

# Connection cable

## V1-W-A2-BK1M-PUR-U-V1-G

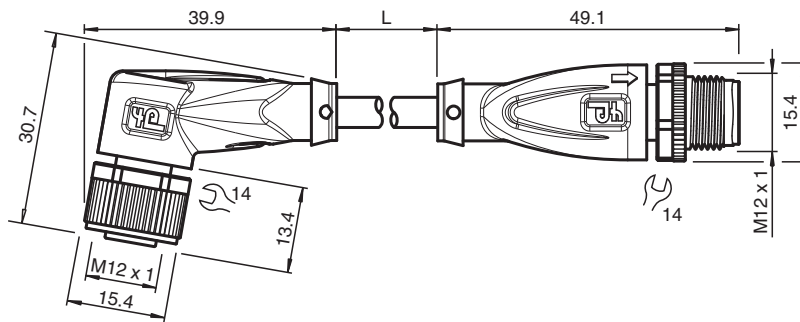


- Built-in LED, as operating and function indicator
- Suitable for drag chains and abrasion resistant
- Suitable for robotic applications / torsion resistant
- Degree of protection IP68 / IP69
- Free of paint wetting interfering substances
- Resistant to microbes and hydrolysis
- UV resistant
- UL listed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

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



### Dimensions



### Technical Data

| General specifications            |                          |
|-----------------------------------|--------------------------|
| <b>Connector 1</b>                |                          |
| Connection                        | socket                   |
| Construction type                 | M12                      |
| Style                             | angled                   |
| Locking                           | screw connection         |
| Number of pins                    | 4                        |
| Coding                            | A-coded                  |
| <b>Connector 2</b>                |                          |
| Connection                        | plug                     |
| Construction type                 | M12                      |
| Style                             | straight                 |
| Locking                           | screw connection         |
| Number of pins                    | 4                        |
| Coding                            | A-coded                  |
| <b>Indicators/operating means</b> |                          |
| LED green                         | Operating display        |
| LED yellow                        | Functional display pin 4 |
| <b>Electrical specifications</b>  |                          |

Release date: 2023-07-13 Date of issue: 2023-07-13 Filename: 240780-100001\_eng.pdf

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

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**Technical Data**

|                                   |                |   |
|-----------------------------------|----------------|---|
| Operating voltage                 | U <sub>B</sub> | max. 24 V DC -20 % / +25 %                                      |
| Operating current                 | I <sub>B</sub> | max. 4 A  |
| <b>Conformity</b>                 |                |   |
| Degree of protection              |                | EN 60529  |
| Plug connection                   |                | connector M12 x 1 : IEC 61076-2-101                             |
| 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>  |                |   |
| Plug connector                    |                |   |
| 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   |
| 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, transparent/black  |
| Seal                              |                | FKM   |
| Contact surface                   |                | gold plated (Au)  |
| Flammability                      |                | V-2   |

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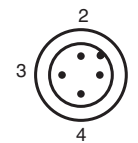
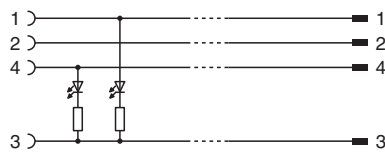
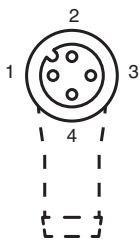
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## Technical Data

| 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 |

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