SIEMENS

## Data sheet 6ES7232-4HB32-0XB0



Figure similar

SIMATIC S7-1200, Analog output, SM 1232, 2 AO, +/-10 V, 14-bit resolution, or 0-20 mA/4-20 mA, 13-bit resolution

| | |
|---|---|
| **General information** | |
| Product type designation | SM 1232, AQ 2x14 bit |
| **Supply voltage** | |
| Rated value (DC) | 24 V |
| **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. | 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%, to 55 °C ±0.6% total measurement range |
| Basic error limit (operational limit at 25 °C) | |
| ● Voltage, relative to output range, (+/-) | 0.3 % |
| ● Current, relative to output range, (+/-) | 0.3 % |
| Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency | |
| ● Common mode voltage, max. | 12 V |
| **Interrupts/diagnostics/status information** | |
| Alarms | Yes |
| Diagnostics function | Yes |
| Alarms | |
| ● Diagnostic alarm | Yes |
| Diagnoses | |
| ● Monitoring the supply voltage | Yes |
| ● Wire break | Yes |


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| | |
|---|---|
| ● Short-circuit | Yes |
| Diagnostics indication LED | |
| ● for status of the outputs | Yes |
| ● for maintenance | Yes |
| **Degree and class of protection** | |
| IP degree of protection | IP20 |
| **Standards, approvals, certificates** | |
| CE mark | Yes |
| CSA approval | Yes |
| UL approval | Yes |
| cULus | Yes |
| FM approval | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval | Yes |
| Marine approval | Yes |
| Ecological footprint | |
| ● environmental product declaration | Yes |
| Global warming potential | |
| — global warming potential, (total) [CO2 eq] | 36.4 kg |
| — global warming potential, (during production) [CO2 eq] | 7.46 kg |
| — global warming potential, (during operation) [CO2 eq] | 29.1 kg |
| — global warming potential, (after end of life cycle) [CO2 eq] | -0.18 kg |
| **Ambient conditions** | |
| Free fall | |
| ● Fall height, max. | 0.3 m; five times, in product package |
| Ambient temperature during operation | |
| ● min. | -20 °C |
| ● max. | 60 °C |
| ● horizontal installation, min. | -20 °C |
| ● horizontal installation, max. | 60 °C |
| ● vertical installation, min. | -20 °C |
| ● vertical installation, max. | 50 °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 | |
| ● Operation at 25 °C without condensation, max. | 95 % |
| Pollutant concentrations | |
| ● SO2 at RH < 60% without condensation | S02: < 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 |
| **Classifications** | |


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| | 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 |
| IDEA | 4 | 3562 |
| UNSPSC | 15 | 32-15-17-05 |

## Approvals / Certificates

### General Product Approval

### EMV

### Test Certificates

Type Test Certificates/Test Report

Special Test Certificate

### Maritime application

### Maritime application

### other

Confirmation

### Railway

Special Test Certificate

### Dangerous goods

Transport Information

### Environment

Environmental Confirmations

**last modified:** 5/16/2025


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