

SIEMENS

Product data sheet

6ES7134-7SD51-0AB0


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

Input current	
from supply voltage L+, max.	22 mA
Power losses	
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 60 Hz interference frequency suppression; 80 ms basic conversion time x 4 channels with 50 Hz interference frequency suppression
Technical unit for temperature measurement adjustable	Yes
Input ranges	
Voltage	No
Current	No
Thermocouple	No
Resistance thermometer	Yes

Resistance	Yes
Input ranges (rated values), resistance thermometers	
Ni 100	Yes
Input resistance (Ni 100)	2000 k Ω
Pt 100	Yes
Input resistance (Pt 100)	2000 k Ω
Input ranges (rated values), resistors	
0 to 600 ohms	Yes ; Also 1000 ohms
Input resistance (0 to 600 ohms)	1000 k Ω
Resistance thermometer (RTD)	
Characteristic linearization	
for resistance thermometer	Yes
Characteristic linearization	
Parameterizable	Yes
Cable length	
Cable length, shielded, max.	500 m
Analog value creation	
Measurement principle	integrating (Sigma-Delta)
Integrations 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
Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
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 2-conductor connection	Yes
for resistance measurement with 3-conductor connection	Yes
for resistance measurement with 4-conductor connection	Yes
Errors/accuracies	
Linearity error (relative to input area)	+/- 0.015 %
Temperature error (relative to input area)	+/- 0.02 %
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in settled status at 25 °C (relative to input area)	+/- 0.01 %
Operational limit in overall temperature range	
Resistance-type thermometer, relative to input area	+/- 0.15 % ; Applies to resistances standard +/- 0.8K climatic +/- 0.3K
Basic error limit (operational limit at 25 °C)	
Resistance-type thermometer, relative to input area	+/- 0.1 % ; Applies to resistances standard +/- 0.5 K climatic +/- 0.2 K
Interference voltage suppression for $f = n \times (f_l \pm 1\%)$, f_l = 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
Diagnostic messages	
Diagnostic information readable	Yes
Wire break	Yes
Short circuit	Yes
Group error	Yes
Diagnostics indication LED	
Group error SF (red)	Yes

Galvanic isolation	
Galvanic isolation analog inputs	
between the channels	No
between the channels and the backplane bus	Yes
between the channels and the load voltage L+	Yes ; Channels and power bus
Standards, approvals, certificates	
CE mark	Yes
Use in hazardous areas	
Type of protection acc. to EN 50020 (CENELEC)	II2 G (1) GD Ex ib[ia] IIC T4 and I M2 Ex ib[ia] I
Type of protection acc. to KEMA	04 ATEX 1247
Dimensions	
Width	30 mm
Height	129 mm
Depth	136.5 mm
Weight	
Weight, approx.	230 g
Status	Jul 17, 2012