

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)	
<ul style="list-style-type: none"> • 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	4; Current or voltage
Output ranges, voltage	
<ul style="list-style-type: none"> • -10 V to +10 V 	Yes
Output ranges, current	
<ul style="list-style-type: none"> • 0 to 20 mA 	Yes
Load impedance (in rated range of output)	
<ul style="list-style-type: none"> • with voltage outputs, min. 	1 000 Ω
<ul style="list-style-type: none"> • with current outputs, max. 	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, parameterizableInterference 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 voltageWire-breakShort-circuit	Yes Yes Yes
Diagnostics indication LED	
<ul style="list-style-type: none">for status of the outputsfor 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

Ambient conditions

Free fall	
<ul style="list-style-type: none">Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
<ul style="list-style-type: none">permissible temperature rangemin.	-20 °C to +60 °C horizontal mounting, -20 °C to 50 °C vertical mounting, 95% humidity, non-condensing -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 %
Extended ambient conditions	
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	
Enclosure material (front)	
• Plastic	Yes
Dimensions	
Width	45 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	180 g
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