SIEMENS

Data sheet 6ES7231-0HF22-0XA0

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



Figure similar

Input current	
from load voltage L+ (without load), max.	60 mA
from backplane bus 5 V DC, max.	20 mA
Power loss	
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	

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• 0 to +5 V	Yes
• Input resistance (0 to 5 V)	10 MΩ
• 0 to +10 V	Yes
• Input resistance (0 to 10 V)	10 MΩ
• -2.5 V to +2.5 V	Yes
• Input resistance (-2.5 V to +2.5 V)	10 MΩ
• -5 V to +5 V	Yes
• Input resistance (-5 V to +5 V)	10 MΩ
• -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 MΩ
Input ranges (rated values), thermocouples	
• 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 generation

Integration and conversion time/resolution per channel

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• 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 µs
Displayable conversion value range	
• bipolar signals	-32 000 to +32 000
• unipolar signals	0 to 32000
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency	
• Common mode voltage, max.	12 V
Interrupts/diagnostics/status information	
Diagnostics indication LED	
• external fault EXTF (red)	Yes
Potential separation	
Potential separation analog inputs	
• Potential separation 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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