

## Data sheet

### SM M32 - Analog output (M32-1BD70)

#### Technical data

| Order no.   | M32-1BD70                                  |
|---|--|
| Type  | SM M32 - Analog output                     |
| Module ID   | 050A 25E0                                  |
| <b>General information</b>                              |  |
| Note  | -  |
| Features  | 4x AO<br>12 Bit<br>Voltage 0...10 V +-10 V |
| <b>Current consumption/power loss</b>                   |  |
| Current consumption from backplane bus                  | 60 mA                                      |
| Current consumption from load voltage L+ (without load) | 25 mA                                      |
| Power loss  | 0.9 W                                      |
| <b>Technical data analog outputs</b>                    |  |
| Number of outputs                                       | 4  |
| Cable length, shielded                                  | 200 mm                                     |
| Rated load voltage                                      | DC 24 V                                    |
| Reverse polarity protection of rated load voltage       | yes  |
| Current consumption from rated load voltage             | -  |
| Voltage output short-circuit protection                 | yes  |
| Voltage outputs   | yes  |
| Min. load resistance (voltage range)                    | 5 kOhm                                     |
| Max. capacitive load (current range)                    | 1 µF                                       |
| Max. inductive load (current range)                     | 10 mA                                      |
| Output voltage ranges                                   | -10 V ... +10 V<br>0 V ... +10 V           |
| Operational limit of voltage ranges                     | +/-0.3%                                    |
| Basic error limit voltage ranges                        | +/-0.2%                                    |
| Destruction limit against external applied voltage      | max. 24V                                   |
| Current outputs   | -  |
| Max. in load resistance (current range)                 | -  |
| Max. inductive load (current range)                     | -  |
| Typ. open circuit voltage current output                | -  |
| Output current ranges                                   | -  |
| Operational limit of current ranges                     | -  |
| Basic error limit current ranges                        | -  |
| Destruction limit against external applied voltage      | -  |
| Settling time for ohmic load                            | 2 ms                                       |
| Settling time for capacitive load                       | 4 ms                                       |
| Settling time for inductive load                        | -  |
| Resolution in bit                                       | 12   |
| Conversion time   | 2 ms all channels                          |
| Substitute value can be applied                         | no   |
| Output data size  | 8 Byte                                     |

## Status information, alarms, diagnostics

|                                  |                        |
|----------------------------------|------------------------|
| Status display                   | yes                    |
| Interrupts                       | no                     |
| Process alarm                    | no                     |
| Diagnostic interrupt             | no                     |
| Diagnostic functions             | yes                    |
| Diagnostics information read-out | possible               |
| Supply voltage display           | green LED              |
| Group error display              | Bicolour green/red LED |
| Channel error display            | red LED per channel    |

## Isolation

|   |                  |
|---|------------------|
| 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

|                  |    |
|------------------|----|
| Input bytes      | 0  |
| Output bytes     | 8  |
| Parameter bytes  | 10 |
| Diagnostic bytes | 20 |

## Housing

|          |                    |
|----------|--------------------|
| Material | PPE / PPE GF10     |
| Mounting | Profile rail 35 mm |

## Mechanical data

|                              |                       |
|------------------------------|-----------------------|
| Dimensions (WxHxD)           | 26 mm x 88 mm x 71 mm |
| Net weight                   | 94 g                  |
| Weight including accessories | 94 g                  |
| Gross weight                 | 107 g                 |

## Environmental conditions

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

## Certifications

|                  |                |
|------------------|----------------|
| UL certification | in preparation |
| KC certification | in preparation |