

SIPLUS ET 200SP, ANALOG INPUT MODULE, AI 4xI 2-/4-WIRE STANDARD, -40 ... +70 GRAD C MIT CONFORMAL COATING BASED ON 6ES7134-6GD00-0BA1 . FITS TO BU-TYPE A0, A1, COLOR CODE CC03, MODULE DIAGNOSIS, 16BIT, +/-0,3%



Figure similar

General information	
Product type designation	AI 4xI 2-/4-wire ST
Product function	
• I&M data	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated as of version	V11 SP2 with HSP0024 / -
• STEP 7 configurable/integrated as of version	V5.5 SP2 with GSD file / -
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.	37 mA; without sensor supply
Encoder supply	

24 V encoder supply	
• 24 V	Yes
• Short-circuit protection	Yes
• Output current, max.	20 mA; max. 50 mA per channel for a duration < 10 s
Power loss	
Power loss, typ.	0.85 W; without sensor supply
Address area	
Address space per module	
• Address space per module, max.	8 byte
Analog inputs	
Number of analog inputs	4; > 60 °C max. 1x +/- 20 mA permissible
permissible input current for current input (destruction limit), max.	50 mA
Cycle time (all channels), min.	Sum of the basic conversion times and additional processing times (depending on the parameterization of the active channels)
Input ranges (rated values), currents	
• 0 to 20 mA	Yes; 15 bit
• Input resistance (0 to 20 mA)	100 Ω; + approx. 0.7 V diode forward voltage in 2-wire operation
• -20 mA to +20 mA	Yes; 16 bit incl. sign
• Input resistance (-20 mA to +20 mA)	100 Ω
• 4 mA to 20 mA	Yes; 15 bit
• Input resistance (4 mA to 20 mA)	100 Ω; + approx. 0.7 V diode forward voltage in 2-wire operation
Cable length	
• shielded, max.	200 m
Analog value generation for the inputs	
Measurement principle	integrating (Sigma-Delta)
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	16 bit
• Integration time, parameterizable	Yes
• Interference voltage suppression for interference frequency f1 in Hz	16.6 / 50 / 60 Hz
• Conversion time (per channel)	180 / 60 / 50 ms
Smoothing of measured values	
• parameterizable	Yes
• Step: None	Yes
• Step: low	Yes
• Step: Medium	Yes
• Step: High	Yes
Encoder	
Connection of signal encoders	

• for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer	Yes 650 Ω 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; for 4-wire transducer-connection up to +/- 5 V permissible input voltage in other channels for 4-wire transducer
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 $f = n \times (f_1 \pm 1 \%)$, f_1 = interference frequency	
• Series mode interference (peak value of interference < rated value of input range), min.	70 dB
• Common mode voltage, max.	10 V
• Common mode interference, min.	90 dB
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnostic messages	
• Monitoring the supply voltage	Yes
• Wire-break	Yes; at 4 to 20 mA
• Short-circuit	Yes; 2-wire mode: Short-circuit of the encoder supply to ground or of an input to the encoder supply
• Overflow/underflow	Yes
Diagnostics indication LED	
• Monitoring of the supply voltage (PWR-LED)	Yes; Green LED
• Channel status display	Yes; Green LED
• for module diagnostics	Yes; Green/red LED
Potential separation	
Potential separation channels	
• between the channels	Yes; channel group-specific between 2-wire current input group and 4-wire voltage input group
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	Yes; only for 4-wire transducer
Permissible potential difference	
between different circuits	75 V DC/60 V AC

between the inputs (UCM)	10 V DC
Isolation	
Isolation tested with	707 V DC
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min.	-40 °C; = Tmin
• horizontal installation, max.	70 °C; = Tmax; > 60 °C max. 1x +/- 20 mA permissible
• vertical installation, min.	-40 °C; = Tmin
• vertical installation, max.	50 °C; = Tmax
Extended ambient conditions	
Relative humidity	
— With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
— against biologically active substances / conformity with EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna). The supplied connector covers must remain on the unused interfaces during operation!
— against chemically active substances / conformity with EN 60721-3-3	Yes; Class 3C4 (RH < 75%) incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!
— against mechanically active substances / conformity with EN 60721-3-3	Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	31 g
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