

# Connection cable

## V1-G-BK5M-PUR-U-V31-GM

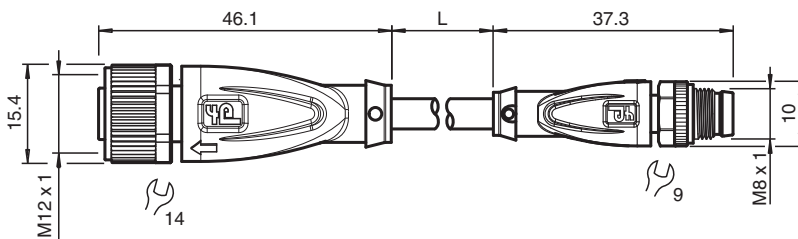


- Suitable for drag chains and abrasion resistant
- Suitable for robotic applications / torsion resistant
- Degree of protection IP68 / IP69
- Free of paint wetting interfering substances
- Resistant to microbes and hydrolysis
- UV resistant
- UL listed for USA and Canada
- Halogen-free
- Specific design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

Cordset M12 socket straight 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                     |                | straight  |  |
| 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  |  |
| 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   |  |

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

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## Technical Data

|  |   |   |
|--|---|---|
| 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>                 |   |   |
| Connector 1                                      |   |   |
| 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   |
| Connector 2                                      |   |   |
| 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                                  |   | 4.3 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 | 5 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   |
| Contact surface                                  |   | gold plated (Au)  |
| Flammability                                     |   | V-2   |

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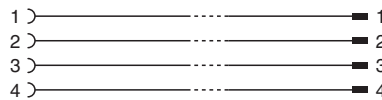
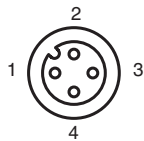
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## Technical Data

|                              |                        |
|------------------------------|------------------------|
| 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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