OMRON

Industrial Ethernet Connectors
XS5□-T / XS6□-T

Support for Ethernet/IP, EtherCAT, and Other Popular Networks Based on Ethernet

- Combines tough RJ45 Connectors for use outside of panels and Environment-resistance Connectors with IP67 protection (M12).
- M12 Smartclick mates with any threaded M12 socket and provides 'twist and click' connection with XS5P-T panel socket.
- M12 Smartclick connectors are shielded to protect against EMI.
- Separate RJ45 assembly connectors are available for easy wiring on site.
- Uses AWG22 Cat5E cables that are suitable for wiring outside of panels.

Smartclick ™

NEW

■ Specifications

Type / Item / Model	Cable with Connector on One End (M12) XS5H-T421-□M0-K	Cable with Connectors on Both Ends (M12/M12) XS5W-T421-□M2-K	Cable with Connectors on Both Ends (M12/RJ45) XS5W-T421-□MC-K	Cable with Connectors on Both Ends (RJ45/RJ45) XS5W-T421-□MD-K	RJ45 Assembly Connector XS6G-T421-1	M12 Connector for Panel Mounting XS5P-T42□-5
Rated current	3 A			2.5 A		3 A
Rated voltage	30 V					
Contact resistance	20 mΩ max.					
Insulation resistance	500 MΩ min.					
Withstand voltage	1,000 VAC for 60 s (leak current: 1 mA max.)					
Ambient operating temperature	−25 to 70°C				−40 to 70°C	−25 to 70°C
Ambient storage temperature	−25 to 70°C				−40 to 70°C	−25 to 70°C
Degree of protection	M12: IEC IP67, RJ45: IEC IP20					

■ Materials and Finish

Connector

Item	Model	M12	RJ45
Contact Block		PBT plastic (UL94V-0), light gray	PA plastic (UL94V-0), black
Contacts	**Materials**	Phosphor bronze	
	Finish	Nickel base, 0.4-μm gold-plating	Nickel base, 1.4-μm gold-plating
Fixtures		Nickel-plated zinc alloy	—
Cover		PBT	—
O-ring		Rubber	—

Cable

Specifications	UL CM PVC (double shielding) Cat. 5E
Cores and colors	AWG22 (0.26/7): Yellow, orange, white, and blue
Outer Diameter	6.5 mm
Sheath color	Light blue

Note: **S**martclick ™ is a registered trademark of the OMRON Corporation.
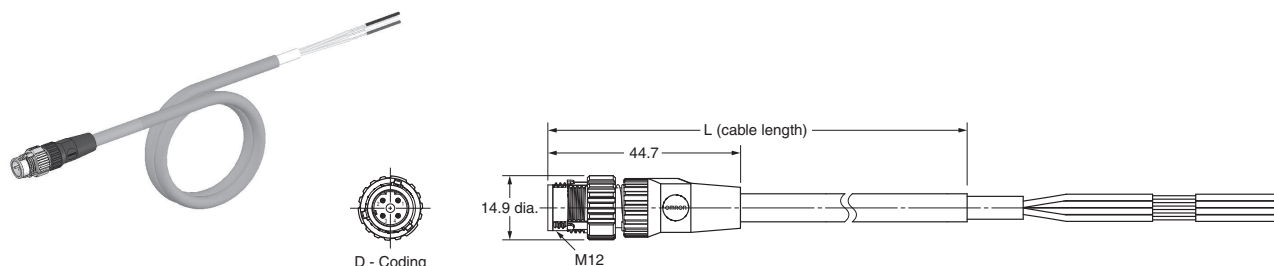
4-Pin Connectors with Cable Attached

■ XS5H - Plug on One Cable End

XS5H-T421-☐M0-K **(1 x M12)**

Dimensions

(Unit: mm)

L (cable length)

44.7

14.9 dia.

D - Coding

M12

Ordering Information

Type	Cable length L (m)	Model
		Straight
Cable with Connector on One End (M12)	0.5	XS5H-T421-BM0-K
	1	XS5H-T421-CM0-K
	2	XS5H-T421-DM0-K
	3	XS5H-T421-EM0-K
	5	XS5H-T421-GM0-K
	10	XS5H-T421-JM0-K
	15	XS5H-T421-KM0-K

Note: Ask your OMRON representative about other specifications.

Model Number Legend

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

XS5H - T421 - ☐M☐ -K
  1   2 3 4 5   6 7 8   9

1. Type
   H: Connector connected to cable, M12 plug on one cable end
2. Signal type
   T: Ethernet
3. Connector Poles
   4:   4 poles
4. Contact Plating
   2:   0.4-μm gold plating - M12 connectors
5. Cable Connection Direction
   1:   Straight

6. Cable Length
   A: 0.3 m   G: 5 m
   B: 0.5 m   J: 10 m
   C: 1 m   K: 15 m
   D: 2 m
   E: 3 m
7. Connections
   M: ① Yellow, ② White, ③ Orange, ④ Blue
        (Numbers inside circles are terminal numbers)
8. Connectors on One End/Both Ends
   0:   One M12 Plug
9. Cable Specifications
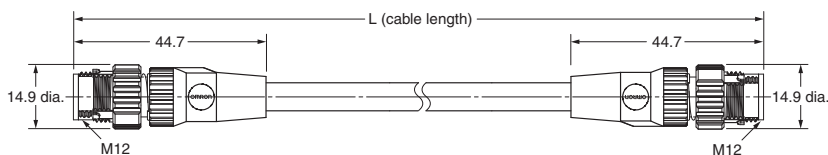   K: UL CM PVC (double shielded) / Cat.5E

■ XS5W - Plugs on Both Cable Ends

XS5W-T421-☐M2-K (2 x M12)

Smartclick™

Dimensions

(Unit: mm)

D - Coding

Ordering Information

Type	Cable length L (m)	Model
		Straight
Cable with Connector on Both Ends (M12 / M12)	0.5	XS5W-T421-BM2-K
	1	XS5W-T421-CM2-K
	2	XS5W-T421-DM2-K
	3	XS5W-T421-EM2-K
	5	XS5W-T421-GM2-K
	10	XS5W-T421-JM2-K
	15	XS5W-T421-KM2-K

XS5W-T421-☐MC-K (1x M12 and 1x RJ45)
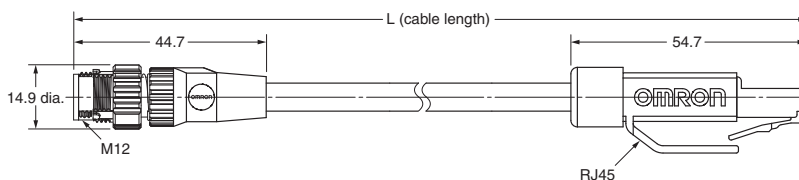
Smartclick™

Dimensions

(Unit: mm)

D - Coding

Ordering Information

Type	Cable length L (m)	Model
		Straight
Cable with Connector on Both Ends (M12 / RJ45)	0.3	XS5W-T421-AMC-K
	0.5	XS5W-T421-BMC-K
	1	XS5W-T421-CMC-K
	2	XS5W-T421-DMC-K
	3	XS5W-T421-EMC-K
	5	XS5W-T421-GMC-K
	10	XS5W-T421-JMC-K
	15	XS5W-T421-KMC-K

Note: Ask your OMRON representative about other specifications.

XS5W-T421-☐MD-K (2 x RJ45)

Dimensions

(Unit: mm)
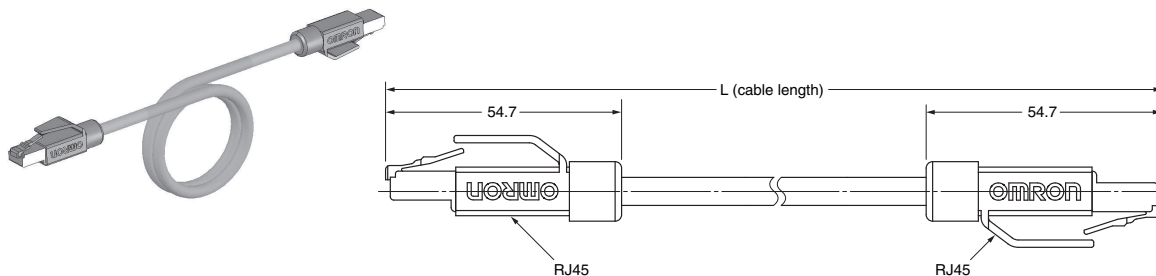
L (cable length)
54.7
54.7
RJ45
RJ45

Ordering Information

| Type | Cable length L (m) | Model |
		Straight
Cable with Connector on Both Ends (RJ45 / RJ45)	0.3	**XS5W-T421-AMD-K**
	0.5	**XS5W-T421-BMD-K**
	1	**XS5W-T421-CMD-K**
	2	**XS5W-T421-DMD-K**
	3	**XS5W-T421-EMD-K**
	5	**XS5W-T421-GMD-K**
	10	**XS5W-T421-JMD-K**
	15	**XS5W-T421-KMD-K**

Note: Ask your OMRON representative about other specifications.

Model Number Legend

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

XS5W - T421 - ☐M☐ -K
 1   2 3 4 5   6 7 8   9

1. Type
W: Connector connected to cable, plugs on both cable ends
2. Signal type
T: Ethernet
3. Connector Poles
4: 4 poles
4. Contact Plating
2: 0.4-µm gold plating - M12 connectors
 1.4 µm gold plating - RJ45 connectors
5. Cable Connection Direction
1: Straight

6. Cable Length
A: 0.3 m   G: 5 m
B: 0.5 m   J: 10 m
C: 1 m   K: 15 m
D: 2 m
E: 3 m
7. Connections
M: ① Yellow, ② White, ③ Orange, ④ Blue
(Numbers inside circles are terminal numbers)
8. Connectors on One End/Both Ends
2: Two M12 Plugs
C: One M12 Plug + One RJ45 Plug
D: Two RJ45 Plugs
9. Cable Specifications
K: UL CM PVC (double shielded) / Cat.5E
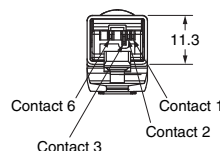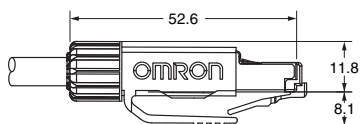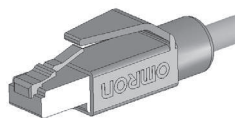
Assembly Connector - RJ45

■ XS6G - Plugs

XS6G-T421-1　　　　　　　　　　　　　　　　　　　　　　　🔲

Dimensions

(Unit: mm)

52.6　11.8　8.1

Applicable wires
6.1 to 6.9 dia.
Stranded wires: AWG22 to AWG24
Solid wires: AWG22 to AWG23

11.3
Contact 6　Contact 1
Contact 2
Contact 3

Ordering Information

Type	Cable length L (m)	Model
		Straight
RJ45 Assembly Connector	- - -	**XS6G-T421-1**

4-Pin Panel-mount Connectors

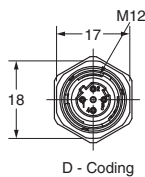## ■ XS5P - Sockets

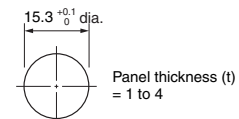**XS5P-T42□-5** (Rear or Front locking M12 socket)　　　🔲

Dimensions

(Unit: mm)

XS5P-T426-5 (Rear Locking)

M12　17　18　2.8　PG9　500　18
14.6 dia.　2.5　11.9　22.1　10±3　(20)
D - Coding
Orange　White　Blue　Yellow　20

XS5P-T427-5 (Front Locking)

M12　18　20　2.8　PG9　500　17
13.9 dia.　10.5　2.5　22.1　10±3　(20)
D - Coding
Orange　White　Blue　Yellow　18
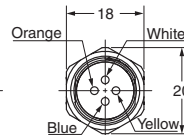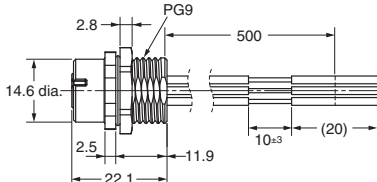
Wiring

Terminal No.	Color
1	Yellow
2	White
3	Orange
4	Blue

Panel Cutout Dimension

15.3 $^{+0.1}_{0}$ dia.
Panel thickness (t) = 1 to 4
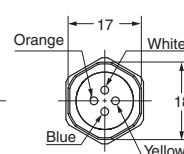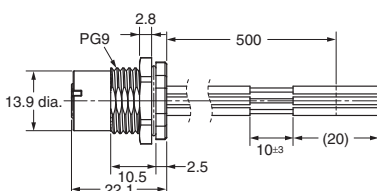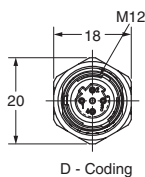
Note 1: The panel cutout dimension is the same for Front-locking and Rear-locking Connectors.
Note 2: Rotational positioning is not possible for connector rotation.

Ordering Information

Type		Cable length L (m)	Model
			Straight
M12 Connector for Panel Mounting	Rear Locking	0.5 m	**XS5P-T426-5**
	Front Locking	0.5 m	**XS5P-T427-5**

Precautions

■ 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.
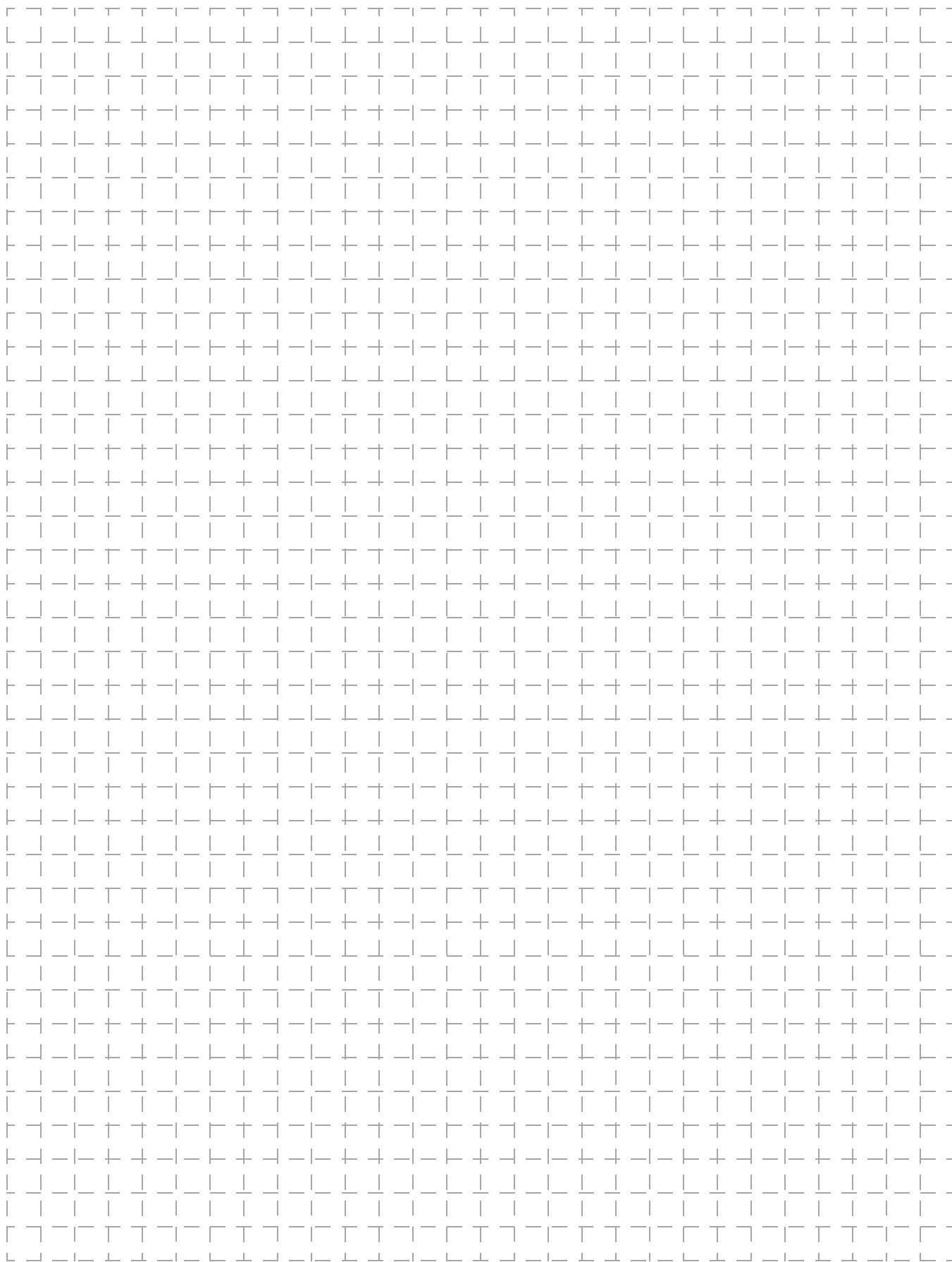
Wiring

- 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 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.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

OMRON

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