

OMRON

XS5 Smartclick

Round Water-resistant Connectors

XW3D Smartclick

Connector Terminal Boxes

Simple, Twist-and-Click Connection.
Meet the Next-generation
M12 Smartclick Connector!

New Assembly Connectors Added to the Lineup.
Many Sensors for Easier Application.

NEW New Compatible Limit Switches Added to the Series.



realizing

The simple, Smartclick XS5 Connector is compared to screw-type M12 connectors.

A simple twist is all it takes to connect the Smartclick XS5, making it an ideal next-generation M12 connector. It's also easy to introduce to existing facilities because it takes only 1/4 the time of ordinary wiring processes, and it's compatible with conventional, screw-type connectors.

The Smartclick connector solves the problems of pre

1

Problem

It's troublesome to screw the connectors together.



It's a twist-and-click connection.

An innovative new lock structure makes connection extremely simple. The lock mechanism is internal, so it will no longer become jammed by sputtered fluids or dust. Also, the use of a movable lock bolt makes it possible to connect the Smartclick XS5 to a screw-type M12 connector.

All combinations are connectable.

	XS5 Smartclick Plug Connector	M12 plug connector
XS5 Smartclick Socket Connector	Twist-and-click connection	Screw connection
M12 socket connector	Screw connection	Screw connection

2

Problem


There's nothing to tell you that it's connected.



The Smartclick XS5 "clicks" to tell you it's connected.

A positive clicking feel tells you for sure that the Connector is securely locked.



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

completely compatible with conventional

previous screw-type connectors.

3

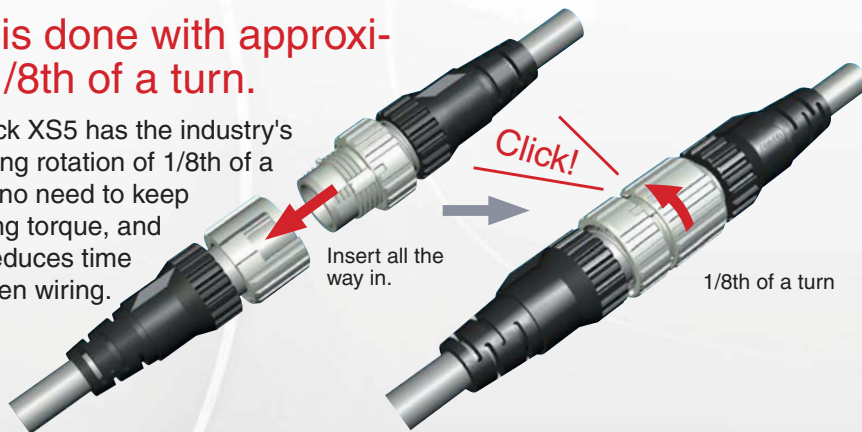
Problem

It's difficult to keep track of locking torque values.

Solution

Locking is done with approximately 1/8th of a turn.

The Smartclick XS5 has the industry's shortest locking rotation of 1/8th of a turn. There's no need to keep track of locking torque, and this greatly reduces time and effort when wiring.



4

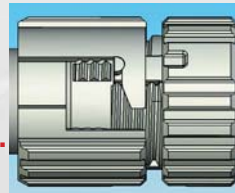
Problem

The connection sometimes vibrates loose.

Solution

A bayonet lock mechanism is used.

By using a bayonet mechanism, which is a common locking method, the Smartclick XS5 eliminates any concerns about loosening.




Round Water-resistant Connectors

XS5

Round Water-resistive Smartclick Connectors That Reduce Installation Work

- A newly developed lock mechanism that is compatible with round 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 M12 connectors.
- A full line-up of models is planned.
- Connectors with Cables are UL approved.

 Refer to *Safety Precautions* on page 20.



 Smartclick

Ratings and 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	100 N/15 s (for cable diameter of 6 mm)
Lock operating force	0.1 N·m to 0.25 N·m
Ambient operating temperature range	–25 to 70°C

Recommended Cables

Cable outer diameter (mm)		Core sizes		
		Crimping models	Soldering models	Screw-on models
for 8 dia.	7 to 8 dia.	Two types of contacts are available. 0.18 to 0.3 mm ² 0.5 to 0.75 mm ²	0.5 mm ² max.	0.18 to 0.75 mm ²
for 7 dia.	6 to 7 dia.			
for 6 dia.	5 to 6 dia.			
for 4 dia.	4 to 5 dia.			
for 3 dia.	3 to 4 dia.			

Connection Combinations

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

⊗ : Connected by twisting.

○ : Connected by screwing.

Note: The XS□M and XS□P cannot mate with each other.

 Smartclick is a registered trademark of the OMRON Corporation.

XS5W

Connectors Connected to Cable, Socket and Plug on Cable Ends

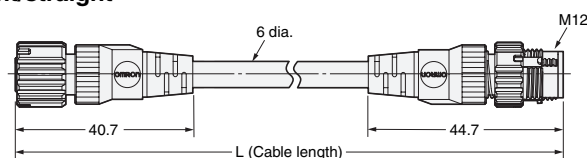
- Vibration-proof Robot Cable
- Oil-resistant Polyurethane Cable

XS5W-D42□-□81-F
XS5W-D42□-□81-P

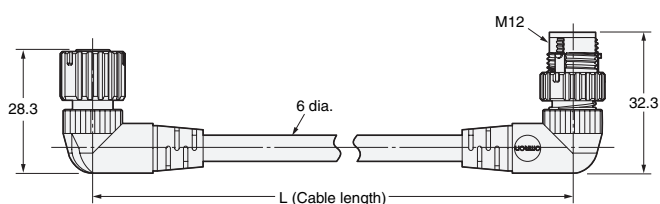
Dimensions

(Unit: mm)

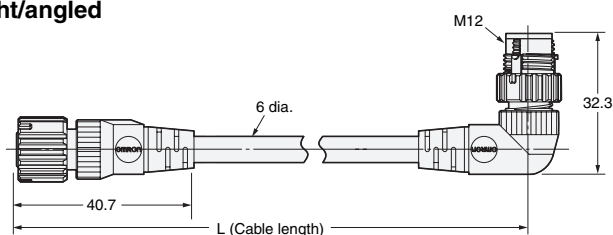
Straight/straight



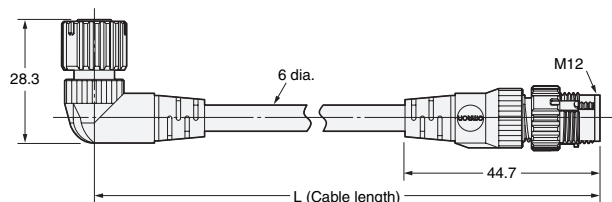
Angled/angled



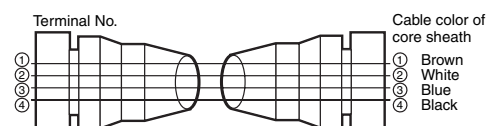
Straight/angled



Angled/straight



Wiring Diagram for 4 Cores



Note: Oil-resistant Polyurethane Cables (XS5W-D42□-□81-P) have black covers. Vibration-proof Robot Cables (XS5W-D42□-□81-F) have warm gray covers.

XS5

Model Number Legend

XS5W-D421-81-

1 2 3 4 5 6 7 8 9

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

1. Type

W: Connector connected to cable, plug on cable ends

2. 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/straight
2: Angled/angled
3: Straight (XS5F)/angled (XS5H)

4: Angled (XS5F)/straight (XS5H)

6. Cable Length

- C: 1 m D: 2 m E: 3 m
G: 5 m J: 10m

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: Vibration-proof Robot Cable
P: Oil-resistant Polyurethane Cable

Ordering Information

Cable specifications	Cable length L (m)	Straight/straight	Angled/angled	Minimum order	UL
		Model			
Vibration-proof Robot Cable	1	XS5W-D421-C81-F	---	10	Yes
	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 specifications	Cable length L (m)	Straight/angled	Angled/straight	Minimum order	UL
		Model			
Vibration-proof Robot Cables	2	XS5W-D423-D81-F	XS5W-D424-D81-F	5	Yes
	5	XS5W-D423-G81-F	XS5W-D424-G81-F		

XS5F

Connector Connected to Cable, Socket on One Cable End

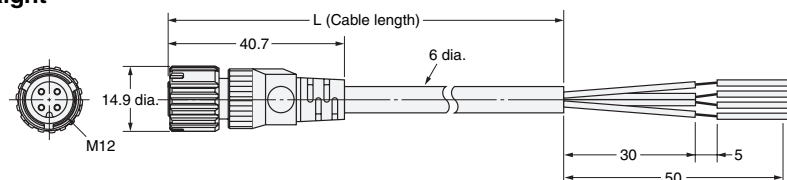
- Vibration-proof Robot Cable
- Oil-resistant Polyurethane Cable

XS5F-D42□-□80-F
XS5F-D42□-□80-P

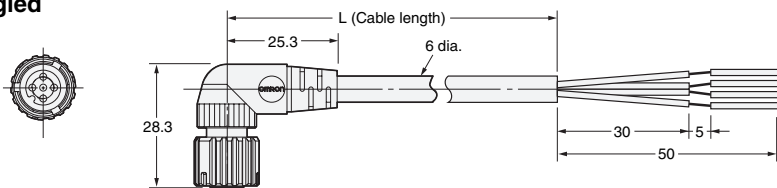
Dimensions

(Unit: mm)

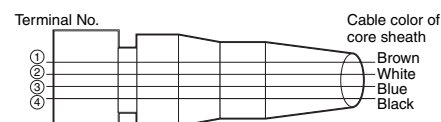
Straight



Angled



Wiring Diagram for 4 Cores



Note: Oil-resistant Polyurethane Cables (XS5F-D42□-□80-P) have black covers. Vibration-proof Robot Cables (XS5F-D42□-□80-F) have warm gray covers.

Model Number Legend

XS5F-D42□-□80-□
1 2 3 4 5 6 7 8 9

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

1. Type

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

2. 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

C: 1 m D: 2 m E: 3 m
G: 5 m J: 10 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: Vibration-proof Robot Cable
P: Oil-resistant Polyurethane Cable

Ordering Information

Cable specifications	Cable length L (m)	Straight Connectors	Angled Connectors	Minimum order	UL
		Model			
Vibration-proof Robot Cable	1	XS5F-D421-C80-F	XS5F-D422-C80-F	10	Yes
	2	XS5F-D421-D80-F	XS5F-D422-D80-F	5	
	3	XS5F-D421-E80-F	XS5F-D422-E80-F		
	5	XS5F-D421-G80-F	XS5F-D422-G80-F		
	10	XS5F-D421-J80-F	XS5F-D422-J80-F	1	
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	

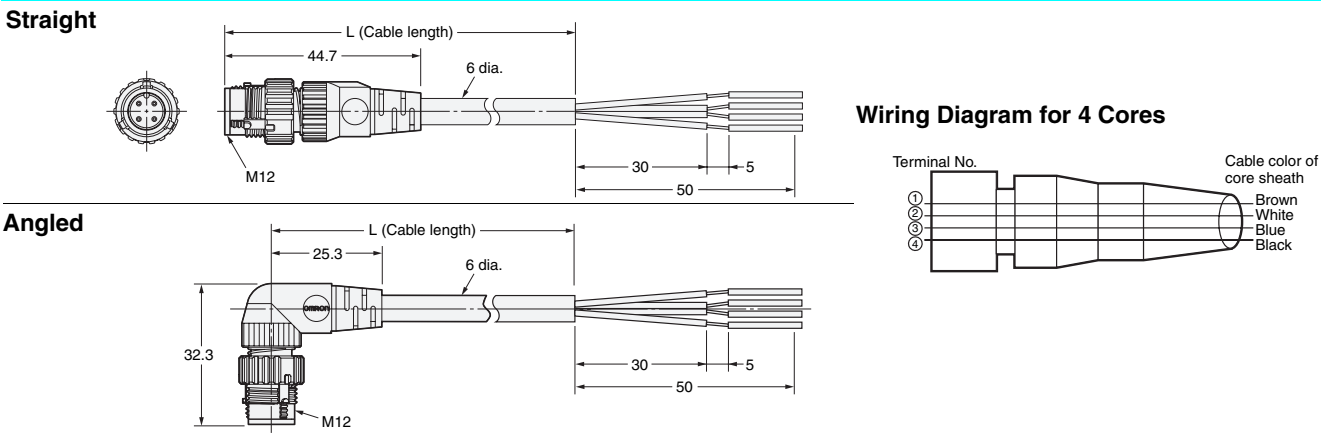
XS5H Connector Connected to Cable, Plug on One Cable End

- Vibration-proof Robot Cable
- Oil-resistant Polyurethane Cable

XS5H-D42□-□80-F

XS5H-D42□-□80-P

Dimensions (Unit: mm)



Note: Oil-resistant Polyurethane Cables (XS5H-D42□-□80-P) have black covers. Vibration-proof Robot Cables (XS5H-D42□-□80-F) have warm gray covers.

Model Number Legend

XS5H-D42□-□80-□
1 2 3 4 5 6 7 8 9

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

- 1. Type**
H: Connector connected to cable, plug on one cable end

2. 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 C: 1 m D: 2 m
G: 5 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: Vibration-proof Robot Cable
P: Oil-resistant Polyurethane Cable

Ordering Information

Cable specifications	Cable length L (m)	Straight Connectors	Angled Connectors	Minimum order	UL
		Model			
Vibration-proof Robot Cable	0.3	XS5H-D421-A80-F	XS5H-D422-A80-F	10	Yes
	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	
	5	XS5H-D421-G80-P	XS5H-D422-G80-P		

XS5G Assembly Connector Plugs

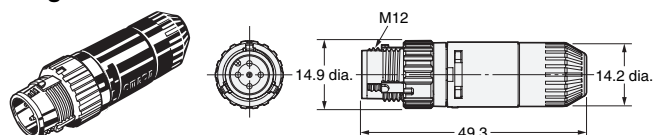
Dimensions

(Unit: mm)

XS5G-D4C□ (Crimping Model)

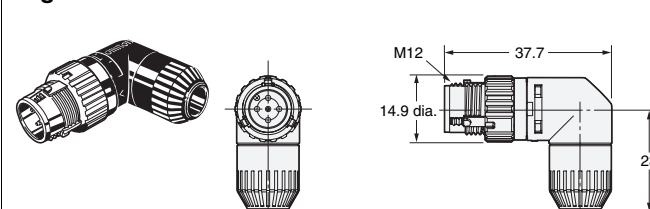
XS5G-D42□ (Soldering Model)

Straight Connectors



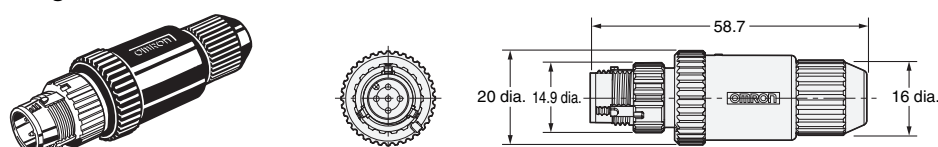
XS5G-D42□ (Soldering Model)

Angled Connectors



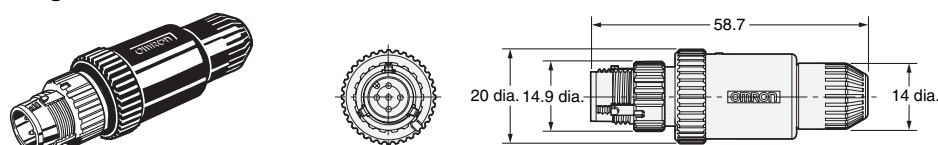
XS5G-D□S□ (Screw-on Connectors, Applicable Cable Outer Diameter: 7 or 8 mm)

Straight Connectors



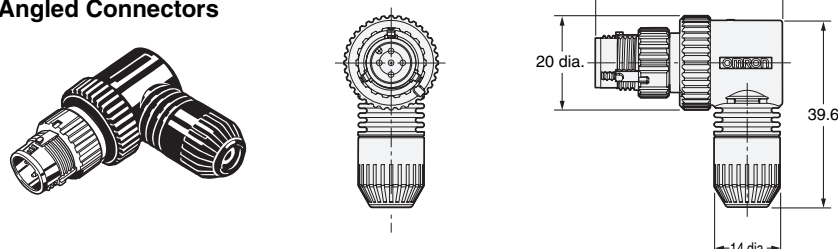
XS5G-D□S□ (Screw-on Connectors, Applicable Cable Outer Diameter: 3, 4, or 6 mm)

Straight Connectors



XS5G-D□S□ (Screw-on Connectors)

Angled Connectors



Ordering Information

No. of poles	Connection method	Suitable cable dia. (mm)	Straight Connectors	Angled Connectors	Minimum order
			Model		
4	Crimping	6 mm (5 to 6)	XS5G-D4C1	---	50
		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: XS5G Screw-on Plugs cannot be connected to side by side to the CN1 and CN2 connectors of XS2R or XS5R Y-Joint Sockets/Plugs.

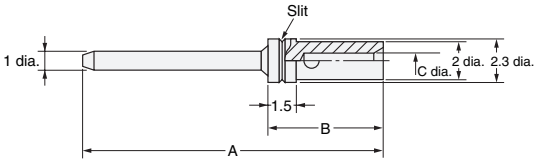
XS5U (Crimping Pin for XS5G)

Dimensions

(Unit: mm)

XS5U-312□
Plug Pin

* A special tool must be used for crimping. For details, refer to page 16.



Dimensions					
Model	Suitable core size (mm ²)	Dimension (mm)			No. of slits
		A	B	C	
XS5U-3121	0.18 to 0.3	22.6	6.1	0.8	1
XS5U-3122	0.5 to 0.75	22.7	6.2	1.3	0

Ordering Information

Suitable core size (mm ²)	Model	Minimum order
0.18 to 0.3	XS5U-3121	100
0.5 to 0.75	XS5U-3122	

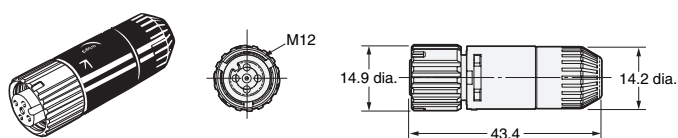
Note: Orders are accepted in multiples of the minimum order.

XS5C Assembly Connector Sockets

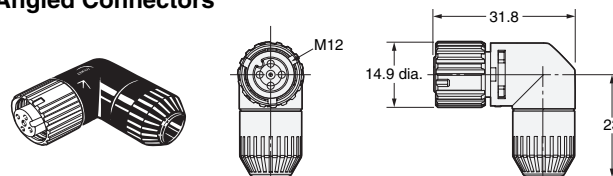
Dimensions

(Unit: mm)

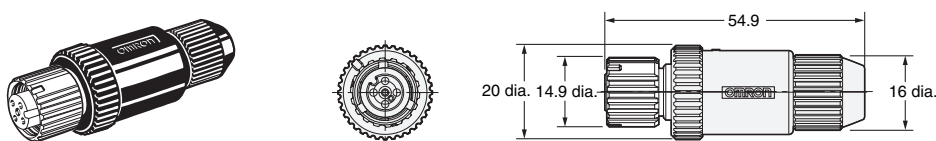
XS5C-D4C□ (Crimping Model)
XS5C-D42□ (Soldering Model)
Straight Connectors



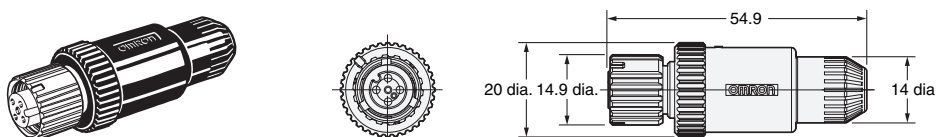
XS5C-D4C□ (Crimping Model)
XS5C-D42□ (Soldering Model)
Angled Connectors



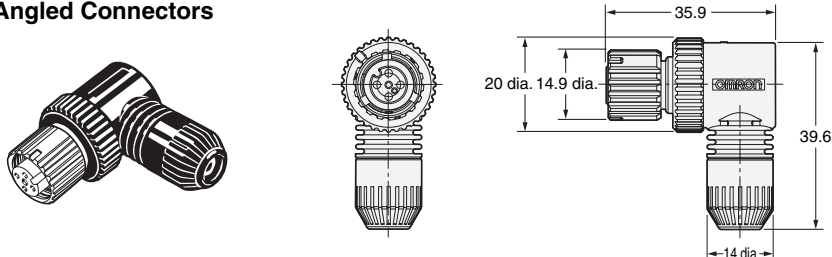
XS5C-D□S□ (Screw-on Connectors, Applicable Cable Outer Diameter: 7 or 8 mm)
Straight Connectors



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



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



Ordering Information

No. of poles	Connection method	Suitable cable dia. (mm)	Straight Connectors	Angled Connectors	Minimum order
			Model		
4	Crimping	6 mm (5 to 6)	XS5C-D4C1	XS5C-D4C2	50
		4 mm (4 to 5)	XS5C-D4C3	XS5C-D4C4	
		3 mm (3 to 4)	XS5C-D4C5	XS5C-D4C6	
	Soldering	6 mm (5 to 6)	XS5C-D421	XS5C-D422	
		4 mm (4 to 5)	XS5C-D423	XS5C-D424	
		3 mm (3 to 4)	XS5C-D425	XS5C-D426	
	Screw-on	6 mm (5 to 6)	XS5C-D4S1	XS5C-D4S2	
		4 mm (4 to 5)	XS5C-D4S3	XS5C-D4S4	
		3 mm (3 to 4)	XS5C-D4S5	XS5C-D4S6	
		8 mm (7 to 8)	XS5C-D4S7	---	
	7 mm (6 to 7)	XS5C-D4S9	---		
5	Screw-on	6 mm (5 to 6)	XS5C-D5S1	---	
		4 mm (4 to 5)	XS5C-D5S3	---	
		3 mm (3 to 4)	XS5C-D5S5	---	
		8 mm (7 to 8)	XS5C-D5S7	---	
		7 mm (6 to 7)	XS5C-D5S9	---	

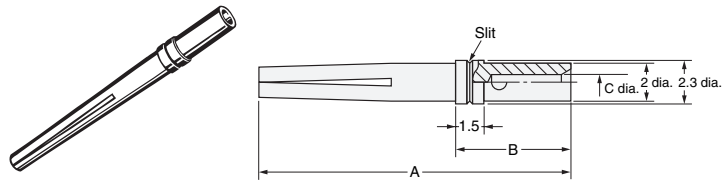
XS5U (Crimping Pin for XS5C)

Dimensions

(Unit: mm)

XS5U-222□
Socket Pin

* A special tool must be used for crimping. For details, refer to page 16.



Dimensions					
Model	Suitable core size (mm ²)	Dimension (mm)			No. of slits
		A	B	C	
XS5U-2221	0.18 to 0.3	16.7	6.1	0.8	1
XS5U-2222	0.5 to 0.75	16.8	6.2	1.3	0

Ordering Information

Suitable core size (mm ²)	Model	Minimum order
0.18 to 0.3	XS5U-2221	100
0.5 to 0.75	XS5U-2222	

Orders are accepted in multiples of the minimum order.

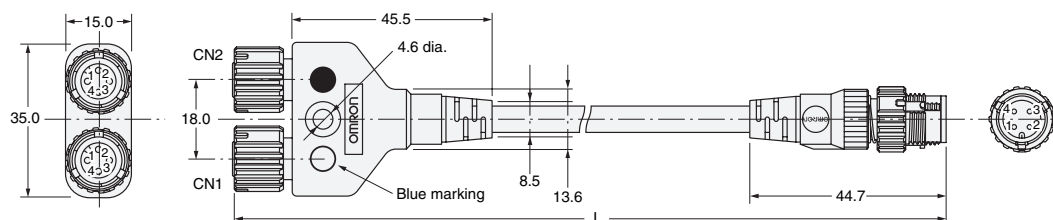
XS5R Y-Joint Plug/Socket Connectors

Dimensions

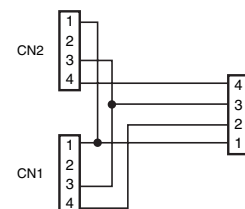
(Unit: mm)

XS5R-D426-□11-F

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

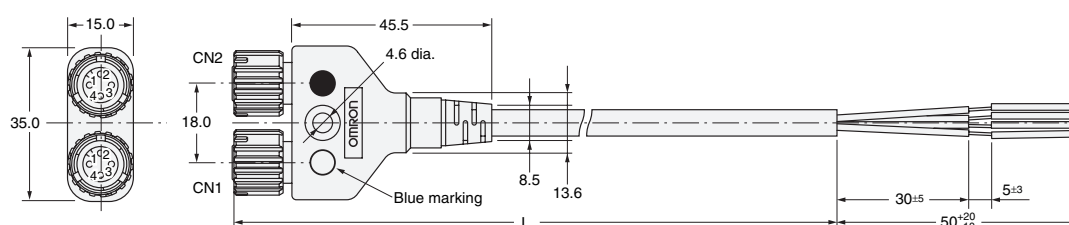


Wiring Diagram

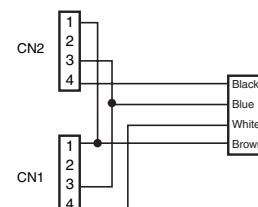


XS5R-D426-□10-F

Connectors on One Cable End (Y-Joint Socket)

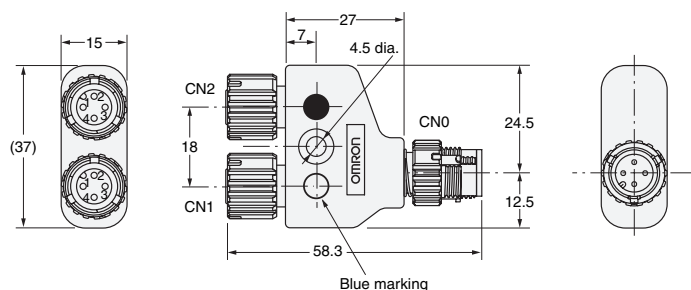


Wiring Diagram



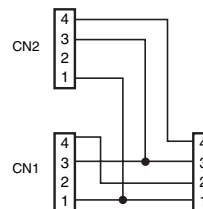
XS5R-D426-□

Y-Joint Plug/Socket without Cable

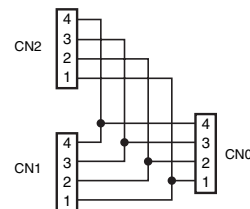


Wiring Diagram

XS5R-D426-1



XS5R-D426-5



Ordering Information

Cable	Connector	Cable length (m)	Model	Minimum order
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	
	Connector on one cable end	2	XS5R-D426-D10-F	5
		5	XS5R-D426-G10-F	
Cable	Connector	Cable length (m)	Model	Minimum order
With no cable	Y-Joint Plug/Socket	—	XS5R-D426-1	10
			XS5R-D426-5	

Note 1. Ask your OMRON representative about other specifications.

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

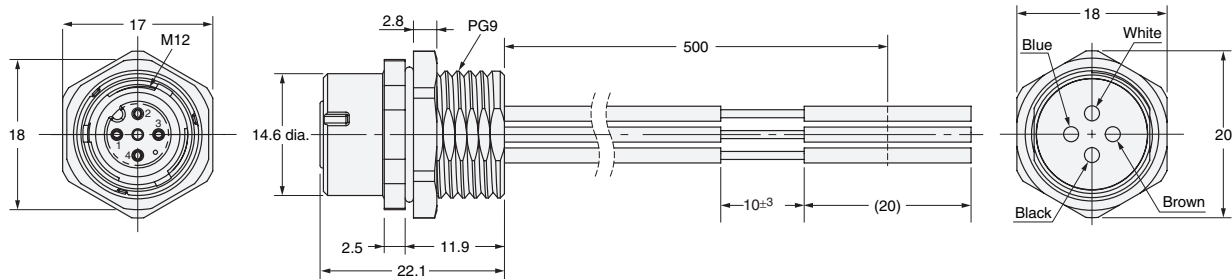
XS5P Panel-mounting Sockets



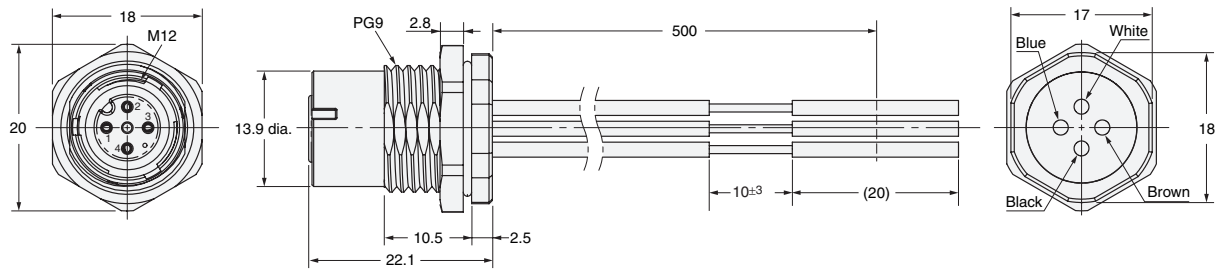
Dimensions

(Unit: mm)

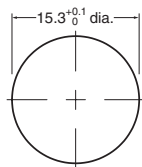
XS5P-D426-5 Panel-mounting Sockets with Rear Locks



XS5P-D427-5 Panel-mounting Sockets with Front Locks



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	Minimum order
With cable	Rear lock	0.5	XS5P-D426-5	10
	Front lock		XS5P-D427-5	

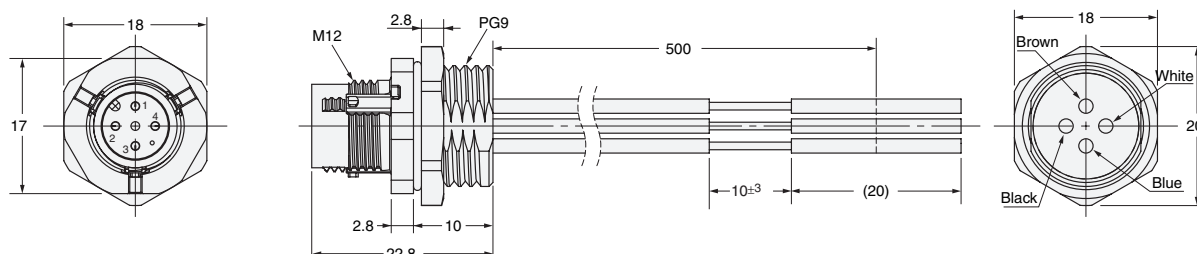
XS5M Panel-mounting Plugs

Dimensions

(Unit: mm)

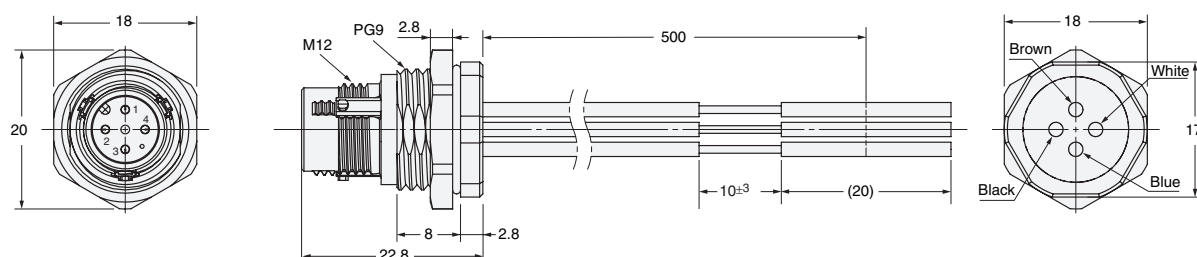
XS5M-D426-5

Panel-mounting Plugs with Rear Locks

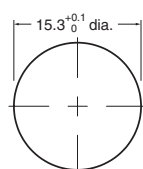


XS5M-D427-5

Panel-mounting Plugs with Front Locks



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

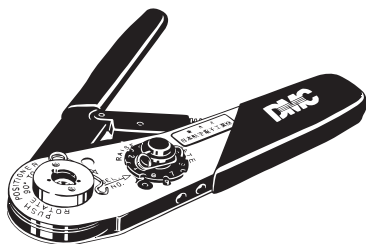
Wire Specifications

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	Minimum order
With cable	Rear lock	0.5	XS5M-D426-5	10
	Front lock		XS5M-D427-5	

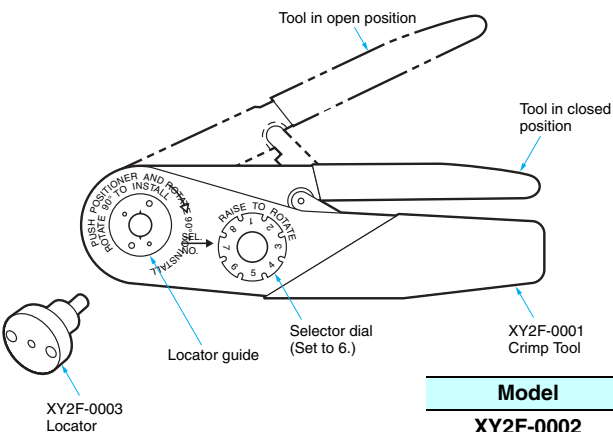
Crimp Tool
XY2F-0002



Use the Crimp Tool to crimp a cable core to the XS5U or XS2U Crimping Pin used with the XS□C or XS□G 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.

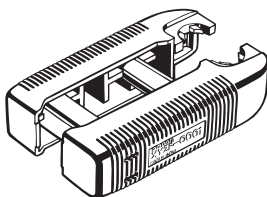
Locator
XY2F-0003



Model
XY2F-0002
XY2F-0003

Pin-block Extraction Tool
XY2F-0001

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 (XS□C/XS□G, soldering/crimping).

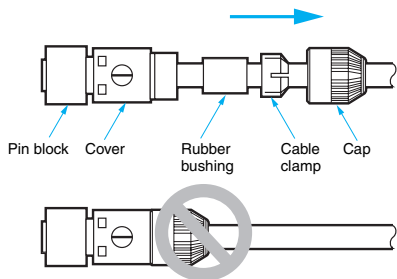


Model
XY2F-0001

Extraction Procedure

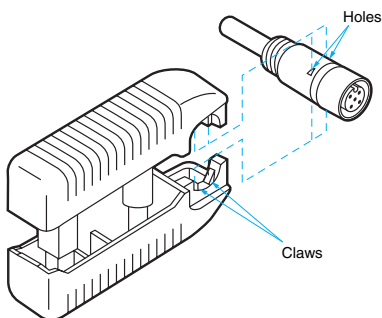
(1) Disconnecting Components

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

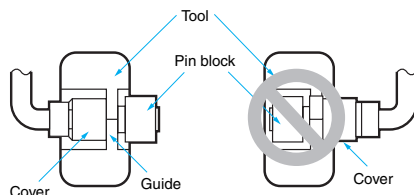


(2) Extracting Pin Block

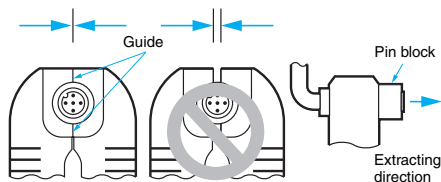
- Insert the claws of the Tool into the four holes of the cover.



- 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.



Precaution for Safe 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.

Assembly Procedure for XS5C/XS5G 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.

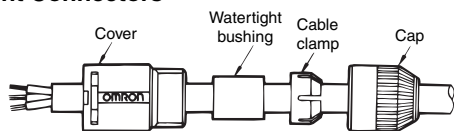
A watertight bushing for 6-mm-diameter Cable has no stripe, that for 4-mm-diameter Cable has a single stripe, and that for 3-mm-diameter Cable has two stripes.

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

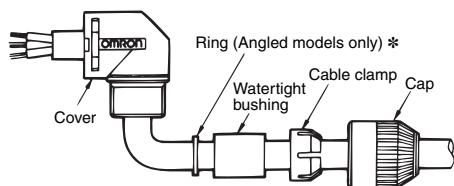
(2) Component Insertion

Crimping/Soldering Connectors

Straight Connectors



Angled Connectors

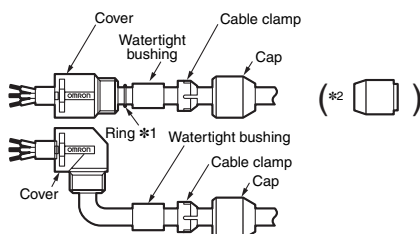


* A ring is not required for Screw-on Connectors.

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

Screw-on Connectors

Confirm that you have all of the required parts.

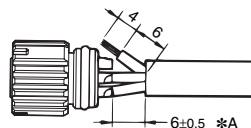


Insulation caps and insulation tubes are included with 5-pole Connectors (XS2C-D5S□ and XS2G-D5S□).

- *1. Rings are not required with 7-mm and 8-mm cables.
- *2. Insert the waterproof bushing for 7-mm and 8-mm cables in the direction shown in the diagram.

(3) Wiring (Processing Cable Ends)

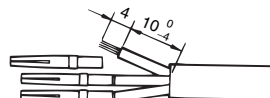
Soldering Connectors



- Strip 10 mm of the Cable sheath and 4 mm of each core.
- Before soldering cores 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.

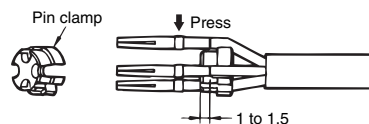
Crimping Connectors

Crimping



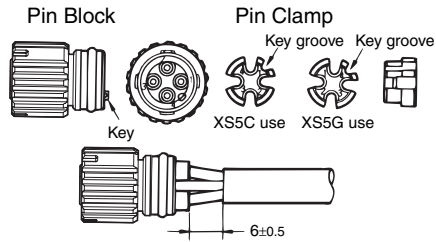
- Strip 14 mm of the Cable sheath and 4 mm of each core.
- Make sure that each core is not damaged and its end strands are not spread out.
- Mount the XY2F-0003 Locator to XY2F-0002 Crimping Tool, both of which are sold separately, and set the selector dial of the Crimping Tool to 6 for the XS5U-□□21 and to 7 for the XS5U-□□22.
- After mounting the crimping pins to the Locator, fully insert the cores to the crimping pins.
- Squeeze the handle of the Crimp Tool to press-fit the cores to the crimping pins. (Squeeze the handle firmly until the handle automatically returns to the release position.)

Wiring



- After press-fitting the cores 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

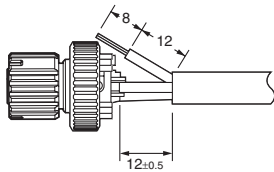


- Tentatively insert the pins to the pin block holes so that the key on the pin block will coincide with the key groove on the pin clamp. Then insert the cable along with the pin clamp.

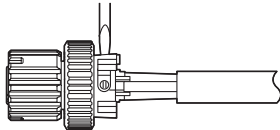
Screw-on Connectors

Cable End Processing

• Four-pole Connectors



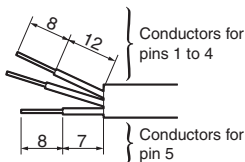
- Loosen the screws on pins 1 to 4 and insert the cores according to the pin numbers.



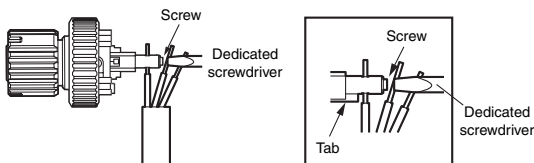
- Use the dedicated Screwdriver (XW4Z-00B)* and tighten the screws securely so that the cores do not pull out (tightening torque: 0.15 to 0.2 N·m).

• Five-pole Connectors

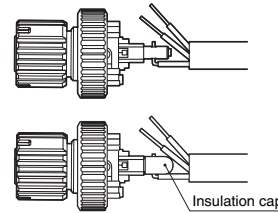
- Strip the cable sheath for a total of 15 mm and strip the core covering for 8 mm for the core to connect to pin 5.



- Connect the core to pin 5 (in the center) first.
- Insert the core 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.



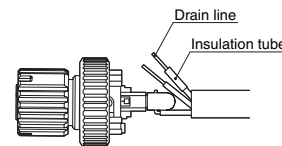
- Bend the cable as shown below, attached the enclosed insulation cap, and then strip the other cores.



- Connect the cores to pins 1 to 4.

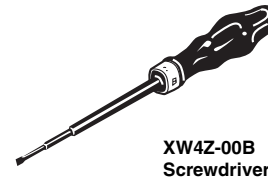
Connecting Shielded Cables to Five-pole Connectors

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



- Connect the cores to pins 1 to 4.

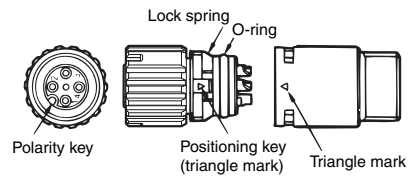
- * When tightening the screws, use the dedicated XW4Z-00B Screwdriver that matches with the screw-slot dimensions.



(4) Inserting Pin Block

Pin Block (Soldering Model)

Cover (Straight Model)



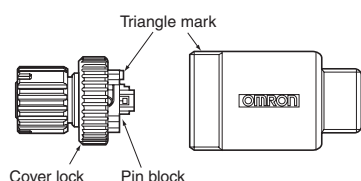
(Crimping Model)

(Angled Model)



- 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 Angled 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.

Pin Block (Screw-mounting Connectors)

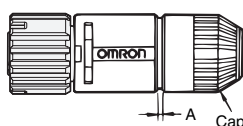


- Align the triangular marks on the pin block and cover and insert the pin block into the cover.
- Press them together firmly (0.39 to 0.49 N·m) until the pin block does not come out of the cover.

(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.

Note: If the cap is not tightened securely enough, the degree of protection (IP67) may not be maintained or vibration may cause the cap to become loose. Do not tighten the cap with pliers or similar tools; they may damage the cap.



- 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

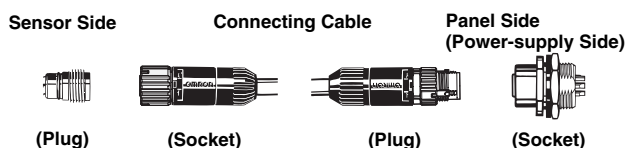
- Confirm the insulation between cores after completing assembly.

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 core sizes of 0.18 to 0.75 mm² for crimping connectors and 0.5 mm² maximum for soldering connectors.

Connector Arrangement

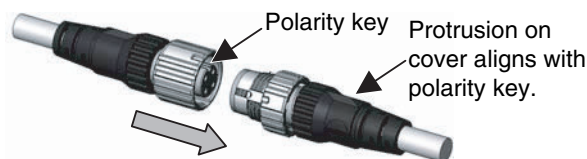
For safety, when constructing a connection system between a Sensor and panel with a connector, make sure that the connector plug is on the Sensor side and the connector socket is on the panel side (i.e., the female pins are located on the power-supply side).



Connecting the XS5

1. Connecting the XS5 Plug and Socket

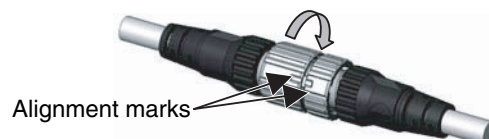
- Align the projection on the plug cover with the polarity key on the socket, then insert the plug all the way in.



- 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.

Safety Precautions

Precautions for 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 or XS2Z-14/15 Dust Cover.

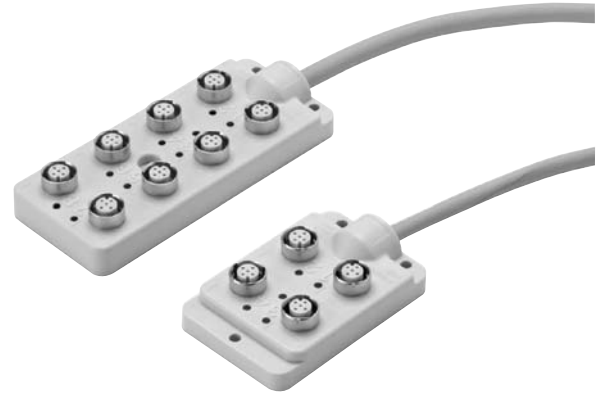
[illegible]

Connector Terminal Boxes

XW3D

Simple Wiring of Sensor Actuators

- Greatly reduce wiring in combination with the Smartclick XS5.
- Insert the connector and turn 1/8 of a turn to lock the connectors.
- Higher rated current to enable output applications.
- Use previous M12 screw connectors.



Specifications

Rated current	4 A/port, 12 A/Box (power line)
Rated voltage	10 to 30 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)	500 VAC for 1 min (leakage current: 1 mA max.)
Degree of protection	IP67 (IEC60529)
Insertion tolerance	50 times min.
Lock strength	Pulling: 100 N/15 s, Twisting: 1 N·m/15 s
Cable holding strength	100 N/15 s
Lock operating force	0.1 N·m to 0.25 N·m
Ambient temperature range	Operating: -25 to 70°C

Materials and Finish

Item	Materials/finish
Contacts	Brass/nickel base, 0.4-μm gold-plating
Fixtures	Nickel-plated zinc alloy
Case	PBT resin (UL94V-0), light gray
Bushing	Rubber
O-ring	Rubber
PCB	Glass epoxy board
Sealing resin	Urethane resin (UL94V-0)
Cable	UL AWM2464 Signal lines: AWG22 Power and ground lines: AWG18

Connection Combinations

OMRON model no.		Twist-and-Click Plug Connectors	M12 Plug Connectors
		XS5H, XS5G, XS5W (plug end), XS5R (plug end)	XS2H, XS2G, XS2W (plug end), XS2R (plug end)
Connector Terminal Box	XW3D	◎	○

◎: Connected by Smartclick.
○: Connected by screwing.

Ordering Information

Sensor type and wiring		3-wire DC NPN/2-wire DC 3-4	2-wire DC 1-4/without polarity 3-4	3-wire DC PNP/2-wire DC 1-4
Actuator wiring		Actuator wiring 1-4	---	Actuator wiring 3-4
No. of ports	No. of I/O	Model		
4	4	XW3D-P455-G11	XW3D-P452-G11	XW3D-P453-G11
8	8	XW3D-P855-G11	XW3D-P852-G11	XW3D-P853-G11
4	8	XW3D-P458-G11	---	XW3D-P457-G11

Note: 1. "1-4" and "3-4" are the connector pin numbers that are wired.

2. All cables are 5 m long.

Waterproof Cover (Sold Separately)

XS2Z-22



Model	No. per box	Material
XS2Z-22	50	Brass with Ni plating

Note: 1. The XW3D/XW3B/XW3A comes with a dust cover. Use the optional XS2Z-22 Waterproof Cover when an IP67 degree of protection is required.

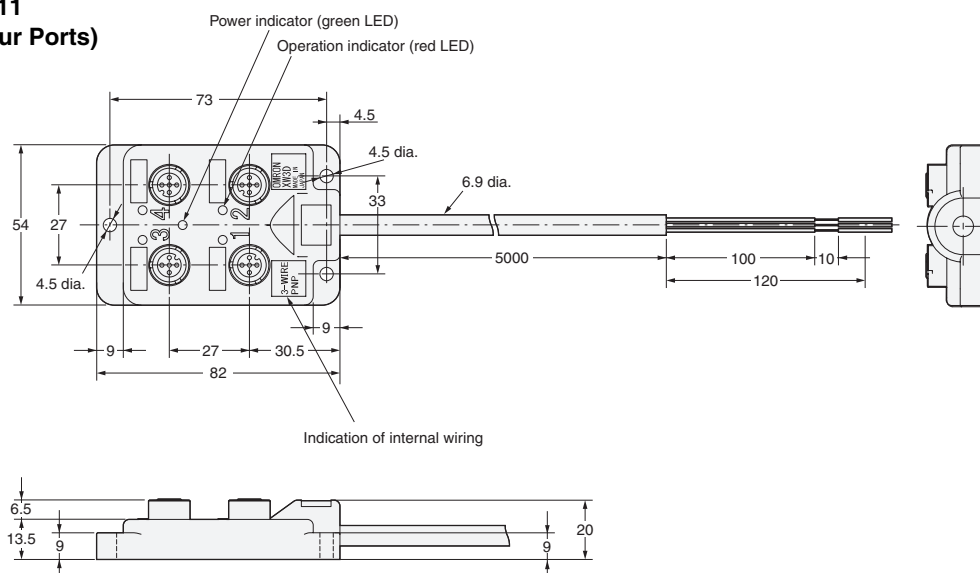
2. The XS2Z-22 connection is threaded.

Dimensions

(Unit: mm)

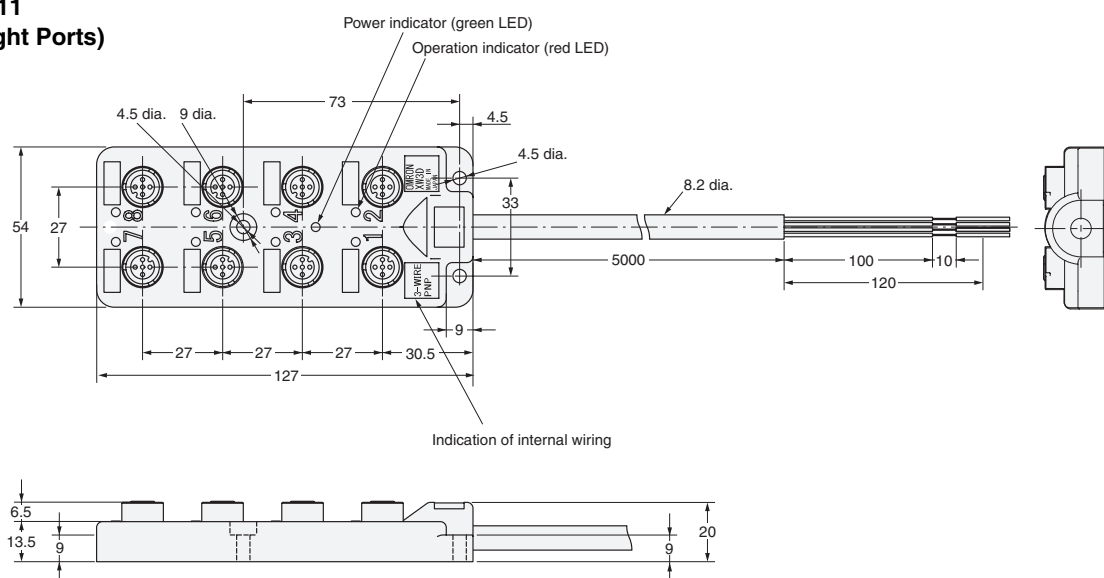
XW3D-P45□-G11

(Model with Four Ports)



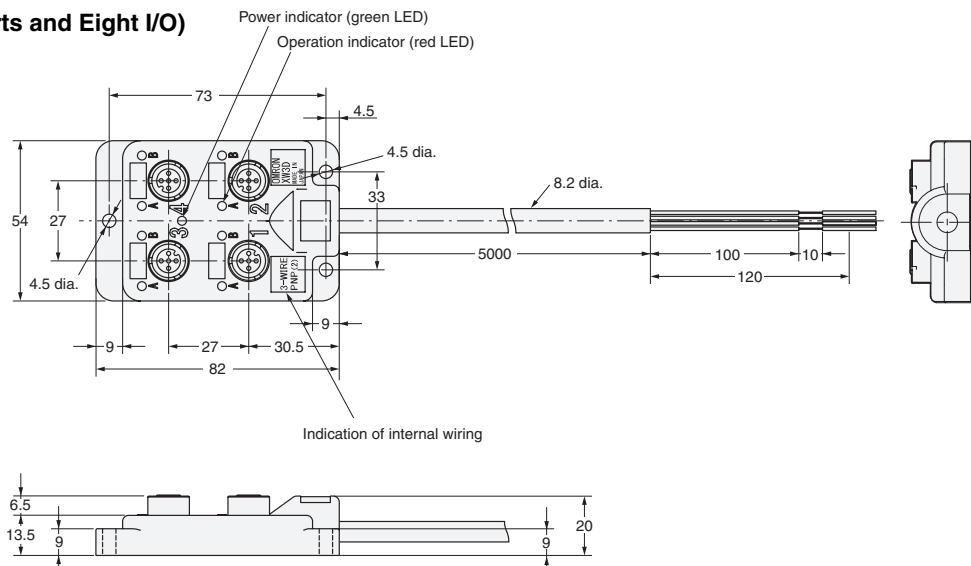
XW3D-P85□-G11

(Model with Eight Ports)



XW3D-P457-G11

(Model with Four Ports and Eight I/O)



Wiring Diagrams

Models with One I/O and One Port

XW3D-P□55-□11

for 3-wire NPN,
2-wire DC (without polarity 3-4),
and Actuator (1-4)

3-WIRE
NPN

XW3D-P□52-□11

for 2-wire DC
(polarity 1-4, without polarity 3-4)

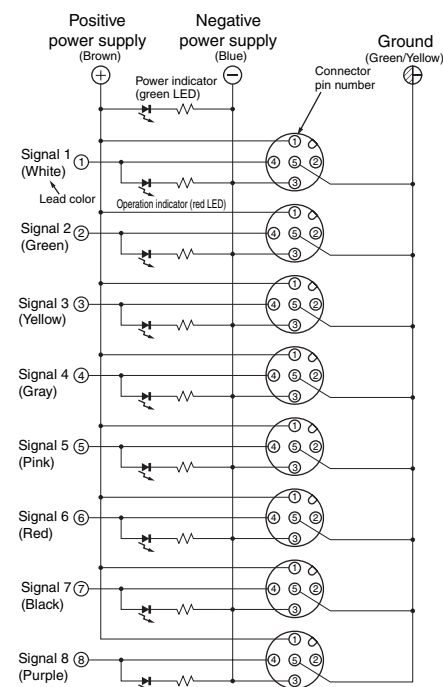
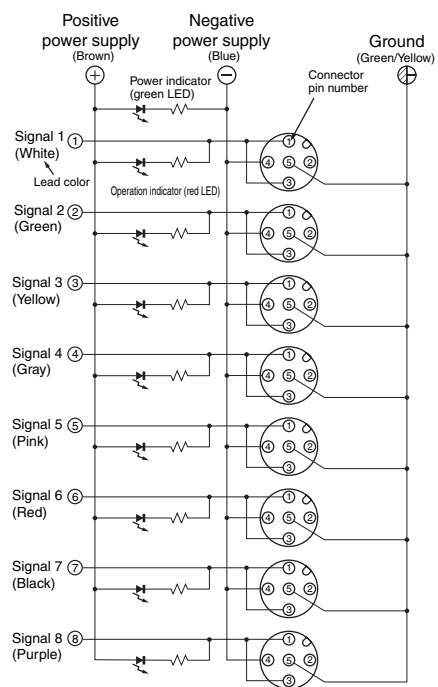
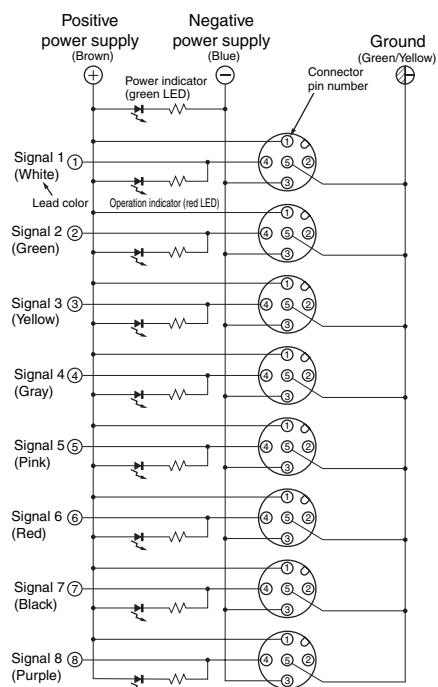
2-WIRE

Note: Cannot be used with NPN-type Photoelectric and Proximity Sensors. Cannot be used with Proximity Sensors with polarity 3-4.

XW3D-P□53-□11

for 3-wire PNP,
2-wire DC (with polarity 1-4),
and Actuator (3-4)

3-WIRE
PNP



Note: 1. The above wiring diagrams are for eight-port use.

2. Figures in parentheses indicate lead colors.

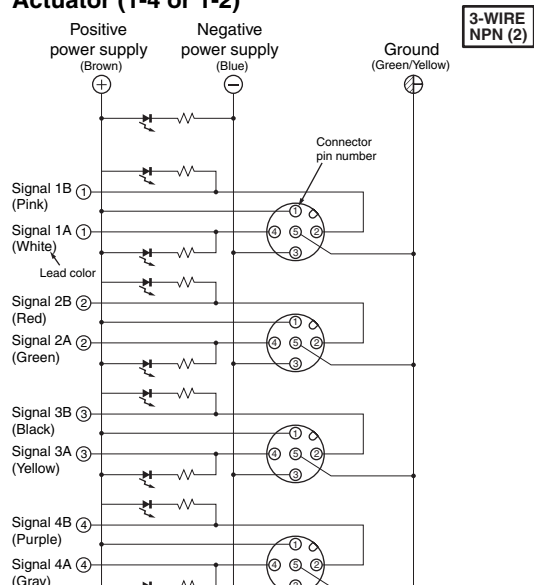
3. The expression "white/red" means white and red stripes.

4. Here, "1-4" and "3-4" are pin numbers.

5. Contact numbers 5 through 8 in the above diagrams do not exist on Terminal Boxes with four ports. The lead colors for signals 1 through 4, power supply, and ground are the same.

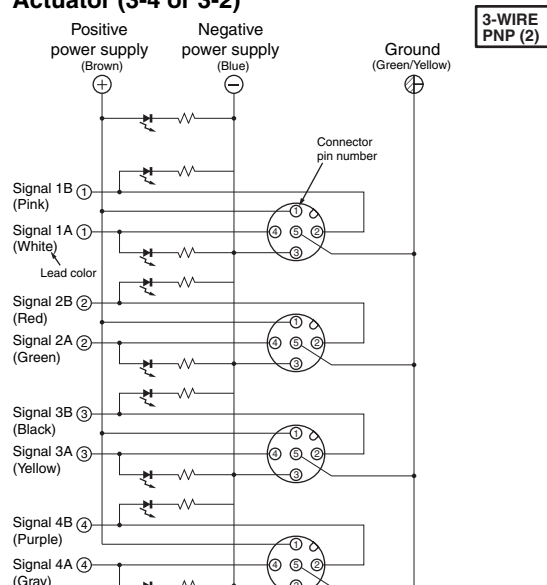
Models with Two I/O and One Port

XW3D-P458-G11 for 3-wire NPN and Actuator (1-4 or 1-2)



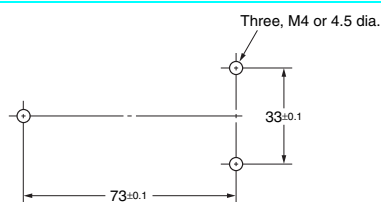
Note: Colors given in the connection diagram are lead colors.

XW3D-P457-G11 for 3-wire PNP and Actuator (3-4 or 3-2)



Mounting Dimensions

(Unit: mm)



Note: The mounting dimensions are the same regardless of the number of ports.

Safety Precautions

Precautions for Correct Use

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

Connector Connection and Disconnection

- Mate the connectors according to the procedure given on page 16.
- 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.
- Confirm in the catalog that sensors and actuators are applicable before using them.
- Always turn OFF the power supply before connecting or disconnecting connectors.
- Do not touch the mating surface of the connectors with wet hands.
- Wipe away any water around the connectors.
- Do not allow metal scraps or dust to enter the mating section.

Cable Lead Polarity

- Connect the cables leads using the correct polarity (Blue: Negative power supply, Brown: Positive power supply).
- If the polarity is not correct, the load may not operate or the operation indicator may not light.
- Always connect a load to the signal lines to operate a sensor or actuator.

Applicable Connectors

- Always mount a Waterproof Cover (XS2Z-22) or Dust Cover (XS2Z-15) to any unused connector on the Connector Terminal Box.

Power Supply and Operation Indicators

- The power supply indicator will be lit green while power is being supplied. The operation indicator will be lit red while the sensor or actuator is operating.
- The XW3D is for a DC sensor or actuator. Do not use it for an AC sensor or actuator.
- Connector Terminal Boxes are available with either 2-wire or 3-wire internal connections, as indicated on the case.

3-WIRE
NPN

2-WIRE

3-WIRE
PNP

3-WIRE
NPN (2)


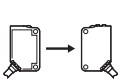



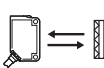









3-WIRE
PNP (2)

XS5-compatible Products

Photoelectric Sensors

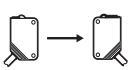
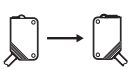


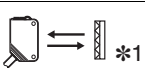








E3ZM-C Oil-resistant, Robust, Compact Photoelectric Sensor (Stainless Housing and Built-in Amplifier)

 Orange light
  Red light
  Infrared light

Sensing method	Appearance		Sensing distance	Model	
				NPN output	PNP output
Through-beam			 15 m	E3ZM-CT61-M1TJ	E3ZM-CT81-M1TJ
			 20 m	E3ZM-CT62B-M1TJ	E3ZM-CT82B-M1TJ
Retro-reflective			 4 m [100 mm]* (Using E39-R1S)	E3ZM-CR61-M1TJ	E3ZM-CR81-M1TJ
Diffuse reflective			 1 m	E3ZM-CD62-M1TJ	E3ZM-CD82-M1TJ
BGS reflective			 10 to 100 mm	E3ZM-CL61H-M1TJ	E3ZM-CL81H-M1TJ
			 10 to 150 mm	E3ZM-CL62H-M1TJ	E3ZM-CL82H-M1TJ
			 10 to 200 mm	E3ZM-CL64H-M1TJ	E3ZM-CL84H-M1TJ

* Separate the Sensor and Reflector by at least the distance given in parentheses.


E3Z Compact Photoelectric Sensor with Built-in Amplifier


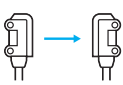



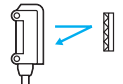

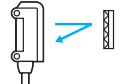



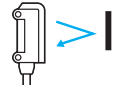


Sensing method	Appearance		Sensing distance	Model	
				NPN output	PNP output
Through-beam			 15 m	E3Z-T61-M1TJ	E3Z-T81-M1TJ
Retro-reflective with MSR function		 *1	 4 m *2 [100 mm]	E3Z-R61-M1TJ	E3Z-R81-M1TJ
Diffuse reflective			 5 to 100 mm (wide view)	---	E3Z-D81-M1TJ
			 1 m	E3Z-D62-M1TJ	E3Z-D82-M1TJ
Narrow-beam reflective			 90±30 mm	E3Z-L61-M1TJ	E3Z-L81-M1TJ

*1. The Reflector is sold separately. Select the Reflector model most suited to the application.

*2. The sensing distance specified is possible when the E39-R1S is used. Values in parentheses indicate the minimum required distance between the Sensor and Reflector.

E3T "Mini" Photoelectric Sensor with Built-in Amplifier


 Infrared light

Sensing method	Appearance		Sensing distance	Operating mode	Model	
					NPN output	PNP output
Through-beam		Side-view 	1 m	Light-ON	E3T-ST11-M1TJ	E3T-ST13-M1TJ
				Dark-ON	E3T-ST12-M1TJ	E3T-ST14-M1TJ
			300 mm	Light-ON	E3T-ST21-M1TJ	E3T-ST23-M1TJ
				Dark-ON	E3T-ST22-M1TJ	E3T-ST24-M1TJ
		Flat 	500 mm	Light-ON	E3T-FT11-M1TJ	E3T-FT13-M1TJ
				Dark-ON	E3T-FT12-M1TJ	E3T-FT14-M1TJ
			300 mm	Light-ON	E3T-FT21-M1TJ	E3T-FT23-M1TJ
				Dark-ON	E3T-FT22-M1TJ	E3T-FT24-M1TJ
Retro-reflective		Side-view 	200 mm [10 mm] *	Light-ON	E3T-SR21-M1TJ	E3T-SR23-M1TJ
				Dark-ON	E3T-SR22-M1TJ	E3T-SR24-M1TJ
		Side-view 	100 mm [10 mm] *	Light-ON	E3T-SR31-M1TJ	E3T-SR33-M1TJ
				Dark-ON	E3T-SR32-M1TJ	E3T-SR34-M1TJ
Diffuse reflective		Flat 	5 to 30 mm	Light-ON	E3T-FD11-M1TJ	E3T-FD13-M1TJ
				Dark-ON	E3T-FD12-M1TJ	E3T-FD14-M1TJ
Convergent reflective		Side-view 	5 to 15 mm	Light-ON	E3T-SL11-M1TJ	E3T-SL13-M1TJ
				Dark-ON	E3T-SL12-M1TJ	E3T-SL14-M1TJ
			5 to 30 mm	Light-ON	E3T-SL21-M1TJ	E3T-SL23-M1TJ
				Dark-ON	E3T-SL22-M1TJ	E3T-SL24-M1TJ
BGS reflective		Flat 	1 to 15 mm	Light-ON	E3T-FL11-M1TJ	E3T-FL13-M1TJ
				Dark-ON	E3T-FL12-M1TJ	E3T-FL14-M1TJ
			1 to 30 mm	Light-ON	E3T-FL21-M1TJ	E3T-FL23-M1TJ
				Dark-ON	E3T-FL22-M1TJ	E3T-FL24-M1TJ



* Separate the Sensor and Reflector by at least the distance given in parentheses.

Proximity Sensors


Proximity Sensors with Oil-resistant Cables (PUR Cables)

Appearance	Sensing distance			Output configuration	Operating mode	Model
 Shielded	M8	2 mm		2-Wire DC Polarity 1,4 Pin Specifications	NO	E2E-X2D1-M1TGJ-U
	M12	3 mm				E2E-X3D1-M1TGJ-U
	M18	7 mm				E2E-X7D1-M1TGJ-U
	M30	10 mm				E2E-X10D1-M1TGJ-U
	M8	2 mm		2-Wire DC Polarity 1,2 Pin Specifications	NC	E2E-X2D2-M1TGJ-U
	M12	3 mm				E2E-X3D2-M1TGJ-U
	M18	7 mm				E2E-X7D2-M1TGJ-U
	M30	10 mm				E2E-X10D2-M1TGJ-U


Standard Proximity Sensor (PVC Cable)

Appearance	Sensing distance			Output configuration	Operating mode	Model
 Shielded	M8	2 mm		2-Wire DC Polarity 1,4 Pin Specifications	NO	E2E-X2D1-M1TGJ
	M12	3 mm				E2E-X3D1-M1TGJ
	M18	7 mm				E2E-X7D1-M1TGJ
	M30	10 mm				E2E-X10D1-M1TGJ
 Non-shielded	M12	8 mm		2-Wire DC Polarity 1,4 Pin Specifications	NO	E2E-X8MD1-M1TGJ
	M18	14 mm				E2E-X14MD1-M1TGJ
	M30	20 mm				E2E-X20MD1-M1TGJ


Spatter-Immune Proximity Sensor (Fire-retardant PVC Cable)

Appearance	Sensing distance			Output configuration	Operating mode	Model
 Shielded	M12	3 mm		2-Wire DC Polarity 1,4 Pin Specifications	NO	E2EQ-X3D1-M1TGJ
	M18	7 mm				E2EQ-X7D1-M1TGJ
	M30	10 mm				E2EQ-X10D1-M1TGJ
	M12	4 mm		2-Wire DC Polarity 3,4 Pin Specifications	NO	E2EQ-X4X1-M1TJ
	M18	8 mm				E2EQ-X8X1-M1TJ
	M30	15 mm				E2EQ-X15X1-M1TJ


Proximity Sensor with All-stainless Housing (Fire-retardant PVC Cable)

Appearance	Sensing distance			Output configuration	Operating mode	Model
 Shielded	M8	1.5 mm		2-Wire DC Polarity 1,4 Pin Specifications	NO	E2FM-X1R5D1-M1TGJ
	M12	2 mm				E2FM-X2D1-M1TGJ
	M18	5 mm				E2FM-X5D1-M1TGJ
	M30	10 mm				E2FM-X10D1-M1TGJ


Chip-Immune Inductive Proximity Sensor (PVC Cable)

Appearance	Sensing distance			Output configuration	Operating mode	Model
 Shielded	M12	2 mm		2-Wire DC Polarity 1,4 Pin Specifications	NO	E2EZ-X2D1-M1TGJ
	M18	4 mm				E2EZ-X4D1-M1TGJ
	M30	8 mm				E2EZ-X8D1-M1TGJ
	M12	2 mm		2-Wire DC Polarity 3,4 Pin Specifications	NO	E2EZ-X2D1-M1TJ
	M18	4 mm				E2EZ-X4D1-M1TJ
	M30	8 mm				E2EZ-X8D1-M1TJ

All-metal, Long-distance Proximity Sensors


Appearance	Sensing distance			Output configuration	Operating mode	Model
 Shielded	M12	4 mm		3-Wire DC PNP 1, 4, 3 Pin Specifications	NO	E2V-X4B1-M1TJ
	M18	8 mm				E2V-X8B1-M1TJ
	M30	15 mm				E2V-X15B1-M1TJ
	M12	4 mm		3-Wire DC NPN 1, 4, 3 Pin Specifications	NO	E2V-X4C1-M1TJ
	M18	8 mm				E2V-X8C1-M1TJ
	M30	15 mm				E2V-X15C1-M1TJ

Cable Amplifier Proximity Sensor




Appearance	Sensing distance			Output configuration	Operating mode	Model
 Shielded	3 dia.	0.8 mm		2-Wire DC Polarity 1,4 Pin Specifications	NO	E2EC-CR8D1-M1TGJ
	5.4 dia.	1.5 mm				E2EC-C1R5D1-M1TGJ
	8 dia.	3 mm				E2EC-C3D1-M1TGJ
	8 dia.	2 mm		2-Wire DC No polarity 3, 4 Pin Specifications	NO	E2EC-QC2D1-M1TGJ-T

Limit Switches with Prewired DC Connectors

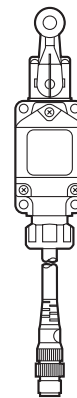
General-Purpose Limit Switches

Actuator	Operating characteristics		Cable length	Pin connections	With LED operation indicator	With LED operation indicator and tight seal (sealed built-in switch)
	Pretravel (PT)	Total travel (TT)			Model	Model
	Standard models: 15°	Standard travel: 45°	0.3 m	NO: ③④ NC: ①②	WLCA2-LD-DTGJ03	WLCA2-55LD-DTGJ03
	High precision: 5°	Standard travel: 45°	0.3 m	NO: ③④ NC: ①②	WLGCA2-LD-DTGJ03	WLGCA2-55LD-DTGJ03
	Standard models: 15°	Overtravel: 80°	0.3 m	NO: ③④ NC: ①②	WLH2-LD-DTGJ03	WLH2-55LD-DTGJ03
	High sensitivity: 10°	Overtravel: 80°	0.3 m	NO: ③④ NC: ①②	WLG2-LD-DTGJ03	WLG2-55LD-DTGJ03
			0.3 m	NO: ③④ NC: ②	WLG2-LD-DTK1EJ03	WLG2-55LD-DTK1EJ03
			0.3 m	NO: ③④	WLG2-LD-M1TJ	WLG2-55LD-M1TJ
			0.3 m	NO: ①④	WLG2-LD-M1TGJ	WLG2-55LD-M1TGJ
			0.3 m	NC: ②③	WLG2-LD-M1TJB	WLG2-55LD-M1TJB


Models with Spatter Countermeasures

Actuator		Operating characteristics		Cable length	Pin connections	With LED operation indicator
		Pretravel (PT)	Total travel (TT)			Model
	With Allen screw hole	Standard models: 15°	Standard travel: 45°	0.3 m	NO: ③④ NC: ①②	WLCA2-LDS-DTGJS03
		High sensitivity: 10°	Overtravel: 80°	0.3 m	NO: ③④ NC: ①②	WLG2-LDS-DTGJS03
	Double nut	High sensitivity: 10°	Overtravel: 80°	0.3 m	NO: ③④ NC: ①②	WLG2-LDAS-DTGJS03
	With Allen screw hole and hexagonal bolt	High sensitivity: 10°	Overtravel: 80°	0.3 m	NO: ③④ NC: ①②	Available soon. WLG2-LDFS-DTGJS03
Sealed top-roller plunger		1.7 mm	7.3 mm	0.3 m	NO: ③④ NC: ①②	Available soon. WLD28-LDS-DTGJS03
						

Models with Prewired Connectors



Long-life Models (Durability: 30 Million Operations)

Actuator	Operating characteristics		Cable length	Pin connections	With LED operation indicator
	Pretravel (PT)	Total travel (TT)			Model
	Standard models: 15°	Standard travel: 45°	0.3 m	NO: ③④ NC: ①②	WLMCA2-LD-DTGJ03
	High precision: 5°	Standard travel: 45°	0.3 m	NO: ③④ NC: ①②	WLMGCA2-LD-DTGJ03
	Standard models: 15°	Overtravel: 80°	0.3 m	NO: ③④ NC: ①②	WLMH2-LD-DTGJ03
	High sensitivity: 10°	Overtravel: 80°	0.3 m	NO: ③④ NC: ①②	WLMG2-LD-DTGJ03

Operation Indicator Lighting Specifications and Internal Wiring

Wiring specification code	Operation indicator lighting specification	Operation indicator connection pins
DTGJ03	Lit for non-operation (connected to NO side)	③④
DTGJS03		
DTK1EJ03		
M1TJ	Lit for non-operation (connected to NO side)	③④
M1TGJ	Lit for non-operation (connected to NO side)	①④
M1TJB	Lit for operation (connected to NC side)	②③

* Safety standards: Certified for UL, CCC, and EN. (Certification has been obtained for UL 508 and CSA 22.2 and No. 14.)

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