

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	
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 to +10 V	Yes
Output ranges, current	
• 0 to 20 mA	Yes

Load impedance (in rated range of output)	
• with voltage outputs, min.	1 000 Ω
• with current outputs, max.	600 Ω

Analog value creation

Measurement principle	Differential
Integration and conversion time/resolution per channel	
• Resolution (incl. overrange)	Voltage: 14 bits; Current : 13 bits
• 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

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)	
• Voltage, relative to output area, (+/-)	0.3 %
• Current, relative to output area, (+/-)	0.3 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency	
• common mode voltage, max.	12 V

Interrupts/diagnostics/status information

Alarms	
• Alarms	Yes
• Diagnostic alarm	Yes
Diagnostic messages	
• Diagnostic functions	Yes
• Monitoring the supply voltage	Yes
• Wire break	Yes
• Short circuit	Yes
Diagnostics indication LED	
• For status of the outputs	Yes
• for maintenance	Yes

Degree and class of protection

Degree of protection to EN 60529	
• IP20	Yes

Standards, approvals, certificates

CE mark	Yes
RCM (formerly C-TICK)	Yes
FM approval	Yes
Highest safety class achievable in safety mode	
• SIL according to IEC 61508:2010	none

Climatic and mechanical conditions for storage and transport

Climatic conditions for storage and transport	
Free fall	

— Drop height, max. (in packaging)	0.3 m; five times, in dispatch package
Temperature	
— Permissible temperature range	-40 °C to +70 °C
Air pressure acc. to IEC 60068-2-13	
— Permissible air pressure	1080 to 660 hPa
Relative humidity	
— Permissible range (without condensation) at 25 °C	95 %

Mechanical and climatic conditions during operation

Climatic conditions in operation	
Temperature	
— 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
Air pressure acc. to IEC 60068-2-13	
— Permissible air pressure	1080 to 795 hPa
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
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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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