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Sensor/actuator flush-type plug, 8-pos., M12 SPEEDCON, rear/screw mounting with M12 thread, with 0.5 m TPE litz wire,  $8 \times 0.25 \text{ mm}^2$ 

### Why buy this product

- ☑ Pre-assembled with litz wires for immediate use
- Sealed on the litz wire side for optimum leak-tightness
- Standard pin assignments for signal and power transmission with a uniform design-in design
- For high transmission safety: shield connection to the housing with optional EMC nut



# **Key Commercial Data**

| Packing unit | 1 STK           |  |
|--------------|-----------------|--|
| GTIN         | 4 046356 161978 |  |
| GTIN         | 4046356161978   |  |

# Technical data

#### **Dimensions**

| Length of cable | 0.5 m |
|-----------------|-------|
|-----------------|-------|

#### Ambient conditions

| Ambient temperature (operation) | -25 °C 85 °C (Plug / socket) |
|---------------------------------|------------------------------|
| Degree of protection            | IP67                         |

#### General

|                       | The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if there is a danger of contamination, the connector must be sealed using a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration. |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated current at 40°C | 2 A                                                                                                                                                                                                                                                                                                                                                |



# Technical data

# General

| Rated voltage               | 30 V                                |
|-----------------------------|-------------------------------------|
| Rated surge voltage         | 0.8 kV                              |
| Number of positions         | 8                                   |
| Insulation resistance       | $\geq$ 100 M $\Omega$               |
| Coding                      | A - standard                        |
| Standards/regulations       | M12 connector IEC 61076-2-101       |
| Status display              | No                                  |
| Overvoltage category        | II                                  |
| Degree of pollution         | 3                                   |
| Connection method           | Individual wires                    |
| Insertion/withdrawal cycles | > 100                               |
| Torque                      | 3 Nm 4 Nm (Installation-side)       |
| Mounting type               | Rear mounting M12 x 1 With flat nut |

### Material

| Flammability rating according to UL 94 | V0                           |
|----------------------------------------|------------------------------|
| Contact material                       | CuZn                         |
| Contact surface material               | Au                           |
| Contact carrier material               | PA 6.6                       |
| Material, knurls                       | Zinc die-cast, nickel-plated |
| Sealing material                       | NBR                          |

### Cable

| Cable type                         | TPE litz wire                                      |  |
|------------------------------------|----------------------------------------------------|--|
| Conductor cross section            | 0.25 mm <sup>2</sup>                               |  |
| AWG signal line                    | 24                                                 |  |
| Conductor structure signal line    | 14x 0.15 mm                                        |  |
| Core diameter including insulation | 1.15 mm ±0.07 mm                                   |  |
| Thickness, insulation              | 0.21 mm                                            |  |
| Wire colors                        | Brown, blue, white, gray, pink, green, yellow, red |  |
| Material conductor insulation      | TPE                                                |  |
| Conductor material                 | Tin-plated Cu litz wires                           |  |
| Standards/specifications           | M12 connector IEC 61076-2-101                      |  |
| Insulation resistance              | ≥ 20 MΩ*km                                         |  |
| Conductor resistance               | ≤ 80 mΩ/m                                          |  |
| Nominal voltage, cable             | 300 V                                              |  |
| Test voltage, cable                | 2000 V AC                                          |  |
| Ambient temperature (operation)    | -40 °C 85 °C (cable, fixed installation)           |  |
|                                    | -25 °C 85 °C (cable, flexible installation)        |  |

# Standards and Regulations

|  | connector |
|--|-----------|
|--|-----------|



# Technical data

# Standards and Regulations

| Standards/regulations                  | IEC 61076-2-101 |
|----------------------------------------|-----------------|
| Flammability rating according to UL 94 | V0              |

### **Environmental Product Compliance**

| REACh SVHC | Lead 7439-92-1                                                                                      |
|------------|-----------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50                                                            |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

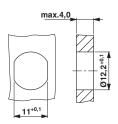
# Drawings

### Dimensional drawing



Housing cutout for M12 fastening thread, mounting panel with thread

# Dimensional drawing



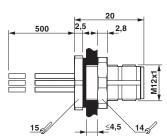
Housing cutout for M12 fastening thread, mounting panel with feed-through hole (alternative with surface as protection against rotation)

# Schematic diagram



Pin assignment M12 plug, 8-pos., view plug side

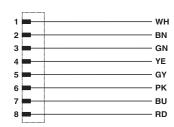
### Dimensional drawing



M12 flush-type connector



### Circuit diagram



Contact assignment of the M12 plug and the M12 socket

|  | Α | p | p | ro | va | ıls |
|--|---|---|---|----|----|-----|
|--|---|---|---|----|----|-----|

Approvals

cULus Recognized / UL Recognized / EAC

Ex Approvals

### Approval details

| cULus Recognized   | c <b>'511</b> us | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm E221474-20140616 |       |
|--------------------|------------------|--------------------------------------------------------------------------------------|-------|
|                    |                  |                                                                                      |       |
| Nominal voltage UN |                  |                                                                                      | 30 V  |
| Nominal current IN |                  |                                                                                      | 2 A   |
| mm²/AWG/kcmil      |                  |                                                                                      | 24-22 |

| UL Recognized      | http://database.ul.com/ | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 118976 |  |
|--------------------|-------------------------|-----------------------------------------------------------------------------------|--|
|                    |                         |                                                                                   |  |
| Nominal voltage UN | ;                       | 30 V                                                                              |  |
| Nominal current IN | 2                       | 2 A                                                                               |  |
| mm²/AWG/kcmil      | 2                       | 24                                                                                |  |

| EAC | ERC | B.00767 |
|-----|-----|---------|
|-----|-----|---------|



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