

**Data sheet**  
SM 021 - Digital input (021-1DF00)

**Technical data**

| Order no.   | 021-1DF00                                       |
|---|---|
| Type  | SM 021 - Digital input                          |
| Module ID   | 0012 1F41                                       |
| <b>General information</b>  |   |
| Note  | -   |
| Features  | 8x DI<br>DC 24 V<br>Diagnostic of wiring errors |
| <b>Current consumption/power loss</b>                               |   |
| Current consumption from backplane bus                              | 60 mA   |
| Power loss  | 1.1 W   |
| <b>Technical data digital inputs</b>                                |   |
| Number of inputs  | 8   |
| Cable length, shielded  | 1000 m  |
| Cable length, unshielded  | 600 m   |
| Rated load voltage  | -   |
| Current consumption from load voltage L+ (without load)             | -   |
| Rated value   | DC 20.4...28.8 V                                |
| Input voltage for signal "0"  | DC 0...5 V                                      |
| Input voltage for signal "1"  | DC 10.8...28.8 V                                |
| Input voltage hysteresis  | -   |
| Signal logic input  | Sinking input                                   |
| Frequency range   | -   |
| Input resistance  | -   |
| Input capacitance   | -   |
| Input current for signal "1"  | 3 mA  |
| Connection of Two-Wire-BEROs possible                               | yes   |
| Max. permissible BERO quiescent current                             | 1.5 mA  |
| Input delay of "0" to "1"   | parameterizable 100µs - 20ms                    |
| Input delay of "1" to "0"   | parameterizable 100µs - 20ms                    |
| Number of simultaneously utilizable inputs horizontal configuration | 8   |
| Number of simultaneously utilizable inputs vertical configuration   | 8   |
| Input characteristic curve  | IEC 61131-2, type 3                             |
| Initial data size   | 8 Bit   |
| <b>Status information, alarms, diagnostics</b>                      |   |
| Status display  | green LED per channel                           |
| Interrupts  | yes   |
| Process alarm   | no  |
| Diagnostic interrupt  | yes, parameterizable                            |
| Diagnostic functions  | yes   |
| Diagnostics information read-out                                    | possible  |
| Module state  | green LED                                       |

|                                    |                            |
|------------------------------------|----------------------------|
| Module error display               | red LED                    |
| Channel error display              | none                       |
| <b>Isolation</b>                   |                            |
| Between channels                   | -                          |
| Between channels of groups to      | -                          |
| Between channels and backplane bus | yes                        |
| Insulation tested with             | DC 500 V                   |
| <b>Datasizes</b>                   |                            |
| Input bytes                        | 1                          |
| Output bytes                       | 0                          |
| Parameter bytes                    | 12                         |
| Diagnostic bytes                   | 20                         |
| <b>Housing</b>                     |                            |
| Material                           | PPE / PPE GF10             |
| Mounting                           | Profile rail 35 mm         |
| <b>Mechanical data</b>             |                            |
| Dimensions (WxHxD)                 | 12.9 mm x 109 mm x 76.5 mm |
| Net weight                         | 57 g                       |
| Weight including accessories       | 57 g                       |
| Gross weight                       | 71 g                       |
| <b>Environmental conditions</b>    |                            |
| Operating temperature              | 0 °C to 60 °C              |
| Storage temperature                | -25 °C to 70 °C            |
| <b>Certifications</b>              |                            |
| UL certification                   | yes                        |
| KC certification                   | yes                        |
| UKCA certification                 | yes                        |
| ChinaRoHS certification            | yes                        |