

# Round Water-resistant Connectors (M12)

# XS5

## Water-resistant Smartclick Connectors That Reduce Installation Work

- A newly developed lock structure that maintains compatibility with conventional, screw-type M12 connectors.
- Simply insert the Connectors, then turn them approximately 1/8 of a turn to lock.
- A positive click indicates locking.
- Features the same degree of protection (IP67) as conventional, screw-type M12 connectors.
- Connector with cable are UL approved



## Specifications

|                                     |                                                      |
|-------------------------------------|------------------------------------------------------|
| Rated current                       | 4 A                                                  |
| Rated voltage                       | 250 VDC                                              |
| Contact resistance (connector)      | 40 mΩ max.<br>(20 mV max., 100 mA max.)              |
| Insulation resistance               | 1,000 MΩ min. (at 500 VDC)                           |
| Dielectric strength (connector)     | 1,500 VAC for 1 min.<br>(leakage current: 1 mA max.) |
| Degree of protection                | IP67 (IEC60529)                                      |
| Insertion tolerance                 | 50 times min.                                        |
| Lock strength                       | Pulling: 100 N/15 s, Twisting: 1 N·m/15 s            |
| Cable holding strength              | 100 N/15 s (for cable diameter of 6 mm)              |
| Lock operating force                | 0.1 N·m to 0.25 N·m                                  |
| Ambient operating temperature range | -25°C to 70°C                                        |

## Recommended Cables

| Cable outer diameter (mm) |           | Core sizes                                                                                         |                          |                             |
|---------------------------|-----------|----------------------------------------------------------------------------------------------------|--------------------------|-----------------------------|
|                           |           | Crimping models                                                                                    | Soldering models         | Screw-on models             |
| 8 mm                      | 7 to 8 mm | Two types of connectors are available.<br>0.18 to 0.3mm <sup>2</sup><br>0.5 to 0.75mm <sup>2</sup> | 0.5 mm <sup>2</sup> max. | 0.18 to 0.75mm <sup>2</sup> |
| 7 mm                      | 6 to 8 mm |                                                                                                    |                          |                             |
| 6 mm                      | 5 to 6 mm |                                                                                                    |                          |                             |
| 4 mm                      | 4 to 5 mm |                                                                                                    |                          |                             |
| 3 mm                      | 3 to 4 mm |                                                                                                    |                          |                             |

## Connection Combinations

| OMRON model No.              |                                                               | Smartclick Plug Connectors                               | M12 Plug Connectors                                      |
|------------------------------|---------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
|                              |                                                               | XS5H, XS5G, XS5M<br>XS5W (plug side)<br>XS5R (plug side) | XS2H, XS2G, XS2M<br>XS2W (plug side)<br>XS2R (plug side) |
| Smartclick Socket Connectors | XS5F, XS5C, XS5P<br>XS5W (socket side)<br>XS5R, (socket side) | ⊗                                                        | ○                                                        |
| M12 Socket Connectors        | XS2F, XS2C, XS2P<br>XS2W (socket side)<br>XS2R (socket side)  | ○                                                        | ○                                                        |

Note: Smartclick™ is a registered trademark of the OMRON Corporation.

⊗: Connected by Smartclick™ twisting. ○: Connected by screwing.

## Materials and Finish

| Item               | Model                            | XS5F/H/W/R                                      | XS5M/P                | XS5C/G              |
|--------------------|----------------------------------|-------------------------------------------------|-----------------------|---------------------|
| Contacts           | Materials                        | Phosphor bronze                                 |                       | Brass               |
|                    | Finish                           | Nickel base, 0.4-μm gold-plating                |                       |                     |
| Fixtures           |                                  | Nickel-plated zinc alloy                        |                       |                     |
| Pin Block          |                                  | PBT resin (UL94V-0)                             |                       |                     |
| O-ring             |                                  | Rubber                                          |                       |                     |
| Overmolding/Cover  |                                  | Polyester elastomer                             | —                     | PBT resin (UL94V-0) |
| Cable              | Standard cable                   | UL AWM2464, 6-mm dia. 4 cores × AWG20 (0.12/49) | —                     | —                   |
|                    | Vibration-proof robot cable      | UL CL3, 6-mm dia. 4 cores × AWG20 (0.08/110)    | —                     | —                   |
|                    | Oil-resistant polyurethane cable | 6 dia. 4 cores × 0.5 mm <sup>2</sup> (0.12/45)  | —                     | —                   |
| Seal Resin         |                                  | —                                               | Epoxy Resin (UL94V-0) | —                   |
| Power supply wires |                                  | —                                               | UL 1007 AWG20         | —                   |

- Note: 1. See "XS5/XS2 - Assembly Tooling and Accessories" datasheet for information regarding assembly, tooling and accessories that are common to the XS5 and XS2 connectors
2. See "XS2" datasheet for specifics regarding those connectors

# 4-Pin Connectors with Cable Attached

## ■ XS5F - Socket on One Cable End

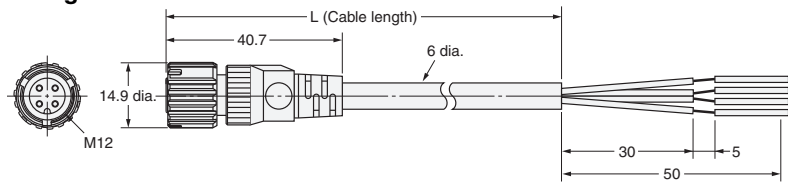
- XS5F-D42□-□80-A Standard Cable
- XS5F-D42□-□80-F Vibration-proof Robot Cable
- XS5F-D42□-□80-P Oil-resistant Polyurethane Cable



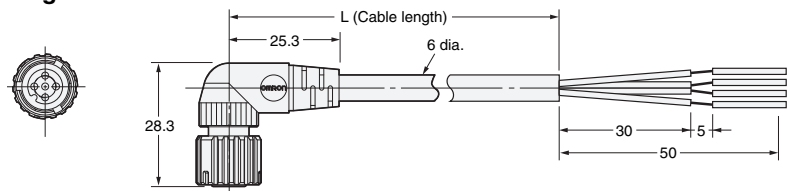
### Dimensions

(Unit: mm)

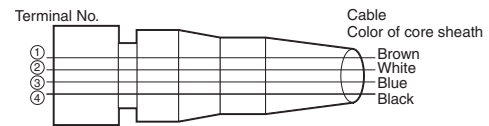
#### Straight



#### Angled



#### Wiring Diagram for 4 Cores



**Note:** The overmolding on the Standard Cable (XS5F-D42□-□80-A) and the Oil-resistant Polyurethane Cable (XS5F-D42□-□80-P) is black, and the overmolding on the Vibration-proof Robot Cable (XS5F-D42□-□80-F) is gray.

### Ordering Information

| Cable type                       | Cable length L (m) | Model           |                 | Standard pack quantity |
|----------------------------------|--------------------|-----------------|-----------------|------------------------|
|                                  |                    | Straight        | Angled          |                        |
| Standard cable                   | 1                  | XS5F-D421-C80-A | XS5F-D422-C80-A | 10                     |
|                                  | 2                  | XS5F-D421-D80-A | XS5F-D422-D80-A |                        |
|                                  | 3                  | XS5F-D421-E80-A | XS5F-D422-E80-A |                        |
|                                  | 5                  | XS5F-D421-G80-A | XS5F-D422-G80-A |                        |
|                                  | 10                 | XS5F-D421-J80-A | XS5F-D422-J80-A |                        |
| Vibration-proof robot cable      | 1                  | XS5F-D421-C80-F | XS5F-D422-C80-F | 10                     |
|                                  | 2                  | XS5F-D421-D80-F | XS5F-D422-D80-F |                        |
|                                  | 3                  | XS5F-D421-E80-F | XS5F-D422-E80-F |                        |
|                                  | 5                  | XS5F-D421-G80-F | XS5F-D422-G80-F |                        |
|                                  | 10                 | XS5F-D421-J80-F | XS5F-D422-J80-F |                        |
| Oil-resistant polyurethane cable | 2                  | XS5F-D421-D80-P | XS5F-D422-D80-P | 5                      |
|                                  | 5                  | XS5F-D421-G80-P | XS5F-D422-G80-P |                        |
|                                  | 10                 | XS5F-D421-J80-P | XS5F-D422-J80-P |                        |

**Note:** Ask your OMRON representative about other specifications.

## Model Number Legend

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

**XS5F** - **D42**□ - □**80** - □  
 1 2 3 4 5 6 7 8 9

### 1. Type

F: Connector connected to cable, socket on one cable end

### 2. AC/DC (Mating Section Form)

D: DC

### 3. Connector Poles

4: 4 poles

### 4. Contact Plating

2: 0.4- $\mu$ m gold plating

### 5. Cable Connection Direction

1: Straight

2: Angled

### 6. Cable Length

A: 0.3 m G: 5 m

B: 0.5 m H: 7 m

C: 1 m J: 10 m

D: 2 m K: 15 m

E: 3 m L: 20 m

F: 4 m

### 7. Connections

8: ① Brown, ② White, ③ Blue, ④ Black  
(Numbers inside circles are terminal numbers.)

### 8. Connectors on One End/Both Ends

0: One end

### 9. Cable Specification

A: Standard cable

F: Vibration-proof robot cable

P: Oil-resistant polyurethane cable

## ■ XS5H - Plug on One Cable End

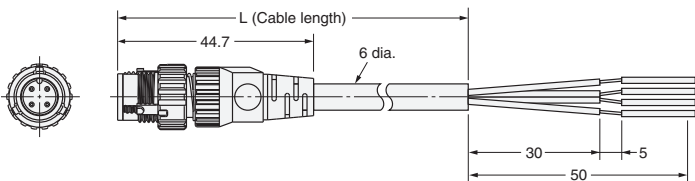
**XS5H-D42□-□80-A Standard Cable**  
**XS5H-D42□-□80-F Vibration-proof Robot Cable**  
**XS5H-D42□-□80-P Oil-resistant Polyurethane Cable**



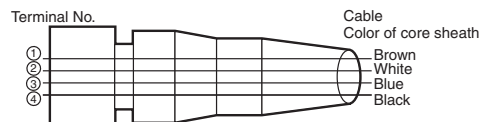
### Dimensions

(Unit: mm)

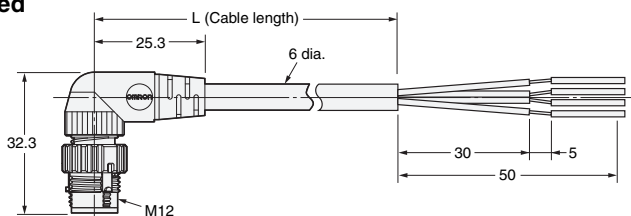
#### Straight



#### Wiring Diagram for 4 Cores



#### Angled



**Note:** The overmolding on the Standard Cable (XS5H-D42□-□80-A) and the Oil-resistant Polyurethane Cable (XS5H-D42□-□80-P) is black, and the overmolding of the Vibration-proof Robot Cable (XS5H-D42□-□80-F) is gray

### Ordering Information

| Cable type                       | Cable length L (m) | Model           |                 | Standard pack quantity |    |
|----------------------------------|--------------------|-----------------|-----------------|------------------------|----|
|                                  |                    | Straight        | Angled          |                        |    |
| Standard cable                   | 0.3                | XS5H-D421-A80-A | XS5H-D422-A80-A | 5                      |    |
|                                  | 1                  | XS5H-D421-C80-A | XS5H-D422-C80-A |                        |    |
|                                  | 2                  | XS5H-D421-D80-A | XS5H-D422-D80-A |                        |    |
|                                  | 5                  | XS5H-D421-G80-A | XS5H-D422-G80-A |                        |    |
| Vibration-proof robot cable      | 0.3                | XS5H-D421-A80-F | XS5H-D422-A80-F |                        |    |
|                                  | 1                  | XS5H-D421-C80-F | XS5H-D422-C80-F |                        |    |
|                                  | 2                  | XS5H-D421-D80-F | XS5H-D422-D80-F |                        |    |
|                                  | 5                  | XS5H-D421-G80-F | XS5H-D422-G80-F |                        |    |
| Oil-resistant polyurethane cable | 0.3                | XS5H-D421-A80-P | XS5H-D422-A80-P |                        | 10 |
|                                  | 2                  | XS5H-D421-D80-P | XS5H-D422-D80-P |                        | 5  |
|                                  | 5                  | XS5H-D421-G80-P | XS5H-D422-G80-P |                        |    |

**Note:** Ask your OMRON representative about other specifications.

## Model Number Legend

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

**XS5H - D42**  -  **80** -

1    2 3 4 5    6 7 8    9

### 1. Type

H: Connector connected to cable, plug on one cable end

### 2. AC/DC (Mating Section Form)

D: DC

### 3. Connector Poles

4: 4 poles

### 4. Contact Plating

2: 0.4- $\mu$ m gold plating

### 5. Cable Connection Direction

1: Straight

2: Angled

### 6. Cable Length

A: 0.3 m    G: 5 m

B: 0.5 m    H: 7 m

C: 1 m    J: 10 m

D: 2 m    K: 15 m

E: 3 m    L: 20 m

F: 4 m

### 7. Connections

8: ① Brown, ② White, ③ Blue, ④ Black  
(Numbers inside circles are terminal numbers)

### 8. Connectors on One End/Both Ends

0: One end

### 9. Cable Specifications

A: Standard cable

F: Vibration-proof robot cable

P: Oil-resistant polyurethane cable

## ■ XS5W - Socket and Plug on Cable Ends

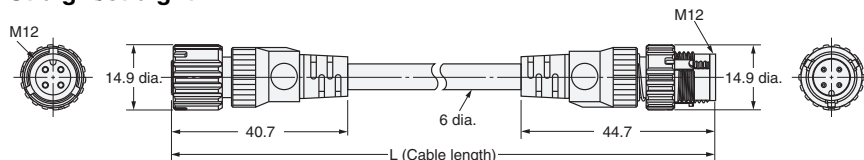
XS5W-D42□-□81-A Standard Cable  
 XS5W-D42□-□81-F Vibration-proof Robot Cable  
 XS5W-D42□-□81-P Oil-resistant Polyurethane Cable



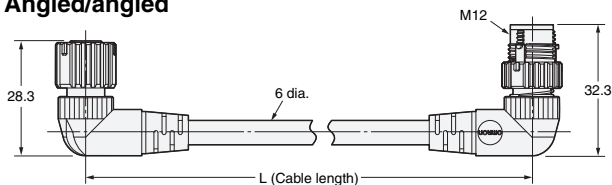
### Dimensions

(Unit: mm)

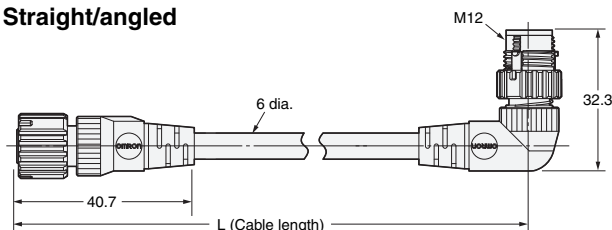
#### Straight/straight



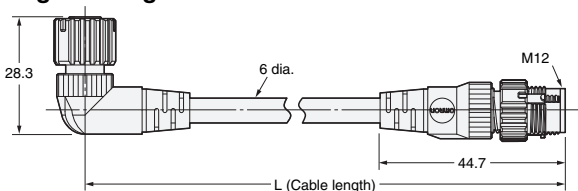
#### Angled/angled



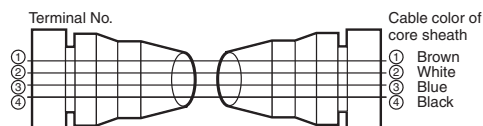
#### Straight/angled



#### Angled/straight



#### Wiring Diagram for 4 Cores



**Note:** The overmolding on the Standard Cable (XS5W-D42□-□81-A) and the Oil-resistant Polyurethane Cable (XS5W-D42□-□81-P) is black, and the overmolding of the Vibration-proof Robot Cable (XS5W-D42□-□81-F) is gray.

## Ordering Information

| Cable type                       | Cable length L (m) | Model             |                 | Standard pack quantity |
|----------------------------------|--------------------|-------------------|-----------------|------------------------|
|                                  |                    | Straight/straight | Angled/angled   |                        |
| Standard cable                   | 1                  | XS5W-D421-C81-A   | —               | 10                     |
|                                  | 2                  | XS5W-D421-D81-A   | XS5W-D422-D81-A |                        |
|                                  | 3                  | XS5W-D421-E81-A   | —               |                        |
|                                  | 5                  | XS5W-D421-G81-A   | XS5W-D422-G81-A |                        |
|                                  | 10                 | XS5W-D421-J81-A   | —               | 5                      |
| Vibration-proof robot cable      | 1                  | XS5W-D421-C81-F   | —               | 10                     |
|                                  | 2                  | XS5W-D421-D81-F   | —               |                        |
|                                  | 3                  | XS5W-D421-E81-F   | —               |                        |
|                                  | 5                  | XS5W-D421-G81-F   | —               |                        |
|                                  | 10                 | XS5W-D421-J81-F   | —               | 5                      |
| Oil-resistant polyurethane cable | 2                  | XS5W-D421-D81-P   | —               | 5                      |
|                                  | 5                  | XS5W-D421-G81-P   | —               | 5                      |
|                                  | 10                 | XS5W-D421-J81-P   | —               | 1                      |

| Cable type     | Cable length L (m) | Model           |                 | Standard pack quantity |
|----------------|--------------------|-----------------|-----------------|------------------------|
|                |                    | Straight/angled | Angled/straight |                        |
| Standard cable | 2                  | XS5W-D423-D81-A | XS5W-D424-D81-A | 5                      |
|                | 5                  | XS5W-D423-G81-A | XS5W-D424-G81-A |                        |

**Note:** Ask your OMRON representative about other specifications.

## Model Number Legend

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

**XS5W - D42**□ - □**81** - □  
 1 2 3 4 5 6 7 8 9

### 1. Type

W: Connectors connected to cable, socket and plug on cable ends

### 2. AC/DC (Mating Section Form)

D: DC

### 3. Connector Poles

4: 4 poles

### 4. Contact Plating

2: 0.4-μm gold plating

### 5. Cable Connection Directions

- 1: Straight/straight
- 2: Angled/angled
- 3: Straight (XS5F)/angled (XS5H)
- 4: Angled (XS5F)/straight (XS5H)

### 6. Cable Length

- A: 0.3 m      G: 5 m
- B: 0.5 m      H: 7 m
- C: 1 m        J: 10 m
- D: 2 m        K: 15 m
- E: 3 m        L: 20 m
- F: 4 m

### 7. Connections

- 8: ① Brown, ② White, ③ Blue, ④ Black  
 (Numbers inside circles are terminal numbers.)

### 8. Connectors on One End/Both Ends

- 1: Both ends

### 9. Cable Specifications

- A: Standard cable
- F: Vibration-proof robot cable
- P: Oil-resistant polyurethane cable

# 4-Pin and 5-Pin Assembly Connector

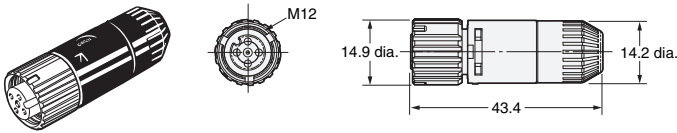
## ■ XS5C Sockets



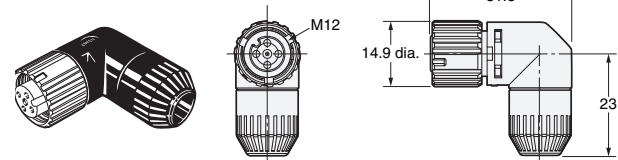
### Dimensions

(Unit: mm)

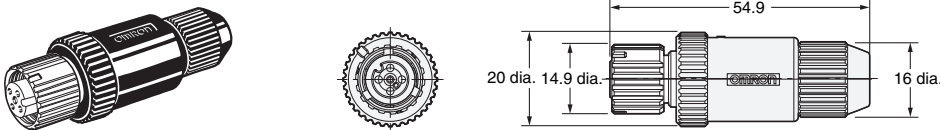
XS5C-D4C□ (Crimping Model)  
 XS5C-D42□ (Soldering Model)  
 Straight Connectors



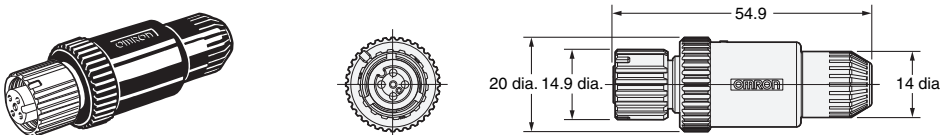
XS5C-D4C□ (Soldering Model)  
 XS5C-D42□ (Soldering Model)  
 Angled Connectors



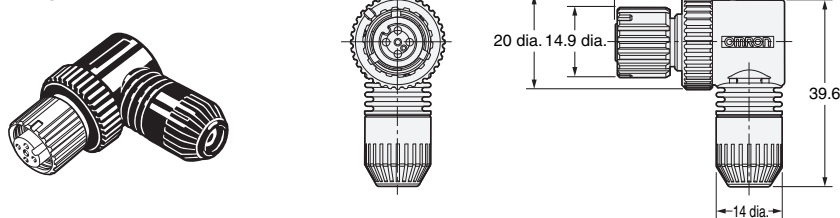
XS5C-D□S□ (Screw-on Connectors, Applicable Cable Outer Diameter: 7 or 8mm)  
 Straight Connectors



XS5C-D□S□ (Screw-on Connectors, Applicable Cable Outer Diameter: 3, 4, or 6mm)  
 Straight Connectors



XS5C-D□S□ (Screw-on Connectors)  
 Angled Connectors





## Ordering Information

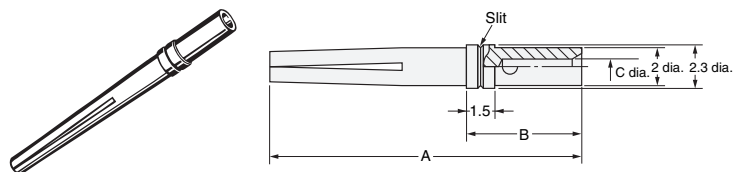
| No. of Poles | Connection Method | Suitable cable dia. (mm) | Model     |           | Standard pack quantity |
|--------------|-------------------|--------------------------|-----------|-----------|------------------------|
|              |                   |                          | Straight  | Angled    |                        |
| 4            | Crimping          | 6 mm (5 to 6)            | XS5C-D4C1 | XS5C-D4C2 | 10                     |
|              |                   | 4 mm (4 to 5)            | XS5C-D4C3 | XS5C-D4C4 |                        |
|              |                   | 3 mm (3 to 4)            | XS5C-D4C5 | XS5C-D4C6 |                        |
|              | Soldering         | 6 mm (5 to 6)            | XS5C-D421 | XS5C-D422 |                        |
|              |                   | 4 mm (4 to 5)            | XS5C-D423 | XS5C-D424 |                        |
|              |                   | 3 mm (3 to 4)            | XS5C-D425 | XS5C-D426 |                        |
|              | Screw-on          | 6 mm (5 to 6)            | XS5C-D4S1 | XS5C-D4S2 |                        |
|              |                   | 4 mm (4 to 5)            | XS5C-D4S3 | XS5C-D4S4 |                        |
|              |                   | 3 mm (3 to 4)            | XS5C-D4S5 | XS5C-D4S6 |                        |
|              |                   | 8 mm (7 to 8)            | XS5C-D4S7 | —         |                        |
|              |                   | 7 mm (6 to 7)            | XS5C-D4S9 | —         |                        |
|              |                   | —                        | —         | —         |                        |
| 5            | Screw-on          | 6 mm (5 to 6)            | XS5C-D5S1 | —         |                        |
|              |                   | 4 mm (4 to 5)            | XS5C-D5S3 | —         |                        |
|              |                   | 3 mm (3 to 4)            | XS5C-D5S5 | —         |                        |
|              |                   | 8 mm (7 to 8)            | XS5C-D5S7 | —         |                        |
|              |                   | 7 mm (6 to 7)            | XS5C-D5S9 | —         |                        |

## ■ XS5U (Crimping pin for XS5C)

### Dimensions

(Unit: mm)

XS5U-222□  
Socket Pin



### Dimensions

| Model     | Suitable core size (mm <sup>2</sup> ) | Dimension (mm) |     |     | No. of slits |
|-----------|---------------------------------------|----------------|-----|-----|--------------|
|           |                                       | A              | B   | C   |              |
| XS5U-2221 | 0.18 to 0.3<br>(22 to 24 AWG)         | 16.7           | 6.1 | 0.8 | 1            |
| XS5U-2222 | 0.5 to 0.7<br>(18 to 20 AWG)          | 16.8           | 6.2 | 1.3 | 0            |

- Note:** 1. A special tool must be used for crimping. For details, refer to the "XS5/XS2 - Assembly Tooling and Accessories" datasheet.  
2. AWG size is based on UL1007 wire.

## Ordering Information

| Suitable core size (mm <sup>2</sup> ) | Model     | Standard Pack Quantity |
|---------------------------------------|-----------|------------------------|
| 0.18 to 0.3                           | XS5U-2221 | 100                    |
| 0.5 to 0.75                           | XS5U-2222 |                        |

■ XS5G - Plugs



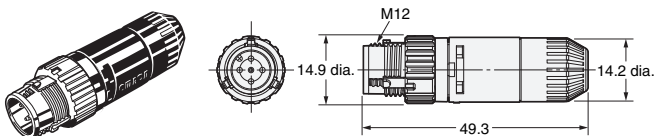
**Dimensions**

(Unit: mm)

**XS5G-D4C□ (Crimping Model)**

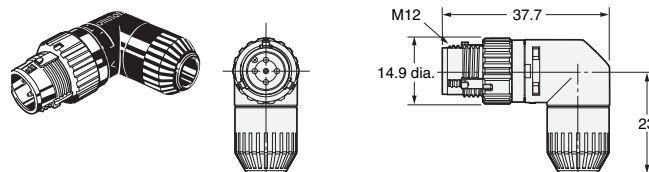
**XS5G-D42□ (Soldering Model)**

**Straight Connectors**



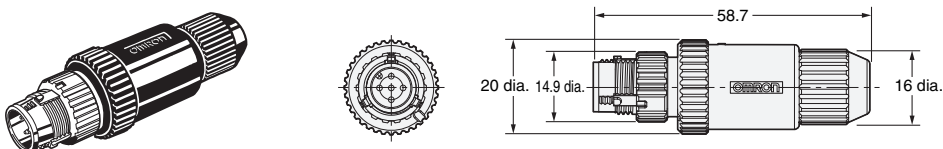
**XS5G-D42□ (Soldering Model)**

**Angled Connectors**



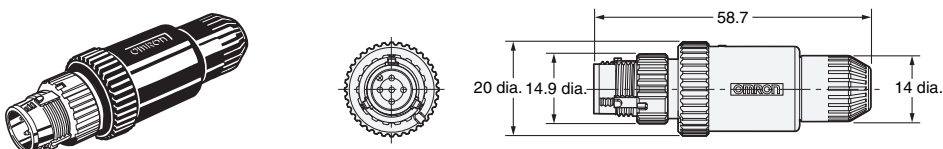
**XS5G-D□S□ (Screw-on Connectors, Applicable Cable Outer Diameter: 7 or 8mm)**

**Straight Connectors**



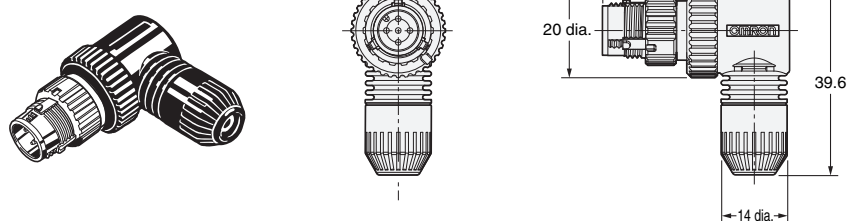
**XS5G-D□S□ (Screw-on Connectors, Applicable Cable Outer Diameter: 3, 4, or 6mm)**

**Straight Connectors**



**XS5G-D□S□ (Screw-on Connectors)**

**Angled Connectors**



## Ordering Information

| No. of Poles | Connection Method | Suitable cable dia. (mm) | Model     |           | Standard pack quantity |
|--------------|-------------------|--------------------------|-----------|-----------|------------------------|
|              |                   |                          | Straight  | Angled    |                        |
| 4            | Crimping          | 6 mm (5 to 6)            | XS5G-D4C1 | —         | 10                     |
|              |                   | 4 mm (4 to 5)            | XS5G-D4C3 | —         |                        |
|              |                   | 3 mm (3 to 4)            | XS5G-D4C5 | —         |                        |
|              | Soldering         | 6 mm (5 to 6)            | XS5G-D421 | XS5G-D422 |                        |
|              |                   | 4 mm (4 to 5)            | XS5G-D423 | XS5G-D424 |                        |
|              |                   | 3 mm (3 to 4)            | XS5G-D425 | XS5G-D426 |                        |
|              | Screw-on          | 6 mm (5 to 6)            | XS5G-D4S1 | XS5G-D4S2 |                        |
|              |                   | 4 mm (4 to 5)            | XS5G-D4S3 | XS5G-D4S4 |                        |
|              |                   | 3 mm (3 to 4)            | XS5G-D4S5 | XS5G-D4S6 |                        |
|              |                   | 8 mm (7 to 8)            | XS5G-D4S7 | —         |                        |
| 5            | Screw-on          | 7 mm (6 to 7)            | XS5G-D4S9 | —         |                        |
|              |                   | 6 mm (5 to 6)            | XS5G-D5S1 | —         |                        |
|              |                   | 4 mm (4 to 5)            | XS5G-D5S3 | —         |                        |
|              |                   | 3 mm (3 to 4)            | XS5G-D5S5 | —         |                        |
|              |                   | 8 mm (7 to 8)            | XS5G-D5S7 | —         |                        |
|              |                   | 7 mm (6 to 7)            | XS5G-D5S9 | —         |                        |

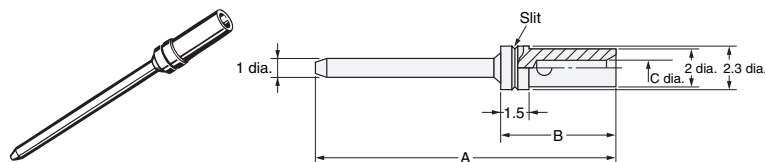
**Note:** XS5G Screw-on Plugs cannot be connected side-by-side to the CN1 and CN2 connectors of XS2R or XS5R Y-Joint Sockets / Plugs

## ■ XS5U (Crimping pin for XS5G)

### Dimensions

(Unit: mm)

XS5U-312□  
Plug Pin



### Dimensions

| Model     | Suitable core size (mm <sup>2</sup> ) | Dimension (mm) |     |     | No. of slits |
|-----------|---------------------------------------|----------------|-----|-----|--------------|
|           |                                       | A              | B   | C   |              |
| XS5U-3121 | 0.18 to 0.3<br>(22 to 24 AWG)         | 22.6           | 6.1 | 0.8 | 1            |
| XS5U-3122 | 0.5 to 0.7<br>(18 to 20 AWG)          | 22.7           | 6.2 | 1.3 | 0            |

- Note:** 1. A special tool must be used for crimping. For details, refer to the "XS5/XS2 - Assembly Tooling and Accessories" datasheet.  
2. AWG size is based on UL1007 wire.

## Ordering Information

| Suitable core size (mm <sup>2</sup> ) | Model     | Standard Pack Quantity |
|---------------------------------------|-----------|------------------------|
| 0.18 to 0.3                           | XS5U-3121 | 100                    |
| 0.5 to 0.75                           | XS5U-3122 |                        |

# 4-Pin Y-Joint Plug/Socket Connectors

## ■ XS5R

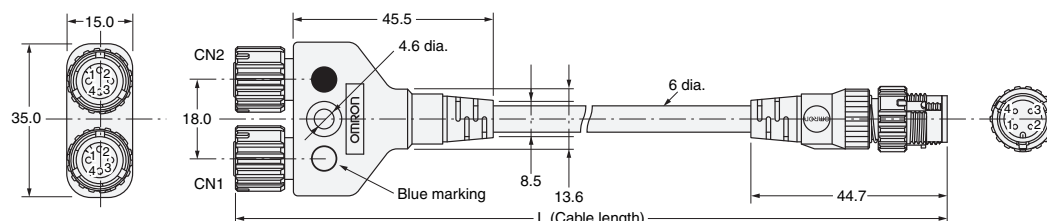


### Dimensions

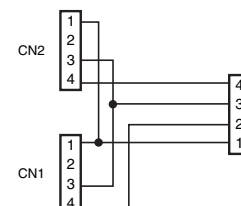
(Unit: mm)

#### XS5R-D426-□11-F

Connectors on Both Ends (Y-Joint Plug/Socket)

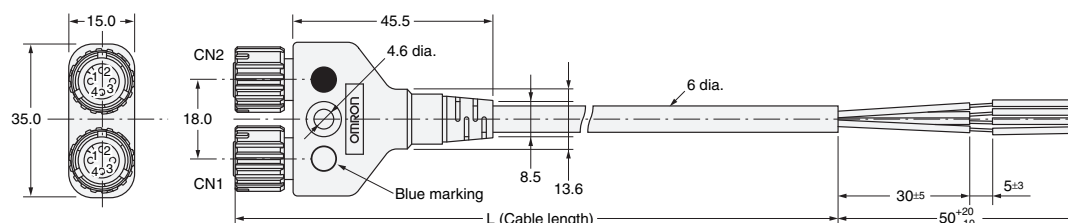


#### Wiring Diagram

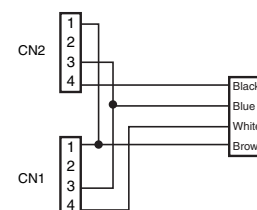


#### XS5R-D426-□10-F

Connectors on One Cable End (Y-Joint Socket)

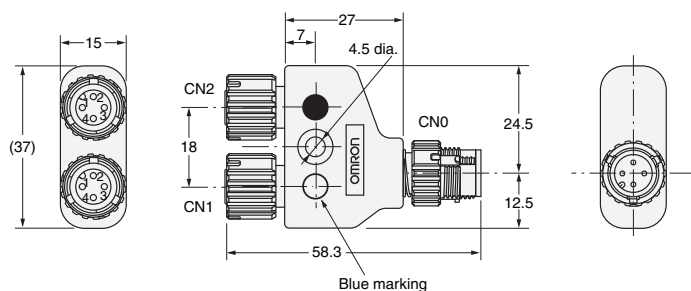


#### Wiring Diagram



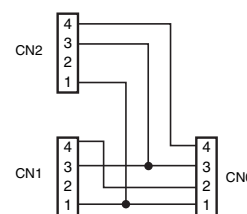
#### XS5R-D426-□

Y-Joint Plug/Socket without Cable

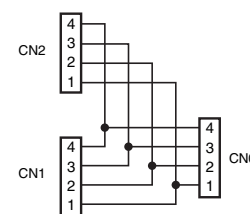


#### Wiring Diagram

##### XS5R-D426-1



##### XS5R-D426-5



## Ordering Information

| Cable         | Connector                     | Cable length (m) | Model           | Standard pack quantity |
|---------------|-------------------------------|------------------|-----------------|------------------------|
| With cable    | Connectors on both cable ends | 0.5              | XS5R-D426-B11-F | 5                      |
|               |                               | 1                | XS5R-D426-C11-F |                        |
|               |                               | 2                | XS5R-D426-D11-F |                        |
|               |                               | 3                | XS5R-D426-E11-F |                        |
|               | Connector on one cable end    | 2                | XS5R-D426-D10-F |                        |
|               |                               | 5                | XS5R-D426-G10-F |                        |
| With no cable | Y-Joint Plug/Socket           | ---              | XS5R-D426-1     | 10                     |
|               |                               | ---              | XS5R-D426-5     |                        |

**Note:** XS2G and XS5G Assembled Connectors with screw connections cannot be connected to both CN1 and CN2 at the same time.

# 4-Pin Panel-mount Connectors

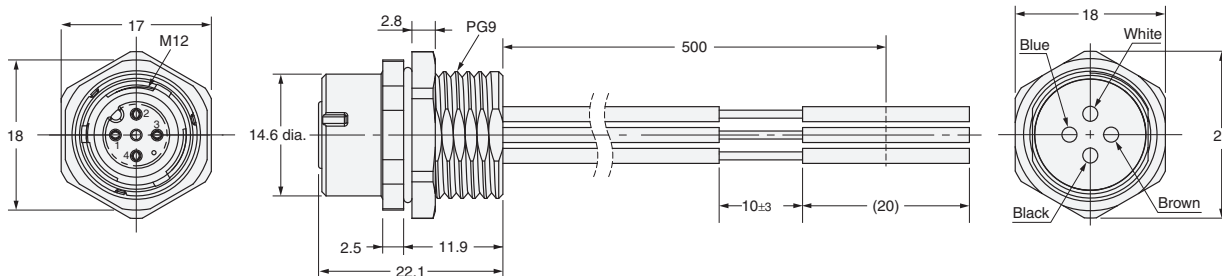
## ■ XS5P - Sockets



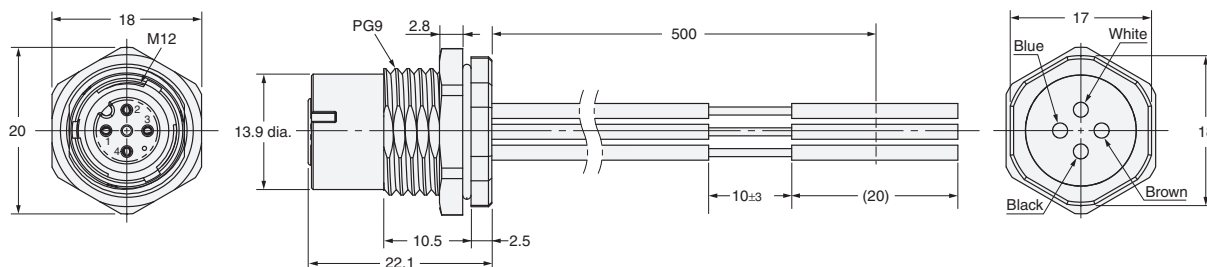
### Dimensions

(Unit: mm)

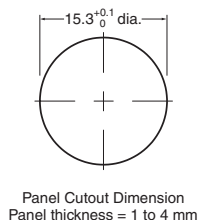
#### XS5P-D426-5 Front Panel-mounting Sockets for Rear Lock Nuts



#### XS5P-D427-5 Rear Panel-mounting Sockets for Front Lock Nuts



### Panel Cutout



- Note:**
1. The panel cutout dimension is the same for Front-locking and Rear-locking Sockets.
  2. Rotational positioning is not possible for connector rotation.

### Wiring and Wire Specifications

#### Wiring

| Pin number | Color |
|------------|-------|
| 1          | Brown |
| 2          | White |
| 3          | Blue  |
| 4          | Black |

#### Wire Specifications

| Item          | Specification           |      |
|---------------|-------------------------|------|
| Specification | UL1007                  |      |
| Nominal size  | AWG20                   |      |
| Configuration | Number of wires         | 21   |
|               | Wire diameter           | 0.18 |
|               | Standard outer diameter | 1.8  |

### Ordering Information

| Type       | Lock       | Cable length (m) | Model       | Standard pack, quantity |
|------------|------------|------------------|-------------|-------------------------|
| With cable | Rear lock  | 0.5              | XS5P-D426-5 | 10                      |
|            | Front lock |                  | XS5P-D427-5 |                         |

## ■ XS5M - Plugs

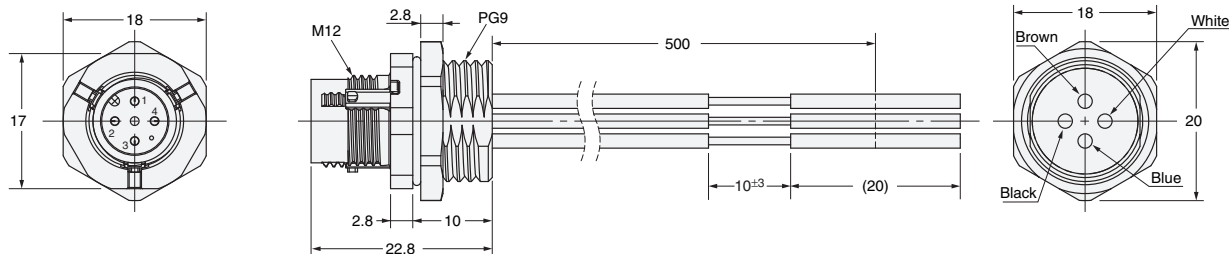


### Dimensions

(Unit: mm)

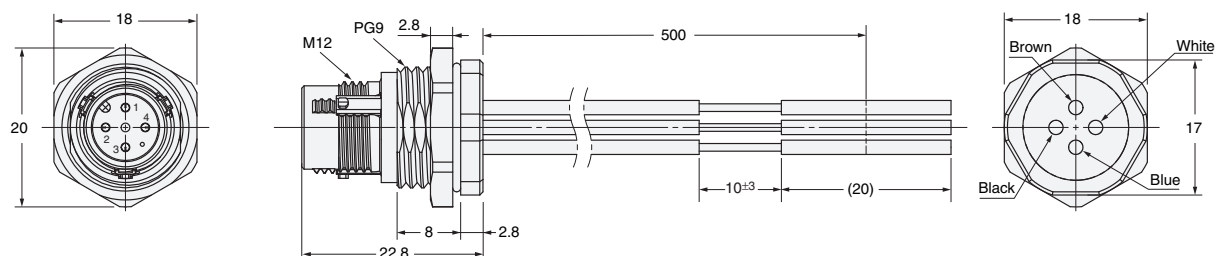
#### XS5M-D426-5

Front Panel-mounting Plugs for Rear Lock Nuts

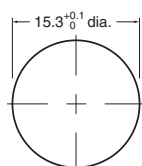


#### XS5M-D427-5

Rear Panel-mounting Plugs for Front Lock Nuts



### Panel Cutout



Panel Cutout Dimension  
Panel thickness = 1 to 4 mm

- Note:**
1. The panel cutout dimension is the same for Front-locking and Rear-locking Sockets.
  2. Rotational positioning is not possible for connector rotation.

### Wiring and Wire Specifications

#### Wiring

| Pin number | Color |
|------------|-------|
| 1          | Brown |
| 2          | White |
| 3          | Blue  |
| 4          | Black |

#### Wire Specifications

| Item          | Specification           |      |
|---------------|-------------------------|------|
| Specification | UL1007                  |      |
| Nominal size  | AWG20                   |      |
| Configuration | Number of wires         | 21   |
|               | Wire diameter           | 0.18 |
|               | Standard outer diameter | 1.8  |

### Ordering Information

| Type       | Lock       | Cable length (m) | Model       | Standard pack, quantity |
|------------|------------|------------------|-------------|-------------------------|
| With cable | Rear lock  | 0.5              | XS5M-D426-5 | 10                      |
|            | Front lock |                  | XS5M-D427-5 |                         |

# Precautions

- Note:** 1. See "XS5/XS2 - Assembly Tooling and Accessories" datasheet for information and precautions regarding assembly, tooling and accessories that are common to the XS5 and XS2 connectors  
2. See "XS2" datasheet for specifics regarding those connectors

## ■ Correct Use

Do not use the Connectors in an atmosphere or environment that exceeds the specifications.

### Connector Connection and Disconnection

- When connecting or disconnecting Connectors, be sure to hold the Connectors by hand.
- Do not hold the cable when disconnecting Connectors.
- When mating Connectors, be sure to insert the plug all the way to the back of the socket before attempting to lock the Connectors.
- Do not use tools of any sort to mate the Connectors. Always use your hands. Pliers or other tools may damage the Connectors.
- When mating the Connectors to XS2 or other M12 Connectors, tighten the lock by hand to a torque of 0.39 to 0.49 N·m.

### Wiring

- Always confirm wiring diagrams before wiring sensors, limit switches, or other devices.
- Lay the cables so that external force is not applied to the Connectors. Otherwise, the degree of protection (IP67) may not be achieved.

### Degree of Protection

- The degree of protection of Connectors (IP67) is not for a fully watertight structure. Do not use the Connectors underwater.
- Do not step on or place any objects on the Connectors. Doing so may damage the Connectors.

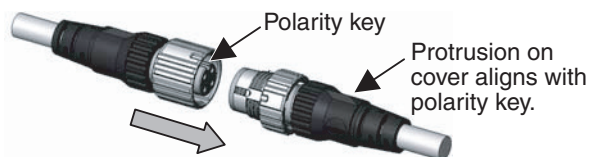
## ■ General Precautions

- Do not pull excessively on the Connectors or cables. Do not install the Connectors or cables in any way that would place a load directly on the mating section or cable connections. Doing so can damage the Connectors or break the wires inside the cables.
- Install the Connectors and cables where they will not be stepped on to prevent the wires inside the cables from being broken and to prevent the Connectors from being damaged. If the Connectors or cables must be installed where they might be stepped on, protect them with covers.
- Refer to the specifications for your cables before bending the cables and do not bend them past their minimum bending radius.
- If sensors or switches are not attached during installation, protect the mating surface of the Connector with a XS2Z-22 Waterproof Cover of XS2Z-14/15 Dust Cover.

## ■ Connecting the XS5

### 1. Connecting the XS5 Plug and Socket

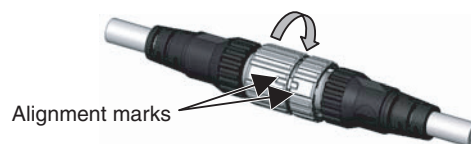
- Align the projection on the plug cover with the polarity key on the socket, then insert the plug all the way in.



- Hold the knurled socket grip, then insert the projection on the plug into the groove of the socket.



- Turn the knurled grips of the socket clockwise approximately 45 degrees in respect to the plug. A click will indicate that the Connectors are locked. The locking condition can also be confirmed by the alignment marks on the plug and socket.



### 2. Connecting the XS5 and XS2

- Align the projection on the plug cover with the polarity key on the socket, then insert the plug all the way in.
- In the same way as when connecting two XS2 Connectors, screw the knurled grip in the clockwise direction.
- Use your fingers to tighten the Connectors sufficiently.

MEMO

A large grid of dashed lines for taking notes, consisting of 20 columns and 30 rows. The grid is used for writing or drawing.



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Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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