M8 and M12 Sensor Connectors and I/O boxes

XS2F/XS3F/XS5F/W/C, Y92E, XW3D

For a wide range of applications and environments the family of sensor connectors are the ideal match for the OMRON sensor portfolio. The line up is optimized to provide the best performance fit and value for money.

- M8, M12, fiber amplifier and photomicrosensor connectors
- 2, 3, 4, 5 and 8-wires
- wide application range from standard to special environments and performance requirements
- · different cable and housing materials



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XS2F/XS3F/XS5F/W/C, Y92E, XW3D

Cable connectors – quick guide and selection table

				Mate	rial	Orde	r code	Extended
Size	Shape	Туре	Features	Nut	Cable			Portfolio and Specs on Page
			3 pin	5	PVC 2 m	XS3F-M8PVC3S2M XS3F-M8PUR3S2M	XS3F-M8PVC3A2M	
	Pro Line	Pro Line		Brass (CuZn)	PVC 2 m	XS3F-M8PUR3S2M XS3F-M8PVC4S2M	XS3F-M8PUR3A2M XS3F-M8PVC4A2M	7
			4pin	,	PUR 2 m	XS3F-M8PUR4S2M	XS3F-M8PUR4A2M	
M8		Lite Line	3 pin	Brass	PVC 2 m	XS3F-LM8PVC3S2M	XS3F-LM8PVC3A2M	9
		Lite Line	4 pin	(CuZn)	1 40 2 111	XS3F-LM8PVC4S2M	XS3F-LM8PVC4A2M	<u> </u>
(°°)	R	Detergent resistant Wash-down	4 pin	Stainless steel (SUS316L)	PP*1 2 m	Y92E-S08PP4S 2M-L	Y92E-S08PP4A 2M-L	17
(0 0)	//	Robotic			Robotic PVC 2 m	XS3F-M421-402-R	XS3F-M422-402-R	
	1	(drag chain)	4 pin	Brass (CuZn)	Robotic PUR 2 m	Y92E-M08PUR4S2M-L	Y92E-M08PUR4A2M-L	13
		High robotic (drag chain & torsion)			High robotic PUR 2 m	Y92E-M08PUR4S2M-R	Y92E-M08PUR4A2M-R	
			3 wire		PVC 2 m	XS2F-M12PVC3S2M	XS2F-M12PVC3A2M	
	-			Brass	PUR 2 m	XS2F-M12PUR3S2M XS2F-M12PVC4S2M	XS2F-M12PUR3A2M XS2F-M12PVC4A2M	
		Pro Line	4 wire	(CuZn)	PUR 2 m	XS2F-M12PUR4S2M	XS2F-M12PUR4A2M	4
M12*2	•		Ei		PVC 2 m	XS2F-M12PVC5S2M	XS2F-M12PVC5A2M	
60			5 wire		PUR 2 m	XS2F-M12PUR5S2M	XS2F-M12PUR5A2M	
	The same of the sa	Lite Line	3 wire	Brass	PVC 2 m	XS2F-LM12PVC3S2M	XS2F-LM12PVC3A2M	9
			4 wire	(CuZn)		XS2F-LM12PVC4S2M	XS2F-LM12PVC4A2M	
		LED	3 wire	NI:-II	PVC 2 m	-	XS2F-M12PVC3A2MPLED	
	The second second	(power and output LED, PNP/NPN)	4 wire	Nickel plated		-	XS2F-M12PVC4A2MPLED	4
	0		3 wire 4 wire	brass	PUR 2 m	_	XS2F-M12PUR3A2MPLED XS2F-M12PUR4A2MPLED	
000	3	Detergent resistant Wash-down	4 wire	Stainless steel (SUS316L)	PP*1 2 m	Y92E-S12PP4S 2M-L	Y92E-S12PP4A 2M-L	17
		105°C Heat resis- tant	4 wire	Stainless steel (SUS316L)	Heat resistant PVC 2 m	XS2F-E421-D80-E	XS2F-E422-D80-E	4
					PVC 2 m	XS5F-D421-D80-F	XS5F-D422-D80-F	
		Twist & click	4 wire	Nickel plated Zinc	PUR 2 m	XS5F-D421-D80-P	XS5F-D422-D80-P	23
		Robotic			Robotic PVC 2 m	XS2F-D421-D80-F	XS2F-D422-D80-F	
	100	(drag chain)	4 wire	Brass (CuZn)	Robotic PUR 2 m	Y92E-M12PUR4S2M-L	Y92E-M12PUR4A2M-L	13
		High robotic (drag chain & torsion)		(OuZII)	High grade robotic PUR 2 m	Y92E-M12PUR4S2M-R	Y92E-M12PUR4A2M-R	
5 3 0 0 0 7 2 8 1	6	8 pin	8 wire shielded cable	Brass (CuZn)	Shielded PUR 2m	Y92E-M12PURSH8S2M-L	-	12
			Special fiber connector - 4 wire	РВТ	PVC 2 m	E3X-CN21		
Fiber amplifier (E3X) connector		Fiber amplifier connectors	Special fiber connector+ M8 plug	Plug: Zinc	PVC 30 cm with M8 4-pin plug	E3X-CN21-M3J-2 0.3M		31
			Special fiber connector+ M12 plug	diecast	PVC 30 cm with M12 4-pin plug	E3X-CN21-M1J 0.3M		

XS2F/XS3F/XS5F/W/C, Y92E, XW3D

				Material		Orde	r code	Extended
Size	Shape	Туре	Features	Nut	Cable			Portfolio and Specs on Page
M8/M12		Confection- able	Plugs and connectors for self assembly	Brass	n.a.	XS2C/G, XS5C/G Y92E_conf		24
M12	777	Field I/0 boxes	Direct wiring or DeviceNet communi- cation	-		XW3D		31
M8/M12	50	T-connec- tors, covers, accessories and extended wiring portfo- lio	n.a.	-		XS2R, XS3R, XY2F,		35

PP - polypropylene For details on pin configuration refer to specifications

M12 Basic line Cable type

XS2F-M12

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

- Compact FA connectors meet 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.
- IEC61076-2-101(IEC60947-5-2)
- Lineup of connectors with LEDs for easy visual confirmation of Sensor operating status.



Ratings and Specifications

Item	XS2F-M12 M XS2W-M12 M	XS2F-M12□□□□A□□M□LED		
Rated current	4A			
Rated voltage	125 VDC	24 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)	AC 1,500 V 1 min. (leakage current: 1 mA max.).			
Degree of protection	IP67 (IEC60529)			
Temperature range	-10 to +80°C			

Materials and Finish

Contacts	Copper alloy/ nickel base, gold plating
Pin block	PBT resin (UL94 V-0)
Fixtures	Copper alloy/ nickel plating
Cover	PBT resin (UL94V-0)

PVC Cable

Item	3 cores	4 cores	
Color	Black		
Outer diameter	5 mm dia.	5 mm dia. *	
Conductor size	AWG23 0.25 mm ² (32/0.1)		
Approvals	AWM2464		
Features	Flame retardant		

^{*}LED Type is 5.4 mm dia.

PUR Cable

Item	3 cores	4 cores	
Color	Black		
Outer diameter	4.3 mm dia.	4.7 mm dia.	
Conductor size	AWG22 0.32 mm ² (42/0.1)		
Approvals	AWM20936		
Features	Flame retardant Halogen free Oil resistance		

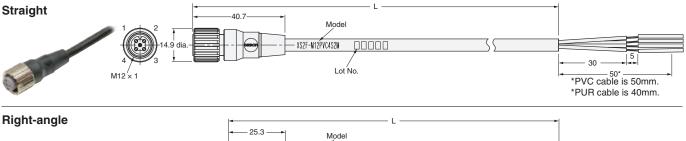
Connector Pinout Diagram (from Mating Side)

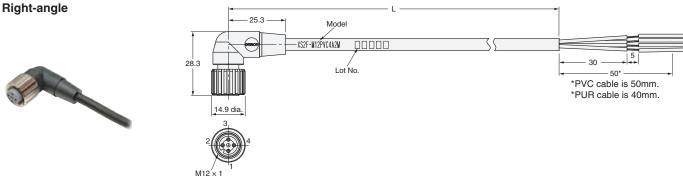
Item	No. of poles	4 poles
DC type	Male (plug) contacts	
вс туре	Female (socket) contacts	0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0

XS2F M12 Sockets on One Cable End

XS2F-M12PVC M PVC cable XS2F-M12PUR M PUR cable

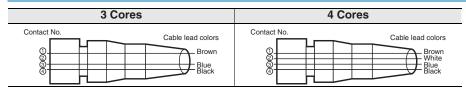
Dimensions (Unit: mm)





Note: For 3-core, pin 2 is not connected internally

Wiring Diagram



Ordering Information

Cable type	No. of cable cores	Cable outer diameter	Cable connection direction	Cable length (m)	Model
				2	XS2F-M12PVC3S2M
			Straight	5	XS2F-M12PVC3S5M
				10	XS2F-M12PVC3S10M
	3			2	XS2F-M12PVC3A2M
			Right-angle	5	XS2F-M12PVC3A5M
				10	XS2F-M12PVC3A10M
PVC		5.0 dia		2	XS2F-M12PVC4S2M
PVC		5.0 dia	Ctroight	5	XS2F-M12PVC4S5M
			Straight	7	XS2F-M12PVC4S7M
	4			10	XS2F-M12PVC4S10M
	4		Right-angle	2	XS2F-M12PVC4A2M
				5	XS2F-M12PVC4A5M
				7	XS2F-M12PVC4A7M
				10	XS2F-M12PVC4A10M
		4.3 dia	Straight	2	XS2F-M12PUR3S2M
				5	XS2F-M12PUR3S5M
				10	XS2F-M12PUR3S10M
	3		Right-angle	2	XS2F-M12PUR3A2M
				5	XS2F-M12PUR3A5M
DUD				10	XS2F-M12PUR3A10M
PUR				2	XS2F-M12PUR4S2M
			Straight	5	XS2F-M12PUR4S5M
	4	4.7 dia		10	XS2F-M12PUR4S10M
	4	4.7 Ula		2	XS2F-M12PUR4A2M
			Right-angle	5	XS2F-M12PUR4A5M
				10	XS2F-M12PUR4A10M

XS2F M12 Sockets on One Cable End with LED

XS2F-M12PVC A MLED PVC Cable XS2F-M12PUR A MLED PUR Cable

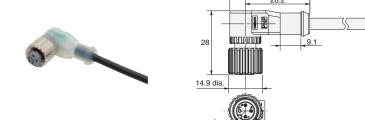
Dimensions (Unit: mm)

. 5

*PVC cable is 50mm.

*PUR cable is 40mm.

Right-angle



Wiring Diagram

3 Co	4 Cores		
NPN type	PNP type	PNP type	
1 O + BROWN	1 O + BROWN	1 O + BROWN 2 O WHITE	
¥3 YELLOW ¥3 GREEN	4 O BLACK	4 O BLACK	
4 O BLACK	¥3 YELLOW ¥3 GREEN	D1 ¥3 D2 ¥3 D3 ¥3	
3 O — O — BLUE	3 O — O — BLUE	3 O — BLUE	

M12 × 1

Ordering Information

Cable type	No. of cable cores	Cable outer diameter	Cable connection di- rection	Cable length (m)	Model	LED			
				2	XS2F-M12PVC3A2MPLED				
				5	XS2F-M12PVC3A5MPLED	PNP			
	3	5.0 dia.		10	XS2F-M12PVC3A10MPLED				
	3	5.0 ula.		2	XS2F-M12PVC3A2MNLED				
VC			Right-angle	5	XS2F-M12PVC3A5MNLED	NPN			
				10	XS2F-M12PVC3A10MNLED				
				2	XS2F-M12PVC4A2MPLED				
	4	5.4 dia		5	XS2F-M12PVC4A5MPLED				
				10	XS2F-M12PVC4A10MPLED				
							2	XS2F-M12PUR3A2MPLED	
PUR	3	4.3 dia		5	XS2F-M12PUR3A5MPLED	PNP			
				10	XS2F-M12PUR3A10MPLED				
				2	XS2F-M12PUR4A2MPLED				
	4 4.7 dia	4.7 dia		5	XS2F-M12PUR4A5MPLED				
				10	XS2F-M12PUR4A10MPLED				

M8 Basic line Cable type

XS3F-M8

Small Round Water-resistive Connectors

- Water-resistive, compact connector meets IP67 requirements.
- Ideal for a wide variety of FA and OA applications.
- Connectors on both cable ends require no harness work.



Ratings and Specifications

Rated current	1A
Rated voltage	125 VDC
Contact resistance (Connector)	40 m Ω max. (20 mV max., 100 mA max.)
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength (Connector)	AC 1,000 V 1 min. (leakage current: 1 mA max.).
Degree of protection	IP67 (IEC60529)
Temperature range	-10 to +80°C

Materials and Finish

Contacts	Copper alloy/ nickel base, gold plating
Pin block	PBT resin (UL94 V-0)
Fixtures	Copper alloy/ nickel plating
Cover	PBT resin (UL94V-0)

PVC Cable

Item	3, 4 cores
Color	Black
Outer diameter	5 mm dia.
Conductor size	AWG23 0.25 mm ² (32/0.1)
Approvals	AWM2464
Features	Flame retardant

PUR Cable

Item	3 cores	4 cores			
Color	Black				
Outer diameter	4.3 mm dia. 4.7 mm dia.				
Conductor size	AWG22 0.32 mm ² (42/0.1)				
Approvals	AWM20936				
Features	Flame retardant Halogen free Oil resistance				

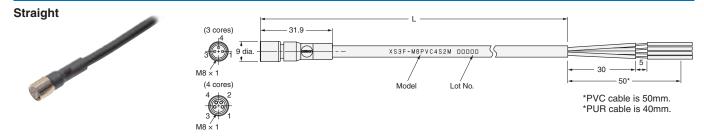
Connector Pinout Diagram (from Mating Side)

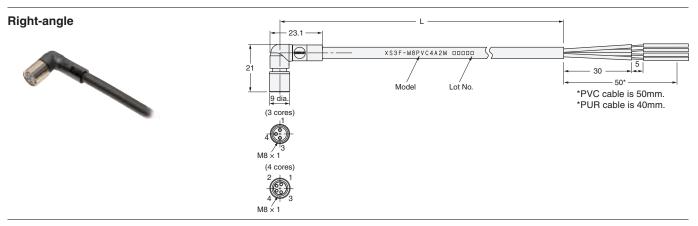
Item	Poles	3 poles	4 poles
DC	Male (plug) contacts	40 1 3 0 0	2 ₀ 0 ⁴ 10 03
	Female (socket) contacts	3 1 0 0	4 ₀ 0 ² 30 01

XS3F M8 Sockets on One Cable End

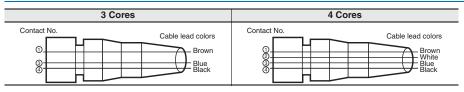
XS3F-M8PVC MPVC cable XS3F-M8PUR MPUR Cable

Dimensions (Unit: mm)





Wiring Diagram



Ordering Information

Cable type	No. of cable cores	Cable outer diameter	Cable connection direction	Cable length (m)	Model
-				2	XS3F-M8PVC3S2M
			Straight	5	XS3F-M8PVC3S5M
	3			10	XS3F-M8PVC3S10M
	3			2	XS3F-M8PVC3A2M
			Right-angle	5	XS3F-M8PVC3A5M
PVC		5.0 dia.		10	XS3F-M8PVC3A10M
FVC		5.0 dia.		2	XS3F-M8PVC4S2M
			Straight	5	XS3F-M8PVC4S5M
	4			10	XS3F-M8PVC4S10M
	4		Right-angle	2	XS3F-M8PVC4A2M
				5	XS3F-M8PVC4A5M
				10	XS3F-M8PVC4A10M
		4.3 dia	Straight	2	XS3F-M8PUR3S2M
				5	XS3F-M8PUR3S5M
	3			10	XS3F-M8PUR3S10M
	G		Right-angle	2	XS3F-M8PUR3A2M
				5	XS3F-M8PUR3A5M
PUR				10	XS3F-M8PUR3A10M
1 011				2	XS3F-M8PUR4S2M
			Straight	5	XS3F-M8PUR4S5M
	4	4.7 dia		10	XS3F-M8PUR4S10M
	7	4.7 dia		2	XS3F-M8PUR4A2M
			Right-angle	5	XS3F-M8PUR4A5M
				10	XS3F-M8PUR4A10M

M8 and M12 Sensor Connectors

XS_-L

The XS_-L family provides reliable operation in standard factory environments. The M8 and M12 sensors are designed to match the specifications of OMRON Lite Line sensors and provide excellent value for money.

- M8 and M12 brass female connectors
- 3-wire and 4-wire PVC cables
- ideal specification match for sensor usage in standard factory environments



Ordering Information

Туре		Size	Cable material	Features	Shape	Cable length	Order code
	M8	4				2 m	XS3F-LM8PVC3S2M
						5 m	XS3F-LM8PVC3S5M
		36 0 01		3-wire		2 m	XS3F-LM8PVC3A2M
						5 m	XS3F-LM8PVC3A5M
		4 2				2 m	XS3F-LM8PVC4S2M
		30001		4-wire -		5 m	XS3F-LM8PVC4S5M
			DVO.			2 m	XS3F-LM8PVC4A2M
Sensor connector with open cable end						5 m	XS3F-LM8PVC4A5M
for standard factory	M12	3/O O4	PVC			2 m	XS2F-LM12PVC3S2M
environments						5 m	XS2F-LM12PVC3S5M
						2 m	XS2F-LM12PVC3A2M
						5 m	XS2F-LM12PVC3A5M
						2 m	XS2F-LM12PVC4S2M
		2001				5 m	XS2F-LM12PVC4S5M
				4-wire		2 m	XS2F-LM12PVC4A2M
						5 m	XS2F-LM12PVC4A5M

Specifications

	M8	M12
Wire size	0.25 mm ²	0.34 mm ²
Rated current	0.5 A	0.8 A
Rated voltage	30 VDC	
Degree of protection	IP67 (IEC 60529)	
Ambient temperature	-10°C to 65°C	

Pin arrangement

M8 3-wire	M8 4-wire	M12 3-wire	M12 4-wire	
3 O 1 = brown 3 = blue 4 = black	3 1 = brown 2 = white 3 = blue 4 = black	3 0 4 1 = brown 2 = n.c. 3 = blue 4 = black	3	

XS3F

M8 Screw-on cable connectors

3-wire

Straight connectors

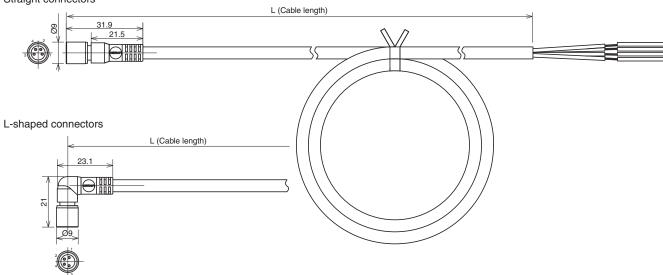
L (Cable length)

L-shaped connectors

L (Cable length)

4-wire



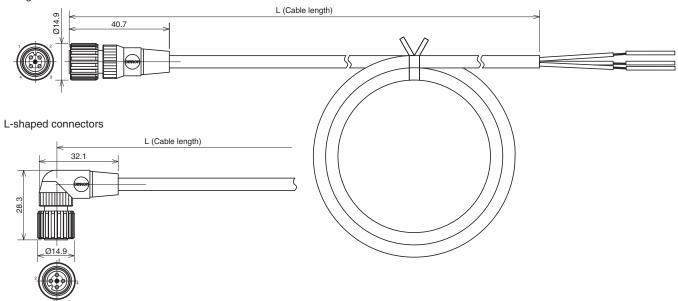


XS2F

M12 Screw-on cable connectors

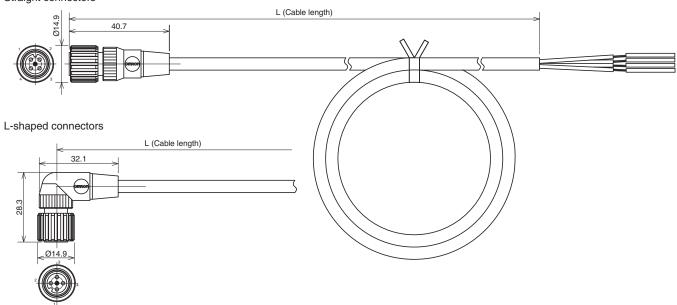
3-wire

Straight connectors



4-wire

Straight connectors



M12 8-Pin Sensor Connectors

Y92E-M12_8

For the connection of sensors with M12 8-pin connectors, the Y92E-M12_8 family provides error-free signal transmission in standard and challenging environments.

- M12 8-pin brass connectors
- Halone-free PUR cable with outer shielding layer



Ordering Information

Туре	Size	Cable material	Features	Shape	Cable length	Order code			
					2 m	Y92E-M12PURSH8S2M-L			
Sensor connector with open cable end					5 m	Y92E-M12PURSH8S5M-L			
		DUD	8-pin, outer shielding layer		10 m	Y92E-M12PURSH8S10M-L			
					25 m	Y92E-M12PURSH8S25M-L			
	Mag				0.6 m	Y92E-M12FSM12MSPURSH806M-L			
Female-male extension	male extension M12 PUR	run			2 m	Y92E-M12FSM12MSPURSH82M-L			
connector					5 m	Y92E-M12FSM12MSPURSH85M-L			
					10 m	Y92E-M12FSM12MSPURSH810M-L			
Male-male extension									0.3 m
connector					0.9 m	Y92E-M12MSM12MSPURSH80.9M-L			

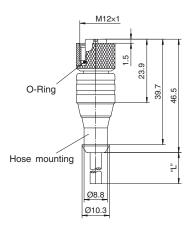
Specifications

		Y92E-M12_8
Wire size		0.25 mm ²
Rated current		4 A
Rated voltage		30 VDC
Degree of protection		IEC 60529: IP67
Ambient temperature		-25°C to 80°C
Rated standards		AWM 21198
	Flame retardant	IEC 60332-2-2 CSA FT2
	Halone free	IEC 60754-1
	RoHS	2002/95/EC

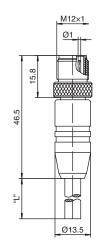
Dimensions

(Unit: mm) Tolerance class IT16 applies to dimensions in this data sheet unless otherwise specified.

Y92E-M12_8 (female)



Y92E-M12_8 (male)



Pin arrangement

M12 8-pin (female)					
	1 = white				
5	2 = brown				
4006	3 = green				
-(0,00)-	4 = yellow				
3 (0 0 0) 7	5 = grey				
2 1	6 = pink				
- 8 .	7 = blue				
	8 = red				
M1	2 8-pin (male)				
	1 = white				
5	2 = brown				
6 4	3 = green				
	4 = yellow				
7 () 3	5 = grey				
	6 = pink				
1 8 2	7 = blue				
	8 = red				

M8 and M12 Robotic Sensor Connectors

XS, Y92E

For demanding applications in drag chains or in the moving parts of robots, the robotic sensor connector family provides the bending and torsion performance required for reliable and long life operation.

- M8 and M12 brass female connectors
- suitable for frequently or constantly moving applications
- > 2 Mio drag chain bending performance PVC or PUR models
- > 5 Mio drag chain bending and > 10 Mio torsion performance PUR models



Ordering Information

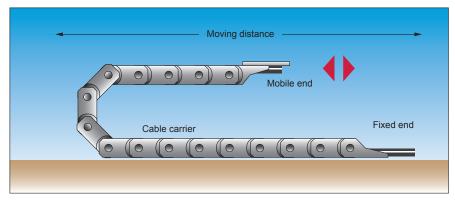
Туре	Size	Cable material	Bending performance (drag chain)	Torsion performance	Features	Shape	Cable length	Order code
							2 m	XS3F-M421-402-R
		PVC					5 m	XS3F-M421-405-R
	M8	PVC			+		2 m	XS3F-M422-402-R
	4 2						5 m	XS3F-M422-405-R
	3(0 0)1						2 m	Y92E-M08PUR4S2M-L
		DUD				1	5 m	Y92E-M08PUR4S5M-L
Sensor		PUR					2 m	Y92E-M08PUR4A2M-L
connector with			O.Mi-	(5 m	Y92E-M08PUR4A5M-L
open cable end and robotic cable			-> 2 Mio	(not specified)	4-wire		2 m	XS2F-D421-D80-F
		PVC				1	5 m	XS2F-D421-G80-F
	M12	2 0 0 5					2 m	XS2F-D422-D80-F
	(05)						5 m	XS2F-D422-G80-F
							2 m	Y92E-M12PUR4S2M-L
							5 m	Y92E-M12PUR4S5M-L
							2 m	Y92E-M12PUR4A2M-L
							5 m	Y92E-M12PUR4A5M-L
	M8						2 m	Y92E-M08PUR4S2M-R
	4 2						5 m	Y92E-M08PUR4S5M-R
Sensor	3(O O)1				•		2 m	Y92E-M08PUR4A2M-R
connector with open cable end		PUR	E Mi-	40 Mi-			5 m	Y92E-M08PUR4A5M-R
and	M12	PUR	> 5 Mio	> 10 Mio	<u> </u>		2 m	Y92E-M12PUR4S2M-R
high grade robotic cable	1/0 0%					1	5 m	Y92E-M12PUR4S5M-R
	(05)						2 m	Y92E-M12PUR4A2M-R
	40 0/3						5 m	Y92E-M12PUR4A5M-R

XS, Y92E

Bending and torsion performance

The bending and torsion performance of the robotic sensor connectors has been tested using the below test methods.

1. Bending (drag chain)

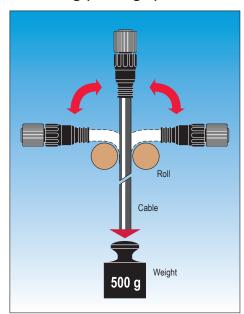


Cable carrier bending radius: approx. $9 \times$ cable outer diameter

Movement speed: PVC: 120 m/min (max)

PUR: 200 m/min (max); max 5 m/s²

2. Bending (left - right)*1

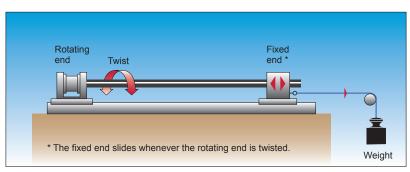


Bending angle: ±90°

Bending speed: 35 cycles/min Roll diameter: 60 mm

*1 For PVC models

3. Torsion



Torsion angle and length: PVC: $\pm 180^{\circ}$ over 0.5 m

PUR: ±360° over 1 m

Specifications

		Robo	tic PVC	Robo	tic PUR	High gra	ade robotic PUR	
		XS3FR XS2FF		Y92E	Y92E-ML		Y92E-MR	
		M8	M12	M8	M12	M8	M12	
Wire size		0.25 mm ²	0.34 mm ²					
Rated current		1A	4A					
Rated voltage		125 VDC	-	30 VDC	240 VDC	30 VDC	240 VDC	
Degree of prote	ection	IEC 60529: IP67	IEC 60529: IP67					
	Fixed			−50°C to 80°C				
Ambient	Moving			-25°C to 80°C				
temperature	Continuous drag chain operation	= −25° to 70°C	= -25° to 70°C			5°C to 60°C		
	Style	-	AWM 2464	AWM 20549		-		
Rated	Flame retardant	-	UL VW1 CSA FT4		IEC 60332-2-2 CSA FT2			
standards	Halone free	-		IEC 60754-1				
	RoHS	2002/95/EC		•				

Pin arrangement

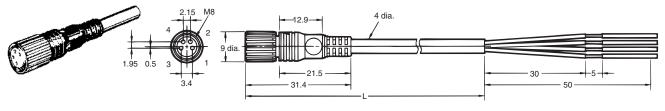
M8 4-pin	M12 4-wire
1 = brown 2 = white 3 = blue 4 = black	1 = brown 2 = white 3 = blue 4 = black 5 = n.c.

Dimensions

(Unit: mm) Tolerance class IT16 applies to dimensions in this data sheet unless otherwise specified.

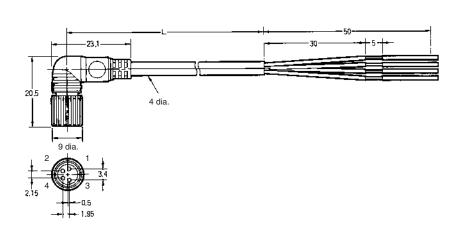
XS3F-_-R

Straight Connectors



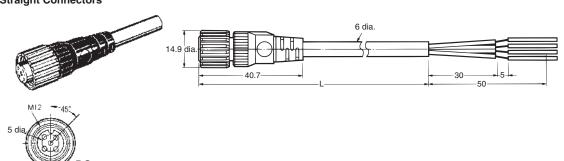
L-shaped Connectors



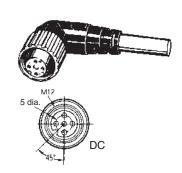


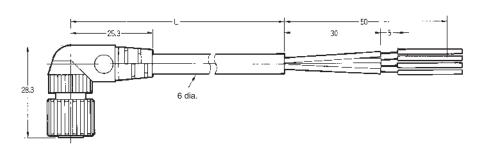
XS, Y92E

XS2F-_-F Straight Connectors



L-shaped Connectors

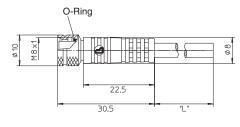




Y92E-M08_

Straight Connectors





L-shaped Connectors

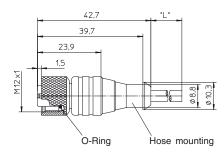


O-Ring

Y92E-M12_

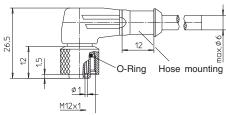
Straight Connectors





L-shaped Connectors





Y92E-S_PP

- · Highest operational reliability
- Strong flexibility due to the product variety
- Support of global industry standards (UL, ECOLAB, etc.)
- Increasing efficiency caused by superior handling characteristics as well as the potential to decrease costs



Ordering information

Detergent and wash-down resistant models

Туре	Size	Material		Features	Shape	Length	Order code
туре	Size	Nut	Cable	reatures	Snape	(m) ^{*1}	Order code
					Angled	2	Y92E-S08PP3A 2M
			PP (Polypropylene)	3 pin	Aligieu	5	Y92E-S08PP3A 5M
					Straight	2	Y92E-S08PP3S 2M
	M8				Straight	5	Y92E-S08PP3S 5M
	IVIO	SUS 316L		4 pin	Angled	2	Y92E-S08PP4A 2M
Detergent resistant						5	Y92E-S08PP4A 5M
Wash-down					Otrocionte	2	Y92E-S08PP4S 2M
					Straight	5	Y92E-S08PP4S 5M
					Anglad	2	Y92E-S12PP4A 2M
	M12				Angled	5	Y92E-S12PP4A 5M
	IVI I Z				Ctucialet	2	Y92E-S12PP4S 2M
					Straight	5	Y92E-S12PP4S 5M

For different cable length please contact your Omron representative

Specifications

Rated current	4 A
Rated voltage	M8: 60 VDC M12 4-wire: 250 VDC
Degree of protection	IP67 / IP68 / IP69K (IEC 60529)
Ambient temperature	−30 to 90°C
Approvals	UL-File Nr. E315587; ECOLAB

Pin arrangement

M8 3 pin		M8 4 pin		M12 4 pin	
3 0 01	1 = brown 3 = blue 4 = black	3 0 01	1 = brown 2 = white 3 = blue 4 = black	3 O O 4 O 5 2 O O 1	1 = brown 2 = white 3 = blue 4 = black 5 = n.c.

Materials

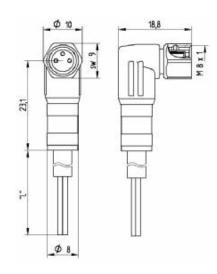
Pin block	PP, white (Polypropylene)
Contacts	Cu/Au, 0.3 µm gold plating
Fixture	Stainless steel
Cover	PP (Polypropylene)
O-ring	EPDM
Cable sheath	TPE (Thermoplastic elastomers)

Y92E-S_PP

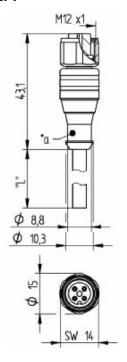
Dimensions

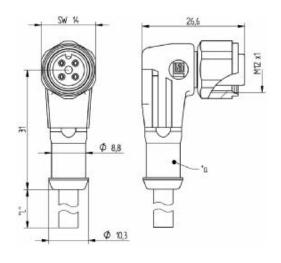
Y92E-S08PP



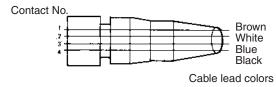


Y92E-S12PP





Wiring Diagram (M8 and M12)



Round Water-resistant Connectors (M12 Smartclick)

XS5W

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.



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	Tensile: 100 N/15 s, Torsion: 1 N·m/15 s (for cable diameter of 6 mm) *2
Lock operating force	0.1 to 0.25 N·m
Ambient operating temperature range	−25 to 70°C
Ambient humidity range	20% to 85%
Number of pressure-weld repairs *1	10 times max. (Limited to the same external diameter and wire diameter.)

^{*1.} Only XS5C/G (IDC models)

^{*2.} Refer to product specifications for details.

XS5W

Materials and Finishes

Item	Model	XS5F/H/W	XS5R	XS5M/P	XS5C/G (Crimping, Soldering)	XS5C/G (Screw-on)	XS5C/G (IDC models)	
Contacts	Material	Phosphor bronze	Phosphor bronze or Brass	Phosphor bronze	Brass	Phosphor bronze or Brass	Phosphor bronze	
Finish Nickel base, 0.4-μm gold plating					Nickel base, 0.15- μm gold plating			
Fixture	s	Nickel-plated zinc a	illoy					
Fixture	s (Lock) *	Stainless						
Pin blo	ck	PBT resin (UL94V-	0)					
O-ring	O-ring Rubber							
Overmo	Overmolding/Cover Soft PBT resin (UL94V-0) PBT resin (UL94V-0)							
	Fire-retardant, Robot cable	UL AWM2464 CL3, AWG20 (0.5mm²) Structure: 0.08 mm						
Cable Oil-resistant 6 mm dia. AWG20 (0.5mm²) Structure: 0.12 mm/45 wires								
	Spatter-resistant Cable 6.6 mm dia. AWG20 (0.5mm²) Structure: 0.08 mm/100 wires							
Seal re	sin			Epoxy resin (UL94V-0)				
Powers	supply wires			UL1007 AWG20				

^{*}Only plug

Connector Pinout Diagram (from Mating Side)

Item	No. of poles	4 poles
	Male (plug) contacts	
DC type	Female (socket) contacts	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Connection Combinations

	OMRON model No.	Smartclick Plug Connectors XS5H, XS5G, XS5W (plug side), XS5R (plug side), XS5M	M12 Plug Connectors XS2H, XS2G, XS2W (plug side), XS2R (plug side), XS2M	
Smartclick Socket Connectors	XS5F, XS5C, XS5W (socket side), XS5R (socket side), XS5P	©	О	
M12 Socket Connectors	XS2F, XS2C, XS2W (socket side), XS2R (socket side), XS2P	0	О	

Smartclick is a registered trademark of the OMRON Corporation.

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

^{©:} Connected by twisting.

O: Connected by screwing.

Smartclick

XS5W Connectors Connected to Cable, Socket and Plug on Cable Ends

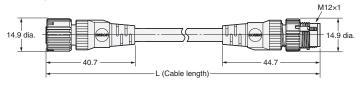
- Fire-retardant, Robot cable
- Oil-resistant Polyurethane Cable
- Spatter-resistant Cable

- XS5W-D42□-□81-F
- XS5W-D42□-□81-P

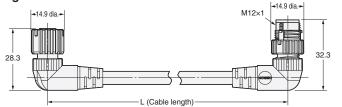
XS5W-D421-□81-SA

Dimensions (Unit: mm)

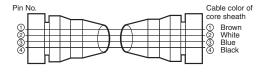
Straight/straight

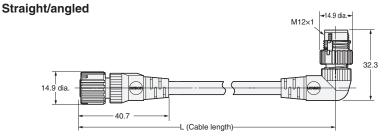


Angled/angled

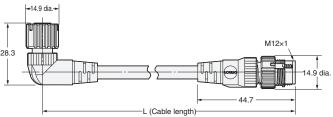


Wiring Diagram for 4 Cores





Angled/straight



Note: Oil-resistant Polyurethane Cables (XS5W-D42 -- 81-P) and Spatter-resistant Cable (XS5W-D421 - 81-SA) have black covers. Fire-retardant, Robot cable (XS5W-D42□-□81-F) have warm gray covers.

XS5W

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*.

1. Type

W: Connectors connected to cable, socket and 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 (Socket)/angled (Plug)
- 4: Angled (Socket)/straight (Plug)

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: Fire-retardant, Robot cable

P: Oil-resistant Polyurethane Cable

SA: Spatter-resistant Cable

Ordering Information

Cable specifications	Cable	Cable outer	Straight/straight	Angled/angled	Minimum	UL
Cable opcomedient	length L (m)	diameter (mm)	Мо	del	order	<u> </u>
	1		XS5W-D421-C81-F		10	
	2		XS5W-D421-D81-F	XS5W-D422-D81-F		
Fire-retardant, Robot cable	3		XS5W-D421-E81-F		5	Yes
Gasio	5	6	XS5W-D421-G81-F	XS5W-D422-G81-F		
	10	0	XS5W-D421-J81-F		1	
	2		XS5W-D421-D81-P		5	
Oil-resistant Polyure- thane Cable	5		XS5W-D421-G81-P		5	
mano cabio	10		XS5W-D421-J81-P		1	
Spatter-resistant	2	6.6	XS5W-D421-D81-SA		Е	
Cable	5	6.6	XS5W-D421-G81-SA		5	
Cable specifications	Cable length L (m)	Cable outer diameter (mm)	Straight (Socket)/ angled (Plug)			UL
	lengui L (III)	diameter (IIIII)	Mo	order		
Fire-retardant, Robot	2	6	XS5W-D423-D81-F	XS5W-D424-D81-F	5	Yes
cable	5	6	XS5W-D423-G81-F	XS5W-D424-G81-F	3	

XS5F

Ordering information

Turna	Size	Material		Features	Chana	Langth (m)	Order code
Туре		Nut	Cable	reatures	Shape	Length (m)	Order code
Twist & Click ^{*1}	M12 Brass	Brass PVC*2	DVC*2	For standard 4 pin or Omron Smartclick connectors	Angled	2	XS5F-D422-D80-F
						5	XS5F-D422-G80-F
			PVC		Straight	2	XS5F-D421-D80-F
						5	XS5F-D421-G80-F

^{*1} The XS5F connectors can be attached to standard M12 plug connectors (screw-fix) and to XS5 plug connectors (twist & click). For details on the twist & click locking mechanism refer to XS5 data sheet.

Specifications

Rated current	4A
Rated voltage	125 VDC, 250 VAC
Degree of protection	IP67 (IEC 60529)
Ambient temperature	-25°C to 70°C

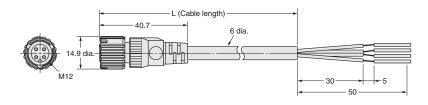
Pin arrangement

M12 4 poles			
3 O O 4 O 5 2 O O 1	1 = brown 2 = white 3 = blue 4 = black 5 = n.c.		

Materials

Pin block	PBT resin (UL94V-0)
Contacts	Phosphor bronze/nickel base, 0.4 µm gold plating
Fixture	Zinc alloy/nickel plated
Cover	Polyester elastomer (UL94V-0)
O-ring	Rubber

Dimensions



^{*2} For PUR models replace -F by -P in the order code

Confectionable plugs and connectors (self-assembly)

XS2C/G, XS5C/G, Y92E-_-conf

Ordering information

Туре	Size	Material Nut	Features		Shape	Order code
	M8		3 pin		atvaight	Y92E-MM08PVC3Sconf-L
	IVIO		4 pin		straight	Y92E-MM08PVC4Sconf-L
				IDC		XS5G-D418
			4 nin	crimp	straight	XS2G-D4C3
			4 pin	solder		XS2G-D423
Plug (male)				solder	angled	XS2G-D424
	M12		Enin	corour five	straight	XS2G-D5S1
			5 pin	screw fix	angled	XS2G-D5S2
			4 pin twist & click (for 4-5 mm cables)	screw fix	straight	XS2G-D4S3
		Polyester elastomer			angled	XS2G-D4S4
	M8		3 pin		otroight	Y92E-M08PVC3Sconf-L
	IVIO		4 pin		straight	Y92E-M08PVC4Sconf-L
			4 pin	IDC		XS5C-D418
				crimp	straight	XS2C-D4C3
Connector (female)				solder		XS2C-D423
	M12			crimp	anglad	XS2C-D4C4
				solder	angled	XS2C-D424
				screw fix	straight	XS2C-D5S1
			5 pin	SCIEW IIX	angled	XS2C-D5S2

Specifications

	Y92E	XS2C/G, XS5C/G
Rated current	4 A	
Rated voltage	36 VDC	125 VDC, 250 VAC
Degree of protection	IP67 (IEC60529)	
Ambient temperature	-25°C to 70°C	

Pin arrangement

N	18	M12			
Plug	Connectors	Plug		Connectors	
4 pin	4 pin	4 pin	5 pin	4 pin	5 pin
1 0 0 3	3 0 01	4 O O 3	4 0 0 3 0 5 1 0 0 2	3 0 0 0 2	O 4 O 5 O 1

4 pin: 1 = brown

2 = white3 = blue

4 = black

5 pin: 1 = brown

2 = white

3 = blue

4 = black 5 = green / yellow

Materials

	Y92E	XS2C/G, XS5C/G	
Pin block	PVC	PBT resin (UL94V-0)	
Contacts	- CuSn, nickel base, 0.3 μm gold plating	Brass/nickel base, 0.4 µm gold plating	
Fixture	- Cu3π, nicker base, 0.3 μm gold platting	Brass/nickel base	
Cover	PVC	PBT resin (UL94V-0)	
O-ring	FKM	Rubber	

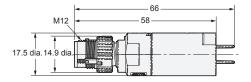
Dimensions

Plugs (male)

XS5G-D418 (IDC Model, Straight)



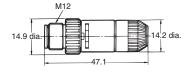




XS2G-D4C□ (Crimping Model, Straight), XS2G-D42□ (Soldering Model, Straight)



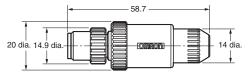




XS2G-D5S1 (Screw-on model, Straight)



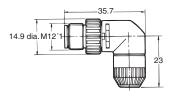




XS2G-D42 (Soldering Model, L-shaped)



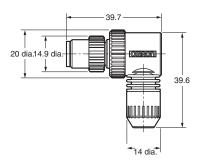




XS2G-D5S2 (Screw-on model, angled)







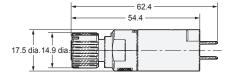
XS2C/G, XS5C/G, Y92E-_-conf

Connectors (female)

XS5C-D418 (IDC Model, Straight)



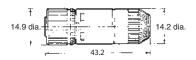




XS2C-D4C□ (Crimping Model, Straight), XS2C-D42□ (Soldering Model, Straight)



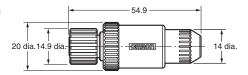




XS2C-D5S1 (Screw-on model, straight)



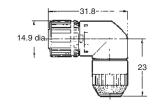




XS2C-D4C□ (Crimping Model, L-shaped)
XS2C-D42□ (Soldering Model, L-shaped)



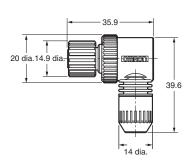




XS2C-D5S2 (Screw-on model, angled)







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.



Smartclick

Specifications

Rated current	4 A/port, 12 A/Box (power line)
Rated voltage	10 to 30 VDC
Contact resistance	40 m Ω max.
(connector)	(20 mV max., 100 mA max.)
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min
(connector)	(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 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-O), 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

		Twist-and-Click Plug Connectors	M12 Plug Connectors
OMRON model no.		XS5H, XS5G, XS5W (plug end), XS5R (plug end)	XS2H, XS2G, XS2W (plug end), XS2R (plug end)
		Addit (plug cliu)	AOZII (plug cilu)

⊚: Connected by €martclick.

O: Connected by screwing.

Smartclick is a registered trademark of the OMRON Corporation.

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
Actuato	r 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.

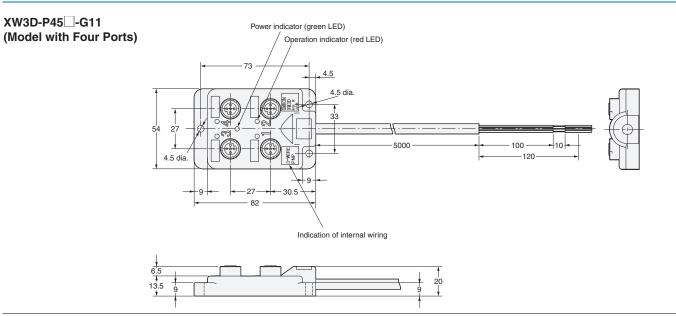
Waterproof Cover (Sold Separately)

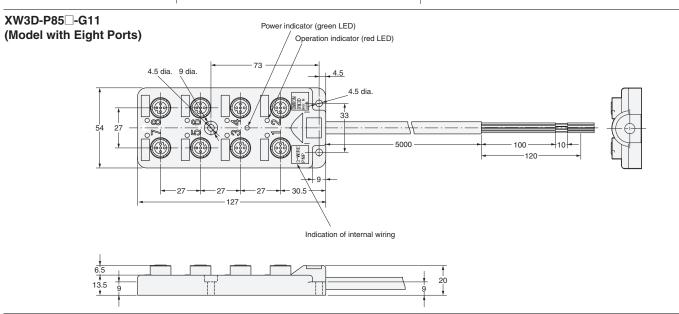
Appearance	Model	No. per box	Material
	XS5Z-11	50	PBT
	XS2Z-22	50	Brass with Ni plating

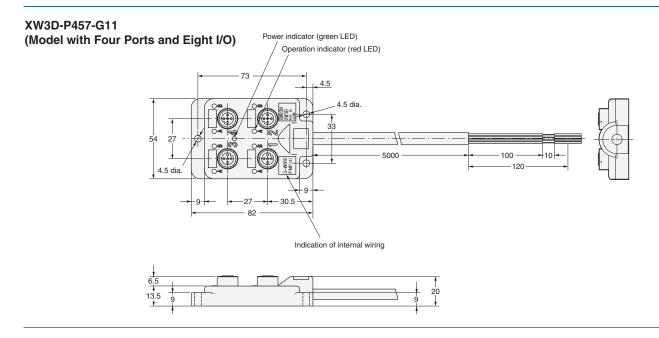
Note 1. The XW3D/XW3B/XW3A comes with a dust cover. If IP67 degree of protection is required, use the XS5Z-11 or XS2Z-22 (sold separately).

2. The XS2Z-22 connection is threaded.

Dimensions (Unit: mm)







Wiring Diagrams

Models with One I/O and One Port

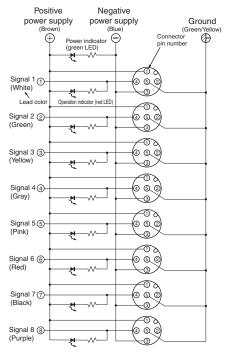
XW3D-P□55-□11 3-WIRE NPN for 3-wire NPN, 2-wire DC (without polarity 3-4), and Actuator (1-4)

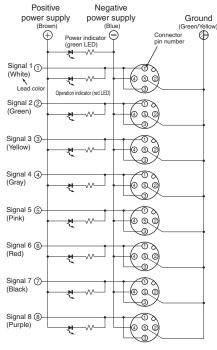
XW3D-P□52-□11 for 2-wire DC (polarity 1-4, without polarity 3-4)

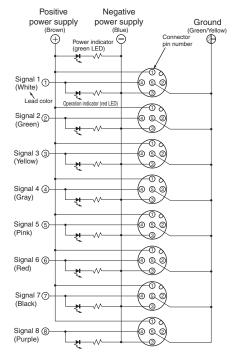
2-WIRE

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



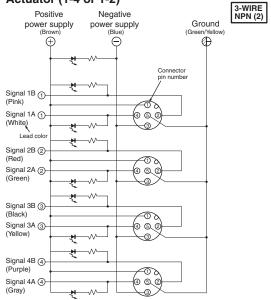




- Note 1. The above wiring diagrams are for eight-port use.
 - 2. Figures in parentheses indicate lead colors.
 - 3. The expression "white/red" means white and red stripes.
 - 4. Here, "1-4" and "3-4" are pin numbers.
 - 5. Contact numbers 5 through 8 in the above diagrams do not exist on Terminal Boxes with four ports. The lead colors for signals 1 through 4, power supply, and ground are the same.

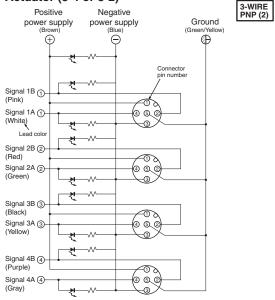
Models with Two I/O and One Port

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



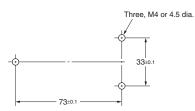
Note: Colors given in the connection diagram are lead colors.

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.
- 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 PNP (2)

Fiber amplifier connectors

E3X-CN

Ordering information

Туре	Size	Features	Order code	
Fiber amplifier connector		4 wire; 2 m PVC cable	E3X-CN21	
	Special connector 17,8×10×15,1	3 wire; 2 m PVC cable	E3X-CN11	
		2 wire slave cable; 2 m PVC	E3X-CN22*1	
		1 wire slave cable; 2 m PVC	E3X-CN12*1	
		M8 4-pin plug with 30 cm PVC cable	E3X-CN21-M3J-2 0.3M	
		M12 4-pin plug with 30 cm PVC cable	E3X-CN21-M1J 0.3M	

^{*1} Slave connectors can be used to reduce wiring effort. The setup requires 1 master amplifier with the slave amplifiers directly mounted attached. The power supply is then provided by the master amplifier via the clipped on slave connectors. For 4-wire masters use 2-wire slaves and for 3-wire masters 1-wire slaves.

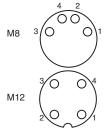
Specifications

Rated current	2.5 A
Rated voltage	50V
Degree of protection	IP50 (EC 60529)
	Groups of 1 or 2 amplifiers: –25 to 55°C
Ambient temperature	Groups of 3 to 10 amplifiers: –25 to 50°C
	Groups of 11 to 16 amplifiers: –25 to 45°C

Materials

Housing	Polybuthylene terephthalate (PBT)
Contacts	Phosphor bronze/ gold plated/ nickel

Pin arrangement



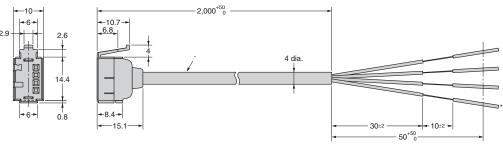
Connector	Cable colour	
1	brown	+
2	orange/white	Output 2 or ext. input
3	blue	_
4	black	Output 1
	pink	Ext. Input

E3X-CN

Dimensions

Master connectors E3X-CN21/E3X-CN11

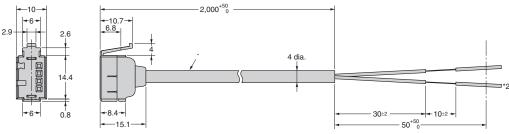




* E3X-CN21: 4-dia. vinyl-insulated round cable with 4 conductors (Conductor cross section: 0.2 mm², Insulator diameter: 1.1 mm)

Slave connectors E3X-CN22/E3X-CN12





* E3X-CN21: 4-dia. vinyl-insulated round cable with 4 conductors (Conductor cross section: 0.2 mm², Insulator diameter: 1.1 mm)

^{*1} Only E3X-CN21

^{*2} Only E3X-CN22

Photomicrosensor connectors

EE-1

Ordering information

Туре	Size	Features	Applicable sensors	Order code	
Pin connector for soldering	13×4×10.8	For dark on		EE-1001	
		For light on	EE-SX47/67	EE-1001-1	
Cable connector	13×4×13.5	standard cable	EE-3/47/07	EE-1010 2M	
		robotic cable		EE-1010-R 2M	
	10×5.8×8	standard cable	EE-SX97	EE-1017 1M	
	10x3.0x0	robotic cable	EE-3/9/	EE-1017-R 1M	
Cable connector for EE-SX91 pigtail versions	10×5.8×8	robotic cable	EE-SX91	EE-1016-R	

Specifications

Rated voltage	5 to 24 VDC
Degree of protection	IP50 (IEC 60529)
Ambient temperature range	operating: -25 to 55°C
	storage: -30 to 80°C

Material

	EE-1001 EE-1010/EE-1016		EE-1017	
Housing	Nylon			
Contacts	Phosphor bronze			
Cable	PVC 2 m PVC 1 m (3 m are availa		PVC 1 m (3 m are available on request)	

Pin arrangement

	EE-1001, EE-1010		EE-1016		EE-1017	
1	+	Brown	+	Brown	+	Brown
2	L	Pink	output 2	White	1	Black
3	out	Black	_	Blue	2	White
4	_	Blue	output 1	Black	_	Blue

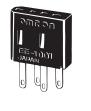
Note: For the connector EE-1001-1 the pins 1(+) and 2 (L) are short circuited

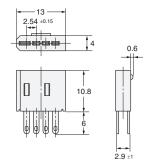
EE-1

Dimensions

Connector

EE-1001

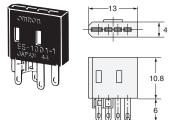


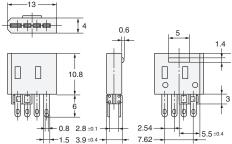


Connector

(short-circuited between positive (+) and L terminals)

EE-1001-1





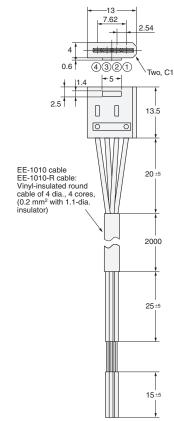
Connector with Cable

EE-1010

Connector with Robot Cable

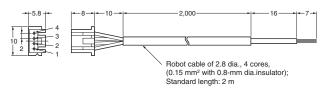
EE-1010-R





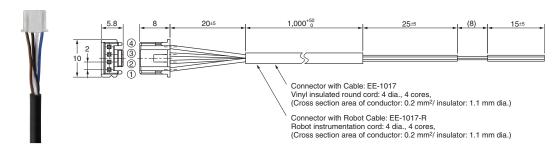
Connector with Robot Cable

EE-1016-R



Connector with Robot Cable

EE-1017-R



T-connectors, Covers, Accessories, extended wiring portfolio $\pmb{\mathsf{XS2}}$

Name	Model	Appearance		
Cable connectors with plugs	XS2W Plug connectors (Connector end)			
(open end or connector end)	XS2H Plug connectors (Open end)			
	XS2F Crimp Tool (for Crimping Connectors)			
Connector Assembly Accessories (Crimping, Soldering, or Screw-on)	XS2U Crimping pin (for XS2G/XS2C)			
	XW4Z Screwdriver (for Screw-on Connectors			
	XS2P Sockets (M12) XS3P Sockets (M8)			
Panel-mounting Connectors	XS2M Plugs (M12) XS3M Plugs (M8)	Flange-mounting Plugs		
		Screw-mounting Plugs		
T-Joints and Y-Joints Used for branching and for daisy-chain connections.	XS2R T-Joint/Y-Joint Plug/Socket Connectors (M12) XS3R Y-Joint Plug/Socket Connectors (M8)	T-Joints		
		Y-Joints		
Dust covers Used to protect unused connector ports	XS2Z (M12)	Connector plugs		
	XS3Z (M8)	Connector covers		

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