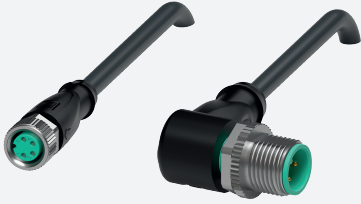


## Connection cable

### V31-GM-BK1M-PUR-U-V1-W

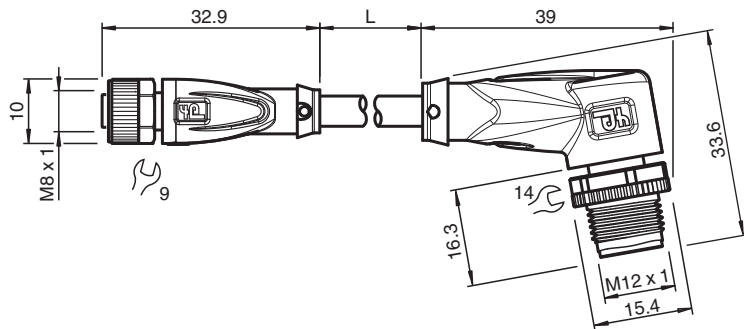


- Suitable for drag chains and abrasion resistant
- Suitable for robotic applications / torsion resistant
- Degree of protection IP68
- Free of paint wetting interfering substances
- Resistant to microbes and hydrolysis
- UV resistant
- UL listed for USA and Canada
- Halogen-free
- Specific design protects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

Cordset M8 socket straight to M12 plug angled 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		M8
Style		straight
Locking		screw connection
Number of pins		4
Coding		A-coded
Connector 2		
Connection		plug
Construction type		M12
Style		angled
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. 4 A

### Conformity

Degree of protection		EN 60529
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## Technical Data

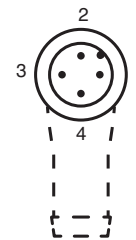
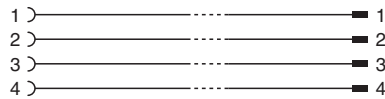
Plug connection		connector M8 x 1 : IEC 61076-2-104 connector M12 x 1 : IEC 61076-2-101
Flammability		UL 1581; DIN EN 60332-2-2
Halogen-free		IEC 60754-1
<b>Approvals and certificates</b>		
UL approval		AWM STYLE 20549 AWM I/II A/B 80°C 300V FT2 (cable)
UL File Number		E231213
<b>Ambient conditions</b>		
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>		
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 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

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### Technical Data

Contact surface	gold plated (Au)
Flammability	V-2
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>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

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