



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	
<ul style="list-style-type: none"> <li>• Voltage</li> <li>• Current</li> <li>• Thermocouple</li> <li>• Resistance thermometer</li> <li>• Resistance</li> </ul>	<ul style="list-style-type: none"> <li>Yes; ±10V, ±5V, ±2.5V</li> <li>Yes; 0 to 20 mA</li> <li>No</li> <li>No</li> <li>No</li> </ul>
Input ranges (rated values), voltages	
<ul style="list-style-type: none"> <li>• -10 V to +10 V</li> <li>— Input resistance (-10 V to +10 V)</li> <li>• -2.5 V to +2.5 V</li> <li>— Input resistance (-2.5 V to +2.5 V)</li> <li>• -5 V to +5 V</li> <li>— Input resistance (-5 V to +5 V)</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>9 MΩ</li> <li>Yes</li> <li>9 MΩ</li> <li>Yes</li> <li>9 MΩ</li> </ul>
Input ranges (rated values), currents	
<ul style="list-style-type: none"> <li>• 0 to 20 mA</li> <li>— Input resistance (0 to 20 mA)</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>250 Ω</li> </ul>
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> <li>• Interference voltage suppression for interference frequency f1 in Hz</li> </ul>	<ul style="list-style-type: none"> <li>12 bit; voltage mode: 11 bit + sign bit, current mode: 11 bit</li> <li>10 / 50 / 60 / 400 Hz</li> </ul>
Smoothing of measured values	

- parameterizable Yes; In 4 stages: 1x, 4x, 16x, 32x cycle time
- Step: None Yes; 1x
- Step: low Yes; 4x
- Step: Medium Yes; 16x
- Step: High Yes; 32x

#### Interrupts/diagnostics/status information

Diagnostics function	Yes
<b>Diagnoses</b>	
• Monitoring the supply voltage	Yes
• Wire break	No
• short-circuit	No
<b>Diagnostics indication LED</b>	
• for status of the inputs	Yes

#### Degree and class of protection

IP degree of protection	IP20
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#### Standards, approvals, certificates

CE mark	Yes
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#### Dimensions

Width	45 mm
Height	100 mm
Depth	81 mm

#### Weights

Weight, approx.	147 g
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#### Classifications

	Version	Classification
eClass	14	27-24-22-01
eClass	12	27-24-22-01
eClass	9.1	27-24-22-01
eClass	9	27-24-22-01
eClass	8	27-24-22-01
eClass	7.1	27-24-22-01
eClass	6	27-24-22-01
ETIM	10	EC001420
ETIM	9	EC001420
ETIM	8	EC001420
ETIM	7	EC001420
IDEA	4	3562
UNSPSC	15	32-15-17-05

#### Approvals / Certificates

##### General Product Approval



[China RoHS](#)



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