

# SIEMENS

## Product data sheet

## 6ES7235-0KD22-0XA0



SIMATIC S7-200, ANALOG I/O EM 235,  
FOR S7-22X CPU ONLY, 4 AI, DC +/-10V;  
1AQ, DC +/-10V 12 BIT CONVERTER

Power supply / Input / Input current	
from backplane bus 5 V DC, max.	30 mA
from sensor current supply or external current supply (24 V DC), max.	60 mA
Power losses	
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
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Voltage	Yes
Current	Yes
Input ranges (rated values), voltages	

0 to +50 mV	Yes
0 to +100 mV	Yes
0 to +500 mV	Yes
0 to +1 V	Yes
0 to +5 V	Yes
0 to +10 V	Yes
-1 V to +1 V	Yes
-10 V to +10 V	Yes
-100 mV to +100 mV	Yes
-2.5 V to +2.5 V	Yes
-25 mV to +25 mV	Yes
-250 mV to +250 mV	Yes
-5 V to +5 V	Yes
-50 mV to +50 mV	Yes
-500 mV to +500 mV	Yes
<b>Input ranges (rated values), currents</b>	
0 to 20 mA	Yes
<b>Temperature compensation</b>	
Parameterizable	No
<b>Analog outputs</b>	
Number of analog outputs	1
<b>Output ranges, voltage</b>	
-10 to +10 V	Yes
<b>Output ranges, current</b>	
0 to 20 mA	Yes
<b>Load impedance (in rated range of output)</b>	
with voltage outputs, min.	5 k $\Omega$
with current outputs, max.	0.5 k $\Omega$
<b>Analog value creation</b>	
<b>Integrations and conversion time/ resolution per channel</b>	
Resolution with overrange (bit including sign), max.	12 bit ; 11 bits for current output
Basic conversion time, ms	< 0.25 ms

Interference voltage suppression for interference frequency f1 in Hz	40 dB, DC to 60 Hz
<b>Settling time</b>	
for voltage output	100 µs
for current output	2 ms
<b>Displayable conversion value range</b>	
bipolar signals	-32000 to +32000
unipolar signals	0 to 32000
<b>Errors/accuracies</b>	
<b>Operational limit in overall temperature range</b>	
Voltage, relative to output area	+/- 2 %
Current, relative to output area	+/- 2 %
<b>Basic error limit (operational limit at 25 °C)</b>	
Voltage, relative to output area	+/- 0,5 %
Current, relative to output area	+/- 0,5 %
<b>Interference voltage suppression for <math>f = n \times (f1 \pm 1\%)</math>, f1 = interference frequency</b>	
common mode voltage, max.	12 V
<b>Interrupts/diagnostics/status information</b>	
<b>Diagnostics indication LED</b>	
External fault EXTF (red)	Yes
<b>Galvanic isolation</b>	
<b>Galvanic isolation analog inputs</b>	
Galvanic isolation analog inputs	No
<b>Galvanic isolation analog outputs</b>	
Galvanic isolation analog outputs	No
<b>Connection method</b>	
Plug-in I/O terminals	No
<b>Dimensions and weight</b>	
<b>Dimensions</b>	
Width	71.2 mm
Height	80 mm
Depth	62 mm
<b>Weight</b>	
Weight, approx.	186 g

Status

May 16, 2011