

## Connection cable

### V1-G-BK3M-PUR-R1-V1-G

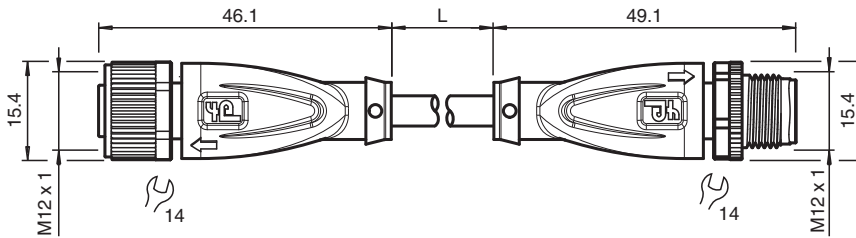


- Highly flexible - suitable for robotics
- Suitable for drag chains and abrasion resistant
- Suitable for robotic applications / torsion resistant
- Degree of protection IP68 / IP69
- Free of paint wetting interfering substances
- Resistant to microbes and hydrolysis
- Oil resistant
- Resistant to salt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

Cordset M12 socket straight to M12 plug straight A-coded, 4-pin, PUR cable black, UL approved, drag chain suitable, torsion resistant, oil and salt water resistant, robotics



## 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          |

### Electrical specifications

|                   |       |                  |
|-------------------|-------|------------------|
| Operating voltage | $U_B$ | max. 250 V AC/DC |
| Operating current | $I_B$ | max. 4 A         |

### Conformity

|                      |  |                                     |
|----------------------|--|-------------------------------------|
| Degree of protection |  | EN 60529                            |
| Plug connection      |  | connector M12 x 1 : IEC 61076-2-101 |

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## Technical Data

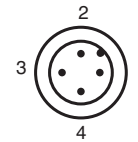
|                                   |   |   |
|-----------------------------------|---|---|
| Flammability                      |   | UL 758 / 1581   |
| Halogen-free                      |   | DIN VDE 0472-815<br>DIN EN 50267-2-1                            |
| Microbial resistance              |   | DIN EN 50525-2-21 / DIN VDE 0282-10                             |
| Hydrolysis resistance             |   | DIN EN 50525-2-21   |
| Oil resistance                    |   | DIN EN 60811-2-1  |
| <b>Approvals and certificates</b> |   |   |
| UL approval                       |   | AWM STYLE 20549 80 °C 300V AWM I 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                    |   | -25 ... 80 °C (-13 ... 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. 50 N / 300 mm  |
| Sheath color                      |   | black (similar to RAL 7021)                                     |
| 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 | 3 m   |
| Cable code                        |   | Li 9Y 11YM 4 x 0.34   |
| <b>Drag chain suitability</b>     |   |   |
| Drag chain cycles                 |   | min. 10000000   |
| Motion velocity                   |   | max. 3 m/s  |
| Traverse distance                 |   | max. 10 m   |
| Acceleration                      |   | max. 10 m/s <sup>2</sup>  |
| Torsion cycles                    |   | min. 10000000   |
| Torsional stress                  |   | ± 360 °/m   |
| <b>Material</b>                   |   |   |
| PWIS free                         |   | yes   |
| Halogen-free                      |   | yes   |
| <b>Plug connector</b>             |   |   |
| Screw connection                  |   | Zinc diecast, nickel-plated                                     |
| Body                              |   | TPU, black  |
| Seal                              |   | FKM   |
| Contact surface                   |   | gold plated (Au)  |
| Flammability                      |   | V-2   |
| <b>Cable</b>                      |   |   |
| Sheathing                         |   | PUR based on polyether  |

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### Technical Data

|                       |     |
|-----------------------|-----|
| Core insulation       | PP  |
| Salt water resistance | yes |
| Oil 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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