## **SIEMENS**

## Data sheet

## 6ES7134-7SD51-0AB0

SIMATIC DP, ELECT. SUBMODULE FOR ET200ISP, 4 AI, RTD, FOR CONNECTION OF RESISTANCE THERMOMETER PT100/NI100



Figure similar

Input current	
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	
• Voltage	No
Current	No
Thermocouple	No
Resistance thermometer	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       2 000 kΩ         • 0 to 600 ohms       Yes; Also 1000 ohms         • 1 put resistance (0 to 600 ohms)       1 000 kΩ         Characteristic linearization       Yes         • parameterizable       Yes         - for resistance thermometer       Yes         Oable length       500 m         Analog value generation for the inputs       fintegrating (Sigma-Delta)         Integration and conversion time/resolution per channel       16 bit         • Resolution with overrange (bit including sign), max.       16 bit         • Integration fime, parameterizable       Yes         - additional conversion time for wire-break monitoring       5 ms         - additional conversion for interference frequency f1 in Hz       50 / 60 Hz         Smoothing of measured values       Yes; in 4 stages	
Interference voltage supression for interference frequency f1 in Hz2 000 kΩPt 1002 000 kΩInput resistance (Ni 100)2 000 kΩInput resistance (Pt 100)2 000 kΩInput ranges (rated values), resistorsYes; Also 1000 ohms0 to 600 ohms1 000 kΩCharacteristic linearizationYes• parameterizableYes- for resistance thermometerYesCable lengthYes• shielded, max.500 mAnalog value generation for the inputsMeasurement principleintegrating (Sigma-Delta)Integration and conversion time/resolution per channel• Integration time, parameterizableYes- additional conversion time for wire-break monitoring16 bit- additional conversion time for wire-break monitoring50 m s at 50 Hz; 66 ms at 60 Hz• Interference voltage suppression for interference frequency f1 in Hz50 / 60 Hz• Smoothing of measured values50 / 60 Hz	
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• Interference voltage suppression for interference frequency f1 in Hz     Smoothing of measured values	
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interference frequency f1 in Hz Smoothing of measured values	
Smoothing of measured values	
parameterizable     Yes: In 4 stages	
Step: None     Yes; 1 x cycle time	
Step: low     Yes; 4 x cycle time	
Step: Medium     Yes; 32 x cycle time	
Step: High Yes; 64 x cycle time	
Encoder	
Connection of signal encoders	
for resistance measurement with two-wire Yes connection	
• for resistance measurement with three-wire Yes Connection	
• for resistance measurement with four-wire Yes connection	
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	
<ul> <li>Resistance thermometer, relative to input range, (+/-)</li> </ul>	0.15 %; Applies to resistances standard $\pm$ 0.8 K, climatic $\pm$ 0.3 K
Basic error limit (operational limit at 25 °C)	
<ul> <li>Resistance thermometer, relative to input range, (+/-)</li> </ul>	0.1 %; Applies to resistances standard $\pm 0.5$ K, climatic $\pm 0.2$ K
Interference voltage suppression for f = n x (f1 +/- 1 %),	f1 = interference frequency
<ul> <li>Series mode interference (peak value of</li> </ul>	70 dB
interference < rated value of input range), min.	
• Common mode interference, min.	90 dB
Interrupts/diagnostics/status information	
Alarms	
Diagnostic alarm	Yes
• Limit value alarm	Yes
Diagnostic messages	
<ul> <li>Diagnostic information readable</li> </ul>	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
<ul> <li>between the channels and backplane bus</li> </ul>	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	
<ul> <li>Performance level according to ISO 13849-1</li> </ul>	none
• SIL acc. to IEC 61508	No
Use in hazardous areas	
<ul> <li>Type of protection acc. to EN 50020 (CENELEC)</li> </ul>	II2 G (1) GD Ex ib[ia] IIC T4 and I M2 Ex ib[ia] I
<ul> <li>Type of protection acc. to KEMA</li> </ul>	04 ATEX 1247
Dimensions	
Width	30 mm

Height Depth	129 mm 136.5 mm
Weights	
Weight, approx.	230 g
last modified:	08/29/2017