# M12 Basic line Cable type

# XS2F-M12

## Water- and Environment-resistive FA Connectors Save Wiring and Maintenance Effort

- Compact FA connectors meet IP67 requirements and ensure a 94V-0 fire retardant rating.
- A wide array of connectors makes a wiring system more modular, simplifies maintenance, and reduces downtime.
- IEC61076-2-101(IEC60947-5-2)
- Lineup of connectors with LEDs for easy visual confirmation of Sensor operating status.



## **Ratings and Specifications**

| Item                            | XS2F-M12 M<br>XS2W-M12 M                        | XS2F-M12□□□□A□□M□LED |  |
|---------------------------------|---|----------------------|--|
| Rated current                   | 4A  |                      |  |
| Rated voltage                   | 125 VDC   | 24 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 1,500 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 cores                             | 4 cores     |  |
|----------------|-------------------------------------|-------------|--|
| Color          | Black                               |             |  |
| Outer diameter | 5 mm dia.                           | 5 mm dia. * |  |
| Conductor size | AWG23 0.25 mm <sup>2</sup> (32/0.1) |             |  |
| Approvals      | AWM2464                             |             |  |
| Features       | Flame retardant                     |             |  |

<sup>\*</sup>LED Type is 5.4 mm dia.

#### **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<br>Halogen free<br>Oil resistance |         |

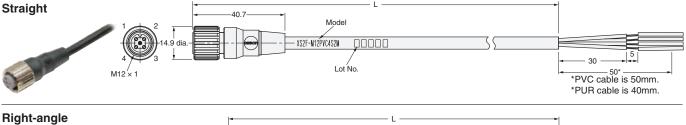
# **Connector Pinout Diagram (from Mating Side)**

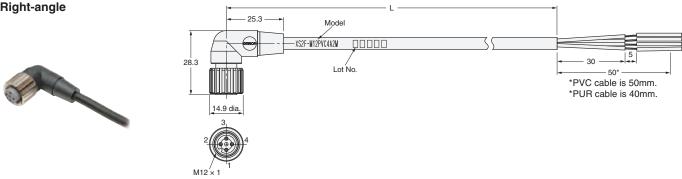
| Item    | No. of poles             | 4 poles                                 |  |
|---------|--------------------------|---|--|
| DC type | Male (plug) contacts     |   |  |
|         | Female (socket) contacts | 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 |  |

# XS2F M12 Sockets on One Cable End

XS2F-M12PVC M PVC cable XS2F-M12PUR M PUR cable

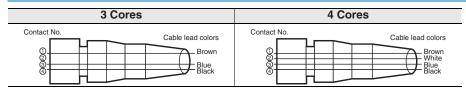
**Dimensions** (Unit: mm)





Note: For 3-core, pin 2 is not connected internally

## **Wiring Diagram**



### **Ordering Information**

| Cable type | No. of cable cores | Cable outer diameter | Cable connection direction | Cable length (m) | Model            |
|------------|--------------------|----------------------|----------------------------|------------------|------------------|
|            |                    | 5.0 dia              | Straight                   | 2                | XS2F-M12PVC3S2M  |
|            |                    |                      |                            | 5                | XS2F-M12PVC3S5M  |
|            | 3                  |                      |                            | 10               | XS2F-M12PVC3S10M |
|            |                    |                      | Right-angle                | 2                | XS2F-M12PVC3A2M  |
|            |                    |                      |                            | 5                | XS2F-M12PVC3A5M  |
|            |                    |                      |                            | 10               | XS2F-M12PVC3A10M |
| PVC        |                    |                      | 0                          | 2                | XS2F-M12PVC4S2M  |
| FVC        |                    |                      |                            | 5                | XS2F-M12PVC4S5M  |
|            |                    |                      | Straight                   | 7                | XS2F-M12PVC4S7M  |
| 4          | 4                  |                      |                            | 10               | XS2F-M12PVC4S10M |
|            | 4                  |                      | Right-angle                | 2                | XS2F-M12PVC4A2M  |
|            |                    |                      |                            | 5                | XS2F-M12PVC4A5M  |
|            |                    |                      |                            | 7                | XS2F-M12PVC4A7M  |
|            |                    |                      |                            | 10               | XS2F-M12PVC4A10M |
|            |                    | 4.3 dia              | Straight                   | 2                | XS2F-M12PUR3S2M  |
|            |                    |                      |                            | 5                | XS2F-M12PUR3S5M  |
| 3          | 0                  |                      |                            | 10               | XS2F-M12PUR3S10M |
|            | 3                  |                      | Right-angle                | 2                | XS2F-M12PUR3A2M  |
|            |                    |                      |                            | 5                | XS2F-M12PUR3A5M  |
|            |                    |                      |                            | 10               | XS2F-M12PUR3A10M |
| PUR        |                    | 4.7 dia              | Straight                   | 2                | XS2F-M12PUR4S2M  |
|            | 4                  |                      |                            | 5                | XS2F-M12PUR4S5M  |
|            |                    |                      |                            | 10               | XS2F-M12PUR4S10M |
|            |                    |                      | Right-angle                | 2                | XS2F-M12PUR4A2M  |
|            |                    |                      |                            | 5                | XS2F-M12PUR4A5M  |
|            |                    |                      |                            | 10               | XS2F-M12PUR4A10M |