



## Cable connector

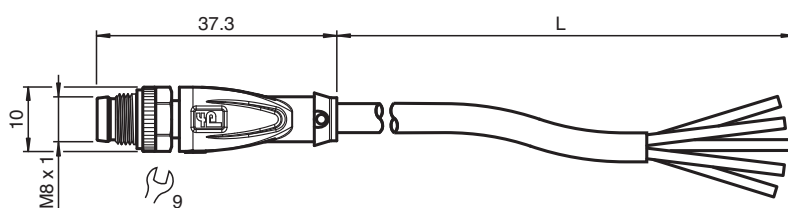
### V311S-GM-BK1M-PUR-U

- Suitable for drag chains and abrasion resistant
- Suitable for robotic applications / torsion resistant
- Degree of protection IP67
- Free of paint wetting interfering substances
- Resistant to microbes and hydrolysis
- UV resistant
- UL listed for USA and Canada
- Halogen-free
- Specific design protects against loosening and inaccurate installation

Male cordset single-ended M8 straight B-coded, 5-pin, PUR cable black, UL-approved, drag chain suitable, torsion resistant



## Dimensions



## Technical Data

### General specifications

|                   |  |                  |
|-------------------|--|------------------|
| Connector 1       |  |                  |
| Connection        |  | plug             |
| Construction type |  | M8               |
| Style             |  | straight         |
| Locking           |  | screw connection |
| Number of pins    |  | 5                |
| Coding            |  | B-coded          |
| Connector 2       |  |                  |
| Connection        |  | cable end        |

### Electrical specifications

|                   |       |                        |
|-------------------|-------|------------------------|
| Operating voltage | $U_B$ | max. 48 V AC / 60 V DC |
| Operating current | $I_B$ | max. 4 A               |

### Conformity

|                      |  |                                    |
|----------------------|--|------------------------------------|
| Degree of protection |  | EN 60529                           |
| Plug connection      |  | connector M8 x 1 : IEC 61076-2-104 |
| Flammability         |  | UL 1581; DIN EN 60332-2-2          |
| Halogen-free         |  | IEC 60754-1                        |

### Approvals and certificates

|                |  |                                                    |
|----------------|--|----------------------------------------------------|
| UL approval    |  | AWM STYLE 20549 AWM I/II A/B 80°C 300V FT2 (cable) |
| UL File Number |  | E231213                                            |

### Ambient conditions

|                     |  |  |
|---------------------|--|--|
| Ambient temperature |  |  |
|---------------------|--|--|

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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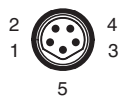
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## Technical Data

|                                  |   |                                                                                 |
|----------------------------------|---|---------------------------------------------------------------------------------|
| Plug connector                   |   | -40 ... 90 °C (-40 ... 194 °F)                                                  |
| Cable, fixed                     |   | -40 ... 80 °C (-40 ... 176 °F)                                                  |
| Cable, flexing                   |   | -25 ... 80 °C (-13 ... 176 °F)                                                  |
| Pollution degree                 |   | 3                                                                               |
| <b>Mechanical specifications</b> |   |                                                                                 |
| Plug connector                   |   |                                                                                 |
| Tightening torque                |   | 0.4 Nm                                                                          |
| Loosening protection             |   | available                                                                       |
| Tool installation                |   | straight knurling and hexagon nut SW = 9 mm                                     |
| Mating cycles                    |   | min. 100                                                                        |
| Degree of protection             |   | IP67                                                                            |
| Cable                            |   | according to IEC/EN 60228 (DIN VDE 0295) class 6                                |
| Sheath diameter                  |   | 4.8 mm                                                                          |
| Bending radius                   |   | > 10 x cable diameter, moving<br>> 5 x cable diameter, fixed                    |
| Sheath stripping force           |   | max. 80 N / 300 mm                                                              |
| Sheath color                     |   | black (similar to RAL 9005)                                                     |
| Number of cores                  |   | 5                                                                               |
| Core cross section               |   | 0.34 mm <sup>2</sup>                                                            |
| Cores color                      |   | Core 1: brown<br>Core 2: white<br>Core 3: blue<br>Core 4: black<br>Core 5: grey |
| Core construction                |   | 42 x 0.1 mm Ø                                                                   |
| Length                           | L | 1 m                                                                             |
| Cable code                       |   | Li F 9Y 11Y 5 x 0,34                                                            |
| Drag chain suitability           |   |                                                                                 |
| Drag chain cycles                |   | min. 5000000                                                                    |
| Motion velocity                  |   | max. 3.3 m/s                                                                    |
| Traverse distance                |   | max. 5 m                                                                        |
| Acceleration                     |   | max. 5 m/s <sup>2</sup>                                                         |
| Torsion cycles                   |   | min. 1000000                                                                    |
| Torsional stress                 |   | ± 180 °/m                                                                       |
| <b>Material</b>                  |   |                                                                                 |
| PWIS free                        |   | yes                                                                             |
| Halogen-free                     |   | yes                                                                             |
| Plug connector                   |   |                                                                                 |
| Screw connection                 |   | Zinc diecast, nickel-plated                                                     |
| Body                             |   | TPU, black                                                                      |
| Contact surface                  |   | Au                                                                              |
| Flammability                     |   | V-2                                                                             |
| Cable                            |   |                                                                                 |
| Sheathing                        |   | PUR based on polyether                                                          |
| Core insulation                  |   | PP                                                                              |
| UV resistance                    |   | yes                                                                             |
| Chemical resistance              |   | good                                                                            |
| Oil resistance                   |   | yes                                                                             |
| Cooling lubricant resistance     |   | yes                                                                             |
| Microbial resistance             |   | yes                                                                             |
| Hydrolysis resistance            |   | yes                                                                             |
| Flammability                     |   | FT2                                                                             |

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Connection



|   |    |
|---|----|
| 1 | BN |
| 2 | WH |
| 3 | BU |
| 4 | BK |
| 5 | GY |

Accessories

|                                                                                   |                          |                                            |
|-----------------------------------------------------------------------------------|--------------------------|--------------------------------------------|
|  | <b>MH V3-SCREWDRIVER</b> | Torque screwdriver (0.4 Nm)                |
|  | <b>MH V3-BIT M8</b>      | plug-in cap for M8                         |
|  | <b>V1/V3-LABELHOLDER</b> | Label holder                               |
|  | <b>V1/V3-LABEL</b>       | Label plate                                |
|  | <b>MH V3-Holder</b>      | Modular universal holder for M8 connectors |

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