

# Round Water-resistant Connectors (M12)

## XS5

### Water-resistant Smartclick Connectors That Reduce Installation Work

- **New** - IDC Field-wiring versions of the XS5G and XS5C.
- A newly developed lock structure that maintains compatibility with 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. (20 mV max., 100 mA max.)   |
| Insulation resistance                        | 1,000 MΩ min. (at 500 VDC)   |
| Dielectric strength (connector)              | 1,500 VAC for 1 min. (leakage current: 1 mA max.)                                  |
| Degree of protection                         | IP67 (IEC60529)  |
| Insertion tolerance                          | 50 times min.  |
| Lock strength                                | Tensile: 100 N/15 s, Torsion: 1 N-m/15 s   |
| Cable holding strength                       | Tensile: 100 N/15 s, Torsion: 1 N-m/15 s (for cable diameter of 6 mm) (See note 2) |
| Lock operating force                         | 0.1 N-m to 0.25 N-m  |
| Ambient operating temperature range          | -25°C to 70°C  |
| Number of pressure-weld repairs (See note 1) | 10 times max. (Limited to the same external diameter and wire diameter.)           |

- Note:** 1. Only XS5C/G (IDC models)  
 2. Refer to product specifications for details.

### Recommended Cables

| Cable outer diameter (mm) | Core sizes   |                          |                             |  |
|---------------------------|--|--------------------------|-----------------------------|--|
|                           | Crimping models  | Soldering models         | Screw-on models             | IDC 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> | 0.14 to 0.75 mm <sup>2</sup><br>• Minimum Wire Diameter: 0.08mm<br>• Outer diameter of wire covering: 0.7 to 2.6 mm<br>• Sheath material: PVC, PE, PUR<br>• Material of wire covering: PVC, PE |
| 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   | XS5R                     | XS5M/P          | XS5C/G<br>(Crimping, Soldering) | XS5C/G<br>(Screw-on)     | XS5C/G<br>(IDC models) |
|------------------------------|----------------------------------|--|--------------------------|-----------------|---------------------------------|--------------------------|------------------------|
| Contacts                     | Materials                        | Phosphor bronze  | Phosphor bronze or Brass | Phosphor bronze | Brass                           | Phosphor bronze or Brass | Phosphor bronze        |
|                              | Finish                           | Nickel base, 0.4- $\mu$ m gold-plating                       |                          |                 |                                 |                          |                        |
| Fixtures                     | Nickel-plated zinc alloy         |  |                          |                 |                                 |                          |                        |
| Fixtures (Lock) (See note 3) | SUS                              |  |                          |                 |                                 |                          |                        |
| Pin Block                    | PBT resin (UL94V-0)              |  |                          |                 |                                 |                          |                        |
| O-ring                       | Rubber                           |  |                          |                 |                                 |                          |                        |
| Overmolding/Cover            | Soft PBT resin (UL94V-0)         |  | —                        |                 | PBT resin(UL94V-0)              |                          |                        |
| Cable                        | Fire-retardant, robot cable      | UL AWM2464 CL3, 6-mm dia., 4 cores $\times$ AWG20 (0.08/110) |                          | —               |                                 |                          | —                      |
|                              | Oil-resistant polyurethane cable | 6 dia.4 cores $\times$ 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  
 3. Only plug

## 4-Pin Connectors with Cable Attached

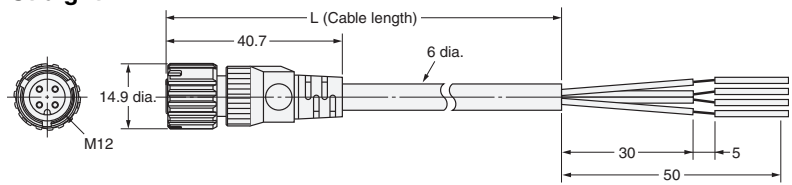
### XS5F - Socket on One Cable End

|  |   |
|--|---|
| <p><b>XS5F-D42□-□80-F</b> Fire-retardant, Robot Cable<br/> <b>XS5F-D42□-□80-P</b> Oil-resistant Polyurethane Cable</p> |  |
|--|---|

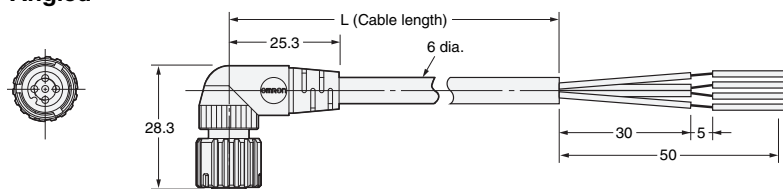
### Dimensions

(Unit: mm)

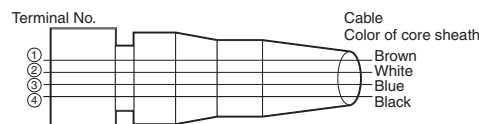
#### Straight



#### Angled



#### Wiring Diagram for 4 Cores



**Note:** The overmolding on the Oil-resistant Polyurethane Cable (XS5F-D42□-□80-P) is black, and the overmolding on the Fire-retardant, Robot Cable (XS5F-D42□-□80-F) is warm gray.

### Ordering Information

| Cable type                       | Cable length L (m) | Model           |                 | Standard pack quantity |
|----------------------------------|--------------------|-----------------|-----------------|------------------------|
|                                  |                    | Straight        | Angled          |                        |
| Fire-retardant, 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                      |
|                                  | 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 | 1                      |

- Note:** 1. Ask your OMRON representative about other specifications.  
 2. XS5F-D42□ models with -F are cRUUs approved.

## 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-μm 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

F: Fire-retardant, robot cable

P: Oil-resistant polyurethane cable

## ■ XS5H - Plug on One Cable End

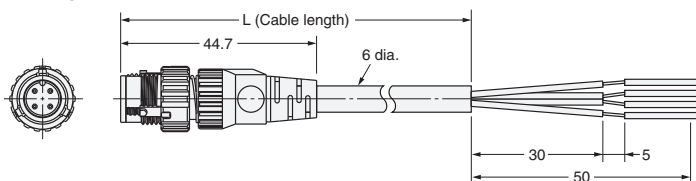
**XS5H-D42□-□80-F** Fire-retardant, Robot Cable  
**XS5H-D42□-□80-P** Oil-resistant Polyurethane Cable



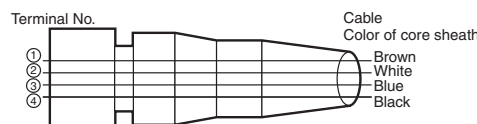
### Dimensions

(Unit: mm)

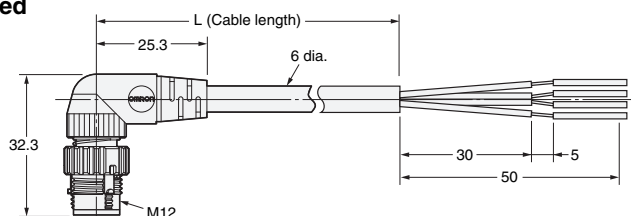
#### Straight



#### Wiring Diagram for 4 Cores



#### Angled



**Note:** The overmolding on the Oil-resistant Polyurethane Cable (XS5H-D42□-□80-P) is black, and the overmolding of the Fire-retardant, Robot Cable (XS5H-D42□-□81-F) is warm gray

### Ordering Information

| Cable type                       | Cable length L (m) | Model           |                 | Standard pack quantity |
|----------------------------------|--------------------|-----------------|-----------------|------------------------|
|                                  |                    | Straight        | Angled          |                        |
| Fire-retardant, robot cable      | 0.3                | XS5H-D421-A80-F | XS5H-D422-A80-F | 10                     |
|                                  | 1                  | XS5H-D421-C80-F | XS5H-D422-C80-F |                        |
|                                  | 2                  | XS5H-D421-D80-F | XS5H-D422-D80-F | 5                      |
|                                  | 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                  | XS5H-D421-G80-P | XS5H-D422-G80-P | 5                      |

- Note:**
1. Ask your OMRON representative about other specifications.
  2. XS5H-D42□ models with -F are cRUUs approved.

## 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

F: Fire-retardant, robot cable

P: Oil-resistant polyurethane cable

## ■ XS5W - Socket and Plug on Cable Ends

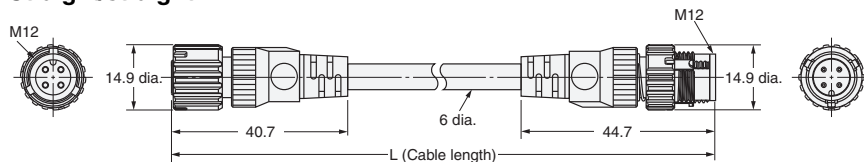
**XS5W-D42□-□81-F** Fire-retardant, Robot Cable  
**XS5W-D42□-□81-P** Oil-resistant Polyurethane Cable



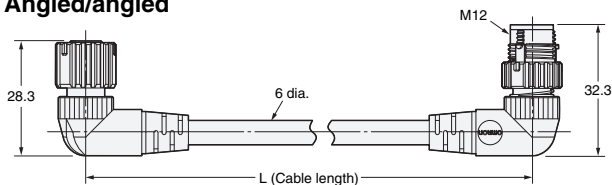
### Dimensions

(Unit: mm)

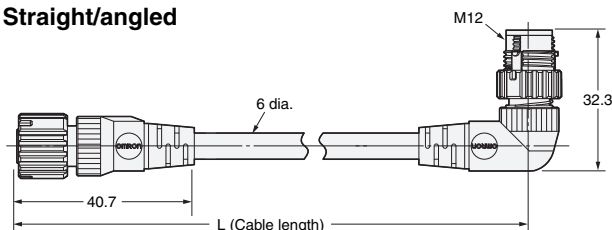
#### Straight/straight



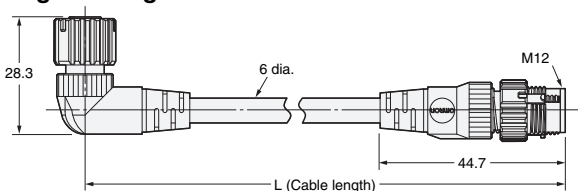
#### Angled/angled



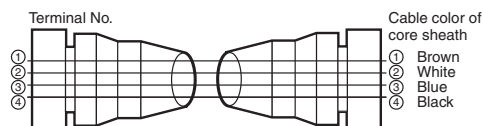
#### Straight/angled



#### Angled/straight



#### Wiring Diagram for 4 Cores



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

## Ordering Information

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

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

**Note:** 1. Ask your OMRON representative about other specifications.

2. XS5W-D42□ models with -F are cRUUs approved.

## 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

- F: Fire-retardant, robot cable
- P: Oil-resistant polyurethane cable

# 4-Pin and 5-Pin Assembly Connector

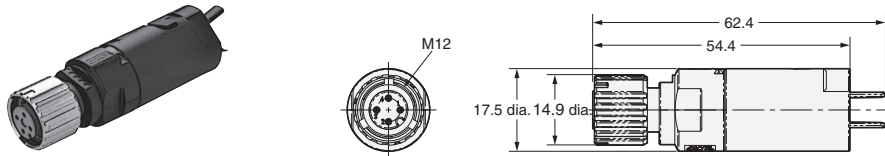
## ■ XS5C Sockets



### Dimensions

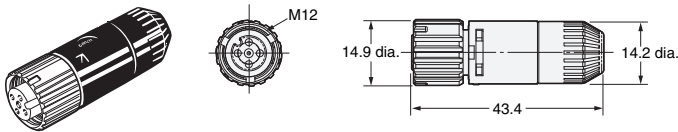
(Unit: mm)

**XS5C-D418 (IDC Model)**  
Straight Connectors

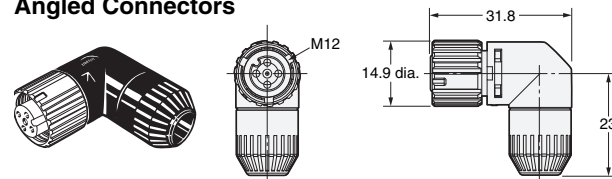


**NEW**

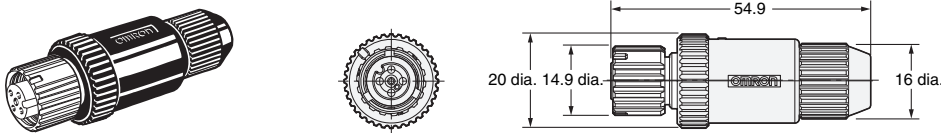
**XS5C-D4C□ (Crimping Model)**  
**XS5C-D42□ (Soldering Model)**  
Straight Connectors



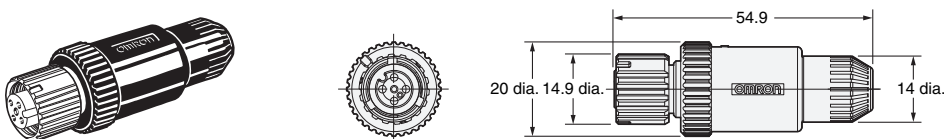
**XS5C-D4C□ (Soldering Model)**  
**XS5C-D42□ (Soldering Model)**  
Angled Connectors



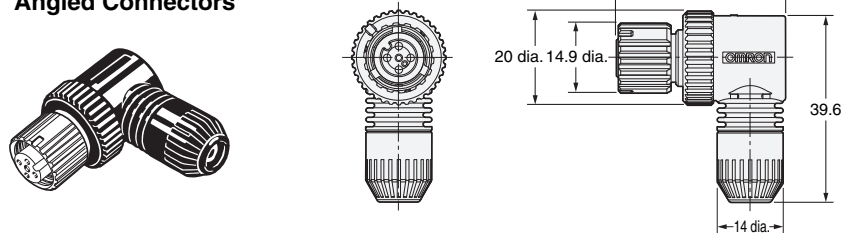
**XS5C-D□S□ (Screw-on Connectors, Applicable Cable Outer Diameter: 7 or 8mm)**  
Straight Connectors



**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            | IDC               | 3 to 8 mm                | <b>XS5C-D418</b> | —                | 1                      |
|              | Crimping          | 6 mm (5 to 6)            | <b>XS5C-D4C1</b> | <b>XS5C-D4C2</b> |                        |
|              |                   | 4 mm (4 to 5)            | <b>XS5C-D4C3</b> | <b>XS5C-D4C4</b> |                        |
|              |                   | 3 mm (3 to 4)            | <b>XS5C-D4C5</b> | <b>XS5C-D4C6</b> |                        |
|              | Soldering         | 6 mm (5 to 6)            | <b>XS5C-D421</b> | <b>XS5C-D422</b> |                        |
|              |                   | 4 mm (4 to 5)            | <b>XS5C-D423</b> | <b>XS5C-D424</b> |                        |
|              |                   | 3 mm (3 to 4)            | <b>XS5C-D425</b> | <b>XS5C-D426</b> |                        |
|              | Screw-on          | 6 mm (5 to 6)            | <b>XS5C-D4S1</b> | <b>XS5C-D4S2</b> |                        |
|              |                   | 4 mm (4 to 5)            | <b>XS5C-D4S3</b> | <b>XS5C-D4S4</b> |                        |
|              |                   | 3 mm (3 to 4)            | <b>XS5C-D4S5</b> | <b>XS5C-D4S6</b> |                        |
|              |                   | 8 mm (7 to 8)            | <b>XS5C-D4S7</b> | —                |                        |
|              |                   | 7 mm (6 to 7)            | <b>XS5C-D4S9</b> | —                |                        |
| 5            | Screw-on          | 6 mm (5 to 6)            | <b>XS5C-D5S1</b> | —                |                        |
|              |                   | 4 mm (4 to 5)            | <b>XS5C-D5S3</b> | —                |                        |
|              |                   | 3 mm (3 to 4)            | <b>XS5C-D5S5</b> | —                |                        |
|              |                   | 8 mm (7 to 8)            | <b>XS5C-D5S7</b> | —                |                        |
|              |                   | 7 mm (6 to 7)            | <b>XS5C-D5S9</b> | —                |                        |

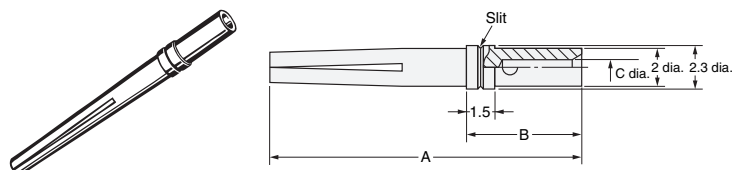
**Note:** 4 pole XS5C models are *cRU*us approved. IDC version (XS5C-D418) is pending approval.

## ■ XS5U (Crimping pin for XS5C)

### Dimensions

(Unit: mm)

XS5U-2221 □  
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                           | <b>XS5U-2221</b> | 100                    |
| 0.5 to 0.75                           | <b>XS5U-2222</b> |                        |

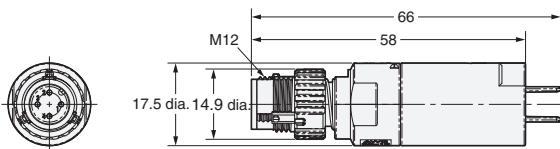
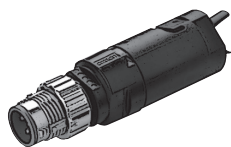
■ XS5G - Plugs



**Dimensions**

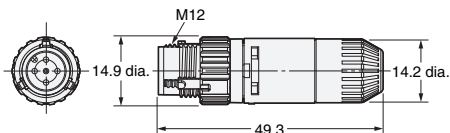
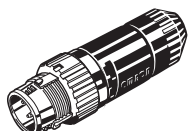
(Unit: mm)

XS5G-D418 (IDC Model)  
Straight Connectors

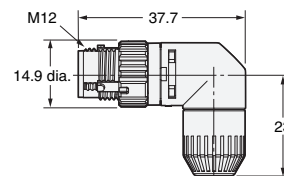
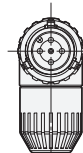
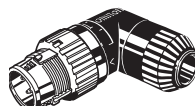


**NEW**

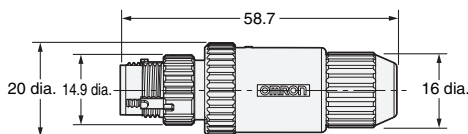
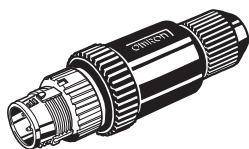
XS5G-D4C□ (Crimping Model)  
XS5G-D42□ (Soldering Model)  
Straight Connectors



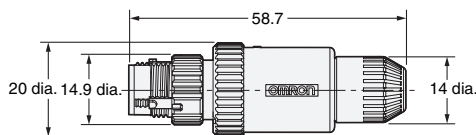
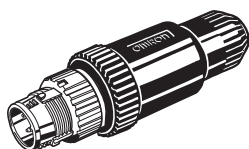
XS5G-D42□ (Soldering Model)  
Angled Connectors



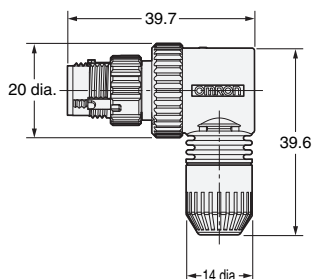
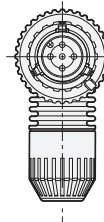
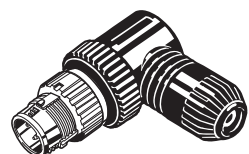
XS5G-D□S□ (Screw-on Connectors, Applicable Cable Outer Diameter: 7 or 8mm)  
Straight Connectors



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            | IDC               | 3 to 8 mm                | XS5G-D418 | —         | 1                      |
|              | Crimping          | 6 mm (5 to 6)            | XS5G-D4C1 | —         |                        |
|              |                   | 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 | —         |                        |
|              |                   | 7 mm (6 to 7)            | XS5G-D4S9 | —         |                        |
| 5            | Screw-on          | 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 | —         |                        |

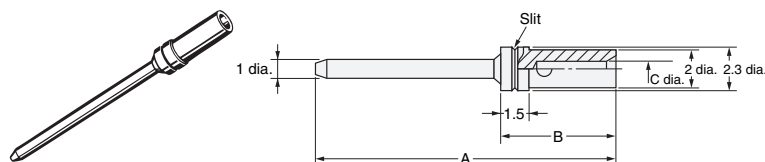
**Note:** 1. XS5G Screw-on Plugs cannot be connected side-by-side to the CN1 and CN2 connectors of XS2R or XS5R Y-Joint Sockets / Plugs  
 2. 4 pole XS5G models are *cRUs* approved. IDC version (XS5G-D418) is pending approval.

## ■ 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

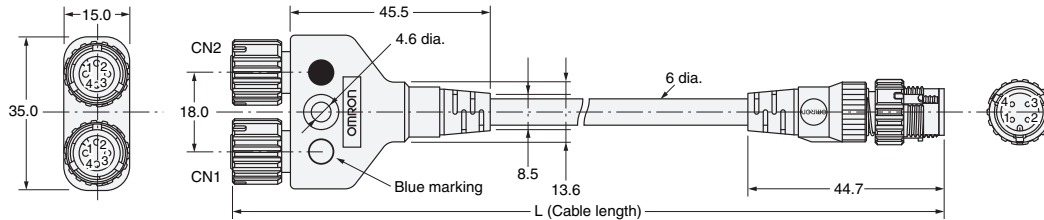


### Dimensions

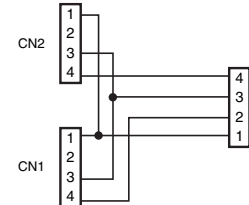
(Unit: mm)

#### XS5R-D426-□11-F

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

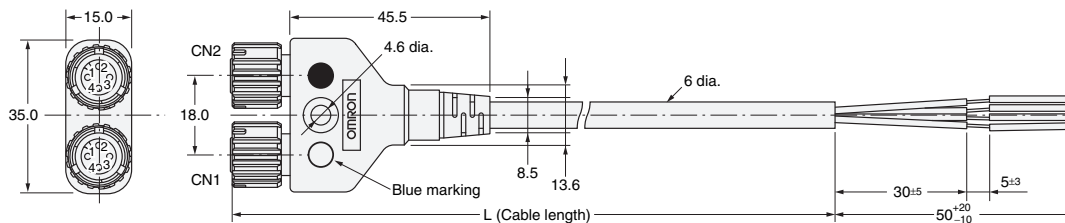


#### Wiring Diagram

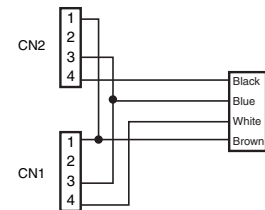


#### XS5R-D426-□10-F

Connectors on One Cable End (Y-Joint Socket)

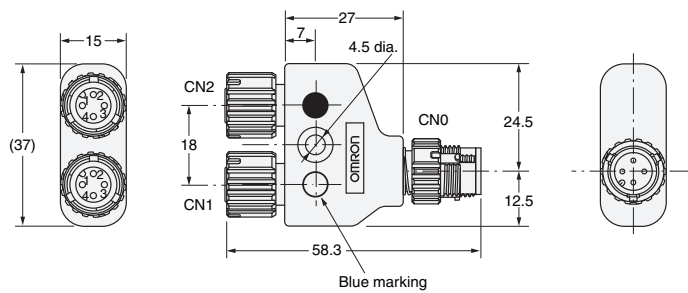


#### Wiring Diagram



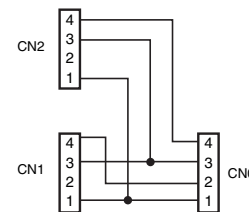
#### XS5R-D426-□

Y-Joint Plug/Socket without Cable

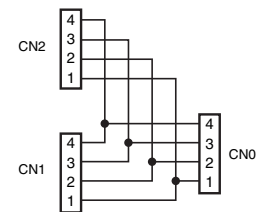


#### Wiring Diagram

##### XS5R-D426-1



##### XS5R-D426-5



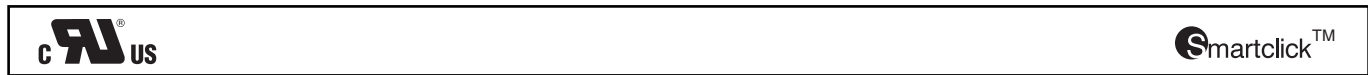
## Ordering Information

| Cable         | Connector                     | Cable length (m) | Model           | Standard pack quantity |
|---------------|-------------------------------|------------------|-----------------|------------------------|
| With cable    | Connectors on both cable ends | 0.5              | XS5R-D426-B11-F | 10                     |
|               |                               | 1                | XS5R-D426-C11-F |                        |
|               |                               | 2                | XS5R-D426-D11-F | 5                      |
|               |                               | 3                | XS5R-D426-E11-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

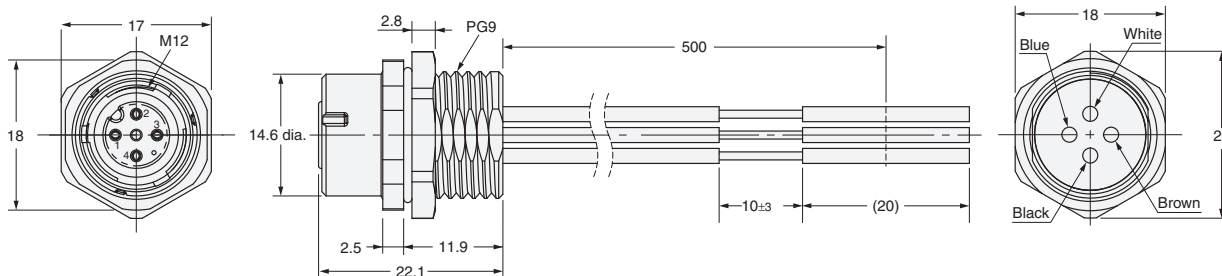
## ■ XS5P - Sockets



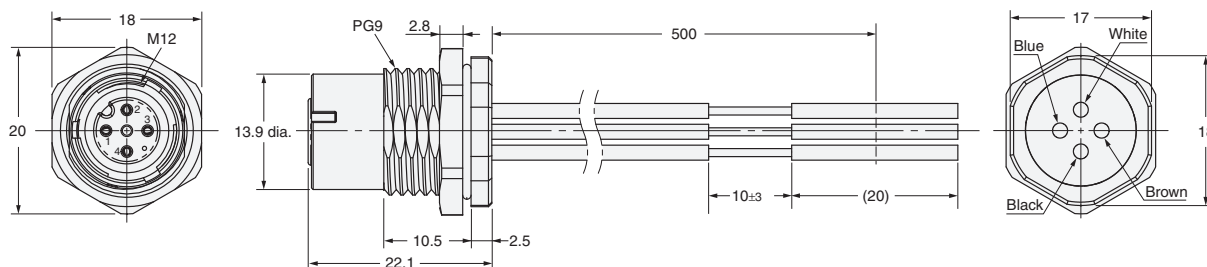
### Dimensions

(Unit: mm)

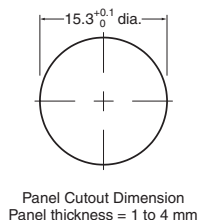
#### XS5P-D426-5 Front Panel-mounting Sockets for Rear Lock Nuts



#### 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

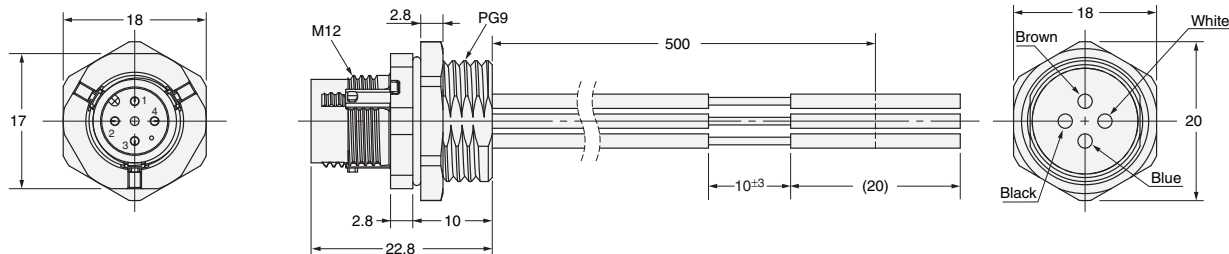


## Dimensions

(Unit: mm)

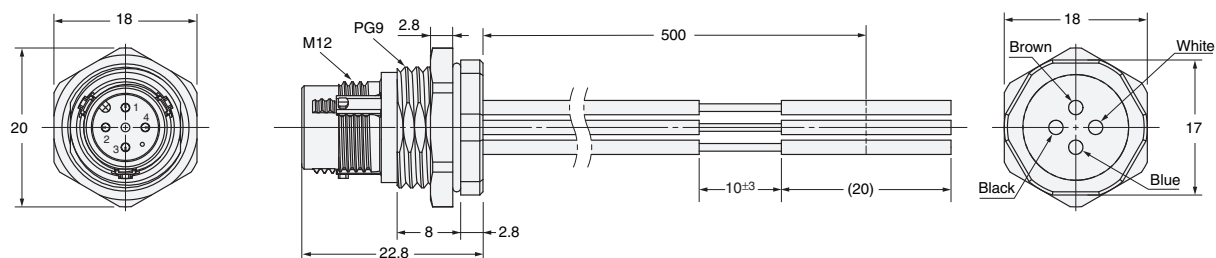
### XS5M-D426-5

Front Panel-mounting Plugs for Rear Lock Nuts

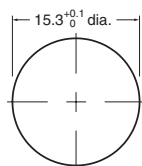


### XS5M-D427-5

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, along with assembly details for the NEW IDC Field-wiring versions of the XS5C and XS5G 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.

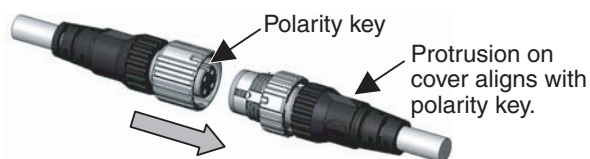
## ■ General Precautions

- 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

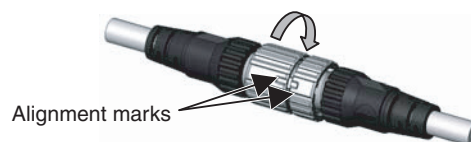
- Align the projection on the plug cover with the polarity key on the socket, then insert the plug all the way in.



- 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.

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