

Round Water-resistant Connectors (M8) XS3W-M8/XS3F-M8

Small Round Water-resistant Connectors



- Water-resistant, compact connector meets IP67 requirements.
- M8 Screw-on Connectors
- Connectors on both cable ends require no harness work.
- Based on IEC61076-2-104.
- UL approved products.



Refer to *Safety Precautions* on page 5.

Model Number Structure

Model Number Legend

Use this model number legend to identify products from their model number. Use this model number legend to identify products from their model number. When ordering, use a model number from the table in Ordering Information.

XS3 - **M 8 P V C**

1 2 3 4 5 6

- | | |
|--|--|
| <p>1. Type
W: Socket and Plug on Cable Ends
F: Sockets on One Cable End</p> <p>2. Fastening Method
M8: M8 type</p> <p>3. Cable Material
PVC: PVC Cable</p> <p>4. Connector Poles
3: 3 poles
4: 4 poles</p> | <p>5. Cable Connection Direction
XS3W-M8
SS: Straight (Plug)/Straight (Socket)
SA: Straight (Plug)/Right-angle (Socket)</p> <p>XS3F-M8
S: Straight
A: Right-angle</p> <p>6. Cable Length
2M: 2 m
5M: 5 m
10M: 10 m</p> |
|--|--|

XS3W-M8/XS3F-M8

Ordering Information

Type	Cable specifications	Cable outer diameter (mm)	No. of cable cores (Poles)	Cable connection direction	Cable length (m)	Model	UL
Socket and Plug on Cable Ends	PVC cable	5.0 dia.	3	Straight (Plug)/ Straight (Socket)	2	XS3W-M8PVC3SS2M	UL2238 certified (File no. E207683)
					5	XS3W-M8PVC3SS5M	
					10	XS3W-M8PVC3SS10M	
				Straight (Plug)/ Right-angle (Socket)	2	XS3W-M8PVC3SA2M	
					5	XS3W-M8PVC3SA5M	
					10	XS3W-M8PVC3SA10M	
			4	Straight (Plug)/ Straight (Socket)	2	XS3W-M8PVC4SS2M	
					5	XS3W-M8PVC4SS5M	
					10	XS3W-M8PVC4SS10M	
				Straight (Plug)/ Right-angle (Socket)	2	XS3W-M8PVC4SA2M	
					5	XS3W-M8PVC4SA5M	
					10	XS3W-M8PVC4SA10M	
Sockets on One Cable End	PVC cable	5.0 dia.	3	Straight type	2	XS3F-M8PVC3S2M	
					5	XS3F-M8PVC3S5M	
					10	XS3F-M8PVC3S10M	
				Right-angle type	2	XS3F-M8PVC3A2M	
					5	XS3F-M8PVC3A5M	
					10	XS3F-M8PVC3A10M	
			4	Straight type	2	XS3F-M8PVC4S2M	
					5	XS3F-M8PVC4S5M	
					10	XS3F-M8PVC4S10M	
				Right-angle type	2	XS3F-M8PVC4A2M	
					5	XS3F-M8PVC4A5M	
					10	XS3F-M8PVC4A10M	

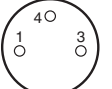
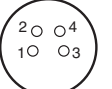
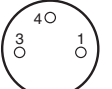
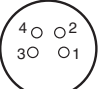
Ratings and Specifications

Item	Model	XS3W-M8/XS3F-M8
Rated current		1 A
Rated voltage		125 VDC
Contact resistance (connector)		40 mΩ max. (20 mV max., 100 mA max.)
Insulation resistance		1,000 MΩ min. (at 500 VDC)
Dielectric strength (connector)		1,000 VAC for 1 min (leakage current: 1 mA max.)
Degree of protection		IP67 (IEC60529)
Insertion tolerance		200 times
Cable tensile strength		49 N/15 s
Ambient operating temperature range		-10 to 80°C
Ambient humidity range		20 to 85%RH

Materials and Finish

Item	Model	XS3W-M8/XS5F-M8
Contacts		Copper alloy/Gold plating
Fixture		Copper alloy/Nickel plating
Contact block		PBT resin
O-ring		Rubber
Cover		PBT resin
Cable		5 mm dia, AWG23, PVC

Pin Arrangement (Engaged Side)

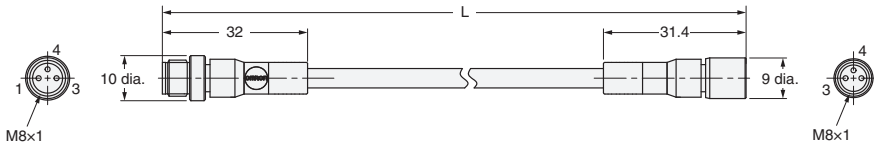
Item	Poles	3 poles	4 poles
DC	Male (plug) contacts		
	Female (socket) contacts		

Dimensions

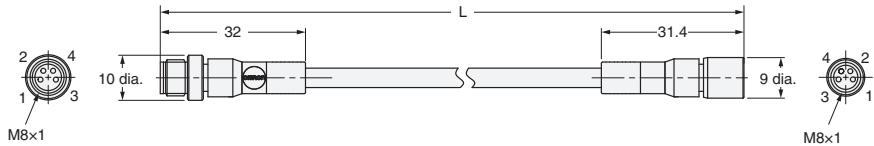
Connectors on both cable ends XS3W-M8

Straight (Plug)/Straight (Socket)

XS3W-M8PVC3SS□M (3 poles)

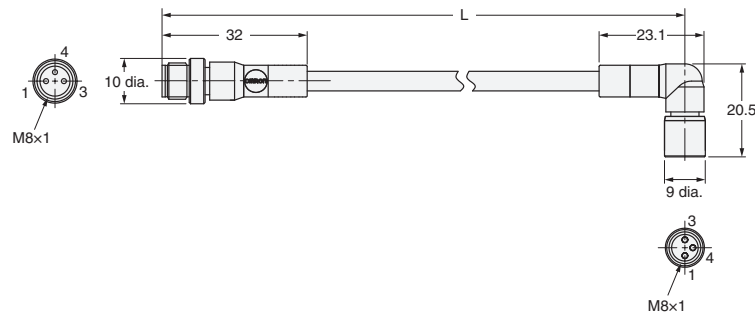


XS3W-M8PVC4SS□M (4 poles)

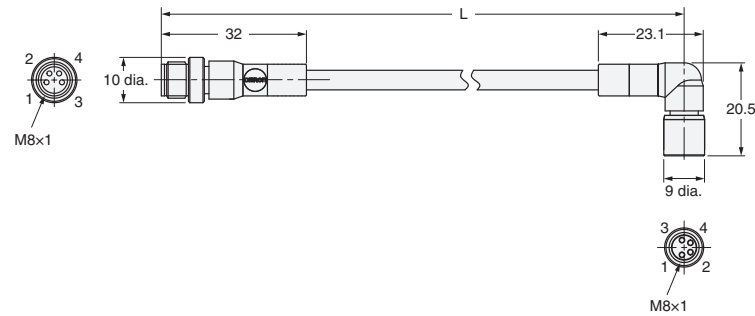


Straight (Plug)/Right-angle (Socket)

XS3W-M8PVC3SA□M (3 poles)

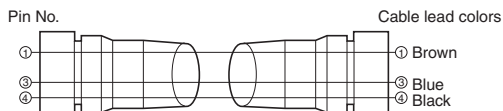


XS3W-M8PVC4SA□M (4 poles)

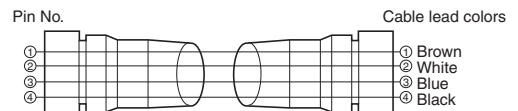


Wiring Diagram

3 Cores



4 Cores

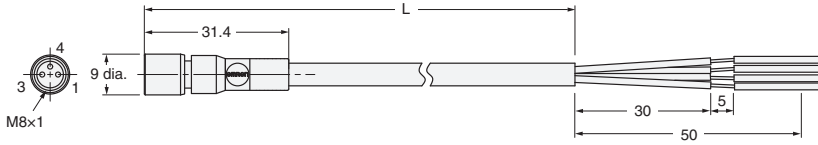


XS3W-M8/XS3F-M8

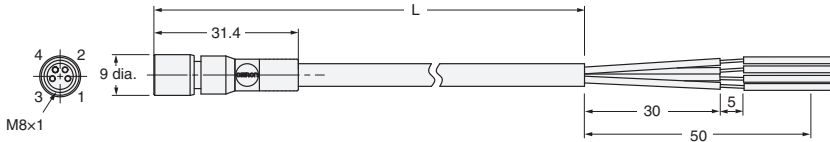
Connectors on both cable ends XS3F-M8

Straight Connectors

XS3F-M8PVC3S□M (3 poles)

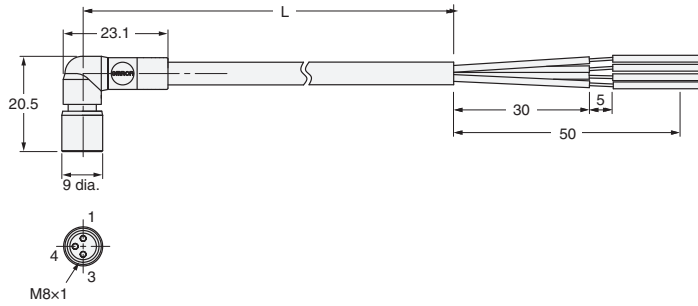


XS3F-M8PVC4S□M (4 poles)

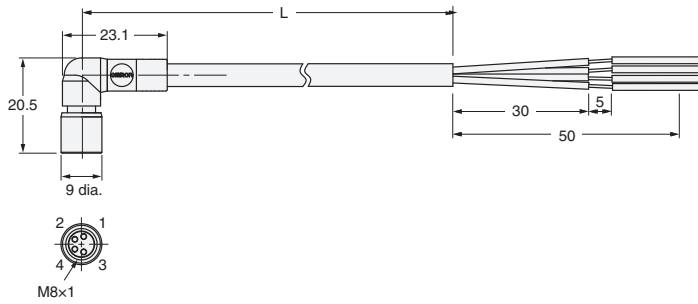


Right-Angle Connectors

XS3F-M8PVC3A□M (3 poles)

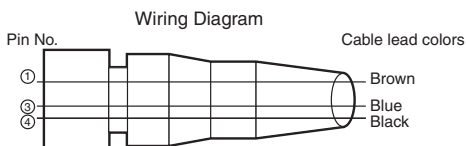


XS3F-M8PVC4A□M (4 poles)

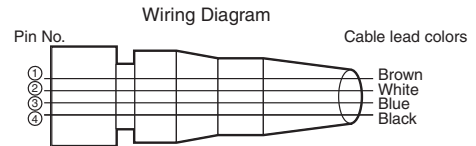


Wiring Diagram

3 Cores



4 Cores



Safety Precautions

Meaning of Display

Precautions for Safe Use	Supplementary comments on what to do or avoid doing, to use the product safely.
Precautions for Correct Use	Supplementary comments on what to do or avoid doing, to prevent failure to operate, malfunction, or undesirable effects on product performance.

Precautions for Safe Use

Disposal

Dispose of this product as industrial waste.

Precautions for Correct Use

Do not use the product in atmospheres or environments that exceed product ratings.

Connections

- The XS3 and XS2 Sensor I/O Connectors cannot be connected to each other.
- You cannot mate Connectors that have a different number of poles.
- When using Sensors with Connectors or Limit Switches, use the Sensor I/O Connectors specified in the catalog.

Connector Connection and Disconnection

- Before connecting or disconnecting Connectors, make sure that no power is being supplied to the Connectors.
- When connecting or disconnecting Connectors, be sure to hold the Connectors by hand. Do not disconnect the Connectors by pulling the cable.
- Do not touch the mating surface of the connectors with wet hands. If there is any water on the Connector or near the Connector, be sure to wipe off the water before connecting or disconnecting the Connector, otherwise the Connector may short-circuit internally or not ensure good insulation.
- Make sure that mating section of any Connector is free of metal dust or power.
- Do not use tools of any sort to mate the Connectors. Always use your hands. Pliers or other tools may damage the Connectors. Be sure to tighten each thread bracket by hand within a torque of 0.2 N·m. If the thread bracket is not tightened securely, the Connector may not maintain its proper degree of protection or the thread bracket may fall off due to vibration.
- When you tighten or loosen a thread bracket, hold onto only the thread bracket.
If you hold onto the cover or cable, excessive rotational force will be applied to the Connector and may damage it.

Degree of Protection

- Do not impose external force continuously on the joints of pin blocks and covers, otherwise the Connectors may not keep its proper degree of protection (i.e., IP67).
- The degree of protection of connectors (IP67) is not for a fully watertight structure. Do not use them underwater.
- The Connectors are not oil-resistant. Do not use them where they would be subject to oil.
- If Connectors are used in places with vibration or shock, secure the mating section of each Connector, otherwise the Connectors may be disconnected or fail to maintain their proper degree of protection.
- Connectors are of resin mold construction. Do not impose excessive force on them.

Storage

Do not store Connectors for long periods of time in the following locations

- Locations subject to dust or high humidity
- Locations subject to ammonia gas or sulfide gas

Setup

- Do not make any cable bends near the base of the Unit.
- Any bends made must have a minimum radius of 36 mm.

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Note: Do not use this document to operate the Unit.

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