

## Connection cable

### V1-W-BK1M-PUR-U-V31-GM

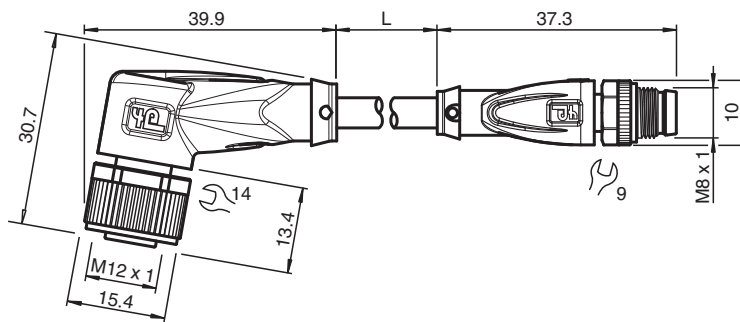


- Suitable for drag chains and abrasion resistant
- Suitable for robotic applications / torsion resistant
- Degree of protection IP68 / IP69
- Free of paint wetting interfering substances
- Resistant to microbes and hydrolysis
- UV resistant
- UL listed for USA and Canada
- Halogen-free
- Specific design protects against loosening and inaccurate installation

Cordset M12 socket angled to M8 plug straight A-coded, 4-pin, PUR cable black, UL approved, drag chain suitable, torsion resistant



## Dimensions



## Technical Data

### General specifications

|                   |  |                  |
|-------------------|--|------------------|
| Connector 1       |  |                  |
| Connection        |  | socket           |
| Construction type |  | M12              |
| Style             |  | angled           |
| Locking           |  | screw connection |
| Number of pins    |  | 4                |
| Coding            |  | A-coded          |
| Connector 2       |  |                  |
| Connection        |  | plug             |
| Construction type |  | M8               |
| Style             |  | straight         |
| Locking           |  | screw connection |
| Number of pins    |  | 4                |
| Coding            |  | A-coded          |

### Electrical specifications

|                   |                |                 |
|-------------------|----------------|-----------------|
| Operating voltage | U <sub>B</sub> | max. 30 V AC/DC |
| Operating current | I <sub>B</sub> | max. 3 A        |

### Conformity

|                      |          |
|----------------------|----------|
| Degree of protection | EN 60529 |
|----------------------|----------|

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

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## Technical Data

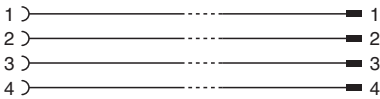
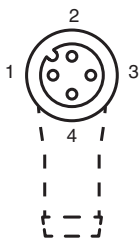
|                                   |   |                                                                           |
|-----------------------------------|---|---------------------------------------------------------------------------|
| Plug connection                   |   | connector M12 x 1 : IEC 61076-2-101<br>connector M8 x 1 : IEC 61076-2-104 |
| Flammability                      |   | UL 1581; DIN EN 60332-2-2                                                 |
| Halogen-free                      |   | IEC 60754-1                                                               |
| <b>Approvals and certificates</b> |   |                                                                           |
| UL approval                       |   | AWM STYLE 20549 AWM I/II A/B 80°C 300V FT2 (cable)                        |
| UL File Number                    |   | E231213                                                                   |
| <b>Ambient conditions</b>         |   |                                                                           |
| Ambient temperature               |   |                                                                           |
| Plug connector                    |   | -40 ... 90 °C (-40 ... 194 °F)                                            |
| Cable, fixed                      |   | -40 ... 80 °C (-40 ... 176 °F)                                            |
| Cable, flexing                    |   | -20 ... 80 °C (-4 ... 176 °F)                                             |
| Pollution degree                  |   | 3                                                                         |
| <b>Mechanical specifications</b>  |   |                                                                           |
| <b>Connector 1</b>                |   |                                                                           |
| Tightening torque                 |   | 0.6 Nm                                                                    |
| Loosening protection              |   | available                                                                 |
| Tool installation                 |   | straight knurling and hexagon nut SW = 14 mm                              |
| Mating cycles                     |   | min. 100                                                                  |
| Degree of protection              |   | IP68 / IP69                                                               |
| <b>Connector 2</b>                |   |                                                                           |
| 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              |   | IP68                                                                      |
| Cable                             |   | according to IEC/EN 60228 (DIN VDE 0295) class 6                          |
| Sheath diameter                   |   | 4.3 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                   |   | 4                                                                         |
| 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           |
| Core construction                 |   | 42 x 0.1 mm Ø                                                             |
| Length                            | L | 1 m                                                                       |
| Cable code                        |   | Li 9Y 11Y 4 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                                                                |
| Seal                              |   | FKM                                                                       |

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Technical Data

|                              |                        |
|------------------------------|------------------------|
| Contact surface              | gold plated (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                    |

Connection



Accessories

|                                                                                     |                              |                                                  |
|-------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------|
|  | <b>MH V1-SCREWDRIVER</b>     | Torque screwdriver (0.6 Nm)                      |
|  | <b>MH V1-BIT M12</b>         | plug-in cap M12                                  |
|  | <b>V1/V3-LABELHOLDER</b>     | Label holder                                     |
|  | <b>V1/V3-LABEL</b>           | Label plate                                      |
|  | <b>MH V1-Holder</b>          | Modular universal holder for M12 connectors      |
|  | <b>V1-CLIP</b>               | Unlocking protector for M12 connector            |
|  | <b>V1-MARKING-RING-COLOR</b> | Marking rings for M12 connectors, various colors |
|  | <b>MH V3-SCREWDRIVER</b>     | Torque screwdriver (0.4 Nm)                      |
|  | <b>MH V3-BIT M8</b>          | plug-in cap for M8                               |
|  | <b>MH V3-Holder</b>          | Modular universal holder for M8 connectors       |

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