

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7123-1FB00-0AB0

TWO-CHANNEL VOLTAGE INPUT SUBMODULE

Used with the applicable SIMATIC ET 200L-SC configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens SIMATIC ET 200L-SC manufacturer documentation; applicable pages 1, 2

*** 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	

• Resolution (incl. overrange) • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Basic conversion time (ms) • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz	±10 V: 13 bit, 1 to 5 V: 12 bit 13 bit Yes 65 / 55 ms 60 / 50 ms 50 / 60 Hz
Smoothing of measured values	
• parameterizable • Step: None • Step: low • Step: Medium • Step: High	Yes; parameterizable in 4 stages by means of digital filtering Yes; 1x cycle time Yes; 8x cycle time Yes; 64x cycle time Yes; 128x cycle time
Encoder	
Connection of signal encoders	
• for voltage measurement • for voltage measurement as 2-wire transducer	Yes 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 $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency	
• Series mode interference (peak value of interference < rated value of input range), min. • Common mode interference (USS < 2.5 V), min.	70 dB 90 dB
Interrupts/diagnostics/status information	
Alarms	No
Diagnostics function	No
Potential separation	
Potential separation analog inputs	
• between the channels • between the channels and backplane bus	No No; Optocoupler