SIEMENS

Data sheet 6ES7134-7SD51-0AB0

Figure similar

SIMATIC DP, electronic module for ET200iSP, 4 AI, RTD, for connection of resistance thermometers PT100/NI100, Ex ib (ia Ga) IIC T4 Gb, Ex ib [ia IIIC Da] IIC T4 Gb, Ex ib [ia] I Mb

General information	
Product type designation	4AI RTD
Input current	
Current consumption, typ.	19 mA
from supply voltage L+, max.	22 mA
Power loss	
Power loss, typ.	0.4 W
Analog inputs	
Number of analog inputs	4
Cycle time (all channels) max.	320 ms; 66 ms basic conversion time x 4 channels with interference frequency suppression 60 Hz, 80 ms basic conversion time x 4 channels with interference frequency suppression 50 Hz
Technical unit for temperature measurement adjustable	Yes
Input ranges (rated values), resistance thermometer	
● Ni 100	Yes
— Input resistance (Ni 100)	2 000 kΩ
● Pt 100	Yes
— Input resistance (Pt 100)	2 000 kΩ
Input ranges (rated values), resistors	
● 0 to 600 ohms	Yes; also 1 000 ohms
— Input resistance (0 to 600 ohms)	1 000 kΩ
Characteristic linearization	
● parameterizable	Yes
— for resistance thermometer	Yes
Cable length	
● shielded, max.	500 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
● Basic conversion time, including integration time (ms)	80 ms at 50 Hz; 66 ms at 60 Hz
— additional conversion time for wire-break monitoring	5 ms
● Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
Smoothing of measured values	
● parameterizable	Yes; in 4 stages

● Step: None	Yes; 1x cycle time
● Step: low	Yes; 4x cycle time
● Step: Medium	Yes; 32x cycle time
● Step: High	Yes; 64x cycle time
Encoder	
Connection of signal encoders	
● for resistance measurement with two-wire connection	Yes
● for resistance measurement with three-wire connection	Yes
● for resistance measurement with four-wire connection	Yes
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.015 %
Temperature error (relative to input range), (+/-)	0.02 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.01 %
Operational error limit in overall temperature range	
● Resistance thermometer, relative to input range, (+/-)	0.15 %; Applies to resistances standard ±0.8 K, climatic ±0.3 K
Basic error limit (operational limit at 25 °C)	
● Resistance thermometer, relative to input range, (+/-)	0.1 %; Applies to resistances standard ±0.5 K, climatic ±0.2 K
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, min.	90 dB
Interrupts/diagnostics/status information	
Alarms	
● Diagnostic alarm	Yes
● Limit value alarm	Yes
Diagnoses	
● Diagnostic information readable	Yes
● Wire-break	Yes
● Short-circuit	Yes
● Group error	Yes
Diagnostics indication LED	
● Group error SF (red)	Yes
Potential separation	
Potential separation analog inputs	
● between the channels	No
● between the channels and backplane bus	Yes
● Between the channels and load voltage L+	Yes; Channels and power bus
Standards, approvals, certificates	
CE mark	Yes
Highest safety class achievable in safety mode	
● Performance level according to ISO 13849-1	none
● SIL acc. to IEC 61508	No
Dimensions	
Width	30 mm
Height	129 mm
Depth	136.5 mm
Weights	
Weight, approx.	230 g

last modified: 1/19/2021