


## Data sheet

### SM 153, PB-DP slave (153-6PL00)

#### Technical data

|   |  |
|---|--|
| <b>Order no.</b>  | <b>153-6PL00</b>                             |
| Type  | SM 153, PB-DP slave                          |
| <b>General information</b>  |  |
| Note  | -  |
| Features  | PROFIBUS-DP slave<br>16 inputs<br>16 outputs |
| <b>Technical data power supply</b>                                  |  |
| Power supply (rated value)  | DC 24 V                                      |
| Power supply (permitted range)                                      | DC 20.4...28.8 V                             |
| Reverse polarity protection   | ✓  |
| Current consumption (no-load operation)                             | -  |
| Current consumption (rated value)                                   | 55 mA  |
| <b>Technical data digital inputs</b>                                |  |
| Number of inputs  | 16   |
| Cable length, shielded  | 1000 m                                       |
| Cable length, unshielded  | 600 m  |
| Rated load voltage  | DC 24 V                                      |
| Reverse polarity protection of rated load voltage                   | -  |
| Current consumption from load voltage L+ (without load)             | -  |
| Rated value   | DC 24 V                                      |
| Input voltage for signal "0"  | DC 0...5 V                                   |
| Input voltage for signal "1"  | DC 15...28.8 V                               |
| Input voltage hysteresis  | -  |
| Frequency range   | -  |
| Input resistance  | -  |
| Input current for signal "1"  | 7 mA   |
| Connection of Two-Wire-BEROs possible                               | ✓  |
| Max. permissible BERO quiescent current                             | 1.5 mA                                       |
| Input delay of "0" to "1"   | 3 ms   |
| Input delay of "1" to "0"   | 3 ms   |
| Number of simultaneously utilizable inputs horizontal configuration | 16   |
| Number of simultaneously utilizable inputs vertical configuration   | 16   |
| Input characteristic curve  | IEC 61131-2, type 1                          |
| Initial data size   | 2 Byte                                       |
| <b>Technical data digital outputs</b>                               |  |
| Number of outputs   | 16   |
| Cable length, shielded  | 1000 m                                       |
| Cable length, unshielded  | 600 m  |

|   |   |
|---|---|
| Rated load voltage  | DC 24 V   |
| Reverse polarity protection of rated load voltage             | -   |
| Current consumption from load voltage L+ (without load)       | 55 mA   |
| Total current per group, horizontal configuration, 40°C       | 4 A   |
| Total current per group, horizontal configuration, 60°C       | 2 A   |
| Total current per group, vertical configuration               | 2 A   |
| Output voltage signal "1" at min. current                     | L+ (-0.8 V)   |
| Output voltage signal "1" at max. current                     | L+ (-1.5 V)   |
| Output current at signal "1", rated value                     | 1 A   |
| Output delay of "0" to "1"                                    | 150 $\mu$ s   |
| Output delay of "1" to "0"                                    | 100 $\mu$ s   |
| Minimum load current  | -   |
| Lamp load   | 5 W   |
| Parallel switching of outputs for redundant control of a load | not possible  |
| Parallel switching of outputs for increased power             | not possible  |
| Actuation of digital input                                    |  |
| Switching frequency with resistive load                       | max. 1000 Hz  |
| Switching frequency with inductive load                       | max. 0.5 Hz   |
| Switching frequency on lamp load                              | max. 10 Hz  |
| Internal limitation of inductive shut-off voltage             | L+ (-52 V)  |
| Short-circuit protection of output                            | yes, electronic   |
| Trigger level   | 1.5 A   |
| Number of operating cycle of relay outputs                    | -   |
| Switching capacity of contacts                                | -   |
| Output data size  | 2 Byte  |

### Status information, alarms, diagnostics

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


### Isolation

|   |          |
|---|----------|
| Between channels  | -        |
| Between channels of groups to                               | -        |
| Between channels and backplane bus                          | -        |
| Between channels and power supply                           | -        |
| Max. potential difference between circuits                  | -        |
| Max. potential difference between inputs (Ucm)              | -        |
| Max. potential difference between Mana and Mintern (Uiso)   | -        |
| 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 |

### Hardware configuration

|                                 |   |
|---------------------------------|---|
| Racks, max.                     | - |
| Modules per rack, max.          | - |
| Number of digital modules, max. | - |
| Number of analog modules, max.  | - |

### Communication

|                              |   |
|------------------------------|---|
| Fieldbus                     | PROFIBUS-DP to EN 50170   |
| Type of interface            | RS485   |
| Connector                    | Sub-D, 9-pin, female  |
| Topology                     | Linear bus with bus termination at both ends                                      |
| Electrically isolated        |  |
| Number of participants, max. | 125   |
| Node addresses               | 1 - 99  |
| Transmission speed, min.     | 9.6 kbit/s  |
| Transmission speed, max.     | 12 Mbit/s   |
| Address range inputs, max.   | 2 Byte  |
| Address range outputs, max.  | 2 Byte  |
| Number of TxPDOs, max.       | -   |
| Number of RxPDOs, max.       | -   |

### Datasizes

|                  |       |
|------------------|-------|
| Input bytes      | 2     |
| Output bytes     | 2     |
| Parameter bytes  | 7 + 5 |
| Diagnostic bytes | 13    |

### Housing

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

### Mechanical data

|                    |                          |
|--------------------|--------------------------|
| Dimensions (WxHxD) | 152.4 mm x 76 mm x 48 mm |
| Weight             | 264 g                    |

### Environmental conditions

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

### Certifications

|                     |     |
|---------------------|-----|
| UL508 certification | yes |
|---------------------|-----|