

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	
• 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 for the inputs

Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> <li>Resolution with overrange (bit including sign), max.</li> </ul>	12 bit
<ul style="list-style-type: none"> <li>Interference voltage suppression for interference frequency f1 in Hz</li> </ul>	40 dB, DC up to 60 V for interference frequency
<ul style="list-style-type: none"> <li>Conversion time (per channel)</li> </ul>	250 µs
Errors/accuracies	
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$ , f1 = interference frequency	
<ul style="list-style-type: none"> <li>Common mode voltage, max.</li> </ul>	12 V
Interrupts/diagnostics/status information	
Diagnostics indication LED	
<ul style="list-style-type: none"> <li>external fault EXTf (red)</li> </ul>	Yes
Potential separation	
Potential separation analog inputs	
<ul style="list-style-type: none"> <li>Potential separation analog inputs</li> </ul>	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
<b>last modified:</b>	03/24/2017