

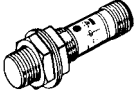
Sensor I/O Connector Overview

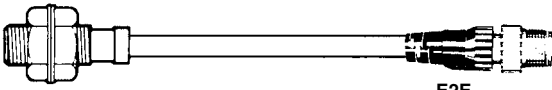
XS2/XW3A FA Connectors


Wiring System Configuration

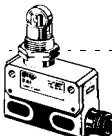
Sensor End

Using Limit Switches and Sensors with Connectors

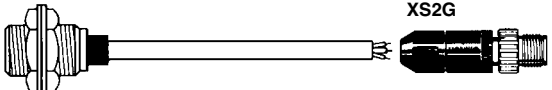
Proximity Sensor
(Direct Connection Type)  E2E

(Connector-Terminal Connection Type)  E2E

Compact Limit Switch
(Connector-Terminal Connection Type)  D4CC

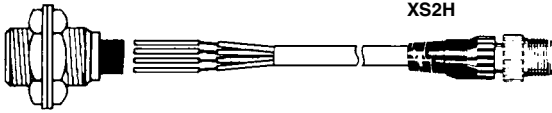
Compact Enclosed Switch
(Connector-Terminal Connection Type)  D4E-□N

Enabling Connectors to Be Used with Sensors

Connector Assembly (Crimping, Soldering, Screw-mounting)
 XS2G

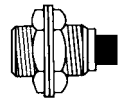
Used to enable connectors (Connector-Terminal connection types) to be used with pre-wired Sensors.

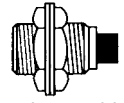
Making Sensors with Cables (Sensor Manufacturers)

Connector with Cable
 XS2H

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

Sensor-embedded Connector


 XS2M (Embedded Plug with Screw Threads)

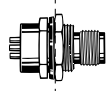
 XS2M (Embedded Plug without Screw Threads)

Used to enable connectors (direct connection types) to be integrated with the Sensor body.

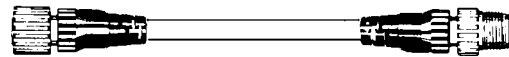
Mounting to Panels

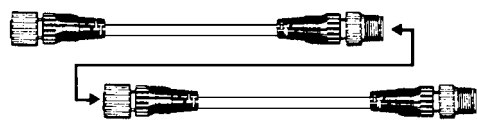
Panel-mounting Connector

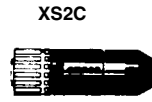
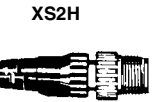
 XS2M (Flange-mounting)



 XS2M (Screw-mounting)



Relay Cable


Connector with Cable
XS2W 

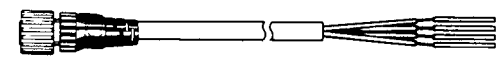
(Multiple XS2W can be used to extend the cable.) 

Connector Assembly (Crimping, Soldering, Screw-mounting) + Connector with Cable
XS2C  XS2H 

Connector with Cable + Connector Assembly (Crimping, Soldering, Screw-mounting)
XS2F  XS2G 

Connector Assembly (Crimping, Soldering, Screw-mounting)
XS2C  XS2G 

Connector Assembly (Crimping, Soldering, Screw-mounting)
XS2C 

Connector with Cable
XS2F 

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Connectors

Peripheral
Devices

XS2
/XW3A

XS2

XN2

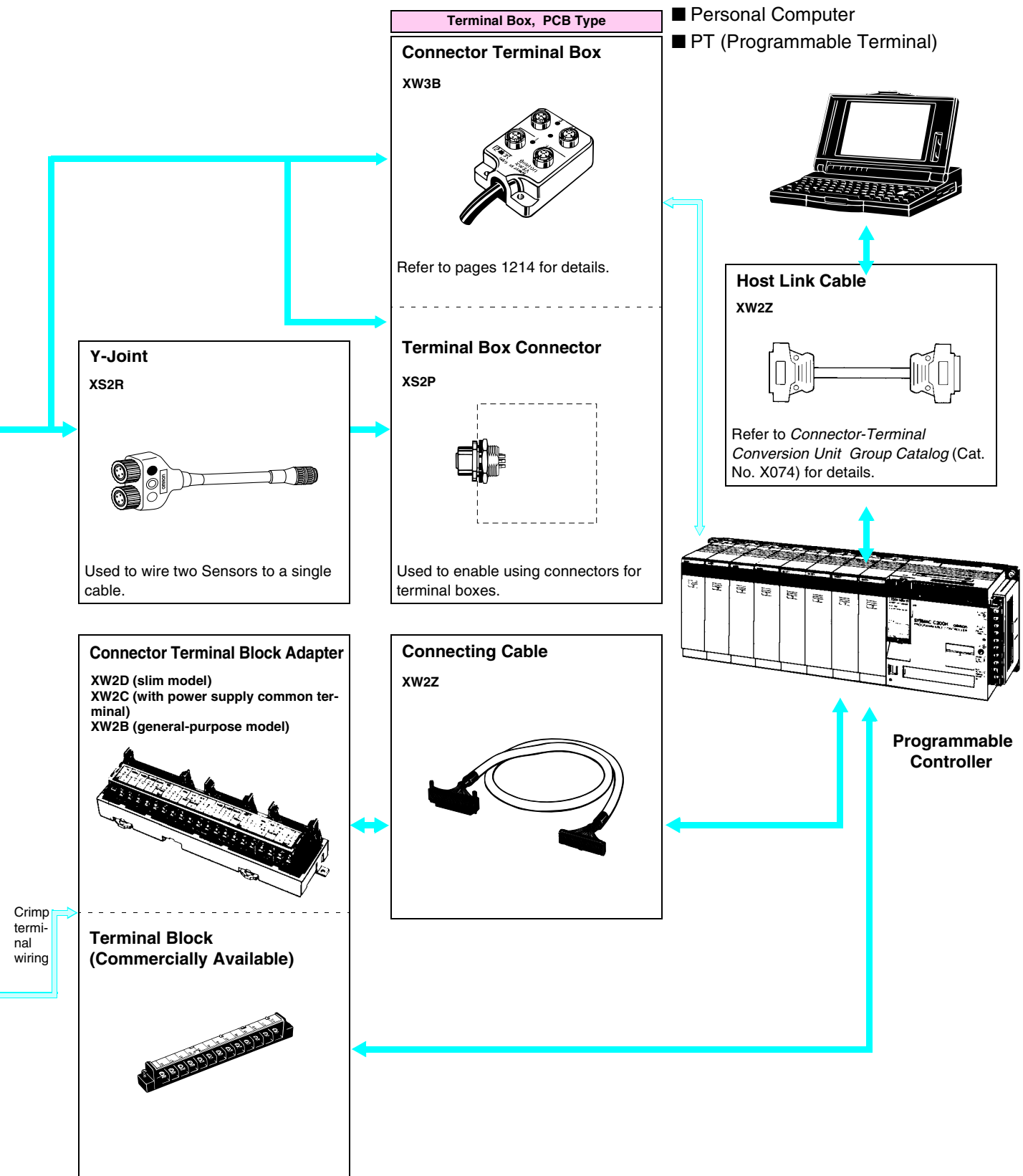
XW3B

XW3A

XS3

Sensor I/O Connector Overview

(indicates mating connectors, and indicates wiring connections.)



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XS2
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XS2

XN2

XW3B

XW3A

XS3

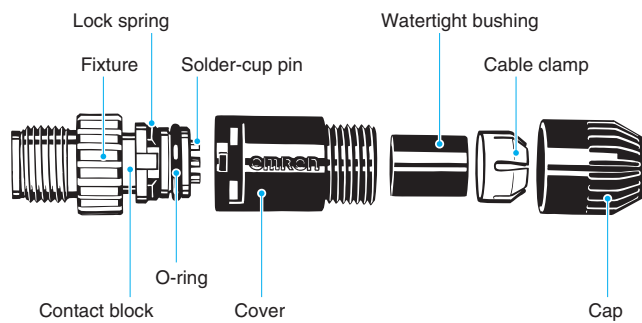
XS2

Water- and Environment-resistant FA Connectors Save Wiring and Maintenance Effort

- Compact FA connectors satisfy IP67 requirements and ensure a 94V-0 fire retardant rating.
- A wide array of connectors makes a wiring system more modular, simplifies maintenance, and reduces downtime.
- Connectors with Cables and Connector Assemblies are available.
- Three types of Connector Assembly: Crimping, soldering, and screw-on.
- UL-listed 4-conductor cables.



Construction (XS2G Soldering Plug Connector Assembly)



Ratings and Specifications

Rated current	3 A
Rated voltage	125 VDC, 250 VAC
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 (IEC529)
Insertion tolerance	200 times min.
Assembled fixture strength	Tensile: 98 N/15 s Torsion: 0.98 N-m/15 s
Cable holding strength	Cable diameter: 6 mm 98 N for 15 s 4 to 5 mm 49 N for 15 s 3 mm 29 N for 15 s
Ambient temperature	Operating: -25°C to 70°C

Recommended Cables

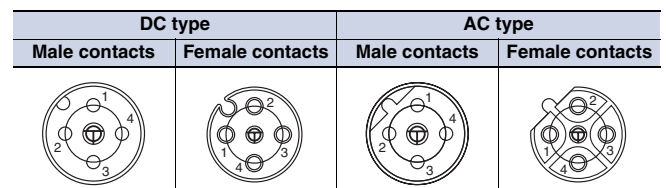
Cable outer diameter	Conductor sizes		
	Crimping models	Soldering models	Screw-on models
6 mm	5 to 6 mm	0.5 mm ² max.	0.18 to 0.75 mm ²
4 mm	4 to 5 mm		
3 mm	3 to 4 mm		

Materials and Finish

Item	Model	XS2F/H/W	XS2M/R/P	XS2C/G
Contacts	Materials	Phosphor bronze	Brass	
	Finish	Nickel base, 0.4-μm gold plating		
Fixtures	Materials	Brass *		
	Finish	Nickel plated *		
Pin Block	Materials	PBT resin (UL94V-0)	PBT resin (UL94V-0)	PBT resin (UL94V-0)
	Finish	For DC: light gray; for AC: dark gray		
O-ring/rubber bushing	Rubber			
Cover	Polyester elastomer	---	---	PBT resin (UL94V-0)
Cap	---	---	---	PBT resin (UL94V-0)
Cable clamp	---	---	---	PA resin (UL94V-0)
Pin clamp	---	---	---	PBT resin (UL94V-0)
Lock spring	---	---	---	LCP resin (UL94V-0)
Watertight bushing	---	---	---	Rubber
Ring	---	---	---	Steel

* The T-joint of the XS2R is aluminum/white.

Socket Appearance



Note: The AC and DC connectors are different as shown here and therefore cannot be connected together.

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XS2






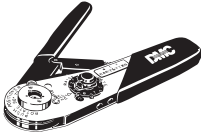
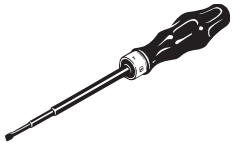

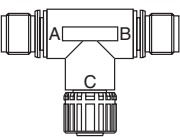
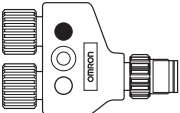



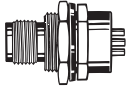
XN2

XW3B

XW3A

XS3

List of Products

Name	Model		Appearance	Page
1. Connectors attached to Cable	XS2W Sockets and Plugs on Cable Ends			1186 to 1187
	XS2F Sockets on One Cable End			1188 to 1191
	XS2H Plugs on One Cable End			1192 to 1193
2. Connector Assemblies (Crimping, Soldering, or Screw-on) Used to enable using connectors for sensor cables and relay cables.	XS2G Plug Assemblies			1195 to 1197
	XS2C Socket Assemblies			1196 to 1198
	XY2F Crimp Tool (for Crimping Connectors)			1205
	XW4Z Screwdriver (for Screw-on Connectors)			1199
3. Terminal Box Connectors Used to enable using connectors for terminalboxes.	XS2P Panel-mounting Sockets			1199
4. T-Joints and Y-Joints Used for branching and for daisy-chain connections.	XS2R T-Joint/Y-Joint Plug/Socket Connectors	T-Joints		1201
		Y-Joints		1200
5. Sensor Connector Assemblies Used to enable using connectors in sensors.	XS2M Plugs	Embedded Plugs with Screw Threads		1203 to 1204
		Embedded Plugs with No Screw Threads		
6. Panel-mounting Connectors Used to enable using I/O box connectors mounted to panels.	XS2M Plugs	Flange-mounting Plugs		
		Screw-mounting Plugs		

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XS2
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XS2

XN2

XW3B

XW3A

XS3

XS2

XS2W Sockets and Plugs on Cable Ends

Model Number Legend

XS2W-D **2** - - **1** -

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: For DC

3. Connector Poles

4: 4 poles

5: 5 poles

4. Contact Plating

2: 0.4µm gold plating

5. Cable Connection Direction

1: Straight/straight

2: L-shaped/L-shaped

3: Straight (XS2F)/L-shaped (XS2H)

4: L-shaped (XS2F)/straight (XS2H)

6. Cable Length

A: 0.3 m (straight/straight only)

B: 0.5 m (straight/straight only)

C: 1 m (straight/straight only)

D: 2 m

E: 3 m (straight/straight only)

F: 4 m (straight/straight only)

G: 5 m

H: 7 m (straight/straight only)

J: 10 m (straight/straight only)

K: 15 m (straight/straight only)

L: 20 m (straight/straight only)

7. Connections

Pin No.

(1) (2) (3) (4)

8: Brown White Blue Black (for DC)

Pin No.

(1) (2) (3) (4) (5)

G: Brown White Blue Black Gray

8. Connectors on One End/Both Ends

1: Both ends

9. Cable Specifications

A: Standard cable

R: Vibration-proof robot cable (straight/straight only)

F: Fire-retardant, vibration-proof cable

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

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/XW3A

XS2

XN2

XW3B

XW3A

XS3

XS2W Sockets and Plugs on Cable Ends

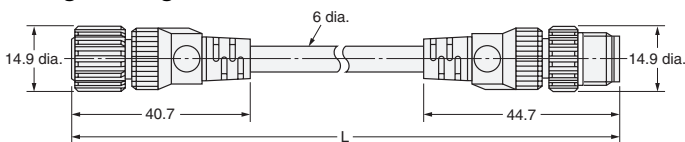
- Connectors with Standard Cable XS2W-D42□-□81-A
- Connectors with Vibration-proof Robot Cable (Straight/Straight) XS2W-D421-□81-R

Dimensions

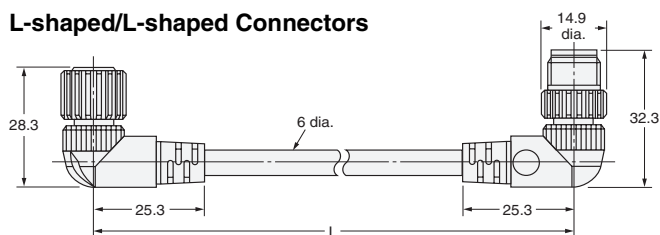
(Unit: mm)

Straight/Straight Connectors

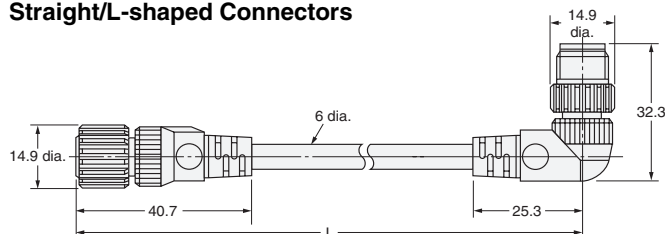
[CAD Data](#)



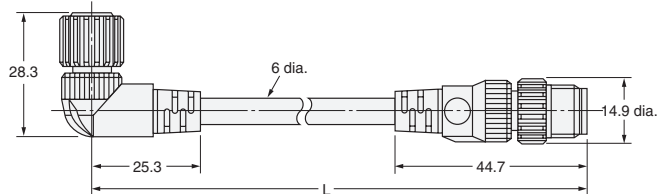
L-shaped/L-shaped Connectors



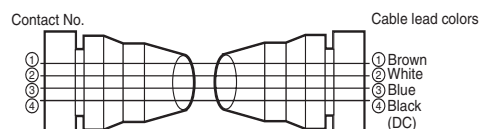
Straight/L-shaped Connectors



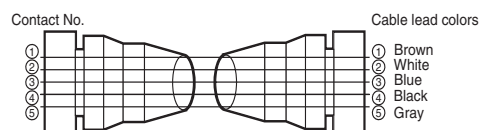
L-shaped/Straight Connectors



Wiring Diagram for 4 Conductors



Wiring Diagram for 5 Conductors



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XS2
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XS2

XN2

XW3B

XW3A

XS3

Ordering Information

Cable type	Cable connection direction	No. of cable conductors	Cable length (m)	DC		UL-listed
				Model	Minimum order	
Standard cable	Straight/Straight	4	1	XS2W-D421-C81-A	10	Yes
			2	XS2W-D421-D81-A		
			5	XS2W-D421-G81-A		
			10	XS2W-D421-J81-A		
	L-shaped/L-shaped		2	XS2W-D422-D81-A	10	
			5	XS2W-D422-G81-A	5	
			2	XS2W-D423-D81-A	10	
			5	XS2W-D423-G81-A	5	
Straight/L-shaped	2	XS2W-D424-D81-A	10			
	5	XS2W-D424-G81-A	5			
L-shaped/Straight		1	XS2W-D421-C81-R	10	Yes	
		2	XS2W-D421-D81-R			
		5	XS2W-D421-G81-R			
		10	XS2W-D421-J81-R			

Note: Orders are accepted in multiples of the minimum order.
Ask your OMRON representative about other cable lengths, and about 5-conductor cables.

XS2

XS2F Sockets on One Cable End

Model Number Legend

XS2F- **2** - **0** -

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)

A: For AC
D: For DC

3. Connector Poles

4: 4 poles
5: 5 poles

4. Contact Plating

2: 0.4-μm gold plating

5. Cable Connection Direction

1: Straight
2: L-shaped

6. Cable Length

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

Only the 2 m (D) and 5 m (G) cables are available for cables with 5 poles.

7. Connections

	Pin No.			
	(1)	(2)	(3)	(4)
A: Brown	---	---	---	Blue (for DC)
B: ---	---	---	Brown	Blue (for AC)
C: Brown	---	---	Blue	Black
D: ---	---	---	Blue	Brown
8: Brown	White	---	Blue	Black (for DC)
9: Brown	White	---	Blue	Black (for AC)

	Pin No.				
	(1)	(2)	(3)	(4)	(5)
G: Brown	White	---	Blue	Black	Gray

8. Connectors on One End/Both Ends

0: One end

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

9. Cable Specifications

A: Standard cable
R: Vibration-proof robot cable
F: Fire-retardant, vibration-proof cable
(R-type Cables are available with 2 or 4 conductors, F-type Cables are available with 4 conductors only.)

Designations for DC Polarity (For Limit Switches and Sensors)

6. Cable Length

3: 2 m
4: 5 m

7. Connections

	Terminal No.			
	(1)	(2)	(3)	(4)
1: ---	---	---	Black	White

8. Connectors on One End/Both Ends

0: One end

9. Cable Specifications

Not designated.

Note: Model number standards are different for items 6, 7, and 9 for connectors with DC polarity.

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XS2

XN2

XW3B

XW3A

XS3

XS2F Pre-wired Connectors with Socket on One End

- Connectors with Standard Cable XS2F-□42□-□□0-A
- Connectors with Vibration-proof Robot Cable XS2F-□42□-□□0-R
- DC-pole Connectors with Standard Cable XS2F-□42□-□□0
- E2E Relay Cable XS2F-□42□-□□0-TR

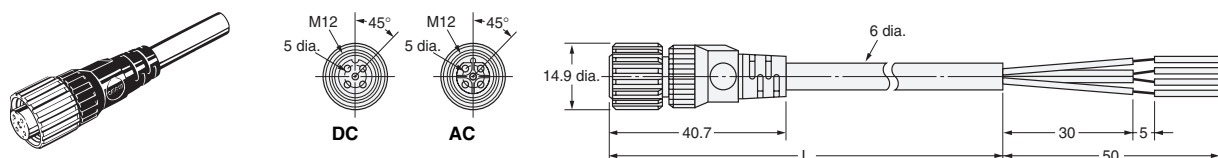
E2E Relay Cables have connector terminal numbers and lead wire colors that correspond with those of the E2E. The cable color is dark gray, and the TR suffix following □□□□(lot number) distinguishes these cables from standard XS2F cables.

Dimensions

(Unit: mm)

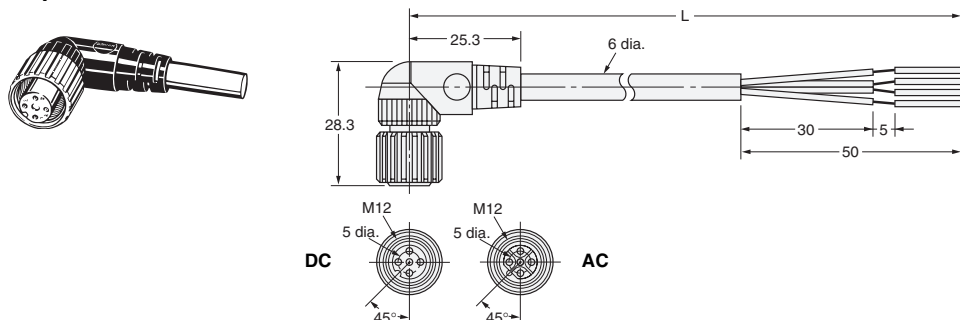
Straight Connectors

CAD Data



L-shaped Connectors

CAD Data



Wiring Diagram

Name and model		Two-conductor model	Three-conductor model	Four-conductor model
Standard cable Vibration-proof robot cable	XS2F-□42□-□□0-A			
	XS2F-□42□-□□0-R			
Standard cable (non-polar DC)	XS2F-□42□-□□0		---	---
E2E Relay Cable	XS2F-D42□-□D0		---	---
	XS2F-D42□-□D0-TR			

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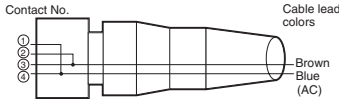
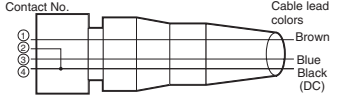
XS2

XN2

XW3B

XW3A

XS3

Name and model		Two-conductor model	Three-conductor model	Four-conductor model
E2E Relay Cable	XS2F-A42□ -□B0-TR		---	---
	XS2F-D42□ -□C0-TR	---		---

Ordering Information

Cable type	Cable connection direction	No. of cable conductors	Cable length (m)	DC	AC	Minimum order	UL-listed	
				Model	Model			
Standard cable	Straight	2	1	XS2F-D421-CA0-A	XS2F-A421-CB0-A	10	---	
		3		XS2F-D421-CC0-A	---		---	
		4		XS2F-D421-C80-A	XS2F-A421-C90-A		Yes	
		2	2	XS2F-D421-DA0-A	XS2F-A421-DB0-A	10	---	
		3		XS2F-D421-DC0-A	---		---	
		4		XS2F-D421-D80-A	XS2F-A421-D90-A		Yes	
		2	5	XS2F-D421-GA0-A	XS2F-A421-GB0-A	5	---	
		3		XS2F-D421-GC0-A	---		---	
		4		XS2F-D421-G80-A	XS2F-A421-G90-A		Yes	
		2	10	XS2F-D421-JA0-A	XS2F-A421-JB0-A	5	---	
		3		XS2F-D421-JC0-A	---		---	
		4		XS2F-D421-J80-A	XS2F-A421-J90-A		Yes	
	L-shaped	Straight	2	1	XS2F-D422-CA0-A	XS2F-A422-CB0-A	10	---
			3		XS2F-D422-CC0-A	---		---
			4		XS2F-D422-C80-A	---		Yes
			2	2	XS2F-D422-DA0-A	XS2F-A422-DB0-A	10	---
			3		XS2F-D422-DC0-A	---		---
			4		XS2F-D422-D80-A	---		Yes
		2	5	XS2F-D422-GA0-A	XS2F-A422-GB0-A	5	---	
		3		XS2F-D422-GC0-A	---		---	
		4		XS2F-D422-G80-A	---		Yes	
		2	10	XS2F-D422-JA0-A	XS2F-A422-JB0-A	5	---	
		3		XS2F-D422-JC0-A	---		---	
		4		XS2F-D422-J80-A	---		Yes	
Vibration-proof robot cable	Straight	2	1	XS2F-D421-CA0-R	XS2F-A421-CB0-R	10	Yes	
		4		XS2F-D421-C80-R	XS2F-A421-C90-R			
		2		2	XS2F-D421-DA0-R			XS2F-A421-DB0-R
		4	XS2F-D421-D80-R		XS2F-A421-D90-R			
		2	5		XS2F-D421-GA0-R	XS2F-A421-GB0-R		
		4		XS2F-D421-G80-R	XS2F-A421-G90-R			
		2		10	XS2F-D421-JA0-R	XS2F-A421-JB0-R		
		4	XS2F-D421-J80-R		XS2F-A421-J90-R			
		2	1		XS2F-D422-CA0-R	XS2F-A422-CB0-R		
		4		XS2F-D422-C80-R	---			
		2		2	XS2F-D422-DA0-R	XS2F-A422-DB0-R		
		4	XS2F-D422-D80-R		---			
	2	5	XS2F-D422-GA0-R		XS2F-A422-GB0-R			
	4		XS2F-D422-G80-R	---				
	2		10	XS2F-D422-JA0-R	XS2F-A422-JB0-R			
	4	XS2F-D422-J80-R		---				
	2	2		XS2F-D421-310	XS2F-A421-310			
	2		XS2F-D421-410	XS2F-A421-410				
	2		L-shaped	XS2F-D422-310	XS2F-A422-310			
	2	XS2F-D422-410		XS2F-A422-410				

Note: Ask your OMRON representative about other cable lengths.

Sensor Controllers/
Related Products

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Sensor
Controllers

Connectors

Peripheral
Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

XS3

Cable type	Cable connection direction	No. of cable conductors	Cable length (m)	DC	AC	Minimum order
				Model	Model	
E2E Relay Cable	Straight	2	2	XS2F-D421-DD0-TR	XS2F-A421-DB0-TR	10
			5	XS2F-D421-GD0-TR	XS2F-A421-GB0-TR	5
			2	XS2F-D422-DD0-TR	XS2F-A422-DB0-TR	10
			5	XS2F-D422-GD0-TR	XS2F-A422-GB0-TR	5
	L-shaped	3	2	XS2F-D421-DC0-TR	---	10
			5	XS2F-D421-GC0-TR	---	5
			2	XS2F-D422-DC0-TR	---	10
			5	XS2F-D422-GC0-TR	---	5

Note: The E2E Relay Cables have different model number standards from those for standard XS2F models. (Refer to page 1188 for details.)

Applicable Proximity Sensors

XS2F model	Proximity Sensor	Old connector model	Old Proximity Sensor model
XS2F-D42□-□D0-TR	E2E-X□D1-M1 E2E-X□D1-M1J-T E2E-X□D2-M1	Y92E-P1D2□	E2E-X□D1-P1 E2E-X□D1-M1J-T E2E-X□D2-P1
XS2F-D42□-□C0-TR	E2E-X□E1-M1	Y92E-P1D3□	E2E-X□E1-P1
XS2F-D42□-□80-□	E2E-X□D1S-M1	Y92E-P1D4□	E2E-X□D1S-P1
XS2F-A42□-□B0-TR	E2E-X□Y1-M1 E2E-X□Y2-M1	Y92E-P1A2□	E2E-X□Y1-P1 E2E-X□Y2-P1

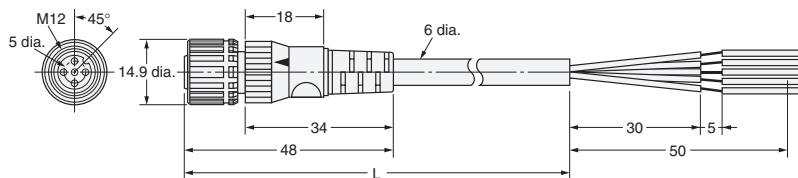
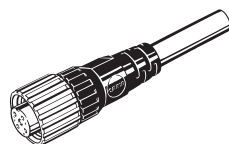
Note: There is no difference in wiring method and cable wire color between the XS2F and Y92E.

●5-pole Connectors for DC XS2F-D521-□G0-A

Dimensions

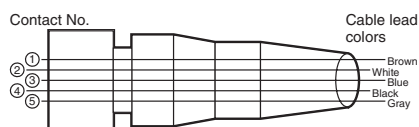
(Unit: mm)

Straight Connectors

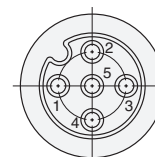


Note: Use the XS2F-D521-□G0-A in combination with the XS2H-D521-□G0-A.

Wiring Diagram



Pin Arrangements (Engagement Side)



Ordering Information

Cable connection direction	Cable length (m)	DC	
		Model	Minimum order
5	2	XS2F-D521-DG0-A	10
	5	XS2F-D521-GG0-A	5

Note: Ask your OMRON representative about other cable lengths.

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XS2
/XW3A

XS2

XN2

XW3B

XW3A

XS3

XS2

XS2H Plugs on One Cable End

Model Number Legend

XS2H- **2** **1** - **0** -

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)

A: For AC
D: For DC

(3)Connector Poles

4: 4 poles
5: 5 poles

(4)Contact Plating

2: 0.4-μm gold plating

(5)Cable Connection Direction

1: Straight

(6)Cable Length

A: 0.3 m
B: 0.5 m
C: 1 m
D: 2 m
G: 5 m

(7)Connections

Pin No.

	(1)	(2)	(3)	(4)
A:	Brown	---	---	Blue (for DC)
B:	---	---	Brown	Blue (for AC)
C:	Brown	---	Blue	Black (for DC)

Pin No.

	(1)	(2)	(3)	(4)
8:	Brown	White	Blue	Black (for DC)
9:	Brown	White	Blue	Black (for AC)

Pin No.

	(1)	(2)	(3)	(4)	(5)
G:	Brown	White	Blue	Black	Gray

(8)Connectors on One End/Both Ends

0: One end

(9)Cable Specifications

A: Standard cable
F: Fire-retardant, vibration-proof cable
R: Vibration-proof robot cable
(R-type Cables are available with 2 or 4 conductors, F-type Cables are available with 4 conductors only.)

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

Sensor Controllers/
Related Products

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Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

XS3

XS2H Plugs on One Cable End

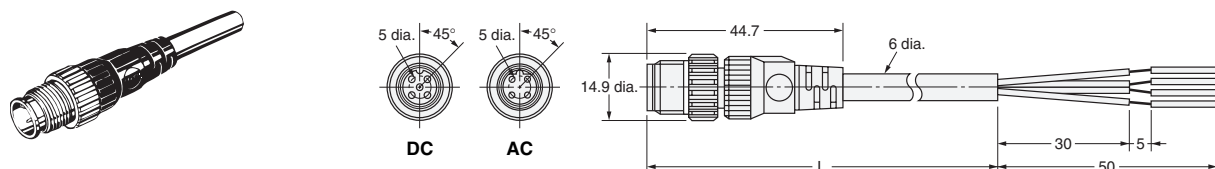
● Connectors on Standard Cable XS2H-□421-□□0-A

Dimensions

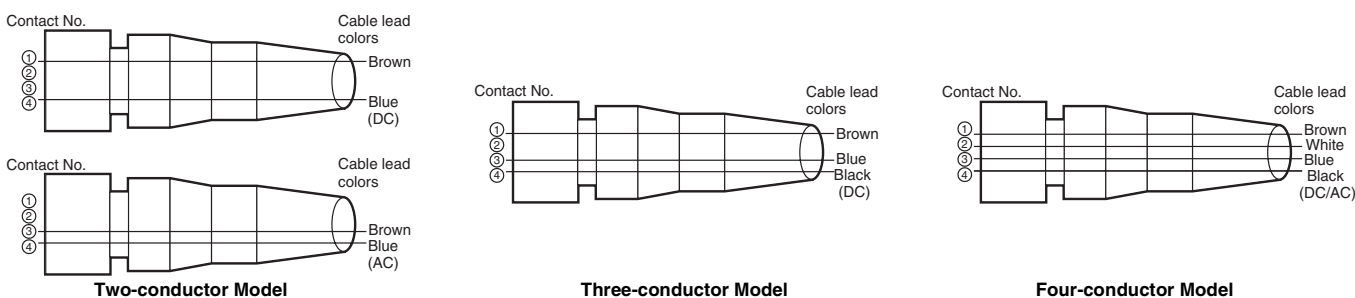
(Unit: mm)

Straight Connectors

CAD Data



Wiring Diagram

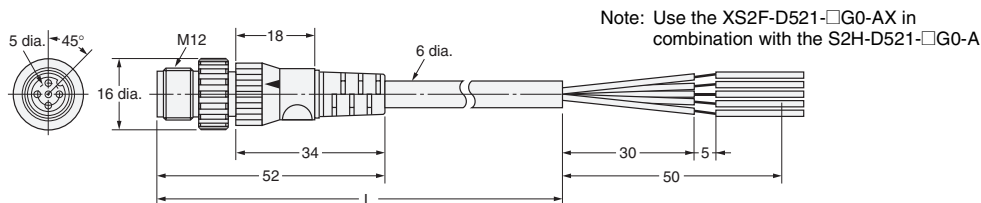
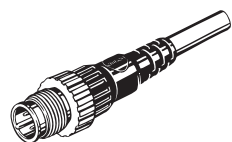


● Connectors on DC Cable (Five Poles) XS2H-D521-□G0-A

Dimensions

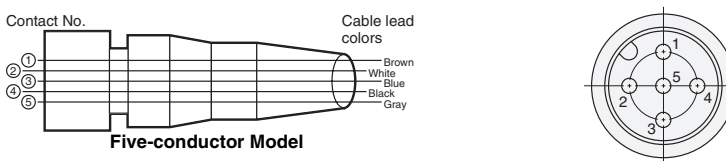
(Unit: mm)

Straight Connectors



Wiring Diagram

Pin Arrangements (Engagement Side)



Ordering Information

No. of connector poles	Cable connection direction	No. of cable conductors	Size	Cable length (m)	DC	AC	Minimum order	UL-listed
					Model	Model		
4	Straight	2	0.5mm ²	0.3	XS2H-D421-AA0-A	XS2H-A421-AB0-A	10	Yes
		3			XS2H-D421-AC0-A	---		
		4			XS2H-D421-A80-A	XS2H-A421-A90-A		
		2		XS2H-D421-CA0-A	XS2H-A421-CB0-A			
		3		XS2H-D421-CC0-A	---			
		4		XS2H-D421-C80-A	XS2H-A421-C90-A			
5	Straight	5	0.3 mm ²	0.3	XS2H-D521-AG0-A	---	10	Yes
				1	XS2H-D521-CG0-A	---		

- Sensor Controllers/
Related Products
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Meters
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Supplies
- Sensor
Controllers
- Connectors
- Peripheral
Devices

- XS2
/XW3A
- XS2
- XN2
- XW3B
- XW3A
- XS3

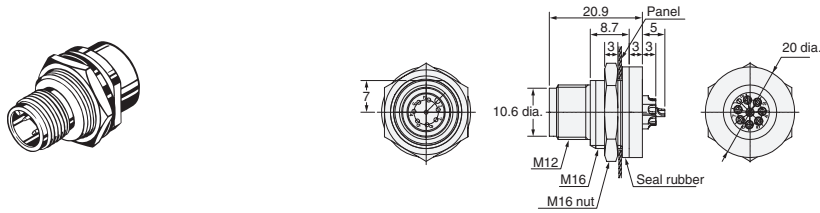
XS2

XS2 Sensor I/O Connectors on Cables (8-pole)

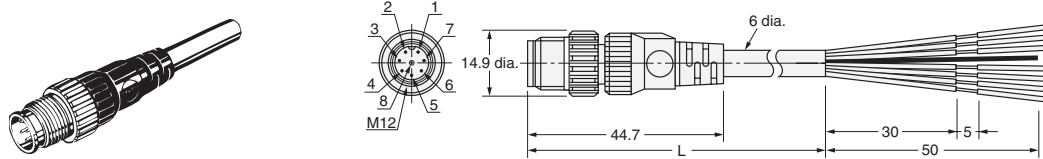
Dimensions

(Unit: mm)

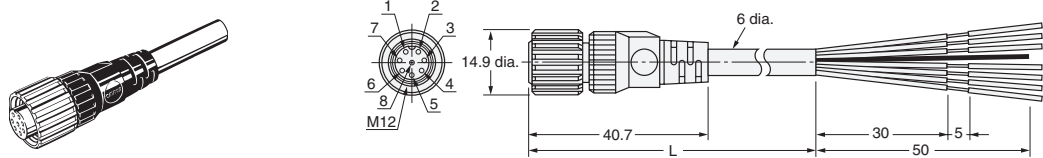
XS2M Panel-mounting Connector Plug (M12)



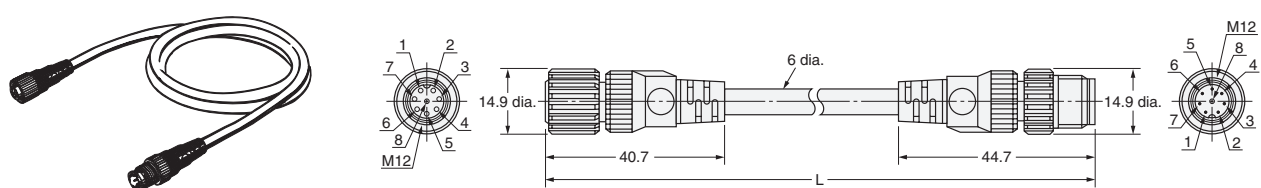
XS2H Plug on One Cable End (M12)



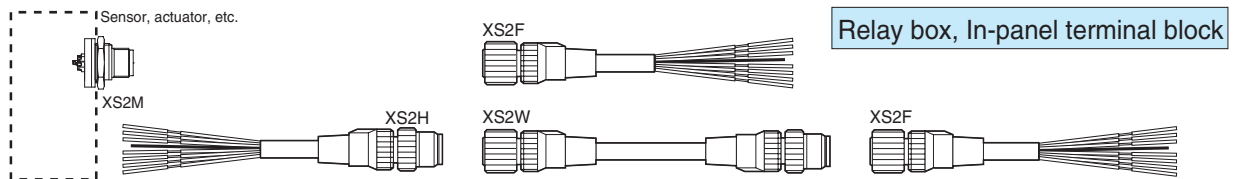
XS2F Socket on One Cable End (M12)



XS2W Plug and Socket on Cable Ends (M12)



Wiring Example



Ratings and Specifications

Rated current	1.5 A
Rated voltage	36 VDC
Contact resistance	40 MΩ max. (at 20 mVDC max. and 100 mA max.)
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength	1,000 VAC for 1 min (leakage current: 1 mA max.)
Degree of protection	IP67
Insertion durability	200 times min.
Operating temperature	-25 to 70°C

Materials and Finish

Contacts	Brass/nickel base, 0.4-μm gold-plating
Bracket, body	Brass/nickel plated
Pin Block	PBT resin (UL94V-0)/light gray
Cover	Polyester elastomer (UL94V-0)/black

Ordering Information

Connector type	Cable connection direction	Number of conductors	Cable length (m)	Model
Panel-mounting plug	Straight	8	---	XS2M-D824-4
Plug on one cable end			0.3	XS2H-D821-AH0-C
			1	XS2H-D821-CH0-C
Socket on one cable end			2	XS2F-D821-DH0-C
			5	XS2F-D821-GH0-C
Plug and socket on cable ends			2	XS2W-D821-DH1-C
			5	XS2W-D821-GH1-C

Pin Numbers and Cable Lead Colors

XS2F/XS2H/XS2W cable lead colors	Pin numbers							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	White	Brown	Green	Yellow	Gray	Pink	Blue	Shield

Sensor Controllers/
Related Products

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Supplies

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Controllers

Connectors

Peripheral
Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

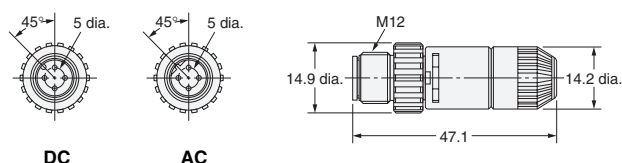
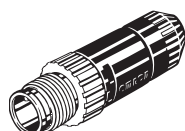
XS3

XS2G Crimping/Soldering Plug Assemblies

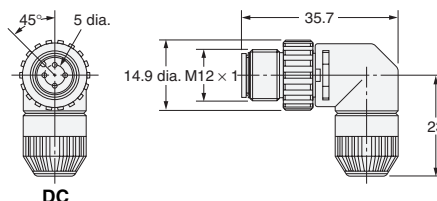
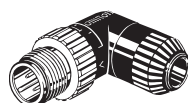
Dimensions

(Unit: mm)

XS2G-□4C□ (Crimping Model)
XS2G-□42□ (Soldering Model)
Straight Connectors



XS2G-D42□ (Soldering Model)
L-shaped Connectors



Ordering Information

Suitable cable dia. (mm)	Cable connection direction	Connection method	DC	AC	Minimum order
			Model	Model	
6-mm-dia. model (5 to 6 mm dia.)	Straight	Crimping	XS2G-D4C1	XS2G-A4C1	50
		Soldering	XS2G-D421	XS2G-A421	
4-mm-dia. model (4 to 5 mm dia.)	L-shaped	Soldering	XS2G-D422	---	
		Crimping	XS2G-D4C3	XS2G-A4C3	
	Straight	Soldering	XS2G-D423	XS2G-A423	
		L-shaped	Soldering	XS2G-D424	
3-mm-dia. model (3 to 4 mm dia.)	Straight	Crimping	XS2G-D4C5	XS2G-A4C5	
		Soldering	XS2G-D425	XS2G-A425	
	L-shaped	Soldering	XS2G-D426	---	

Note: Crimping plug contacts are sold separately.

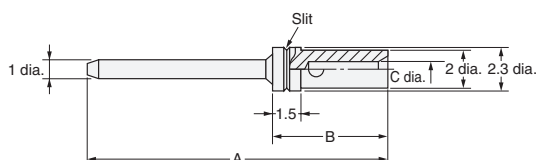
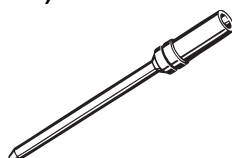
XS2U Crimping Pin for XS2G

Dimensions

(Unit: mm)

XS2U-312□
(Plug Pin)

Note: A Crimp Tool is required for crimping models. Refer to page 1205 for details.)



Dimensions

Model	Suitable conductor size (mm ²)	Dimension (mm)			No. of slits
		A	B	C	
XS2U-3121	0.18 to 0.3	20.0	6.1	0.8	1
XS2U-3122	0.5 to 0.75	20.1	6.2	1.3	0

Ordering Information

Suitable conductor size (mm ²)	Model	Minimum order
0.18 to 0.3	XS2U-3121	100
0.5 to 0.75	XS2U-3122	

Note: Orders are accepted in multiples of the minimum order.

Sensor Controllers/
Related Products

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Meters

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Sensor
Controllers

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Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

XS3

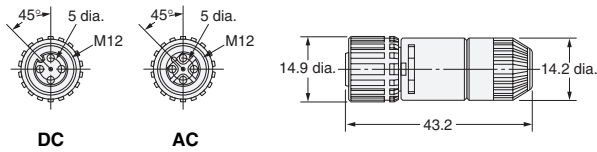
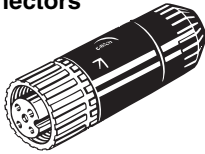
XS2

XS2C Crimping/Soldering Socket Assemblies

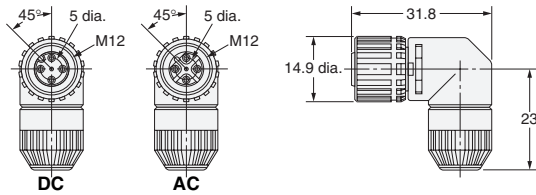
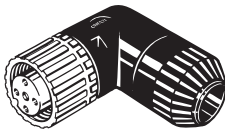
Dimensions

(Unit: mm)

XS2C-□4C□ (Crimping Model)
XS2C-□42□ (Soldering Model)
Straight Connectors



L-shaped Connectors



Ordering Information

Suitable cable dia. (mm)	Cable connection direction	Connection method	DC	AC	Minimum order
			Model	Model	
6-mm-dia. model (5 to 6 mm dia.)	Straight	Crimping	XS2C-D4C1	XS2C-A4C1	50
		Soldering	XS2C-D421	XS2C-A421	
	L-shaped	Crimping	XS2C-D4C2	XS2C-A4C2	
		Soldering	XS2C-D422	XS2C-A422	
4-mm-dia. model (4 to 5 mm dia.)	Straight	Crimping	XS2C-D4C3	XS2C-A4C3	
		Soldering	XS2C-D423	XS2C-A423	
	L-shaped	Crimping	XS2C-D4C4	XS2C-A4C4	
		Soldering	XS2C-D424	XS2C-A424	
3-mm-dia. model (3 to 4 mm dia.)	Straight	Crimping	XS2C-D4C5	XS2C-A4C5	
		Soldering	XS2C-D425	XS2C-A425	
	L-shaped	Crimping	XS2C-D4C6	XS2C-A4C6	
		Soldering	XS2C-D426	XS2C-A426	

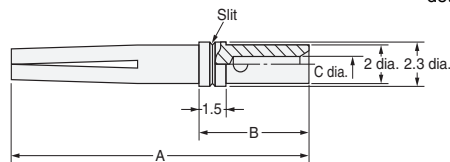
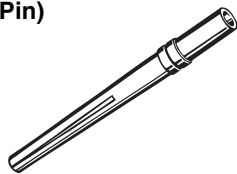
Note: Crimping plug contacts are sold separately.

XS2U Crimping Pin for XS2C

Dimensions

(Unit: mm)

XS2U-222□
(Socket Pin)



Note: A Crimp Tool is required for crimping models. Refer to page 1205 for details.)

Dimensions

Model	Suitable conductor size (mm ²)	Dimension (mm)			No. of slits
		A	B	C	
XS2U-2221	0.18 to 0.3	16.7	6.1	0.8	1
XS2U-2222	0.5 to 0.75	16.8	6.2	1.3	0

Ordering Information

Suitable conductor size (mm ²)	Model	Minimum order
0.18 to 0.3	XS2U-2221	100
0.5 to 0.75	XS2U-2222	

Note: Orders are accepted in multiples of the minimum order.

XS2G Screw-on Plug Assemblies

Dimensions

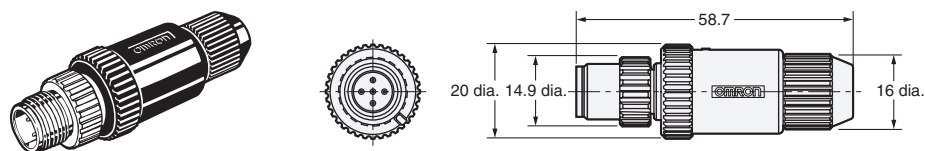
(Unit: mm)

XS2G-D5S7 (5-pole, Straight, Applicable Cable Outer Diameter: 8 mm)

XS2G-D5S9 (5-pole, Straight, Applicable Cable Outer Diameter: 7 mm)

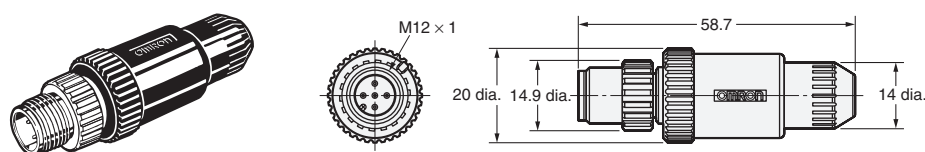
XS2G-D4S7 (4-pole, Straight, Applicable Cable Outer Diameter: 8 mm)

XS2G-D4S9 (4-pole, Straight, Applicable Cable Outer Diameter: 7 mm)



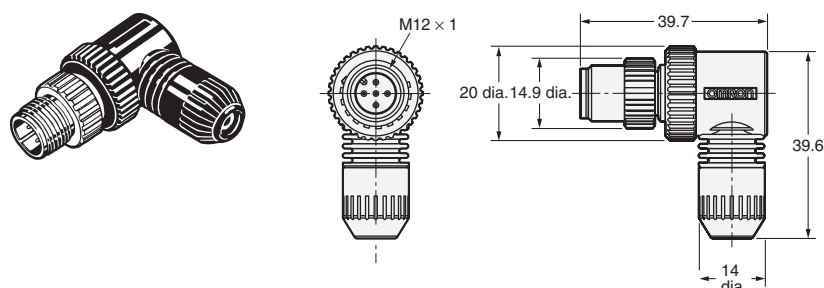
XS2G-D5S1 (5-pole, Straight, Applicable Cable Outer Diameter: 6 mm)

XS2G-D4S□ (4-pole, Straight, Applicable Cable Outer Diameter: 3, 4, or 6 mm)



XS2G-D5S2 (5-pole, L-shaped, Applicable Cable Outer Diameter: 6 mm)

XS2G-D4S□ (4-pole, L-shaped, Applicable Cable Outer Diameter: 3, 4, or 6 mm)



Ordering Information

No. of poles	Suitable cable dia. (mm)	Straight connectors (for DC)		L-shaped connectors (for DC)		Minimum order
		Model		Model		
5	8-mm-dia. model (7 to 8 mm dia.)	XS2G-D5S7		---		50
	7-mm-dia. model (6 to 7 mm dia.)	XS2G-D5S9		---		
	6-mm-dia. model (5 to 6 mm dia.)	XS2G-D5S1	XS2G-D5S2			
4	8-mm-dia. model (7 to 8 mm dia.)	XS2G-D4S7		---		
	7-mm-dia. model (6 to 7 mm dia.)	XS2G-D4S9		---		
	6-mm-dia. model (5 to 6 mm dia.)	XS2G-D4S1	XS2G-D4S2			
	4-mm-dia. model (4 to 5 mm dia.)	XS2G-D4S3	XS2G-D4S4			
	3-mm-dia. model (3 to 4 mm dia.)	XS2G-D4S5	XS2G-D4S6			

Note: 1. Orders are accepted in multiples of the minimum order.

2. XS2G Screw-on Plugs cannot be connected side-by-side to the CN1 and CN2 connectors of XS2R Y-Joint Sockets/Plugs.

Sensor Controllers/
Related Products

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Controllers

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Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

XS3

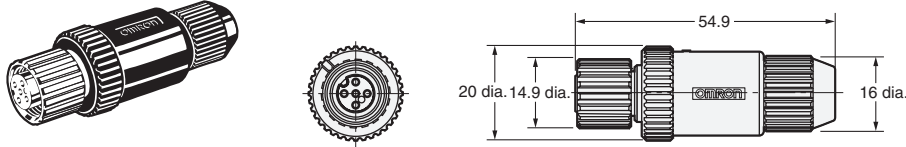
XS2

XS2C Screw-on Socket Assemblies

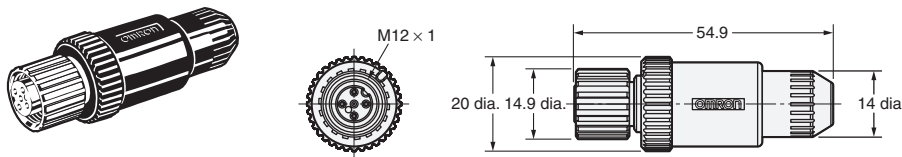
Dimensions

(Unit: mm)

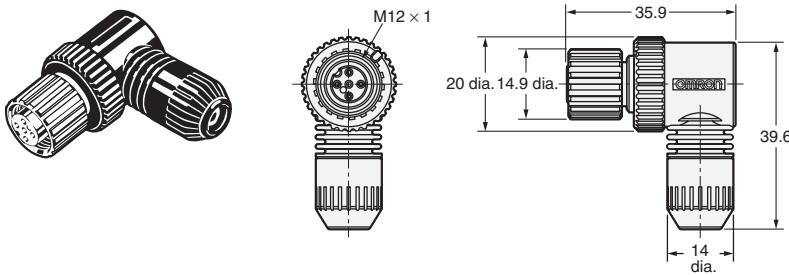
- XS2C-D5S7 (5-pole, Straight, Applicable Cable Outer Diameter: 8 mm)
- XS2C-D5S9 (5-pole, Straight, Applicable Cable Outer Diameter: 7 mm)
- XS2C-D4S7 (4-pole, Straight, Applicable Cable Outer Diameter: 8 mm)
- XS2C-D4S9 (4-pole, Straight, Applicable Cable Outer Diameter: 7 mm)



- XS2C-D5S1 (5-pole, Straight, Applicable Cable Outer Diameter: 6 mm)
- XS2C-D4S□ (4-pole, Straight, Applicable Cable Outer Diameter: 3, 4, or 6 mm)



- XS2C-D5S2 (5-pole, L-shaped, Applicable Cable Outer Diameter: 6 mm)
- XS2C-D4S□ (4-pole, L-shaped, Applicable Cable Outer Diameter: 3, 4, or 6 mm)



Ordering Information

Connectors	No. of poles	Suitable cable dia. (mm)	Straight connectors (for DC)		L-shaped connectors (for DC)		Minimum order
			Model		Model		
Peripheral Devices	5	8-mm-dia. model (7 to 8 mm dia.)	XS2C-D5S7		---		50
		7-mm-dia. model (6 to 7 mm dia.)	XS2C-D5S9		---		
		6-mm-dia. model (5 to 6 mm dia.)	XS2C-D5S1		XS2C-D5S2		
	4	8-mm-dia. model (7 to 8 mm dia.)	XS2C-D4S7		---		
		7-mm-dia. model (6 to 7 mm dia.)	XS2C-D4S9		---		
6-mm-dia. model (5 to 6 mm dia.)		XS2C-D4S1		XS2C-D4S2			
4-mm-dia. model (4 to 5 mm dia.)		XS2C-D4S3		XS2C-D4S4			
		3-mm-dia. model (3 to 4 mm dia.)	XS2C-D4S5		XS2C-D4S6		

Note: Orders are accepted in multiples of the minimum order.

Sensor Controllers/
Related Products

Digital Panel
Meters

Power
Supplies

Sensor
Controllers

Connectors

Peripheral
Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

XS3

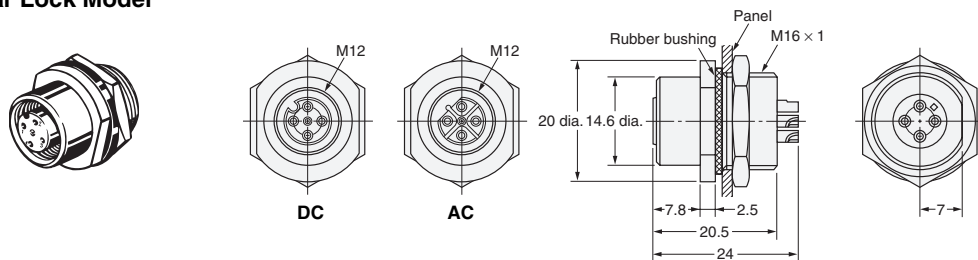
XS2P Panel-mounting Sockets for Terminal Boxes

Dimensions

(Unit: mm)

XS2P-□421-2 (with Solder Cup Pins)

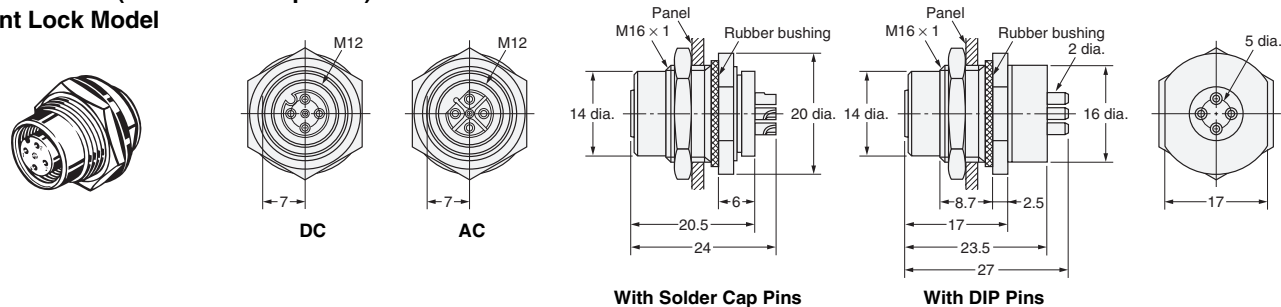
Rear Lock Model



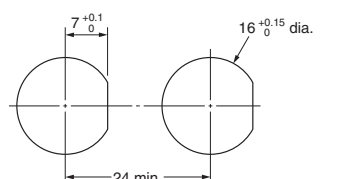
XS2P-□422-1 (with DIP Pins)

XS2P-□422-2 (with Solder Cup Pins)

Front Lock Model

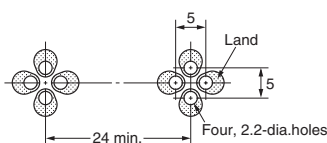


Panel Cutout Dimensions



Note: The panel thickness is 1 to 4 mm.

PCB-mounting Dimensions



Ordering Information

Lock method	Pin shape	DC	AC	Minimum order
		Model	Model	
Rear lock	Solder cup pin	XS2P-D421-2	XS2P-A421-2	50
Front lock	Solder cup pin	XS2P-D422-2	XS2P-A422-2	
	DIP pin	XS2P-D422-1	XS2P-A422-1	

Sensor Controllers/
Related Products

Digital Panel
Meters

Power
Supplies

Sensor
Controllers

Connectors

Peripheral
Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

XS3

XS2

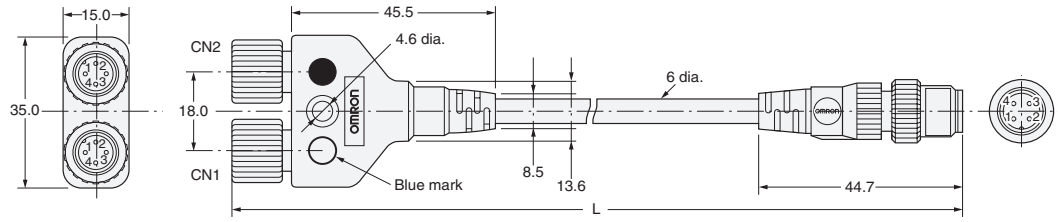
XS2R Y-Joint Plug/Socket Connectors

Dimensions

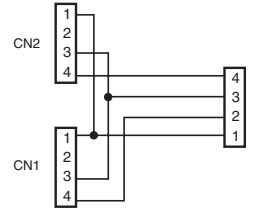
(Unit: mm)

XS2R-D426-□11-F

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

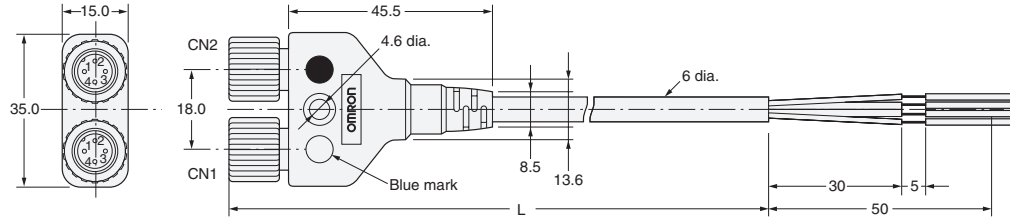


Internal Connections

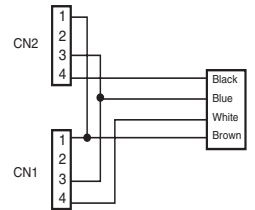


XS2R-D426-□10-F

Connectors on One Cable End (Y-Joint Plug/Socket)

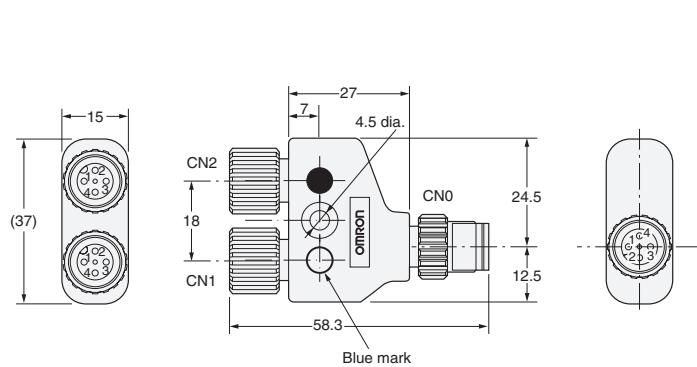


Internal Connections



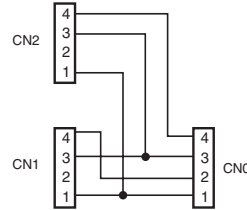
XS2R-D426-1

Y-Joint Plug/Socket without Cable

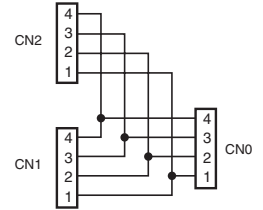


Internal Connections

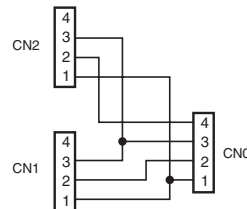
XS2R-D426-1



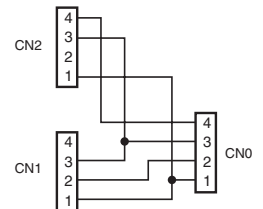
XS2R-D426-5



XS2R-D426-81



XS2R-D426-82



Sensor Controllers/
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Meters

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Sensor
Controllers

Connectors

Peripheral
Devices

Ordering Information

Type	Connector	DC		Minimum order	
		Cable length L (m)	Model		
With cable	Connectors on cable ends	0.5	XS2R-D426-B11-F	5	
		1	XS2R-D426-C11-F		
		2	XS2R-D426-D11-F		
		3	XS2R-D426-E11-F		
		Connector on one cable end	2		XS2R-D426-D10-F
			5		XS2R-D426-G10-F
Without cable	Y-Joint plug/socket	---	XS2R-D426-1	10	
		---	XS2R-D426-5		
		---	XS2R-D426-81		
		---	XS2R-D426-82		

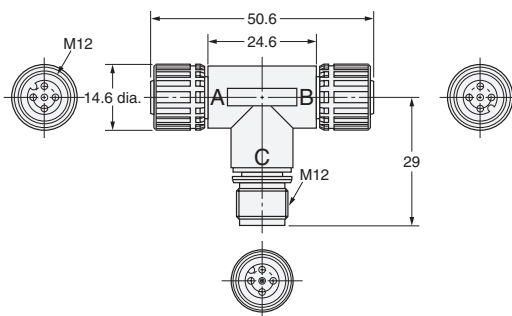
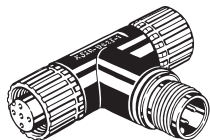
Note: XS2G Screw-on Plugs cannot be connected side-by-side to the CN1 and CN2 connectors.
Consider using crimping or soldering models. Refer to page 1195 for details.

XS2R T-Joint Plug/Socket Connectors

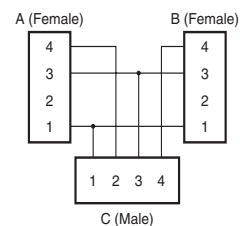
Dimensions

(Unit: mm)

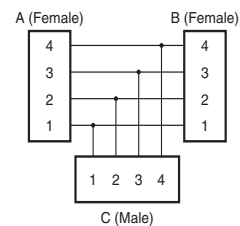
XS2R-D422-1
XS2R-D422-5
Aggregate Models



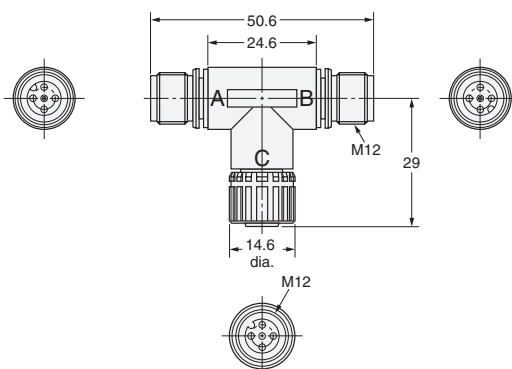
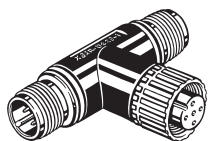
Internal Connections
XS2R-D422-1



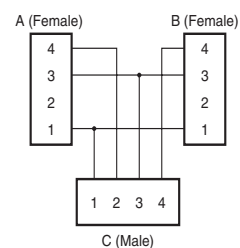
XS2R-D422-5



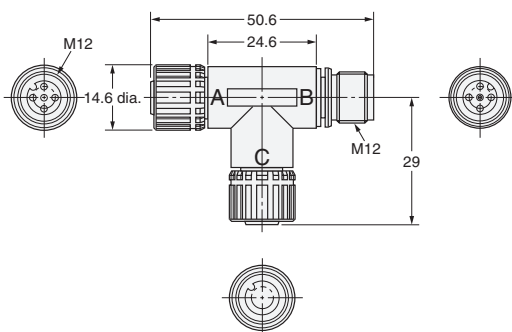
XS2R-D423-1
Bifurcated Model



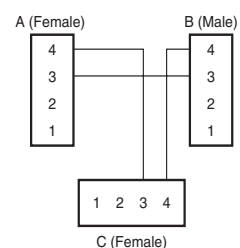
Internal Connections



XS2R-D424-1
Daisy-chain Model



Internal Connections



Ordering Information

Type	DC	Minimum order
	Model	
Aggregate model	XS2R-D422-1	20
	XS2R-D422-5	
Bifurcated model	XS2R-D423-1	
Daisy-chain model	XS2R-D424-1	

Sensor Controllers/
 Related Products

Digital Panel
 Meters

Power
 Supplies

Sensor
 Controllers

Connectors

Peripheral
 Devices

XS2
 /XW3A

XS2

XN2

XW3B

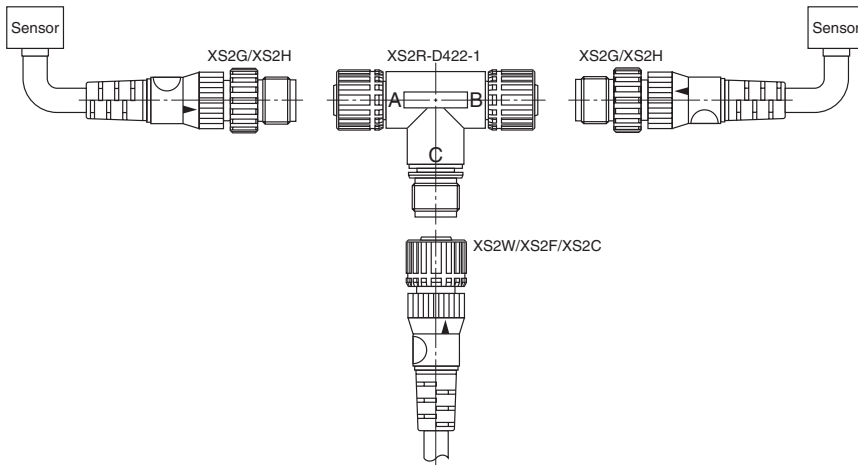
XW3A

XS3

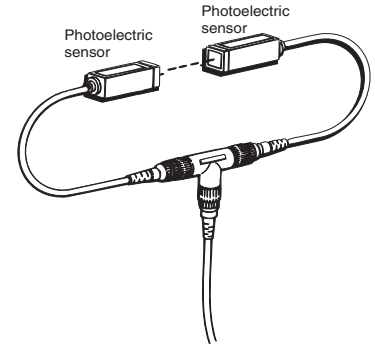
XS2

XS2R Application Examples

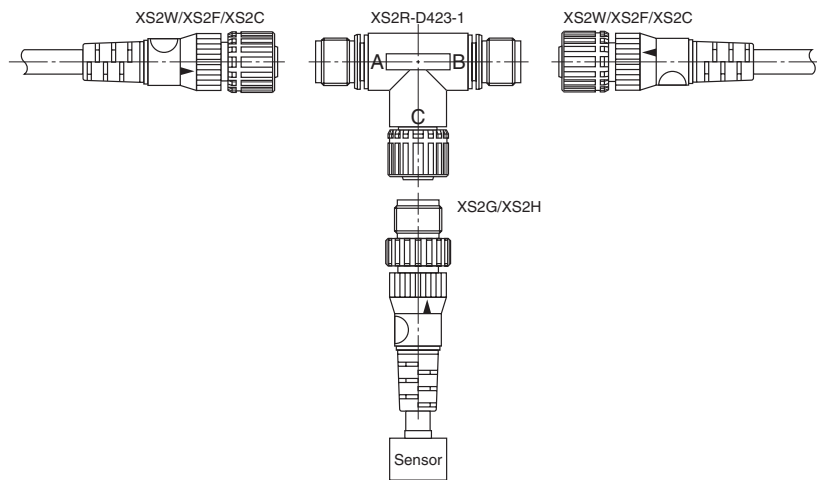
XS2R-D422-1 (Aggregate Model)



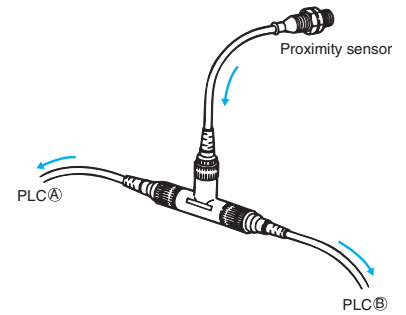
- A pair of Two-wire Sensors or Three-wire Sensors can be connected as shown in the illustration.
- The XS2R-D422-5 has feed-through connections, thus working as a connector for the extension cable.



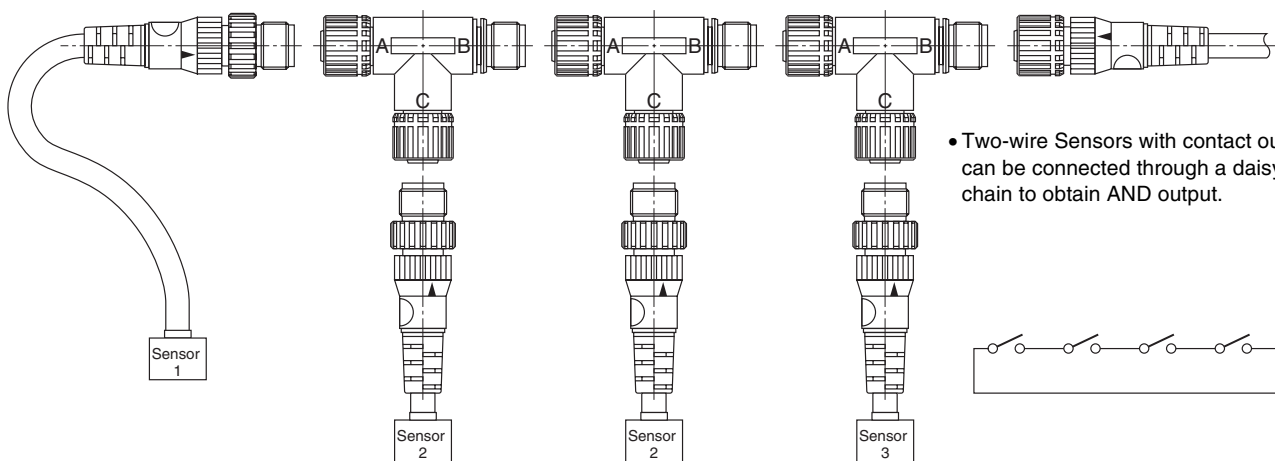
XS2R-D423-1 (Bifurcated Model)



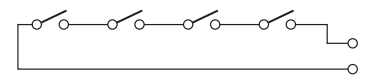
- Two or Three-wire Sensor signals can be bifurcated.



XS2R-D424-1 (Daisy Chain Model)



- Two-wire Sensors with contact output can be connected through a daisy chain to obtain AND output.



Precautions

Refer to *Warranty and Limitations of Liability* on page F-2.

Precautions for Correct Use

Do not use the product in atmospheres or environments that exceed product ratings.

- Before using the XS2R for Sensors, make sure that the wiring of the Sensors and the internal connections of the XS2R are correct.

Sensor Controllers/
Related Products

Digital Panel
Meters

Power
Supplies

Sensor
Controllers

Connectors

Peripheral
Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

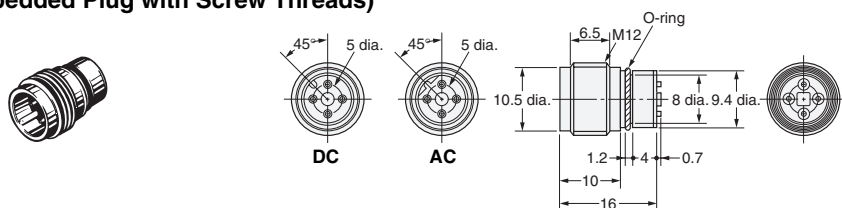
XS3

XS2M Sensor-embedded Plugs

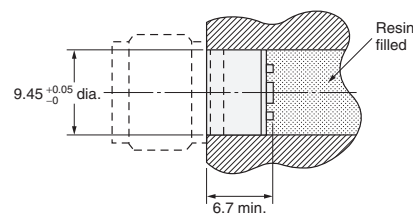
Dimensions

(Unit: mm)

XS2M-D421 (DC)
XS2M-A421 (AC)
(Embedded Plug with Screw Threads)

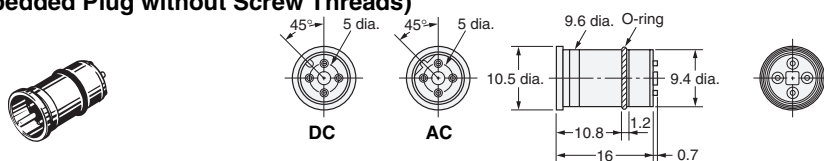


Mounted Dimensions

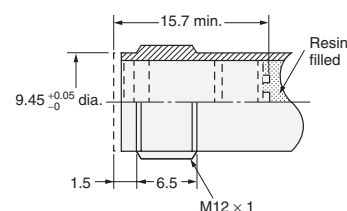


Note: After mounting, anchor the solder cups by injecting resin.

XS2M-D422 (DC)
XS2M-A422 (AC)
(Embedded Plug without Screw Threads)



Mounted Dimensions



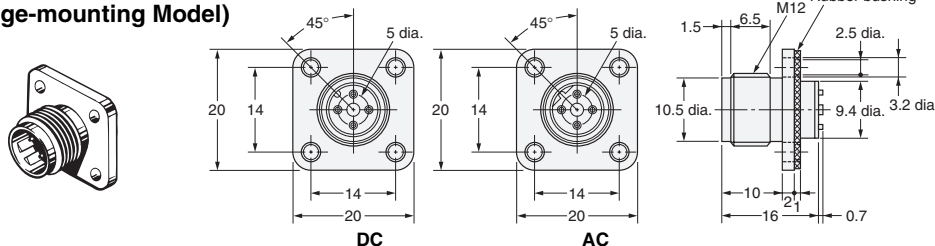
Note: After mounting, anchor the solder cups by injecting resin.

XS2M Panel-mounting Plugs

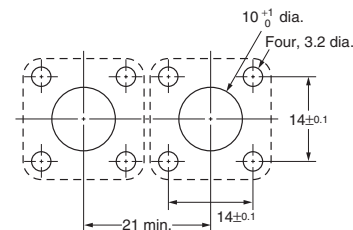
Dimensions

(Unit: mm)

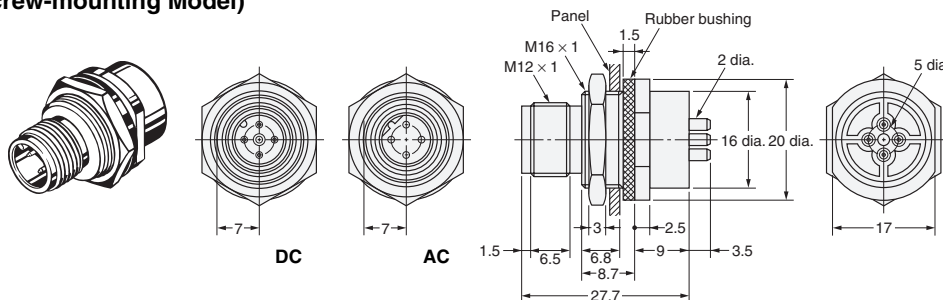
XS2M-D423 (DC)
XS2M-A423 (AC)
(Flange-mounting Model)



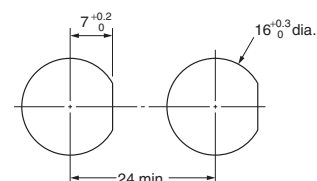
Mounted Dimensions



XS2M-□424-1 (With DIP Pins)
XS2M-□424-2 (With Solder Cup Pins)
(Screw-mounting Model)

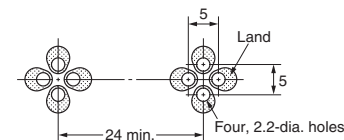


Mounted Dimensions



Note: The panel thickness is 1 to 4 mm.

PCB-mounting Dimensions



Sensor Controllers/
Related Products

Digital Panel
Meters

Power
Supplies

Sensor
Controllers

Connectors

Peripheral
Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

XS3

XS2

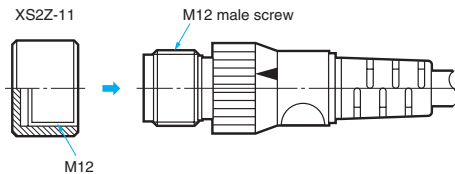
Ordering Information

Mounting method	Pin shape	DC	AC	Minimum order
		Model	Model	
Embedded with screw threads	Solder cup pin	XS2M-D421	XS2M-A421	50
Embedded with no screw threads		XS2M-D422	XS2M-A422	
Flange-mounting		XS2M-D423	XS2M-A423	
Screw-mounting	DIP pin	XS2M-D424-1	XS2M-A424-1	
	Solder cup pin X	XS2M-D424-2	XS2M-A424-2	

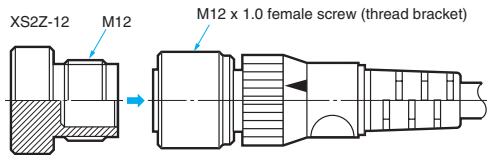
XS2 Connector Covers

Water-resistant Covers

XS2Z-11



XS2Z-12

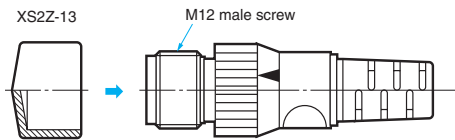


The Water-resistant Cover ensures IP67. When mounting the Water-resistant Cover to a Connector, be sure to apply a torque range between 0.39 and 0.49 N·m to tighten the Water-resistant Cover.

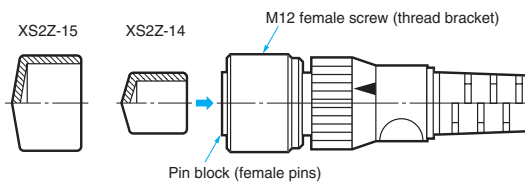
Model	Minimum order	Material	Suitable connector	
			Model	Mounting portion
XS2Z-11	50	Brass/nickel plated	XS2G/XS2H/XS2M/XS2R	M12 male screw
XS2Z-12			XS2C/XS2R/XS2F/XS2P/XW3A/XW3B	M12 female screw (thread bracket)

Dust Covers

XS2Z-13



XS2Z-15/XS2Z-14



The Dust Cover is for dust prevention and does not ensure IP67 degree of protection. When mounting the Dust Cover to a connector, be sure to press the Dust Cover onto the Connector until the Connector is fully inserted into the Dust Cover.

Model	Minimum order	Material	Suitable connector	
			Model	Mounting portion
XS2Z-13	50	Transparent polyvinyl chloride	XS2G/XS2H/XS2M/XS2R	M12 male screw
XS2Z-14			XS2C/XS2R/XS2F/XS2P/XW3A/XW3B	Pin block (female pins)
XS2Z-15		Red polyvinyl chloride		M12 female screw (thread bracket)

Sensor Controllers/
Related Products

Digital Panel
Meters

Power
Supplies

Sensor
Controllers

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Devices

XS2
/XW3A

XS2

XN2

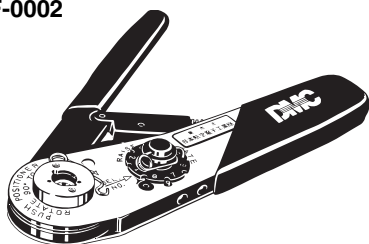
XW3B

XW3A

XS3

Tools

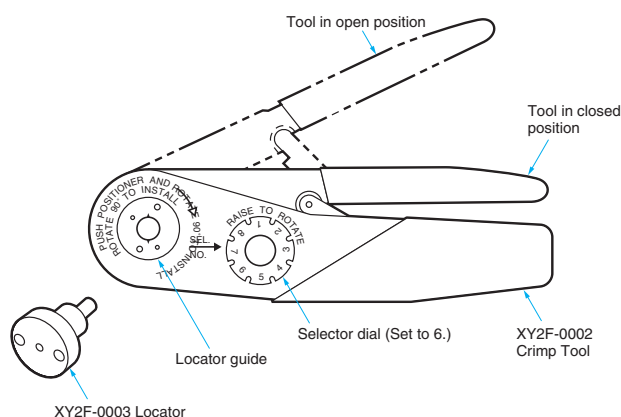
Crimp Tool XY2F-0002



Use the Crimp Tool to crimp a cable conductor to the XS2U Crimping Pin used with the XS2C or XS2G Crimping Connector.

- The XY2F-0002 Crimp Tool is DMC's AFM8 (M22520/2-01).
- Mount the XY2F-0003 Locator (sold separately) to the locator guide of the Crimp Tool with a screw provided with the XY2F-0003 Locator.

Locator XY2F-0003

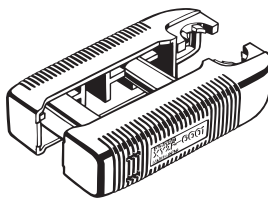


Model
XY2F-0002
XY2F-0003

Pin-block Extraction Tool XY2F-0001

XY2F-0001

Use this tool to extract a Pin Block from the covers in order to make wiring changes or corrections after the cover has been mounted to the pin block for Connector Assemblies (XS2C/XS2G, soldering/crimping).

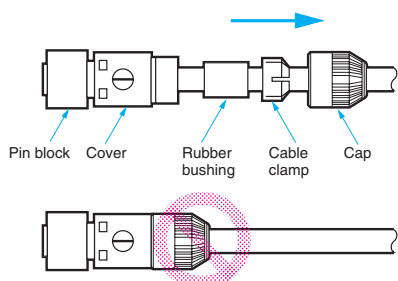


Model
XY2F-0001

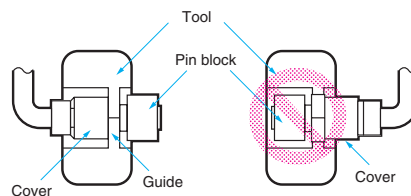
Extraction Procedure

(1) Disconnecting Components

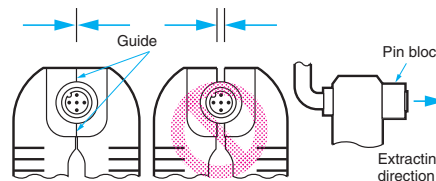
- Disconnect all components on the cap side from the cover.



- Make sure that the pin block is outside the Tool.

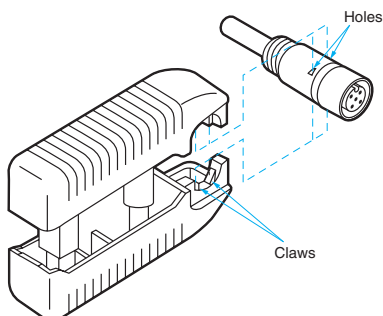


- Press the Tool so that the guides of the Tool are in close contact. Then pull the pin block straight.



(2) Extracting Pin Block

- Insert the claws of the Tool into the four holes of the cover.



Precautions for Correct Use

- The pin block must not be extracted from the same Connector more than 3 times, otherwise the proper degree of protection of the pin block or Connector will not be maintained.

Sensor Controllers/
Related Products

Digital Panel
Meters

Power
Supplies

Sensor
Controllers

Connectors

Peripheral
Devices

XS2
/XW3A

XS2

XN2

XW3B

XW3A

XS3

XS2

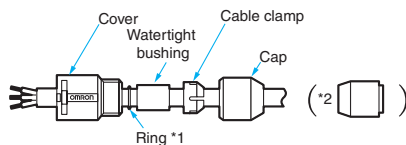
Assembly Procedure for XS2C/XS2G Connector Assemblies

(1) Connector and Cable External Diameters

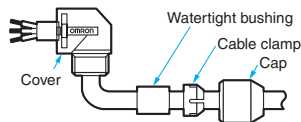
- Connectors for 6-, 4-, and 3-mm-diameter Cables (i.e., Cables that are 5 to 6, 4 to 5, and 3 to 4 mm in diameter respectively) are available. When assembling a Connector used with a cable, make sure that the external diameter of the Connector is suited to that of the cable.
- Connectors for 6-mm-diameter Cables use white cable clamps.
- Connectors for 4 and 3-mm-diameter Cables use black cable clamps.
- A watertight bushing for 6-mm-diameter Cable has no stripe, that for 4-mm-diameter Cable has a single stripe, and that for 3-mm-diameter Cable has two stripes.

(2) Component Insertion (Check that there are no missing parts.)

Straight Connectors



L-shaped Connectors



- *1. A ring is not required for 7-dia. and 8-dia. Connectors.
- *2. Insert the watertight bushing for 7-dia. and 8-dia. models in the direction shown in the diagram.

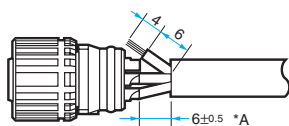
XS2C-D5S□ and XS2G-D5S□ 5-pole models include an insulation cap and insulation tube.

Note: The diagram is for a soldering/crimping terminal. The cover for screw-on models is different.

- As shown in the above illustration, connect the above components to the Cable with its end processed.

(3) Wiring (Processing Cable Ends)

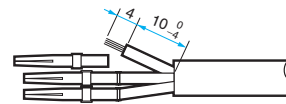
Soldering Connectors



- Strip 10 mm of the Cable sheath and 4 mm of each conductor.
- Before soldering conductors and solder cup pins together, solder-coat each of them.
- The following conditions are recommended for soldering each solder cup pin.
 - Soldering iron: 30 to 60 W
 - Soldering temperature: 280°C to 340°C.
 - Soldering period: 3 s max.
- The length marked *A should be 6.5 mm max., otherwise the proper degree of protection of the connector will not be maintained.

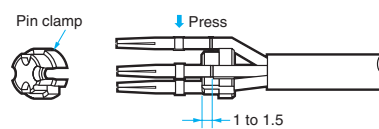
Crimping Connectors

Crimping



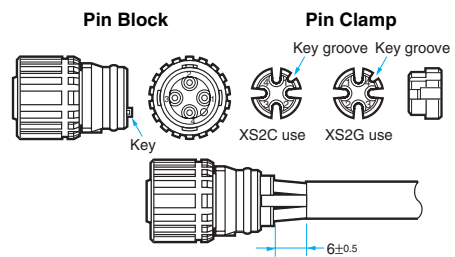
- Strip 14 mm of the Cable sheath and 4 mm of each conductor.
- Make sure that each conductor is not damaged and its end strands are not spread out.
- Mount the XY2F-0003 Locator to DMC's AFM8 (M25520/2-01) Crimp Tool, both of which are sold separately, and set the selector dial of the Crimp Tool to 6 for the XS2U-□□21 and to 7 for the XS2U-□□22.
- After mounting the crimping pins to the Locator, fully insert the conductors to the crimping pins.
- Squeeze the handle of the Crimp Tool to press-fit the conductors to the crimping pins. (Squeeze the handle firmly until the handle automatically returns to the release position.)

Wiring



- After press-fitting the conductors to the pins, insert the pins into the pin clamp as shown in the illustration. Then make sure that the lead colors correspond to the pin clamp numbers that are identical to the connector pin numbers.

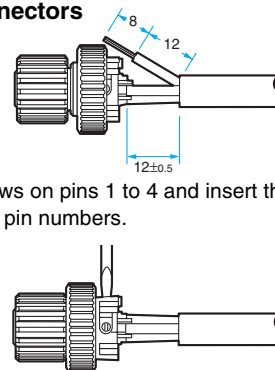
Insertion



- Tentatively insert the pins to the pin block holes so that the key on the pin block will coincide with the key groove on the pin clamp. Then insert the cable along with the pin clamp.

Cable End Processing

Four-pole Connectors



- Loosen the screws on pins 1 to 4 and insert the conductors according to the pin numbers.

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XS2

XN2

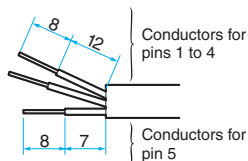
XW3B

XW3A

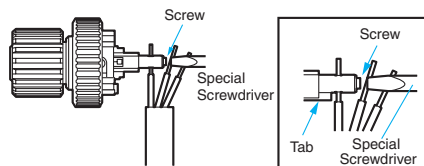
XS3

Five-pole Connectors

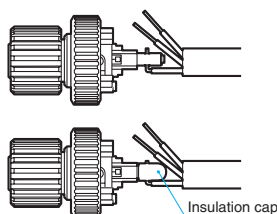
- Strip the cable sheath for a total of 15 mm and strip the conductor covering for 8 mm for the conductor to connect to pin 5.



- Connect the conductor to pin 5 (in the center) first.
- Insert the conductor from the side of the hold with the tab and tighten the screw securely (tightening torque: 0.15 to 0.2 N·m), and then cut off the excess wire with wire cutters.



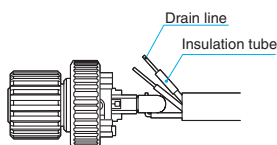
- Bend the cable as shown below, attached the enclosed insulation cap, and then strip the other conductors.



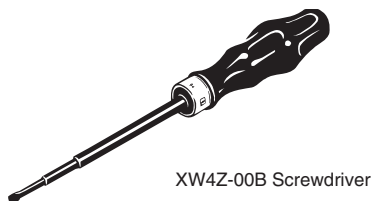
- Connect the conductors to pins 1 to 4.

Connecting Shielded Cables to Five-pole Connectors

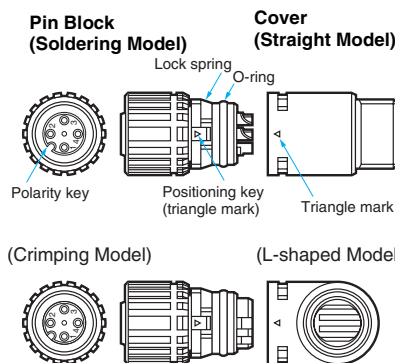
- Place the insulation tub on the drain line of the shield and connect to the terminal.
- Tighten the screw and then check visually to see if there is insulation between the conductors.



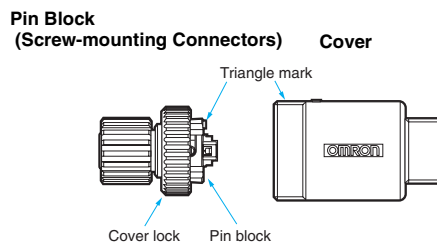
* When tightening the screws, use the dedicated XW4Z-00B Screwdriver that matches with the screw-slot dimensions.



(4) Inserting Pin Block



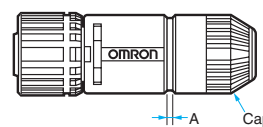
- Mount the cover to the pin block so that the triangle mark on the pin block will coincide with the triangle mark on the cover.
- If the cover is used for an L-shaped model, the relationship between the position of the polarity key on the engaged side and cable connection direction will be determined by the direction in which the positioning key is inserted into the cover, which can be rotated by 90°.
- Fully insert the positioning key until the positioning key is hidden by the casing.



- Align the triangular marks on the pin block and cover and insert the pin block into the cover.
- Press them together firmly (0.39 to 0.49 N·m) until the pin block does not come out of the cover.

(5) Mounting Cap

- After mounting the cover to the pin block and the cover snaps into place, tighten the cap securely by hand within a torque of 0.39 and 0.49 N·m.



- After fully tightening the cap, length A should be approximately one of the following according to the cable external diameter and the Connector model.

Connector	Cable external diameter (mm)			
	6 mm	5 mm	4 mm	3 mm
For 6-mm-dia. cable	1	0	---	---
For 4-mm-dia. cable	---	2	1	---
For 3-mm-dia. cable	---	---	2	1

(6) After Assembly

- Confirm the insulation between conductors after completing assembly.

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XS3

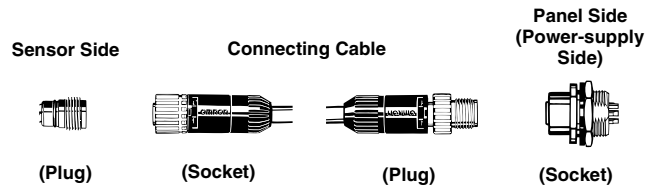
XS2

Recommended Cables

When connecting a commercially available cable to a connector assembly, use a cable with an outside diameter of 3 to 6 mm and conductor sizes of 0.18 to 0.75 mm² for crimping connectors and 0.5 mm² maximum for soldering connectors.

Connector Arrangement

For safety, when constructing a connection system between a Sensor and panel with a connector, make sure that the connector plug is on the Sensor side and the connector socket is on the panel side (i.e., the female pins are located on the power-supply side).



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XW3B

XW3A

XS3

Safety Precautions

Refer to *Warranty and Limitations of Liability* on page F-2.

Precautions for Correct Use

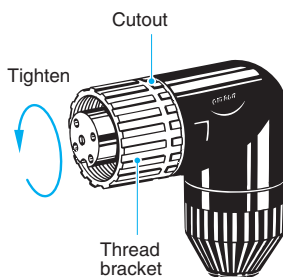
Do not use the product in atmospheres or environments that exceed product ratings.

Tightening Cap (Connector Assemblies)

- (1) Do not use pliers to tighten caps, otherwise the caps may be damaged. Be sure to tighten each cap by hand within a torque range between 0.39 and 0.49 N·m.
- (2) If caps are not tightened securely, the Connectors may not maintain their proper degree of protection (i.e., IP67) or the caps may become loose due to vibration.

Connector Connection and Disconnection

- Always turn OFF the power supply before connecting or disconnecting connectors.
- Do not hold the cable part when disconnecting Connectors.
- Connectors mating with sockets must be fully inserted into the sockets. Tighten the thread brackets carefully so that the threads will not be damaged.
- Fully tighten thread brackets within a torque range between 0.39 and 0.49 N·m and be sure that the threads of the opposite parts are hidden by the thread brackets.
- When disconnecting Connectors, be sure to loosen the thread brackets first. Do not loosen the caps.
- Thread brackets must be loosened in the cutout direction.



Degree of Protection

- Do not impose external force continuously on the joints of pin blocks and covers, otherwise the Connectors may not keep its proper degree of protection (i.e., IP67).
- The degree of protection of connectors (IP67) is not for a fully watertight structure. Do not use them underwater.
- Connectors are of resin mold construction. Do not impose excessive force on them.

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