M12 Round Water-resistant Connectors XS5/XS2/XW3 Wire-saving System

**Using Sensors and Switches with Connectors**

**Connector-Terminal Connection Type**

- Proximity Sensor E2E
- Photoelectric Sensor E3Z
- Limit Switch WL-N

**Direct Connection Type**

- Proximity Sensor E2E
- Compact Limit Switch D4CC
- Compact Enclosed Switch D4E-N

**Enabling M12 Connectors to Be Used with Pre-Wired Sensors**

**Pre-wired Type Sensor + Connector Assembly Plug**

- E2E, XS5G/XS2G

By using a connector assembly, cable length can be adjusted as desired.

**Manufacturing Sensors with Cables (Sensor Manufacturers)**

- Used to enable connectors (Connector-Terminal connection types) to be integrated with the Sensor body.

**Mounting to Panels**

**Panel-mounting Connector**

- Application: Used to enable connectors to be used with I/O boxes by mounting to panels.
- XS2M (Flange-mounting) Using without inserting into panels
- XS2M (Screw-mounting) Using by inserting into panels

A wired-type (XS5M*) for in-panel wiring is also available.

**Relay Cable**

**Connector with Cable**

- XS5W Smartclick
- XS2W Screw-mounting

(Multiple XS5W/XS2W can be used to extend the cable.)

**Connector Assembly* + Connector with Cable**

- XS5C/XS2C
- XS5H Smartclick
- XS2H Screw-mounting

**Connector Assembly* + Connector with Cable + Connector Assembly**

- XS5F Smartclick
- XS2F Screw-mounting

**Connector Assembly**

- XS5C/XS2C
- XS5G/XS2G

**Connector with Cable**

- XS5F Smartclick
- XS2F Screw-mounting

**Connector Assembly**

- XS5C/XS2C

Note: 1. Refer to the data sheets for each sensor and switch, as well as the website, for information regarding mating connector combinations for OMRON sensors and switches.
2. M8 size products and M8 to M12 conversion cables are also available. For details, refer to the data sheet for XS3 Round Water-resistant Connectors (M8/S8).
3. Components inside the control panel are not water-resistant.

* IDC, crimping, soldering, and screw-mounting type connector assemblies are available. (XS5 is the only IDC model)
Sensor I/O Connector Overview

( indicates mating connectors, and ➮ indicates wiring connections.)

Terminal Box

Y-Joint
Application:
Wiring can be reduced and space saved by concentrating two sensors with one cable.
XS5R  Smartclick
XS2R  Screw-mounting

Connector Terminal Box
Application: Concentrating wiring for sensors/actuators to reduce wiring.
XW3D  Smartclick
XW3B  Screw-mounting

Panel-mounting Connector
Application: Used to enable connectors to be used with terminal boxes.
XS5P/XS2P

A wired-type (XS5P) for in-panel wiring is also available.

Control Panel

T-Joint
Application:
Gathering sensors when used as a set.
XS2R  Screw-mounting

Connector-Terminal Block Conversion Unit

XW2R-P  Push-In terminal
XW2R-J  Screw terminal

I/O Relay Terminal

G70V  Push-In Plus terminal
G7TC  Screw terminal

Connecting Cable

XW2Z  For Connector-Terminal Block Conversion Units
XW2Z-R  For I/O Relay Terminals

PLC  I/O Unit

Relay Terminal Block

XW5T  Commercially Available
       Push-In Plus terminal
       Screw terminal

A type with loose wires on one side is also available.

XS5P/XS2P
Sensor I/O Connector Overview

M8 Round Water-resistant Connectors   XS3 Wire-saving System

Using Sensors with Connectors

<table>
<thead>
<tr>
<th>Sensor/Actuator End</th>
<th>Relay Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proximity Sensor</strong> (M8 Connector Type)</td>
<td><strong>Connector with Cable</strong></td>
</tr>
<tr>
<td>E2E</td>
<td>XS3W</td>
</tr>
</tbody>
</table>

**Proximity Sensor** (M8 Connector-Terminal Connection Type)

E2E

**Fiber Sensor** (M8 Connector Type)

E3NX-FA

**Photoelectric Sensor** (M8 Connector Type)

E3Z

Manufacturing Sensors with Cables (Sensor Manufacturers)

**Connector with Cable**

Application:
Used to enable connectors (Connector-Terminal connection types) to be integrated with the Sensor body.

**Connector with Cable**

XS3M Embedded Plug with Screw Threads

Note: 1. Refer to the data sheets for each sensor and switch, as well as the website, for information regarding mating connector combinations for OMRON sensors and switches.
2. M12 size products are also available. For details, refer to the data sheet for XS5/XS2 Round Water-resistant Connectors.
3. Components inside the control panel are not water-resistant.
Sensor I/O Connector Overview

( indicates mating connectors, and  indicates wiring connections.)

Terminal Box

Panel-mounting Connector
Application:
Used to enable connectors to be used with terminal boxes.

Control Panel

Connector-Terminal Block Conversion Unit

XW2R-P Push-In terminal
XW2R-J Screw terminal

I/O Relay Terminal

G70V Push-In Plus terminal
G7TC Screw terminal

Relay Terminal Block

XWST Commercially Available Push-In Plus terminal
Screw terminal

Connecting Cable

XW2Z For Connector-Terminal Block Conversion Units
XW2Z-R For I/O Relay Terminals

PLC I/O Unit

M12 Connector with Cable

XS5F Smartclick
XS2F Screw-mounting

Y-Joint
Application:
Wiring can be reduced and space saved by concentrating two sensors with one cable.

XS3R
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