

## Small Round Water-resistive Connectors



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



Refer to *Safety Precautions* on page 4.

## Ratings and Specifications

Rated current	1A
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)	AC 1,000 V 1 min. (leakage current: 1 mA max.).
Degree of protection	IP67 (IEC60529)
Temperature range	-10 to +80°C

## Materials and Finish

Contacts	Copper alloy/ nickel base, gold plating
Pin block	PBT resin (UL94 V-0)
Fixtures	Copper alloy/ nickel plating
Cover	PBT resin (UL94V-0)

## PVC Cable

Item	3, 4 cores
Color	Black
Outer diameter	5 mm dia.
Conductor size	AWG23 0.25 mm <sup>2</sup> (32/0.1)
Approvals	AWM2464
Features	Flame retardant

## PUR Cable

Item	3 cores	4 cores
Color	Black	
Outer diameter	4.3 mm dia.	4.7 mm dia.
Conductor size	AWG22 0.32 mm <sup>2</sup> (42/0.1)	
Approvals	AWM20936	
Features	Flame retardant Halogen free Oil resistance	

## Connector Pinout Diagram (from Mating Side)

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

# XS3F M8 Sockets on One Cable End

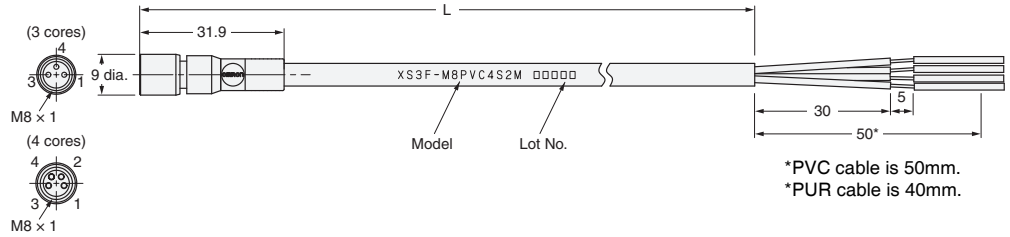
XS3F-M8PVC□□□□M PVC cable

XS3F-M8PUR□□□□M PUR cable

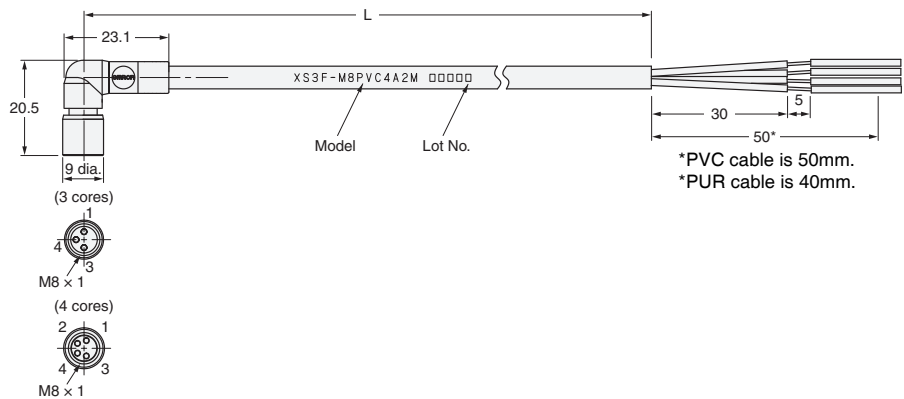
## Dimensions

(Unit: mm)

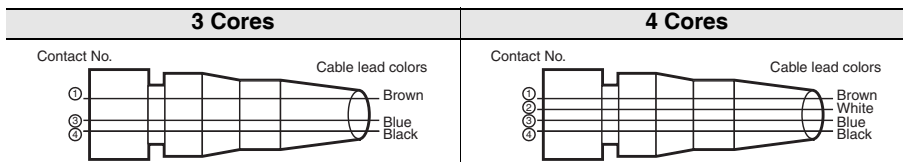
### Straight



### Right-angle



## Wiring Diagram



## Ordering Information

Cable type	No. of cable cores	Cable outer diameter	Cable connection direction	Cable length (m)	Model	
PVC	3	5.0 dia.	Straight	2	XS3F-M8PVC3S2M	
				5	XS3F-M8PVC3S5M	
				10	XS3F-M8PVC3S10M	
			Right-angle	2	XS3F-M8PVC3A2M	
				5	XS3F-M8PVC3A5M	
				10	XS3F-M8PVC3A10M	
	4		Straight	2	XS3F-M8PVC4S2M	
				5	XS3F-M8PVC4S5M	
				10	XS3F-M8PVC4S10M	
			Right-angle	2	XS3F-M8PVC4A2M	
				5	XS3F-M8PVC4A5M	
				10	XS3F-M8PVC4A10M	
PUR	3	4.3 dia.	Straight	2	XS3F-M8PUR3S2M	
				5	XS3F-M8PUR3S5M	
				10	XS3F-M8PUR3S10M	
			Right-angle	2	XS3F-M8PUR3A2M	
				5	XS3F-M8PUR3A5M	
				10	XS3F-M8PUR3A10M	
	4		Straight	4.7 dia.	2	XS3F-M8PUR4S2M
					5	XS3F-M8PUR4S5M
					10	XS3F-M8PUR4S10M
			Right-angle		2	XS3F-M8PUR4A2M
					5	XS3F-M8PUR4A5M
					10	XS3F-M8PUR4A10M

# XS3W M8 Socket and Plug on Cable Ends

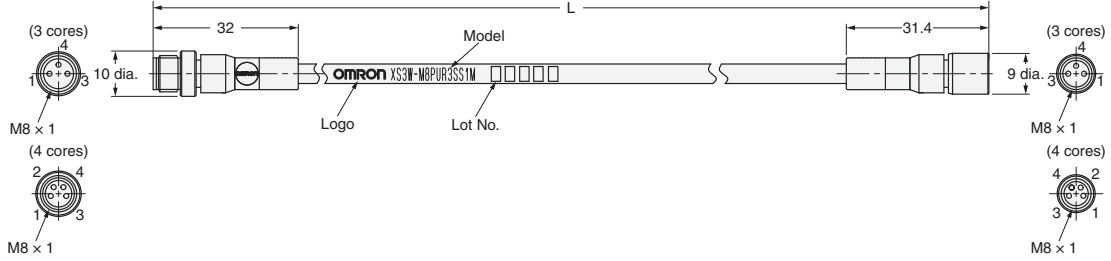
XS3W-M8PVC□□□□M PVC Cable

XS3W-M8PUR□□□□M PUR Cable

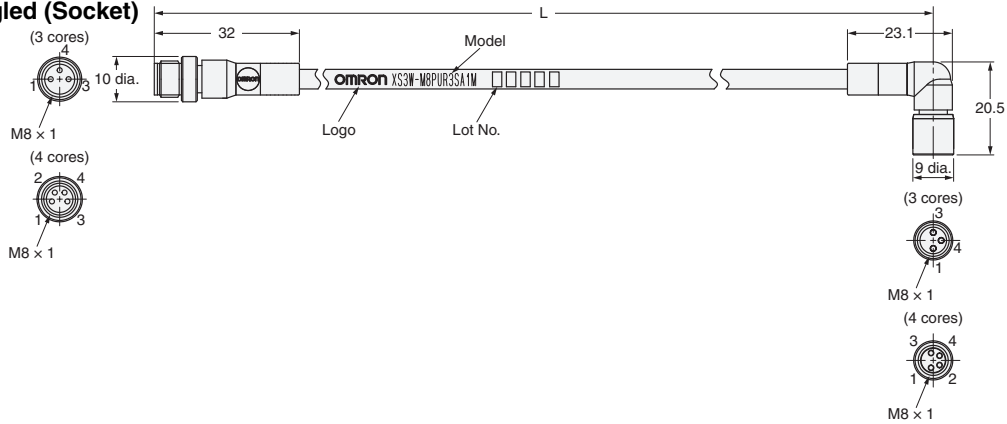
## Dimensions

(Unit: mm)

### Straight/Straight

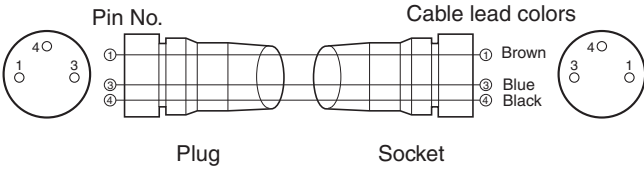


### Straight (Plug)/Angled (Socket)

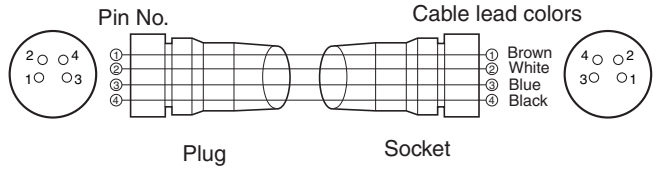


## Wiring Diagram

### 3 poles



### 4 poles



## Ordering Information

Cable type	No. of cable cores	Cable outer diameter	Cable connection direction	Cable length (m)	Model
PVC	3	5.0 dia.	Straight/Straight	2	XS3W-M8PVC3SS2M
				5	XS3W-M8PVC3SS5M
				10	XS3W-M8PVC3SS10M
			Straight (Plug)/Angled (Socket)	2	XS3W-M8PVC3SA2M
				5	XS3W-M8PVC3SA5M
				10	XS3W-M8PVC3SA10M
	4	5.0 dia.	Straight/Straight	2	XS3W-M8PVC4SS2M
				5	XS3W-M8PVC4SS5M
				10	XS3W-M8PVC4SS10M
			Straight (Plug)/Angled (Socket)	2	XS3W-M8PVC4SA2M
PUR	3	4.3 dia.	Straight/Straight	2	XS3W-M8PUR3SS2M
				5	XS3W-M8PUR3SS5M
				10	XS3W-M8PUR3SS10M
			Straight (Plug)/Angled (Socket)	2	XS3W-M8PUR3SA2M
				5	XS3W-M8PUR3SA5M
				10	XS3W-M8PUR3SA10M
	4	4.7 dia.	Straight/Straight	2	XS3W-M8PUR4SS2M
				5	XS3W-M8PUR4SS5M
				10	XS3W-M8PUR4SS10M
			Straight (Plug)/Angled (Socket)	2	XS3W-M8PUR4SA2M
Straight (Plug)/Angled (Socket)	5	XS3W-M8PUR4SA5M			
Straight (Plug)/Angled (Socket)	10	XS3W-M8PUR4SA10M			

## Safety Precautions

### 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.
- 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 engagement side of any Connector 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 engagement side of any Connector is free of metal dust or power.
- Do not use pliers to tighten mounting the thread bracket, otherwise the thread bracket may be damaged. 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.

#### 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).
- Connectors are not fully watertight. 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 engaged side 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 Installation.
- 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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