

## Connection cable

### V31-GM-A2-BK1M-PUR-U-V31-GM

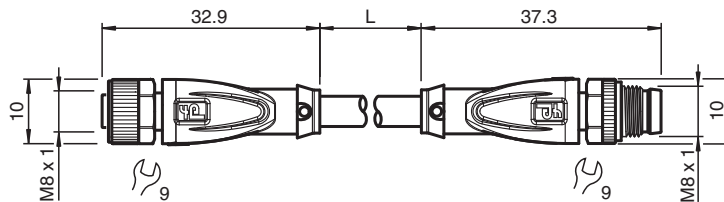


- Built-in LED, as operating and function indicator
- Suitable for drag chains and abrasion resistant
- Suitable for robotic applications / torsion resistant
- Degree of protection IP68
- Free of paint wetting interfering substances
- Resistant to microbes and hydrolysis
- UV resistant
- UL listed for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

Cordset M8 socket straight A-coded LED 4-pin to M8 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  |  | M8               |
| Style              |  | straight         |
| Locking            |  | screw connection |
| Number of pins     |  | 4                |
| Coding             |  | A-coded          |
| <b>Connector 2</b> |  |                  |
| Connection         |  | plug             |
| Construction type  |  | M8               |
| 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 | $U_B$ | max. 24 V DC -20 % / +25 % |
| Operating current | $I_B$ | max. 3 A                   |

### Conformity

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

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## Technical Data

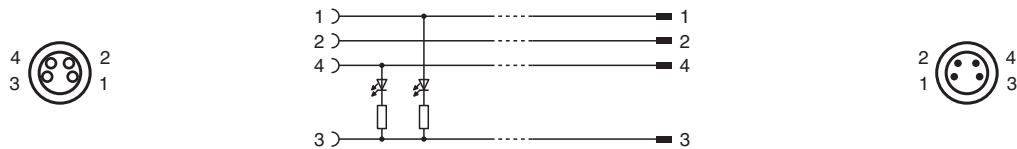
|                                   |   |                                                                 |
|-----------------------------------|---|-----------------------------------------------------------------|
| Degree of protection              |   | EN 60529                                                        |
| Plug connection                   |   | 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>  |   |                                                                 |
| Plug connector                    |   |                                                                 |
| 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                                              |
| <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                                                              |

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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 V3-SCREWDRIVER</b> | Torque screwdriver (0.4 Nm)                |
|  | <b>MH V3-BIT M8</b>      | plug-in cap for M8                         |
|  | <b>V1/V3-LABELHOLDER</b> | Label holder                               |
|  | <b>V1/V3-LABEL</b>       | Label plate                                |
|  | <b>MH V3-Holder</b>      | Modular universal holder for M8 connectors |