

SIEMENS

Data sheet

6ES7235-0KD22-0XA0



Spare part SIMATIC S7-200, analog I/O EM 235, only for S7-22X CPU, 4 AI, +/-10 V DC; 1 AO, +/-10 V DC 12 bit converter

Input current	
from external supply (24 V DC), max.	60 mA
from backplane bus 5 V DC, max.	30 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 +50 mV • 0 to +100 mV • 0 to +500 mV • 0 to +1 V • 0 to +5 V • 0 to +10 V • -1 V to +1 V • -10 V to +10 V • -100 mV to +100 mV • -2.5 V to +2.5 V • -25 mV to +25 mV • -250 mV to +250 mV • -5 V to +5 V • -50 mV to +50 mV • -500 mV to +500 mV 	<ul style="list-style-type: none"> Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Input ranges (rated values), currents	
<ul style="list-style-type: none"> • 0 to 20 mA 	<ul style="list-style-type: none"> Yes
Thermocouple (TC)	
Temperature compensation — parameterizable	No
Analog outputs	

Number of analog outputs	1	
Output ranges, voltage		
• -10 V to +10 V	Yes	
Output ranges, current		
• 0 to 20 mA	Yes	
Load impedance (in rated range of output)		
• with voltage outputs, min.	5 kΩ	
• with current outputs, max.	0.5 kΩ	
Analog value generation for the inputs		
Integration and conversion time/resolution per channel		
• Resolution with overrange (bit including sign), max.	12 bit	
• Basic conversion time (ms)	< 0.25 ms	
• Interference voltage suppression for interference frequency f1 in Hz	40 dB, DC to 60 Hz	
Displayable conversion value range		
• bipolar signals	-32 000 to +32 000	
• unipolar signals	0 to 32 000	
Analog value generation for the outputs		
Integration and conversion time/resolution per channel		
• Resolution with overrange (bit including sign), max.	11 bit	
Settling time		
• for voltage output	100 μs	
• for current output	2 ms	
Displayable conversion value range		
• bipolar signals	-32 000 to +32 000	
• unipolar signals	0 to 32 000	
Errors/accuracies		
Operational error limit in overall temperature range		
• Voltage, relative to output range, (+/-)	2 %	
• Current, relative to output range, (+/-)	2 %	
Basic error limit (operational limit at 25 °C)		
• Voltage, relative to output range, (+/-)	0.5 %	
• Current, relative to output range, (+/-)	0.5 %	
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, 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	
Potential separation analog outputs		
• Potential separation analog outputs	No	
Connection method		
Plug-in I/O terminals	No	
Dimensions		
Width	71.2 mm	
Height	80 mm	
Depth	62 mm	
Weights		
Weight, approx.	186 g	
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	For use in hazardous locations	Maritime application
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[Miscellaneous](#)

[China RoHS](#)



[FM](#)



Maritime application



[CCS \(China Classification Society\)](#)

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8/24/2025

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