

Data sheet
SM 232 (232-1BD51)
Technical data

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|---|---|
| Order no. | 232-1BD51 |
| Type | SM 232 |
| General information | |
| Note | - |
| Features | 4x AO 12 Bit Voltage +/- 10 V, 1...5 V, 0...10 V Current +/- 20 mA, 0/4...20 mA Parameterizable |
| Current consumption/power loss | |
| Current consumption from backplane bus | 75 mA |
| Power loss | 1.8 W |
| Technical data analog outputs | |
| Number of outputs | 4 |
| Cable length, shielded | 200 m |
| Rated load voltage | DC 24 V |
| Reverse polarity protection of rated load voltage | yes |
| Current consumption from load voltage L+ (without load) | 60 mA |
| Voltage output short-circuit protection | yes |
| Voltage outputs | yes |
| Min. load resistance (voltage range) | 1 kOhm |
| Max. capacitive load (current range) | 1 µF |
| Max. inductive load (current range) | 30 mA |
| Output voltage ranges | -10 V ... +10 V +1 V ... +5 V 0 V ... +10 V |
| Operational limit of voltage ranges | +/-0.4% ... +/-0.8% |
| Basic error limit voltage ranges | +/-0.2% ... +/-0.4% |
| Destruction limit against external applied voltage | max. 15V |
| Current outputs | yes |
| Max. in load resistance (current range) | 500 Ohm |
| Max. inductive load (current range) | 10 mH |
| Typ. open circuit voltage current output | 12 V |
| Output current ranges | 0 mA ... +20 mA +4 mA ... +20 mA -20 mA ... +20 mA |
| Operational limit of current ranges | +/-0.3% ... +/-0.8% |
| Basic error limit current ranges | +/-0.2% ... +/-0.5% |
| Destruction limit against external applied voltage | max. 15V |
| Settling time for ohmic load | 0.05 ms |
| Settling time for capacitive load | 0.5 ms |
| Settling time for inductive load | 0.1 ms |
| Resolution in bit | 12 |
| Conversion time | 0.45 ms / channel |
| Substitute value can be applied | no |

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| Output data size | 8 Byte |
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Status information, alarms, diagnostics

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|----------------------------------|----------------------|
| Status display | none |
| Interrupts | yes |
| Process alarm | no |
| Diagnostic interrupt | yes, parameterizable |
| Diagnostic functions | yes |
| Diagnostics information read-out | possible |
| Supply voltage display | none |
| Group error display | red SF LED |
| Channel error display | none |

Isolation

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|---|------------------|
| Between channels | - |
| Between channels of groups to | - |
| Between channels and backplane bus | yes |
| Between channels and power supply | yes |
| Max. potential difference between circuits | - |
| Max. potential difference between inputs (Ucm) | - |
| Max. potential difference between Mana and Mintern (Uiso) | DC 75 V/ AC 50 V |
| Max. potential difference between inputs and Mana (Ucm) | - |
| Max. potential difference between inputs and Mintern (Uiso) | - |
| Max. potential difference between Mintern and outputs | - |
| Insulation tested with | DC 500 V |

Datasizes

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|------------------|---|
| Input bytes | 0 |
| Output bytes | 8 |
| Parameter bytes | 8 |
| Diagnostic bytes | 4 |

Housing

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| Material | PPE / PA 6.6 |
| Mounting | Profile rail 35 mm |

Mechanical data

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| Dimensions (WxHxD) | 25.4 mm x 76 mm x 88 mm |
| Net weight | 100 g |
| Weight including accessories | - |
| Gross weight | - |

Environmental conditions

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|-----------------------|-----------------|
| Operating temperature | 0 °C to 60 °C |
| Storage temperature | -25 °C to 70 °C |

Certifications

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|------------------|-----|
| UL certification | yes |
| KC certification | - |