

SIMATIC S7-1200, ANALOG OUTPUT, SM 1232, 2 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 loss

Power loss, typ.

1.5 W

Analog outputs

Number of analog outputs

2; 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 generation	
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 f_1 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 $\pm 0.3\%$, to 55 °C $\pm 0.6\%$ 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 $f = n \times (f_1 \pm 1 \%)$, $f_1 =$ interference frequency	
<ul style="list-style-type: none"> Common mode voltage, max. 	12 V
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostic functions	Yes
Alarms	
<ul style="list-style-type: none"> Diagnostic alarm 	Yes
Diagnostic messages	
<ul style="list-style-type: none"> Monitoring the supply voltage Wire-break Short-circuit 	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 acc. 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"> Fall height, max. 	0.3 m; five times, in dispatch package
Ambient temperature during 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
<ul style="list-style-type: none"> • min. 	-20 °C
<ul style="list-style-type: none"> • max. 	60 °C
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> • min. 	-40 °C
<ul style="list-style-type: none"> • max. 	70 °C
Air pressure acc. to IEC 60068-2-13	
<ul style="list-style-type: none"> • Operation, min. 	795 hPa
<ul style="list-style-type: none"> • Operation, max. 	1 080 hPa
<ul style="list-style-type: none"> • Storage/transport, min. 	660 hPa
<ul style="list-style-type: none"> • Storage/transport, max. 	1 080 hPa
Relative humidity	
<ul style="list-style-type: none"> • permissible range (without condensation) at 25 °C 	95 %
Extended ambient conditions	
Pollutant concentrations	
— SO ₂ at RH < 60% without condensation	SO ₂ : < 0.5 ppm; H ₂ S: < 0.1 ppm; RH < 60% condensation-free
Connection method	
required front connector	Yes
Mechanics/material	
Enclosure material (front)	
<ul style="list-style-type: none"> • Plastic 	Yes
Dimensions	
Width	45 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	180 g
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