



Product data sheet
6ES7234-4HE30-0XB0

SIMATIC S7-1200, ANALOG I/O SM 1234, 4 AI / 2 AO, +/-10V, 14 BIT RESOLUTION, OR 0-20 MA, 13 BIT RESOLUTION,

Supply voltages

Rated value

DC 24 V

Yes

Short-circuit protection

0.0000000000000000E+00

Current consumption

Current consumption, typ.

60 mA

from backplane bus DC 5 V, typ.

80 mA

Current consumption/power loss

Power loss, typ.

2 W

Connection point

required front connectors

Yes

Analog inputs

Number of analog inputs

4 ; Current or voltage differential inputs

Permissible input frequency for current input
(destruction limit), max. ± 35 Vpermissible input current for voltage input (destruction
limit), max.

40 mA

Cycle time (all channels), max.

625 μ s

Voltage

Yes ; ± 10 V, ± 5 V, ± 2.5 V

Current

Yes ; 0 to 20 mA

thermocouple

No

Resistance thermometer

No

Impedance

No

Input ranges (rated values), voltages

-10 V to +10 V

Yes

Input resistance (-10 V to +10 V)

9M ohms

-2.5 V to +2.5 V

Yes

Input resistance (-2,5 V to +2,5 V)

9M ohms

-5 V to +5 V

Yes

Input resistance (-5 V to +5 V)	9M ohms
Input ranges (rated values), currents	
0 to 20 mA	Yes
Input resistance (0 to 20 mA)	250 ohms
Voltage input	
permissible input frequency for voltage input (destruction limit), max.	35 V
Current input	
permissible input current for current input (destruction limit), max.	40 mA
Temperature compensation	
programmable	No
Analog outputs	
Number of analog outputs	2 ; Current or voltage
Output ranges, voltage	
-10 to +10 V	Yes
Output ranges, current	
0 to 20 mA	Yes
Load impedance (in rated range of output)	
with voltage outputs, min.	1000 Ω
with current outputs, max.	600 Ω
Analog value creation	
Measurement principle	Differential
Integration and conversion time/resolution per channel	
Resolution (incl. overload area)	Voltage: 14 bits; Current : 13 bits
Resolution with overload area (bit including sign), max.	12 bit ; + sign
Integration time, parameterizable	Yes
Interference voltage suppression for interference frequency f1 in Hz	40 dB, DC to 60 V for interference frequency 50 / 60 Hz
Smoothing of measured values	
parameterizable	Yes
Level: none	Yes
Level: weak	Yes
Level: middle	Yes
Level: strong	Yes
Errors/accuracies	

Temperature error (relative to input areas)	25°C ±0.1% to 55°C ±0.2% total measurement range
Temperature error (relative to output area)	25°C ±0.3% to 55°C ±0.6% total measurement range
Basic error limit (operational limit at 25 °C)	
Voltage, relative to input area	+/- 0,1 %
Current, relative to input area	+/- 0,1 %
Voltage, relative to output area	+/- 0,3 %
Current, relative to output area	+/- 0,3 %
Interference voltage suppression for $f = n \times (f_l \pm 1 \%)$, f_l = interference frequency	
common mode voltage, max.	12 V
Interrupts/diagnostics/status information	
Alarms	
Alarms	Yes
Diagnostic alarm	Yes
Diagnoses	
Diagnostic functions	Yes
Monitoring the voltage supply to the electronics	Yes
Wire break	Yes
Short circuit	Yes
Isolation	
Isolation, analog outputs	
between the channels and the voltage supply to the electronics	No
Degree of protection	
IP 20	Yes
Standards, approvals, certificates	
CE symbol	Yes
C-TICK	Yes
FM approval	Yes
Mechanics	
Plastic	Yes
Dimensions and weight	
Dimensions and weight	
Width	45 mm
Height	100 mm
Depth	75 mm

Weight

Weight, approx.

220 g

Status

Sep 28, 2009