05	
Product function		
I&M data	Yes; I&M0 to I&M3	
 Isochronous mode 	No	
 Measuring range scalable 	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 	V2.3 / -	
Operating mode		
 Oversampling 	No	
• 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, max.	45 mA; without sensor supply	
Encoder supply		
24 V encoder supply		
• 24 V	Yes	
 Short-circuit protection 	Yes	
 Output current, max. 	50 mA; Total current for both channels (two-wire)	
Additional 24 V encoder supply		
• 24 V	Yes	
Short-circuit protection	Yes; Module-wise	
 Output current, max. 	200 mA; Total current for both channels (four-wire)	

Power loss	
Power loss, typ.	1.1 W
Address area	
Address space per module	
Address space per module, max.	4 byte; + 1 byte for QI information
Hardware configuration	
Automatic encoding	Yes
Mechanical coding element	Yes
Type of mechanical coding element	Type A
Selection of BaseUnit for connection variants	
1-wire connection	BU type A0, A1
• 2-wire connection	BU type A0, A1
 4-wire connection 	BU type A0, A1
Analog inputs	
Number of analog inputs	2
For current measurement	2
permissible input current for current input (destruction limit), max.	50 mA
Cycle time (all channels), min.	500 μs
Input ranges (rated values), currents	
• 0 to 20 mA	Yes; 15 bit
— Input resistance (0 to 20 mA)	130 Ω ; 90 ohms with two wires
• -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; 15 bit
— Input resistance (4 mA to 20 mA)	130 Ω; 90 ohms with two wires
Cable length	4.000
• shielded, max.	1 000 m
Analog value generation for the inputs	Circus Dalta
Measurement principle	Sigma Delta
Integration and conversion time/resolution per channel	16 hit
Resolution with overrange (bit including sign), max.	16 bit Yes
 Integration time, parameterizable Interference voltage suppression for interference 	16.6 / 50 / 60 Hz / off
frequency f1 in Hz	50 ms @ 60 Hz, 60 ms @ 50 Hz, 180 ms @ 16.6 Hz, 500 μs without
Conversion time (per channel)	filter
Smoothing of measured values	
 Number of smoothing levels 	4
parameterizable	Yes
Step: None	Yes; 1x conversion time
Step: low	Yes; 4x conversion time
Step: Medium	Yes; 8x conversion time
Step: High	Yes; 16x conversion time
Encoder	
Connection of signal encoders	
 for current measurement as 2-wire transducer 	Yes
 Burden of 2-wire transmitter, max. 	650 Ω
for current measurement as 4-wire transducer	Yes
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.005 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.05 %
Operational error limit in overall temperature range	
Current, relative to input range, (+/-)	0.5 %
Basic error limit (operational limit at 25 °C)	
Current, relative to input range, (+/-)	0.3 %
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 =	interference frequency

Series mode interference (peak value of	70 dB
interference < rated value of input range), min.	
Common mode voltage, max.	10 V
Common mode interference, min.	90 dB
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
Diagnostic alarm	Yes
Limit value alarm	No
Diagnoses	
 Monitoring the supply voltage 	Yes
Wire-break	Yes; at 4 to 20 mA
Short-circuit	Yes; Short-circuit of the 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 	No
for module diagnostics	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
 between the channels 	No
 between the channels and backplane bus 	Yes
 between the channels and the power supply of the electronics 	Yes
Permissible potential difference	
between the inputs (UCM)	10 Vpp
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
horizontal installation, min.	-30 °C; < 0 °C as of FS04
horizontal installation, max.	60 °C
vertical installation, min.	-30 °C; < 0 °C as of FS04
 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	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	32 g
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last modified:

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