



Spare part SIMATIC S7-200, Analog input EM 231, only for S7-22X CPU, 4 AI, 0-10V DC, 12 bit converter

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	4; Difference
permissible input voltage for voltage input (destruction limit), max.	30 V
permissible input current for current input (destruction limit), max.	32 mA
Input ranges	
<ul style="list-style-type: none"> • Voltage 	Yes
<ul style="list-style-type: none"> • Current 	Yes
<ul style="list-style-type: none"> • Thermocouple 	No
<ul style="list-style-type: none"> • Resistance thermometer 	No
<ul style="list-style-type: none"> • Resistance 	No
Input ranges (rated values), voltages	
<ul style="list-style-type: none"> • 0 to +5 V <ul style="list-style-type: none"> — Input resistance (0 to 5 V) 	Yes 10 MΩ
<ul style="list-style-type: none"> • 0 to +10 V <ul style="list-style-type: none"> — Input resistance (0 to 10 V) 	Yes 10 MΩ
<ul style="list-style-type: none"> • -2.5 V to +2.5 V <ul style="list-style-type: none"> — Input resistance (-2.5 V to +2.5 V) 	Yes 10 MΩ
<ul style="list-style-type: none"> • -5 V to +5 V <ul style="list-style-type: none"> — Input resistance (-5 V to +5 V) 	Yes 10 MΩ
Input ranges (rated values), currents	
<ul style="list-style-type: none"> • 0 to 20 mA <ul style="list-style-type: none"> — Input resistance (0 to 20 mA) 	Yes 10 MΩ
Thermocouple (TC)	
Temperature compensation <ul style="list-style-type: none"> — parameterizable 	No
Cable length	
<ul style="list-style-type: none"> • 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"> • Resolution with overrange (bit including sign), max. 	12 bit
<ul style="list-style-type: none"> • Interference voltage suppression for interference frequency f_1 in Hz 	40 dB, DC to 60 V for interference frequency 50 / 60 Hz
<ul style="list-style-type: none"> • Conversion time (per channel) 	250 μs
Displayable conversion value range	

- bipolar signals
- unipolar signals

-32 000 to +32 000

[0 to 32 000](#)

Errors/accuracies

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

- 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.

183 g

last modified:

5/22/2024 