

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 ² (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 ² (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

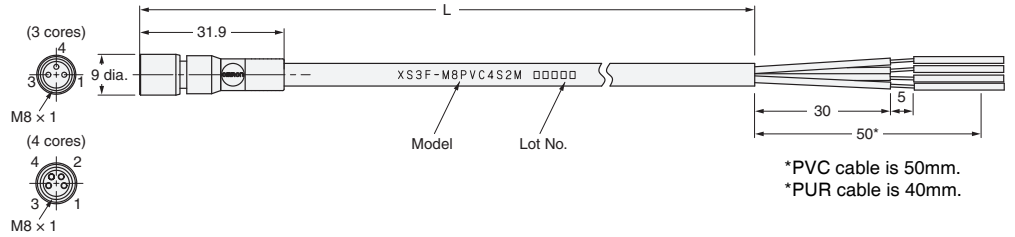
XS3F-M8PVC□□□□M PVC cable

XS3F-M8PUR□□□□M PUR cable

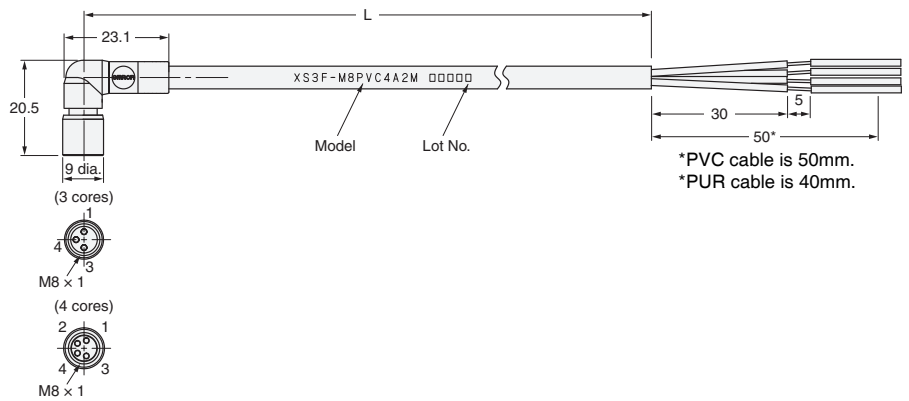
Dimensions

(Unit: mm)

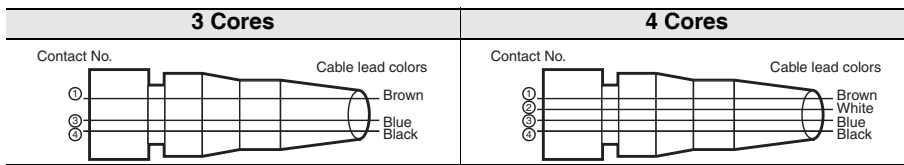
Straight



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 | |
| | | | Right-angle | 10 | XS3F-M8PVC4S10M | |
| | | | | 2 | XS3F-M8PVC4A2M | |
| 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 |
| | | | Right-angle | | 10 | XS3F-M8PUR4S10M |
| | | | | | 2 | XS3F-M8PUR4A2M |
| Right-angle | 5 | XS3F-M8PUR4A5M | | | | |
| | 10 | XS3F-M8PUR4A10M | | | | |

XS3W M8 Socket and Plug on Cable Ends

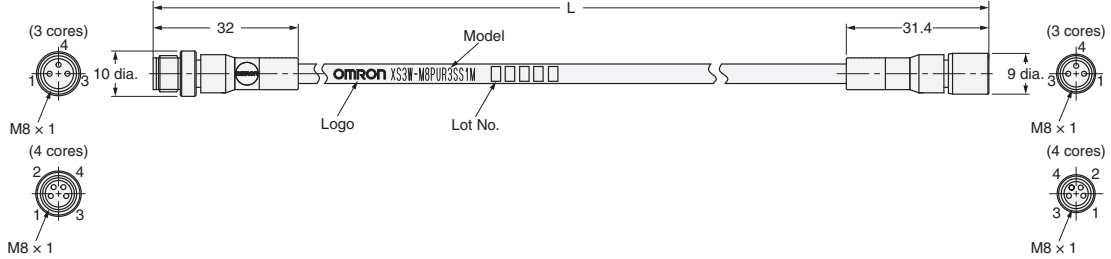
XS3W-M8PVC□□□□M PVC Cable

XS3W-M8PUR□□□□M PUR Cable

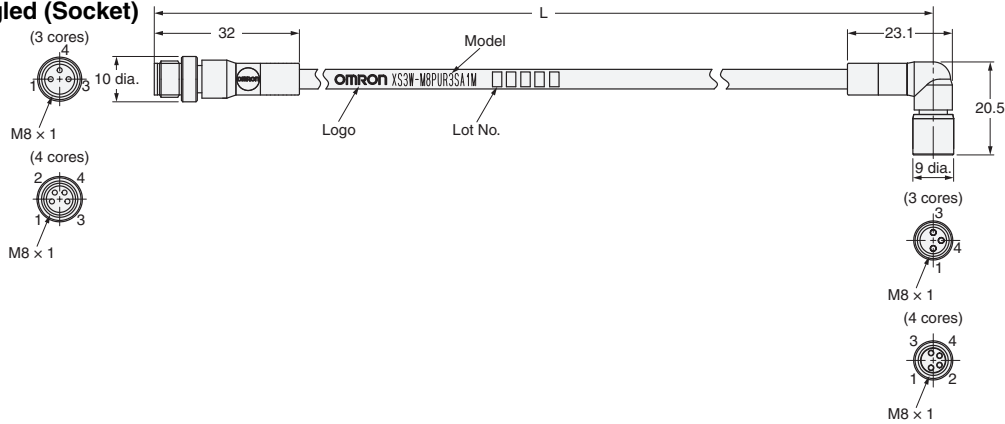
Dimensions

(Unit: mm)

Straight/Straight

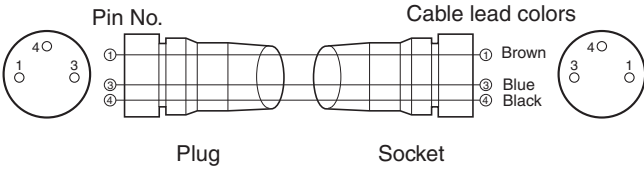


Straight (Plug)/Angled (Socket)

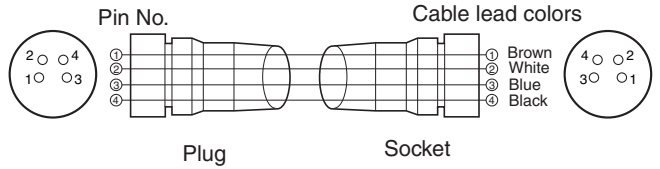


Wiring Diagram

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 |
| 5 | XS3W-M8PUR4SA5M | | | | |
| 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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