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Sensor/actuator box, Connection method: M12-SPEEDCON-socket Plastic, Number of slots: 6, Number of positions: 4, Slot assignment: Single, Status indication: Yes, npn; Master cable connection: Fixed connection 180°, PUR/PVC, Cable length: 5 m, Shielding: No

#### **Product Features**

- Safety in the field, thanks to molded housing and high degree of protection
- Flexible, distributed bundling of signals in one master cable
- ☑ Convenient: increased machine availability thanks to quick and easy diagnostics
- ☑ Save time, thanks to installation with SPEEDCON rapid interlock system.



#### Key commercial data

| Packing unit           | 1 PCE           |
|------------------------|-----------------|
| Minimum order quantity | 25 PCE          |
| GTIN                   | 4 046356 782876 |
| Custom tariff number   | 85444290        |
| Country of origin      | POLAND          |

#### Technical data

#### General

| Rated voltage                            | 24 V DC |
|--|---------|
| Max. operating voltage U <sub>max</sub>  | 30 V DC |
| Current carrying capacity per I/O signal | 2 A     |
| Current carrying capacity per slot       | 4 A     |
| Total rated current                      | 12 A    |
| Number of positions                      | 4       |
| Number of slots                          | 6       |



## Technical data

#### General

| Sensor/actuator connection system | M12-SPEEDCON-socket                   |
|-----------------------------------|---------------------------------------|
| Ambient conditions                |                                       |
| Degree of protection              | IP65                                  |
|                                   | IP67                                  |
| Ambient temperature (operation)   | -25 °C 80 °C                          |
|                                   | -40 °C 90 °C (for fixed installation) |
|                                   | 5°C 80°C (for flevible installation)  |

## Local diagnostics function

| Local diagnostics | Supply voltage Green LED      |
|-------------------|-------------------------------|
|                   | Status display I/O Yellow LED |

#### Master cable connection data

| Connection method                            | Fixed connection |
|--|------------------|
| Length of cable                              | 5 m              |
| Tightening torque slot sensor/actuator cable | 0.4 Nm           |
| Tightening torque screw plug                 | 0.4 Nm           |

#### Insulation material

| Housing material              | PBT         |
|-------------------------------|-------------|
| Material of the moulding mass | PUR         |
| Contact material              | Cu alloy    |
| Contact surface material      | Gold-plated |
| Contact carrier material      | PA          |
| Material of threaded sleeve   | PBT         |
| Material, O-ring              | NBR         |

## Pin assignment

| Slot/position = Wire color or connection | 1 / 4 (A) = WH        |
|--|-----------------------|
|  | 2 / 4 (A) = GN        |
|  | 3 / 4 (A) = YE        |
|  | 4 / 4 (A) = GY        |
|  | 5 / 4 (A) = PK        |
|  | 6 / 4 (A) = RD        |
|  | 1-6 / 1 (+ 24 V) = BN |
|  | 1-6 / 3 (0 V) = BU    |
|  | 1-6 / 5 (PE) = GN/YE  |

#### Cable



## Technical data

#### Cable

| Cable type (abbreviation)                     | PUR  |
|---|--|
| Cable abbreviation                            | LiYY11Y-HF   |
| UL AWM style                                  | 20549  |
| Conductor cross section                       | 6x 0.34 mm² (signal line)                                  |
|   | 3x 0.75 mm² (power line)                                   |
| AWG signal line                               | 22   |
| AWG power supply                              | 18   |
| Conductor structure signal line               | 19x 0.15 mm  |
| Conductor structure, voltage supply           | 42x 0.15 mm  |
| Core diameter including insulation            | 1.3 mm ±0.1 mm (signal line)                               |
|   | 1.8 mm ±0.1 mm (power line)                                |
| Thickness, insulation                         | ≥ 0.15 mm (Inner sheath)                                   |
|   | ≥ 0.38 mm (Outer cable sheath)                             |
| Overall twist                                 | Wires twisted in layers                                    |
| External sheath, color                        | Black RAL 9005   |
| External cable diameter D                     | 8 mm ± 0.2 mm  |
| Minimum bending radius, fixed installation    | 7.5 x D  |
| Minimum bending radius, flexible installation | 10 x D   |
| Number of bending cycles                      | 1500000  |
| Bending radius                                | 80 mm  |
| Traversing path                               | 2 m  |
| Traversing rate                               | 2 m/s  |
| Cable weight                                  | 96.6 kg/km   |
| Outer sheath, material                        | PUR  |
| Material, inner sheath                        | PVC  |
| Material conductor insulation                 | PVC  |
| Conductor material                            | Bare Cu litz wires   |
| Nominal voltage, cable                        | 300 V  |
| Test voltage, cable                           | 2000 V   |
| Special properties                            | Silicone-free  |
| Flame resistance                              | DIN EN 50265   |
| Resistance to oil                             | As per VDE 0472 Part 803                                   |
| Other resistance                              | Highly resistant to acids, alkaline solutions and solvents |
| Ambient temperature (operation)               | -40 °C 90 °C (cable, fixed installation)                   |
|   | -5 °C 80 °C (cable, flexible installation)                 |



## Classifications

## eCl@ss

| eCl@ss 4.0 | 27140815 |
|------------|----------|
| eCl@ss 4.1 | 27140815 |
| eCl@ss 5.0 | 27143423 |
| eCl@ss 5.1 | 27143423 |
| eCl@ss 6.0 | 27143423 |
| eCl@ss 7.0 | 27449001 |
| eCl@ss 8.0 | 27449001 |

#### **ETIM**

| ETIM 3.0 | EC001856 |
|----------|----------|
| ETIM 4.0 | EC002585 |
| ETIM 5.0 | EC002585 |

## **UNSPSC**

| UNSPSC 6.01   | 31261501 |
|---------------|----------|
| UNSPSC 7.0901 | 31261501 |
| UNSPSC 11     | 31261501 |
| UNSPSC 12.01  | 31261501 |
| UNSPSC 13.2   | 31261501 |

## Approvals

| А | n | n | rc | Э١. | ıa | ıs |
|---|---|---|----|-----|----|----|

Approvals

UL Recognized / cUL Recognized / GOST / cULus Recognized

Ex Approvals

Approvals submitted

Approval details



## Approvals

| UL Recognized <b>51</b> |                                       |  |  |  |
|-------------------------|---------------------------------------|--|--|--|
|                         |                                       |  |  |  |
| Nominal voltage UN      | 24 V                                  |  |  |  |
|                         |                                       |  |  |  |
|                         | · · · · · · · · · · · · · · · · · · · |  |  |  |

| cUL Recognized • • • • • • • • • • • • • • • • • • • |      |  |  |  |  |  |
|--|------|--|--|--|--|--|
|  |      |  |  |  |  |  |
| Nominal voltage UN                                   | 24 V |  |  |  |  |  |

| GOST 🕙 |  |  |
|--------|--|--|



#### Accessories

Accessories

Marking

Contactor marker - zack marker strip - SS-ZB 17,5 WH - 0804963



Contactor marker – zack marker strip, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into flat marker groove, Lettering field: 17.5 x 8 mm

Contactor marker - zack marker strip - SS-ZB 17,5 YE - 0804976



Contactor marker – zack marker strip, Strip, yellow, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into flat marker groove, Lettering field: 17.5 x 8 mm



#### Accessories

Contactor marker - zack marker strip - SS-ZB 17,5 WH CUS - 0824468



Contactor marker – zack marker strip, Can be ordered: Strip, white, Labeled according to customer specifications, Mounting type: Snap into flat marker groove, Lettering field: 17.5 x 8 mm

Contactor marker - zack marker strip - SS-ZB 17,5 YE CUS - 0824469



Contactor marker – zack marker strip, Can be ordered: Strip, yellow, Labeled according to customer specifications, Mounting type: Snap into flat marker groove, Lettering field: 17.5 x 8 mm

#### Protection and sealing elements

Screw plug - PROT-MS SCO - 1553129



M12 screw plug with SPEEDCON quick locking for unoccupied M12 sockets of the sensor/actuator cables, boxes and flush-type connectors

#### Tools

Torque screwdriver - TSD 04 SAC - 1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

#### Tool - SAC BIT M12-D15 - 1208432



Nut for assembling sensor/actuator cables with M12 connector and for M12 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive



#### Accessories

Tool - SACC BIT M12-D20 - 1208445



Nut for assembling SACC M12 connectors for free assembly, excluding M12 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive

## **Drawings**

#### Schematic diagram



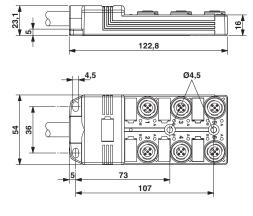
M12 slot, socket, 4-pos.

#### Cable cross section

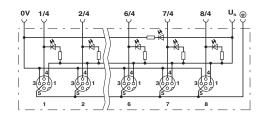


PUR/PVC black [PUR]

Dimensioned drawing



Circuit diagram



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