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Data sheet 6ES7232-4HF50-0XB0

Siemens EcoTech

SIMATIC S7-1200 G2: SM 1232 analog output, 8 AO; outputs: 8x AQ 14 bit DAC (+/-10 V, 0-20 mA or 4-20 mA)



Figure similar

General information	
Product type designation	SM 1232, AQ 8x 14 bit
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption, typ.	45 mA
from backplane bus 5 V DC, typ.	90 mA
Power loss	
Power loss, typ.	5.6 W
Analog outputs	
Number of analog outputs	8; Current or voltage
Output ranges, voltage	
● -10 V to +10 V	Yes
Output ranges, current	
● 0 to 20 mA	Yes
● 4 mA to 20 mA	Yes
Load impedance (in rated range of output)	
● with voltage outputs, min.	1 000 Ω
● with current outputs, max.	600 Ω
Cable length	
● shielded, max.	100 m; shielded, twisted pair
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
● Resolution with overrange (bit including sign), max.	14 bit; Voltage: 14 bit; Current : 13 bit
Errors/accuracies	
Temperature error (relative to output range), (+/-)	25 °C ±0.3 % / -20 °C to 60 °C ±0.6 % of the full-scale deflection
Basic error limit (operational limit at 25 °C)	
● Voltage, relative to output range, (+/-)	0.3 %
● Current, relative to output range, (+/-)	0.3 %
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
● Diagnostic alarm	Yes

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Diagnoses	
● Monitoring the supply voltage	Yes
● Wire break	Yes
● Short-circuit	Yes
Diagnostics indication LED	
● DIAG LED	Yes
● for status of the outputs	Yes
Degree and class of protection	
IP degree of protection	IP20
Standards, approvals, certificates	
Siemens Eco Profile (SEP)	Siemens EcoTech
CE mark	Yes
CSA approval	No
UL approval	Yes
cULus	Yes
FM approval	No
RCM (formerly C-TICK)	Yes
KC approval	Yes
Marine approval	No
Ecological footprint	
● environmental product declaration	Yes; type 2 acc. to ISO 14021
Global warming potential	
— global warming potential, (total) [CO2 eq]	32.2 kg
— global warming potential, (during production) [CO2 eq]	7.96 kg
— global warming potential, (during operation) [CO2 eq]	24.5 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.358 kg
Ambient conditions	
Free fall	
● Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
● min.	-20 °C
● max.	40 °C; at max. voltages and max. specifications
● horizontal installation, min.	-20 °C
● horizontal installation, max.	60 °C; at rated voltages, 50 % of max. specification and alternate IO active
● vertical installation, min.	-20 °C
● vertical installation, max.	50 °C; at rated voltages, 50 % of max. specification and alternate IO active
Ambient temperature during storage/transportation	
● min.	-40 °C
● max.	70 °C
Air pressure acc. to IEC 60068-2-13	
● Operation, min.	540 hPa
● Operation, max.	1 140 hPa
● Storage/transport, min.	540 hPa
● Storage/transport, max.	1 140 hPa
Altitude during operation relating to sea level	
● Installation altitude, min.	-1 000 m
● Installation altitude, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Relative humidity	
● Operation at 25 °C without condensation, max.	95 %
Vibrations	
● Vibration resistance during operation acc. to IEC 60068-2-6	3.5 mm from 5 - 8.4 Hz, 1g from 8.4 - 150 Hz
● Operation, tested according to IEC 60068-2-6	Yes
Shock testing	
● tested according to IEC 60068-2-27	Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms
Pollutant concentrations	

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● SO2 at RH < 60% without condensation	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60 % condensation-free
Connection method	
required front connector	No
Mechanics/material	
Enclosure material (front)	
● Plastic	Yes
Dimensions	
Width	30 mm
Height	125 mm
Depth	100 mm
Weights	
Weight, approx.	173 g

Classifications

	Version	Classification
eClass	16	27-24-22-01
eClass	14	27-24-22-01
eClass	12	27-24-22-01
eClass	9.1	27-24-22-01
eClass	9	27-24-22-01
eClass	8	27-24-22-01
eClass	7.1	27-24-22-01
eClass	6	27-24-22-01
ETIM	10	EC001420
ETIM	9	EC001420
ETIM	8	EC001420
ETIM	7	EC001420

Approvals / Certificates

General Product Approval

Miscellaneous | Manufacturer Declaration

General Product Approval

China RoHS | Manufacturer Declaration

For use in hazardous locations

Miscellaneous | CCC-Ex | CCC-Ex

Test Certificates

Type Test Certificates/Test Report

Maritime application

NK / Nippon Kaiji Kyokai

Maritime application | **Environment**

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