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Data sheet 6ES7123-1FB00-0AB0

*** SPARE PART*** SIMATIC SC,ELECTRONIC SUBMODULE 2 AI, +/-10V, 1..5V

General information	
Usable terminal block	TB 16SC
Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes
Input current	
from supply voltage L+, max.	30 mA
Power loss	
Power loss, typ.	0.6 W
Hardware configuration	
Slots	
• required slots	1; from 8
Analog inputs	
Number of analog inputs	2
permissible input voltage for voltage input (destruction limit), max.	20 V; 20 V DC permanent, 75 V DC for max. 1 s (duty factor 1:20)
Input ranges	
• Voltage	Yes
Input ranges (rated values), voltages	
• 1 V to 5 V	Yes
• Input resistance (1 V to 5 V)	100 kΩ
• -10 V to +10 V	Yes
• Input resistance (-10 V to +10 V)	100 kΩ
Thermocouple (TC)	
Temperature compensation	
— parameterizable	No
Characteristic linearization	
• parameterizable	No
Cable length	
• shielded, max.	200 m
Analog value generation for the inputs	
Measurement principle	integrating
Integration and conversion time/resolution per channel	

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• Resolution (incl. overrange)	±10 V: 13 bits, 1 to 5 V: 12 bits
• Resolution with overrange (bit including sign), max.	13 bit
• Integration time, parameterizable	Yes
• Basic conversion time (ms)	65 / 55 ms
• Integration time (ms)	60 / 50 ms
• Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
Smoothing of measured values	
• parameterizable	Yes; parameterizable in 4 stages by means of digital filtering
• Step: None	Yes; 1 x cycle time
• Step: low	Yes; 8 x cycle time
• Step: Medium	Yes; 64 x cycle time
• Step: High	Yes; 128 x cycle time

Encoder

Connection of signal encoders	
• for voltage measurement	Yes
• for voltage measurement as 2-wire transducer	Yes

Errors/accuracies

Linearity error (relative to input range), (+/-)	0.05 %
Temperature error (relative to input range), (+/-)	0.01 %/K
Crosstalk between the inputs, min.	50 dB; At 50/60 Hz
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, (+/-)	1 %
Basic error limit (operational limit at 25 °C)	
• Voltage, relative to input range, (+/-)	0.7 %
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency	
• Series mode interference (peak value of interference < rated value of input range), min.	70 dB
• Common mode interference (USS < 2.5 V) , min.	90 dB

Interrupts/diagnostics/status information

Alarms	No
Diagnostic functions	No

Potential separation

Potential separation analog inputs	
• between the channels	No
• between the channels and backplane bus	No; Optocoupler

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• between the channels and the power supply of the electronics	No

Permissible potential difference	
Between the inputs and MANA (UCM)	2 V DC / 2 Vpp AC

Isolation	
Isolation tested with	1500 V AC

Dimensions	
Width	10 mm
Height	64 mm
Depth	51 mm

Weights	
Weight, approx.	20 g

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