



Figure similar

SIMATIC S7-200 SMART, Analog input SM AI04, 4 AI, 0...10V, 0...5V, +/-5 V, +/-2.5 V, or 0/4-20 mA 11 bit + sign (12 bit ADC)

General information	
Product type designation	SM AI04, AI 4x12 bit
CiR - Configuration in RUN	
Reparameterization possible in RUN	No
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V; -15 / +20 %
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption, typ.	40 mA
from backplane bus 5 V DC, typ.	80 mA
Power loss	
Power loss, typ.	1.5 W
Analog inputs	
Number of analog inputs	4
Input ranges	
• Voltage	Yes; ±10V, ±5V, ±2.5V
• Current	Yes; 0 to 20 mA
• Thermocouple	No
• Resistance thermometer	No
• Resistance	No
Input ranges (rated values), voltages	
• -10 V to +10 V	Yes
— Input resistance (-10 V to +10 V)	9 MΩ
• -2.5 V to +2.5 V	Yes
— Input resistance (-2.5 V to +2.5 V)	9 MΩ
• -5 V to +5 V	Yes
— Input resistance (-5 V to +5 V)	9 MΩ
Input ranges (rated values), currents	
• 0 to 20 mA	Yes
— Input resistance (0 to 20 mA)	250 Ω
Analog value generation for the inputs	
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	12 bit; voltage mode: 11 bit + sign bit, current mode: 11 bit
• Interference voltage suppression for interference frequency f1 in Hz	10 / 50 / 60 / 400 Hz
Smoothing of measured values	
• parameterizable	Yes; In 4 stages: 1x, 4x, 16x, 32x cycle time

- Step: None
- Step: low
- Step: Medium
- Step: High

Yes; 1x
 Yes; 4x
 Yes; 16x
 Yes; 32x

Interrupts/diagnostics/status information

Diagnostics function Yes

Diagnoses

- Monitoring the supply voltage Yes
- Wire-break No
- Short-circuit No

Diagnostics indication LED

- for status of the inputs Yes

Degree and class of protection

IP degree of protection IP20

Standards, approvals, certificates

CE mark Yes

Dimensions

Width 45 mm
 Height 100 mm
 Depth 81 mm

Weights

Weight, approx. 147 g

last modified: 11/11/2021 