



Figure similar

SIMATIC S7-200, ANALOG INPUT EM 231, FOR S7-22X CPU ONLY, 8 AI, 0-10V DC, MAX 2AE 0..20MA 12/11 BIT CONVERTER

Input current	
from load voltage L+ (without load), max.	60 mA
from backplane bus 5 V DC, max.	20 mA
Power losses	
Power loss, typ.	2 W
Analog inputs	
Number of analog inputs	8; Difference
permissible input voltage for voltage input (destruction limit), max.	30 V
permissible input current for current input (destruction limit), max.	40 mA
Input ranges	
• Voltage	Yes
• Current	Yes; for channels 6 and 7 only
• Thermocouple	No
• Resistance thermometer	No
• Resistance	No
Input ranges (rated values), voltages	
• 0 to +5 V	Yes
• Input resistance (0 to 5 V)	10 M Ω
• 0 to +10 V	Yes
• Input resistance (0 to 10 V)	10 M Ω
• -2.5 V to +2.5 V	Yes
• Input resistance (-2.5 V to +2.5 V)	10 M Ω

• -5 V to +5 V	Yes
• Input resistance (-5 V to +5 V)	10 M Ω
• -80 mV to +80 mV	No
Input ranges (rated values), currents	
• 0 to 20 mA	Yes; for channels 6 and 7 only
• Input resistance (0 to 20 mA)	10 M Ω
Input ranges (rated values), thermoelements	
• Type E	No
• Type J	No
• Type K	No
• Type N	No
• Type R	No
• Type S	No
• Type T	No
Input ranges (rated values), resistance thermometer	
• Cu 10	No
• Ni 10	No
• Ni 1000	No
• Ni 120	No
• Pt 100	No
• Pt 1000	No
• Pt 10000	No
• Pt 200	No
• Pt 500	No
Input ranges (rated values), resistors	
• 0 to 150 ohms	No
• 0 to 300 ohms	No
• 0 to 600 ohms	No
Thermocouple (TC)	
Temperature compensation	
— Parameterizable	No
Cable length	
• shielded, max.	100 m; to the sensor
Analog value creation	
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	12 bit
• Interference voltage suppression for interference frequency f1 in Hz	40 dB, DC up to 60 V for interference frequency
• Conversion time (per channel)	250 μ s
Displayable conversion value range	

- bipolar signals -32 000 to +32 000
- unipolar signals 0 to 32000

Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, $f_1 =$ interference frequency

- common mode voltage, max. 12 V

Interrupts/diagnostics/status information

Diagnostics indication LED

- Description LED, EXTF

Potential separation

Galvanic isolation analog inputs

- Galvanic isolation analog inputs No

Connection method

Plug-in I/O terminals No

Dimensions

Width 71.2 mm

Height 80 mm

Depth 62 mm

Weights

Weight, approx. 190 g

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