



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 • Current • Thermocouple • Resistance thermometer • Resistance 	<ul style="list-style-type: none"> Yes Yes No No 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) • 0 to +10 V <ul style="list-style-type: none"> — Input resistance (0 to 10 V) • -2.5 V to +2.5 V <ul style="list-style-type: none"> — Input resistance (-2.5 V to +2.5 V) • -5 V to +5 V <ul style="list-style-type: none"> — Input resistance (-5 V to +5 V) 	<ul style="list-style-type: none"> Yes 10 MΩ Yes 10 MΩ Yes 10 MΩ 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) 	<ul style="list-style-type: none"> Yes 10 MΩ
Thermocouple (TC)	
Temperature compensation	
— 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. • Interference voltage suppression for interference frequency f1 in Hz • Conversion time (per channel) 	<ul style="list-style-type: none"> 12 bit 40 dB, DC to 60 V for interference frequency 50 / 60 Hz 250 μs
Displayable conversion value range	
<ul style="list-style-type: none"> • bipolar signals 	-32 000 to +32 000

- unipolar signals

[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 / header

Plug-in I/O terminals

No

Dimensions

Width

71.2 mm

Height

80 mm

Depth

62 mm

Weights

Weight, approx.

183 g

last modified:

3/12/2021 