

SIMATIC S7-1200, ANALOG OUTPUT, SM 1232, 4 AO, +/-10V, 14 BIT RESOLUTION, OR 0 - 20 MA/4 - 20 MA, 13 BIT RESOLUTION



Supply voltage

Rated value (DC)

- 24 V DC

Yes

Input current

Current consumption, typ.

45 mA

from backplane bus 5 V DC, typ.

80 mA

Power losses

Power loss, typ.

1.5 W

Analog inputs

Number of analog inputs

0

Thermocouple (TC)

Temperature compensation

- Parameterizable

No

Analog outputs

Number of analog outputs

4; Current or voltage

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.
- with current outputs, max.

1 000 Ω

600 Ω

Analog value creation

Measurement principle	Differential
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> • Resolution (incl. overrange) • Integration time, parameterizable • Interference voltage suppression for interference frequency f1 in Hz 	Voltage: 14 bits; Current : 13 bits Yes 40 dB, DC to 60 V for interference frequency 50 / 60 Hz
Errors/accuracies	
Temperature error (relative to output range), (+/-)	25 °C ±0.3%, to 55 °C ±0.6% total measurement range
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> • Voltage, relative to output area, (+/-) • Current, relative to output area, (+/-) 	0.3 % 0.3 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency	
<ul style="list-style-type: none"> • common mode voltage, max. 	12 V
Interrupts/diagnostics/status information	
Alarms	
<ul style="list-style-type: none"> • Alarms • Diagnostic alarm 	Yes Yes
Diagnostic messages	
<ul style="list-style-type: none"> • Diagnostic functions • Monitoring the supply voltage • Wire break • Short circuit 	Yes Yes Yes Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> • For status of the outputs • for maintenance 	Yes Yes
Degree and class of protection	
Degree of protection to EN 60529	
<ul style="list-style-type: none"> • IP20 	Yes
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
Highest safety class achievable in safety mode	
<ul style="list-style-type: none"> • SIL acc. to IEC 61508 	none
Ambient conditions	
Free fall	
<ul style="list-style-type: none"> • Drop height, max. (in packaging) 	0.3 m; five times, in dispatch package
Ambient temperature in operation	
<ul style="list-style-type: none"> • Permissible temperature range 	-20 °C to +60 °C horizontal mounting, -20 °C to 50 °C vertical mounting, 95% humidity, non-condensing

• Min.	-20 °C
• max.	60 °C
Ambient temperature during storage/transportation	
• Min.	-40 °C
• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
• Operation, min.	795 hPa
• Operation, max.	1 080 hPa
• Storage/transport, min.	660 hPa
• Storage/transport, max.	1 080 hPa
Relative humidity	
• Permissible range (without condensation) at 25 °C	95 %
Pollutant concentrations	
— SO2 at RH < 60% without condensation	SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
Connection method	
required front connector	Yes
Mechanics/material	
Type of housing (front)	
• plastic	Yes
Dimensions	
Width	45 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	180 g
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