

# Connection cable

## V31-GM-BK1M-PUR-A-V1-G

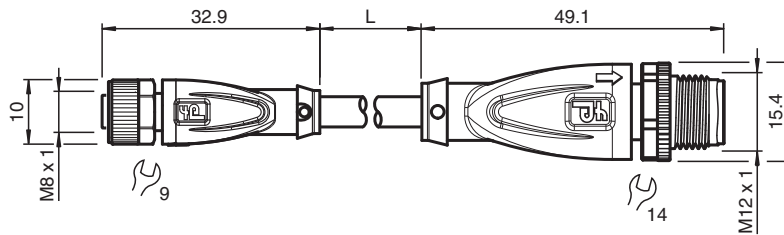


- Improved resistance to weld spatter
- Suitable for drag chains and abrasion resistant
- Suitable for robotic applications / torsion resistant
- Degree of protection IP68
- Free of paint wetting interfering substances
- Resistant to microbes and hydrolysis
- UL listed for USA and Canada
- Halogen-free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

Cordset M8 socket straight to M12 plug straight A-coded, 4-pin, PUR cable weld spatter resistant black, UL approved, drag chain suitable, torsion resistant



### Dimensions



### Technical Data

#### General specifications

Connector 1	
Connection	socket
Construction type	M8
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. 30 V AC/DC
Operating current	$I_B$	max. 3 A

#### Conformity

Degree of protection	EN 60529
Plug connection	connector M8 x 1 : IEC 61076-2-104 connector M12 x 1 : IEC 61076-2-101
Flammability	UL 1581; DIN EN 60332-2-2

Release date: 2023-06-29 Date of issue: 2023-06-29 Filename: 314702\_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

Halogen-free		DIN VDE 0472-815 IEC 60754-1
Microbial resistance		DIN EN 50525-2-21 / DIN VDE 0282-10
Hydrolysis resistance		DIN EN 50525-2-21
<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		-25 ... 80 °C (-13 ... 176 °F)
Pollution degree		3
<b>Mechanical specifications</b>		
Connector 1		
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
Connector 2		
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 > 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 Core 2: white Core 3: blue Core 4: black
Core construction		42 x 0.1 mm Ø
Length	L	1 m
Cable code		Li F 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

Release date: 2023-06-29 Date of issue: 2023-06-29 Filename: 314702\_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

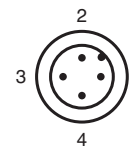
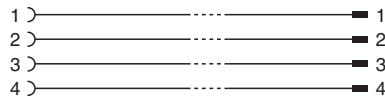
 Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**











### Technical Data

Contact surface	gold plated (Au)
Flammability	V-2
Cable	
Sheathing	PUR based on polyether
Core insulation	PP
Weld spatter 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>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>V1/V3-LABELHOLDER</b>	Label holder
	<b>V1/V3-LABEL</b>	Label plate
	<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

Release date: 2023-06-29 Date of issue: 2023-06-29 Filename: 314702\_eng.pdf