

## Connection cable

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

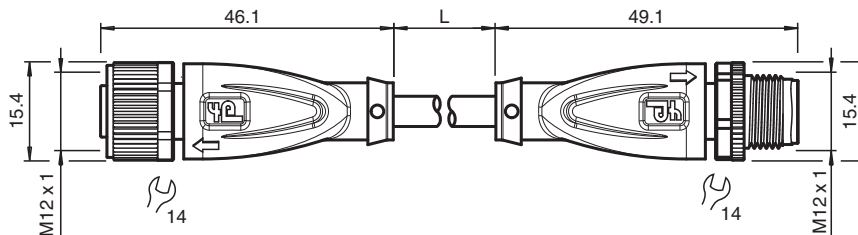


- Built-in LED, as operating and function indicator
- Suitable for drag chains and abrasion resistant
- Suitable for robotic applications / torsion resistant
- Degree of protection IP68 / IP69
- Free of paint wetting interfering substances
- Resistant to microbes and hydrolysis
- UV resistant
- UL listed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

Cordset M12 socket straight 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

|                            |                |                            |
|----------------------------|----------------|----------------------------|
| 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          |                | M12                        |
| Style                      |                | straight                   |
| Locking                    |                | screw connection           |
| Number of pins             |                | 4                          |
| Coding                     |                | A-coded                    |
| Indicators/operating means |                |                            |
| LED green                  |                | Operating display          |
| LED yellow                 |                | Functional display pin 4   |
| Electrical specifications  |                |                            |
| Operating voltage          | U <sub>B</sub> | max. 24 V DC -20 % / +25 % |
| Operating current          | I <sub>B</sub> | max. 4 A                   |
| Conformity                 |                |                            |

Release date: 2023-07-13 Date of issue: 2023-07-14 Filename: 240779-100001\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**

## Technical Data

|                                   |   |                                                                 |
|-----------------------------------|---|-----------------------------------------------------------------|
| 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                                              |
| <b>Drag chain suitability</b>     |   |                                                                 |
| 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                                                             |
| <b>Plug connector</b>             |   |                                                                 |
| Screw connection                  |   | Zinc diecast, nickel-plated                                     |
| Body                              |   | TPU, transparent/black                                          |
| Seal                              |   | FKM                                                             |
| Contact surface                   |   | gold plated (Au)                                                |
| Flammability                      |   | V-2                                                             |
| <b>Cable</b>                      |   |                                                                 |
| Sheathing                         |   | PUR based on polyether                                          |
| Core insulation                   |   | PP                                                              |

Release date: 2023-07-13 Date of issue: 2023-07-14 Filename: 240779-100001\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

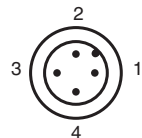
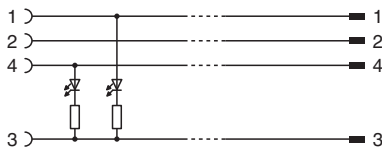
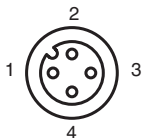
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**

Technical Data

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

Release date: 2023-07-13 Date of issue: 2023-07-14 Filename: 240779-100001\_eng.pdf