Proximity Sensor

E2E/E2EQ NEXT Series

DC 2-wire

Long-distance Detection Prevents Unexpected Facility Stoppages

- Exceptional sensing distance*1. Nearly double the sensing distance of previous models.
- With high-brightness LED, indicator is visible 360° around.
- Only 10 seconds*2 to replace a Proximity Sensor with Quick fix (Mounting Sleeve).
- Cables with enhanced oil resistance have 2-year oil resistance*3.
- IP69K compliant for water resistance and wash resistance.*4
- UL certification (UL60947-5-2) and CSA certification (CSA C22.2 UL60947-5-2-14)

*1. Based on July 2017 OMRON investigation.
*2. Time required to adjust the distance when installing a Sensor. Based on OMRON investigation.
*3. Refer to page 6 and 8 for details. However, E2EQ series is excluded.
*4. E2EQ series is excluded.

Be sure to read *Safety Precautions* on page 15.

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

E2E/E2EQ NEXT Series Model Number Legend

DC 2-wire

E2E (1) - X (2) (3) D (4) (5) (6) - (7) - (8) (9) - (10) (11)

No.	Classification	Code	Meaning
(1)	Case	Blank	Without spatter-resistant coating
		Q	With spatter-resistant coating
(2)	Sensing distance	Number	Sensing distance (Unit: mm) (R: Indication of decimal point)
(3)	Shielding	Blank	Shielded Models
		M	Unshielded Models
(4)	Operation mode	1	Normally open (NO)
		2	Normally closed (NC)
(5)	Body size	Blank	Standard
		L	Long Body
(6)	Size (Omitted for the Single distance type.)	8	M8
		12	M12
		18	M18
		30	M30
(7)	Connecting method	Blank	Pre-wired Models
		M1TGJ	M12 Pre-wired Smartclick Connector Models pigtail
		M1TGJR	M12 Pre-wired Smartclick Connector Models (Robot (bending-resistant) PVC cable) robot pigtail
(8)	Polarity	Blank	Polarity
		T	No polarity
(9)	Cable specifications *	Blank	Standard PVC cable
		R	Robot (bending-resistant) PVC cable
(10)	New model	Blank	Other than Single distance model (Pre-wired Models)
		N	Single distance model (Applicable only to Pre-wired Models)
(11)	Cable length	Number M	Cable length

* (9) is only shown in the model number of Pre-wired Models.

Note: 1. The purpose of this model number legend is to provide understanding of the meaning of specifications from the model number. Models are not available for all combinations of code numbers.

2. Size description of the number 7 is not included in the Single-distance type.

Ordering Information

Sensors

E2E NEXT Series (Triple distance model)
DC 2-wire [Refer to *Dimensions* on page 18.]
Shielded Models *1

Size (Sensing distance)	Connection method	Polarity	Model	
			Operation mode: NO	Operation mode: NC
M8 (3 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X3D18 2M	E2E-X3D28 2M
		No	E2E-X3D18-T 2M	E2E-X3D28-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X3D18-M1TGJ 0.3M	E2E-X3D28-M1TGJ 0.3M
		No	E2E-X3D18-M1TGJ-T 0.3M	E2E-X3D28-M1TGJ-T 0.3M
M12 (7 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X7D112 2M	E2E-X7D212 2M
		No	E2E-X7D112-T 2M	E2E-X7D212-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X7D112-M1TGJ 0.3M	E2E-X7D212-M1TGJ 0.3M
		No	E2E-X7D112-M1TGJ-T 0.3M	E2E-X7D212-M1TGJ-T 0.3M
M18 (11 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X11D118 2M	E2E-X11D218 2M
		No	E2E-X11D118-T 2M	E2E-X11D218-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X11D118-M1TGJ 0.3M	E2E-X11D218-M1TGJ 0.3M
		No	E2E-X11D118-M1TGJ-T 0.3M	E2E-X11D218-M1TGJ-T 0.3M
M30 (20 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X20D130 2M	E2E-X20D230 2M
		No	E2E-X20D130-T 2M	E2E-X20D230-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X20D130-M1TGJ 0.3M	E2E-X20D230-M1TGJ 0.3M
		No	E2E-X20D130-M1TGJ-T 0.3M	E2E-X20D230-M1TGJ-T 0.3M

Unshielded Models

Size (Sensing distance)	Connection method	Polarity	Model	
			Operation mode: NO	Operation mode: NC
M8 (6 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X6MD18 2M	E2E-X6MD28 2M
		No	E2E-X6MD18-T 2M	E2E-X6MD28-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X6MD18-M1TGJ 0.3M	E2E-X6MD28-M1TGJ 0.3M
		No	E2E-X6MD18-M1TGJ-T 0.3M	E2E-X6MD28-M1TGJ-T 0.3M
M12 (10 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X10MD112 2M	E2E-X10MD212 2M
		No	E2E-X10MD112-T 2M	E2E-X10MD212-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X10MD112-M1TGJ 0.3M	E2E-X10MD212-M1TGJ 0.3M
		No	E2E-X10MD112-M1TGJ-T 0.3M	E2E-X10MD212-M1TGJ-T 0.3M
M18 (20 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X20MD1L18 2M	E2E-X20MD2L18 2M
		No	E2E-X20MD1L18-T 2M	E2E-X20MD2L18-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X20MD1L18-M1TGJ 0.3M	E2E-X20MD2L18-M1TGJ 0.3M
		No	E2E-X20MD1L18-M1TGJ-T 0.3M	E2E-X20MD2L18-M1TGJ-T 0.3M
M30 (40 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X40MD1L30 2M	E2E-X40MD2L30 2M
		No	E2E-X40MD1L30-T 2M	E2E-X40MD2L30-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X40MD1L30-M1TGJ 0.3M	E2E-X40MD2L30-M1TGJ 0.3M
		No	E2E-X40MD1L30-M1TGJ-T 0.3M	E2E-X40MD2L30-M1TGJ-T 0.3M

*1. When embedding the Proximity Sensor in metal, refer to *Influence of Surrounding Metal* on page 16.
*2. Models with 5-m cable length are also available with "5M" suffix. (Example: E2E-X3D18 5M)
*3. Models with 2-m and 5-m robot (bending-resistant) cables are also available with "-R" in the model number. (Example: E2E-X3D18-R 2M/E2E-X3D18-R 5M)
*4. Models with M12 Pre-wired Smartclick Connectors and robot (bending-resistant) cables are also available with "R" in the model number. (Example: E2E-X3D18-M1TGJR 0.3M/E2E-X3D18-M1TGJR-T 0.3M)

Sensors

E2EQ NEXT Series (Spatter-resistant Triple distance model)

DC 2-wire [Refer to *Dimensions* on page 21.]

Shielded Models *1

Size (Sensing distance)	Connection method	Polarity	Model	
			Operation mode: NO	Operation mode: NC
M8 (3 mm)	Pre-wired (2 m) *2	Yes	E2EQ-X3D18 2M	E2EQ-X3D28 2M
		No	E2EQ-X3D18-T 2M	E2EQ-X3D28-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m)	Yes	E2EQ-X3D18-M1TGJ 0.3M	E2EQ-X3D28-M1TGJ 0.3M
		No	E2EQ-X3D18-M1TGJ-T 0.3M	E2EQ-X3D28-M1TGJ-T 0.3M
M12 (7 mm)	Pre-wired (2 m) *2	Yes	E2EQ-X7D112 2M	E2EQ-X7D212 2M
		No	E2EQ-X7D112-T 2M	E2EQ-X7D212-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m)	Yes	E2EQ-X7D112-M1TGJ 0.3M	E2EQ-X7D212-M1TGJ 0.3M
		No	E2EQ-X7D112-M1TGJ-T 0.3M	E2EQ-X7D212-M1TGJ-T 0.3M
M18 (11 mm)	Pre-wired (2 m) *2	Yes	E2EQ-X11D118 2M	E2EQ-X11D218 2M
		No	E2EQ-X11D118-T 2M	E2EQ-X11D218-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m)	Yes	E2EQ-X11D118-M1TGJ 0.3M	E2EQ-X11D218-M1TGJ 0.3M
		No	E2EQ-X11D118-M1TGJ-T 0.3M	E2EQ-X11D218-M1TGJ-T 0.3M
M30 (20 mm)	Pre-wired (2 m) *2	Yes	E2EQ-X20D130 2M	E2EQ-X20D230 2M
		No	E2EQ-X20D130-T 2M	E2EQ-X20D230-T 2M
	M12 Pre-wired Smartclick Connector (0.3 m)	Yes	E2EQ-X20D130-M1TGJ 0.3M	E2EQ-X20D230-M1TGJ 0.3M
		No	E2EQ-X20D130-M1TGJ-T 0.3M	E2EQ-X20D230-M1TGJ-T 0.3M

*1. When embedding the Proximity Sensor in metal, refer to *Influence of Surrounding Metal* on page 16.
*2. Models with 5-m cable length are also available with "5M" suffix. (Example: E2EQ-X3D18 5M)

E2E NEXT Series (Single distance model)

DC 2-wire [Refer to *Dimensions* on page 22.]

Shielded Models

Size (Sensing distance)	Connection method	Polarity	Model	
			Operation mode: NO	Operation mode: NC
M8 (1.5 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X1R5D1-N 2M	E2E-X1R5D2-N 2M
		No	E2E-X1R5D1-T-N 2M	E2E-X1R5D2-T-N 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X1R5D1-M1TGJ 0.3M	E2E-X1R5D2-M1TGJ 0.3M
		No	E2E-X1R5D1-M1TGJ-T 0.3M	E2E-X1R5D2-M1TGJ-T 0.3M
M12 (2.5 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X2R5D1-N 2M	E2E-X2R5D2-N 2M
		No	E2E-X2R5D1-T-N 2M	E2E-X2R5D2-T-N 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X2R5D1-M1TGJ 0.3M	E2E-X2R5D2-M1TGJ 0.3M
		No	E2E-X2R5D1-M1TGJ-T 0.3M	E2E-X2R5D2-M1TGJ-T 0.3M
M18 (5 mm)	Pre-wired (2 m) *2 *3	Yes	E2E-X5D1-N 2M	E2E-X5D2-N 2M
		No	E2E-X5D1-T-N 2M	E2E-X5D2-T-N 2M
	M12 Pre-wired Smartclick Connector (0.3 m) *4	Yes	E2E-X5D1-M1TGJ 0.3M	E2E-X5D2-M1TGJ 0.3M
		No	E2E-X5D1-M1TGJ-T 0.3M	E2E-X5D2-M1TGJ-T 0.3M

*1. Models with 5-m cable length are also available with "5M" suffix. (Example: E2E-X1R5D1-N 5M)
*2. Models with 2-m and 5-m robot (bending-resistant) cables are also available with "-R" in the model number. (Example: E2E-X1R5D1-R-N 2M/E2E-X1R5D1-R-N 5M)
*3. Models with M12 Smartclick connector model robot (bending-resistant) cables are also available with "R" in the model number. (Example: E2E-X1R5D1-M1TGJR 0.3M/E2E-X1R5D1-M1TGJR-T 0.3M)

Accessories (Sold Separately)

Sensor I/O Connectors

(Models for Pre-wired Connectors) A Sensor I/O Connector is not provided with the Sensor. It must be ordered separately as required.

Round Oil-resistant Connectors XS5 NEXT series

Appearance	Cable Specification	Type	Cable diameter (mm)	Cable Connection Direction	Cable length (m)	Sensor I/O Connector model number	Applicable Proximity Sensor model number
M12 Smartclick Connector Straight type 	Oil-resistant PVC cable	Sockets on One Cable End	6 dia.	Straight	1	**XS5F-D421-C80-X**	E2E-X□D□-M1TGJ(R)(-T) E2EQ-X□D□-M1TGJ(-T)
					2	**XS5F-D421-D80-X**	
					3	**XS5F-D421-E80-X**	
					5	**XS5F-D421-G80-X**	
					10	**XS5F-D421-J80-X**	
	Oil-resistant PVC robot cable	Sockets on One Cable End	6 dia.	Straight	1	**XS5F-D421-C80-XR**	
					2	**XS5F-D421-D80-XR**	
					3	**XS5F-D421-E80-XR**	
					5	**XS5F-D421-G80-XR**	
					10	**XS5F-D421-J80-XR**	
	Oil-resistant PVC cable	Socket and Plug on Cable Ends	6 dia.	Straight (Socket)/ Straight (Plug)	1	**XS5W-D421-C81-X**	
					2	**XS5W-D421-D81-X**	
					3	**XS5W-D421-E81-X**	
					5	**XS5W-D421-G81-X**	
					10	**XS5W-D421-J81-X**	
	Oil-resistant PVC robot cable	Socket and Plug on Cable Ends	6 dia.	Straight (Socket)/ Straight (Plug)	1	**XS5W-D421-C81-XR**	
					2	**XS5W-D421-D81-XR**	
					3	**XS5W-D421-E81-XR**	
					5	**XS5W-D421-G81-XR**	
					10	**XS5W-D421-J81-XR**	

Note: For details of the connector, refer to *XS5 NEXT Series* on page 87.

Round Water-resistant Connectors XS5 series

Appearance	Cable Specification	Type	Cable diameter (mm)	Cable Connection Direction	Cable length (m)	Sensor I/O Connector model number	Applicable Proximity Sensor model number
M12 Smartclick Connector Straight type  Right-angle type 	PVC robot cable	Sockets on One Cable End	6 dia.	Straight	1	**XS5F-D421-C80-F**	E2E-X□D□-M1TGJ(R)(-T) E2EQ-X□D□-M1TGJ(-T)
					2	**XS5F-D421-D80-F**	
					3	**XS5F-D421-E80-F**	
					5	**XS5F-D421-G80-F**	
					10	**XS5F-D421-J80-F**	
				Right-angle	1	**XS5F-D422-C80-F**	
					2	**XS5F-D422-D80-F**	
					3	**XS5F-D422-E80-F**	
					5	**XS5F-D422-G80-F**	
					10	**XS5F-D422-J80-F**	
		Socket and Plug on Cable Ends	6 dia.	Straight (Socket)/ Straight (Plug)	1	**XS5W-D421-C81-F**	
					2	**XS5W-D421-D81-F**	
					3	**XS5W-D421-E81-F**	
					5	**XS5W-D421-G81-F**	
					10	**XS5W-D421-J81-F**	
				Right-angle (Socket)/ Right-angle (Plug)	2	**XS5W-D422-D81-F**	
					5	**XS5W-D422-G81-F**	
				Straight (Socket)/ Right-angle (Plug)	2	**XS5W-D423-D81-F**	
					5	**XS5W-D423-G81-F**	
				Right-angle (Socket)/ Straight (Plug)	2	**XS5W-D424-D81-F**	
					5	**XS5W-D424-G81-F**	

Note: For details of the connector, refer to *XS5 Series* on page 94.

Sensor I/O Connectors Oil resistance performance of mating combination

E2E NEXT Series Pre-wired Connector Models	Applicable connector Model	
	XS5 NEXT series	XS5 series
E2E-X□D□-M1TGJ(R)(-T)	2 years of oil resistance*	Water-resistant (IP67)

* Applicable cutting oil type: specified in JIS K 2241:2000
2 years of oil resistance indicates the median value of the product design and the oil-resistance performance criterion result (=Typical value).
Products to be shipped will have approximately 2 years of oil resistance, but will very depending on the product.

Quick fix (Mounting Sleeves) [Refer to Dimensions on page 23.]

A Mounting Bracket is not provided with the Sensor. It must be ordered separately as required.

Appearance	Model	Applicable Sensors
	Y92E-J8S12	E2E NEXT M8 Shielded Sensors
	Y92E-J12S18	E2E NEXT M12 Shielded Sensors
	Y92E-J18S30	E2E NEXT M18 Shielded Sensors

Note: Not applicable for E2EQ NEXT Series (spatter-resistant) models.

E2E/E2EQ NEXT Series

Ratings and Specifications

E2E NEXT Series (Triple distance model)

DC 2-wire

Item	Size	M8		M12		M18		M30	
	Shielded	Shielded	Unshielded	Shielded	Unshielded	Shielded	Unshielded	Shielded	Unshielded
	Model	E2E-X3D□	E2E-X6MD□	E2E-X7D□	E2E-X10MD□	E2E-X11D□	E2E-X20MD□	E2E-X20D□	E2E-X40MD□
Sensing distance		3 mm ±10%	6 mm ±10%	7 mm ±10%	10 mm ±10%	11 mm ±10%	20 mm ±10%	20 mm ±10%	40 mm ±10%
Setting distance *1		0 to 2.4 mm	0 to 4.8 mm	0 to 5.6 mm	0 to 8 mm	0 to 8.8 mm	0 to 16 mm	0 to 16 mm	0 to 32 mm
Differential travel		15% max. of sensing distance							
Detectable object		Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to *Engineering Data* on page 9.)							
Standard sensing object		Iron, 9 × 9 × 1 mm	Iron, 18 × 18 × 1 mm	Iron, 21 × 21 × 1 mm	Iron, 30 × 30 × 1 mm	Iron, 33 × 33 × 1 mm	Iron, 60 × 60 × 1 mm	Iron, 60 × 60 × 1 mm	Iron, 120 × 120 × 1 mm
Response frequency *2		350 Hz	250 Hz	350 Hz	200 Hz	250 Hz	200 Hz	200 Hz	50 Hz
Power supply voltage		10 to 30 VDC, (including 10% ripple (p-p))							
Leakage current		0.8 mA max.							
Control output	Load current	3 to 100 mA							
	Residual voltage	Polarity: 3 V max. (Load current: 100 mA, Cable length: 2 m) No polarity: 5 V max. (Load current: 100 mA, Cable length: 2 m)							
Indicator		D1 Models: Operation indicator (orange), Setting indicator (green) D2 Models: Operation indicator (orange)							
Operation mode		D1 Models: NO D2 Models: NC Refer to the timing charts under *I/O Circuit Diagrams* on page 13 for details.							
Protection circuits		Surge suppressor, Load short-circuit protection							
Ambient temperature range		Operating: -25 to 70°C, Storage: -40 to 85°C (with no icing or condensation)							
Ambient humidity range		Operating and Storage: 35% to 95% (with no condensation)							
Temperature influence		±10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C				±20% max. of sensing distance at 23°C in the temperature range of -25 to 70°C	±10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C	±20% max. of sensing distance at 23°C in the temperature range of -25 to 70°C	
Voltage influence		±1% max. of sensing distance at rated voltage in the rated voltage ±15% range							
Insulation resistance		50 MΩ min. (at 500 VDC) between current-carrying parts and case							
Dielectric strength		1,000 VAC, 50/60 Hz for 1 minute between current-carrying parts and case							
Vibration resistance (destruction)		10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions							
Shock resistance (destruction)		500 m/s^2 10 times each in X, Y, and Z directions		1,000 m/s^2 10 times each in X, Y, and Z directions					
Degree of protection		Pre-wired Models/Pre-wired Connector Models: IP67 (IEC 60529), IP67G *3 (JIS C 0920 Annex 1) Passed OMRON's Oil-resistant Component Evaluation Standards *4 (Cutting oil type: specified in JIS K 2241:2000, Temperature: 35 °C max.) and ISO 20653 (old standard: DIN 40050 PART9) IP69K							
Connecting method		Pre-wired Models (Standard cable length: 2 m) and Pre-wired Connector Models (Standard cable length: 0.3 m)							
Weight (packed state)	Pre-wired Models	Approx. 60 g		Approx. 70 g		Approx. 130 g	Approx. 150 g	Approx. 180 g	Approx. 210 g
	Pre-wired Connector Models	Approx. 30 g		Approx. 40 g		Approx. 70 g	Approx. 90 g	Approx.110 g	Approx. 140 g
Materials	Case	Nickel-plated brass	Stainless steel (SUS303)	Nickel-plated brass					
	Sensing surface	Polybutylene terephthalate (PBT)							
	Clamping nuts	Nickel-plated brass							
	Toothed washer	Zinc-plated iron							
	Cable	Vinyl chloride (PVC)							
Accessories		Instruction manual, Clamping nuts, Toothed washer							

*1. Use the Sensor within the range in which the setting indicator (green LED) is ON (except D2 Models).
*2. The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard sensing object, and a set distance of half the sensing distance.
*3. The IP67G is the degree of protection which is defined according to the JIS (Japanese Industrial Standards).
The IP67 indicates the same level of protection as defined by the IEC, and the G indicates that a device has resistance to oil.
*4. The Oil-resistant Component Evaluation Standards are OMRON's own durability evaluation standards.
2-year oil resistance indicates the median value of the product design and the oil-resistance performance criterion result (=Typical value).
The Pre-wired Connector Model verifies 2 years of oil resistance when mating with Round Oil-resistant Connectors XS5 NEXT series correctly.
The degree of protection is not satisfied with the part where cable wires are uncovered for the Pre-wired Models.

E2EQ NEXT Series (Spatter-resistant Triple distance model)
DC 2-wire

Item	Size	M8	M12	M18	M30
	Shielded	Shielded			
	Model	E2EQ-X3D□	E2EQ-X7D□	E2EQ-X11D□	E2EQ-X20D□
Sensing distance		3 mm ±10%	7 mm ±10%	11 mm ±10%	20 mm ±10%
Setting distance *1		0 to 2.4 mm	0 to 5.6 mm	0 to 8.8 mm	0 to 16 mm
Differential travel		15% max. of sensing distance			
Detectable object		Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to *Engineering Data* on page 9.)			
Standard sensing object		Iron, 9 × 9 × 1 mm	Iron, 21 × 21 × 1 mm	Iron, 33 × 33 × 1 mm	Iron, 60 × 60 × 1 mm
Response frequency *2		250 Hz	250 Hz	250 Hz	200 Hz
Power supply voltage		10 to 30 VDC, (including 10% ripple (p-p))			
Leakage current		0.8 mA max.			
Control output	Load current	3 to 100 mA			
	Residual voltage	Polarity: 3 V max. (Load current: 100 mA, Cable length: 2 m) No polarity: 5 V max. (Load current: 100 mA, Cable length: 2 m)			
Indicator		D1 Models: Operation indicator (orange), Setting indicator (green) D2 Models: Operation indicator (orange)			
Operation mode		D1 Models: NO D2 Models: NC Refer to the timing charts under *I/O Circuit Diagrams* on page 13 for details.			
Protection circuits		Surge suppressor, Load short-circuit protection			
Ambient temperature range		Operating: -25 to 70°C, Storage: -40 to 85°C (with no icing or condensation)			
Ambient humidity range		Operating and Storage: 35% to 95% (with no condensation)			
Temperature influence		±10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C		±20% max. of sensing distance at 23°C in the temperature range of -25 to 70°C	
Voltage influence		±1% max. of sensing distance at rated voltage in the rated voltage ±15% range			
Insulation resistance		50 MΩ min. (at 500 VDC) between current-carrying parts and case			
Dielectric strength		1,000 VAC, 50/60 Hz for 1 minute between current-carrying parts and case			
Vibration resistance (destruction)		10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions			
Shock resistance (destruction)		500 m/s^2 10 times each in X, Y, and Z directions	1,000 m/s^2 10 times each in X, Y, and Z directions		
Degree of protection		Pre-wired Models/Pre-wired Connector Models: IP67 (IEC 60529) and IP67G *3 (JIS C 0920 Annex 1)			
Connecting method		Pre-wired Models (Standard cable length: 2 m) and Pre-wired Connector Models (Standard cable length: 0.3 m)			
Weight (packed state)	Pre-wired Models	Approx. 60 g	Approx. 70 g	Approx. 150 g	Approx. 210 g
	Pre-wired Connector Models	Approx. 30 g	Approx. 40 g	Approx. 90 g	Approx. 140 g
Materials	Case	Fluororesin coating (Base material: brass)			
	Sensing surface	Fluororesin			
	Clamping nuts	Fluororesin coating (Base material: brass)			
	Toothed washer	Zinc-plated iron			
	Cable	Vinyl chloride (PVC)			
Accessories		Instruction manual, Clamping nuts, Toothed washer			

*1. Use the Sensor within the range in which the setting indicator (green LED) is ON (except D2 Models).
*2. The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard sensing object, and a set distance of half the sensing distance.
*3. The IP67G is the degree of protection which is defined according to the JIS (Japanese Industrial Standards).
The IP67 indicates the same level of protection as defined by the IEC, and the G indicates that a device has resistance to oil.

E2E NEXT Series (Single distance model)
DC 2-wire

Item		Size	M8	M12	M18
		Shielded	Shielded		
		Model	E2E-X1R5D□	E2E-X2R5D□	E2E-X5D□
Sensing distance			1.5 mm ±10%	2.5 mm ±10%	5 mm ±10%
Setting distance *1			0 to 1.2 mm	0 to 2 mm	0 to 4 mm
Differential travel			10% max. of sensing distance		
Detectable object			Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to *Engineering Data* on page 9.)		
Standard sensing object			Iron, 10 × 10 × 1 mm	Iron, 12 × 12 × 1 mm	Iron, 18 × 18 × 1 mm
Response frequency *2			250 Hz	250 Hz	250 Hz
Power supply voltage			10 to 30 VDC, (including 10% ripple (p-p))		
Leakage current			0.8 mA max.		
Control output	Load current		3 to 100 mA		
	Residual voltage		Polarity: 3 V max. (Load current: 100 mA, Cable length: 2 m) No polarity: 5 V max. (Load current: 100 mA, Cable length: 2 m)		
Indicator			D1 Models: Operation indicator (orange), Setting indicator (green) D2 Models: Operation indicator (orange)		
Operation mode			D1 Models: NO D2 Models: NC Refer to the timing charts under *I/O Circuit Diagrams* on page 13 for details.		
Protection circuits			Surge suppressor, Load short-circuit protection		
Ambient temperature range			Operating: -25 to 70°C, Storage: -40 to 85°C (with no icing or condensation)		
Ambient humidity range			Operating and Storage: 35% to 95% (with no condensation)		
Temperature influence			±10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C		
Voltage influence			±1% max. of sensing distance at rated voltage in the rated voltage ±15% range		
Insulation resistance			50 MΩ min. (at 500 VDC) between current-carrying parts and case		
Dielectric strength			1,000 VAC, 50/60 Hz for 1 minute between current-carrying parts and case		
Vibration resistance (destruction)			10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions		
Shock resistance (destruction)			500 m/s^2 10 times each in X, Y, and Z directions	1,000 m/s^2 10 times each in X, Y, and Z directions	
Degree of protection			Pre-wired Models/Pre-wired Connector Models: IP67 (IEC 60529), IP67G *3 (JIS C 0920 Annex 1) Passed OMRON's Oil-resistant Component Evaluation Standards *4 (Cutting oil type: specified in JIS K 2241:2000, Temperature: 35°C max.) and ISO 20653 (old standard: DIN 40050 PART9) IP69K		
Connecting method			Pre-wired Models (Standard cable length: 2 m) and Pre-wired Connector Models (Standard cable length: 0.3 m)		
Weight (packed state)	Pre-wired Models		Approx. 60 g	Approx. 70 g	Approx. 130 g
	Pre-wired Connector Models		Approx. 30 g	Approx. 40 g	Approx. 70 g
Materials	Case		Stainless steel (SUS303)	Nickel-plated brass	
	Sensing surface		Polybutylene terephthalate (PBT)		
	Clamping nuts		Nickel-plated brass		
	Toothed washer		Zinc-plated iron		
	Cable		Vinyl chloride (PVC)		
Accessories			Instruction manual, Clamping nuts, Toothed washer		

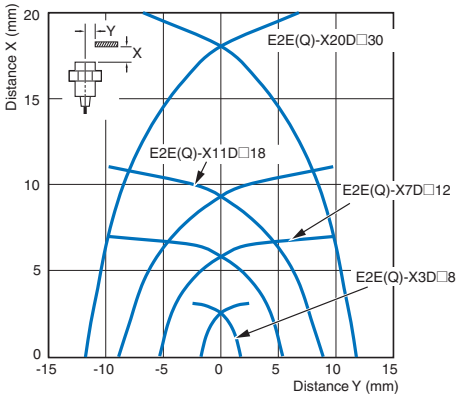
*1. Use the Sensor within the range in which the setting indicator (green LED) is ON (except D2 Models).
*2. The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard.
*3. The IP67G is the degree of protection which is defined according to the JIS (Japanese Industrial Standards).
The IP67 indicates the same level of protection as defined by the IEC, and the G indicates that a device has resistance to oil.
*4. The Oil-resistant Component Evaluation Standards are OMRON's own durability evaluation standards.
2-year oil resistance indicates the median value of the product design and the oil-resistance performance criterion result (=Typical value).
The Pre-wired Connector Model verifies 2 years of oil resistance when mating with Round Oil-resistant Connectors XS5 NEXT series correctly.
The degree of protection is not satisfied with the part where cable wires are uncovered for the Pre-wired Models.

Engineering Data (Reference Value)

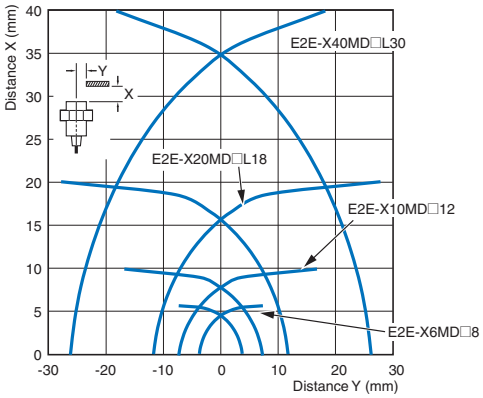
Sensing Area

Triple distance model, Spatter-resistant Triple distance model

Shielded Models
E2E(Q)-X□D□

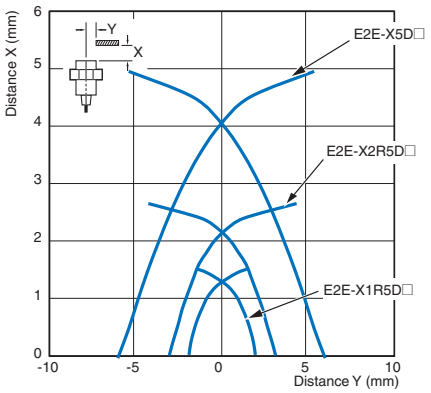


Unshielded Models
E2E-X□MD□



Single distance model

Shielded Models
E2E-X1R5D□/-X2R5D□/-X5D□

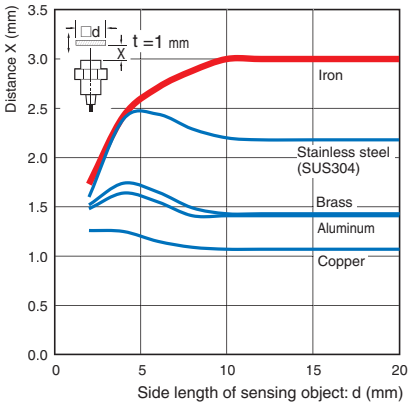


Influence of Sensing Object Size and Materials

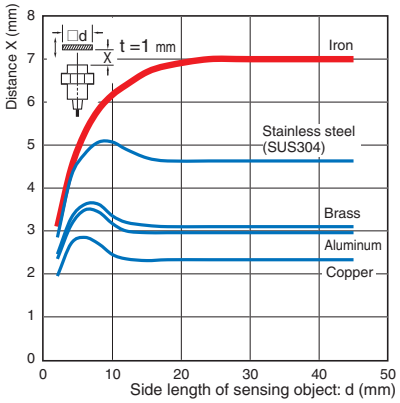
Triple distance model, Spatter-resistant Triple distance model

Shielded Models

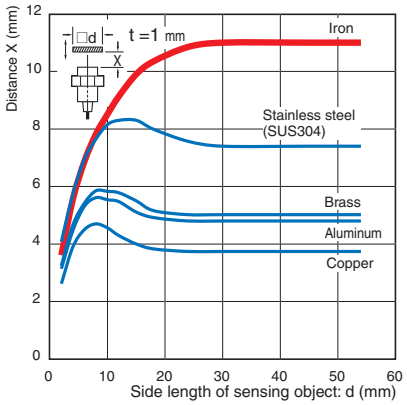
E2E(Q)-X3D□8



E2E(Q)-X7D□12



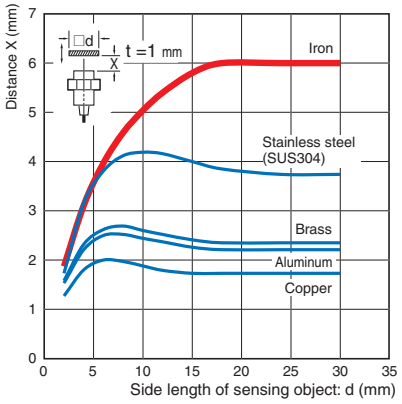
E2E(Q)-X11D□18



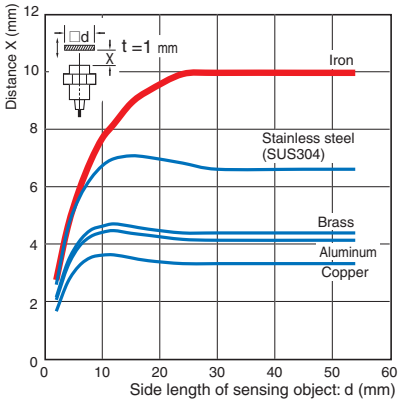
E2E(Q)-X20D□30

Unshielded Models

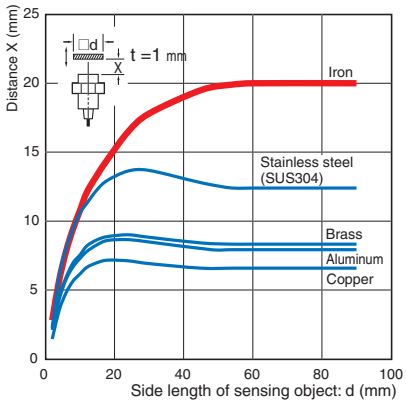
E2E-X6MD□8



E2E-X10MD□12



E2E-X20MD□L18

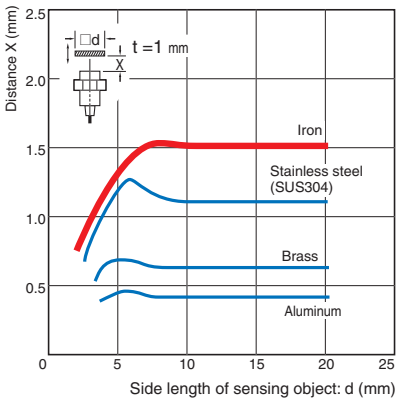


E2E-X40MD□L30

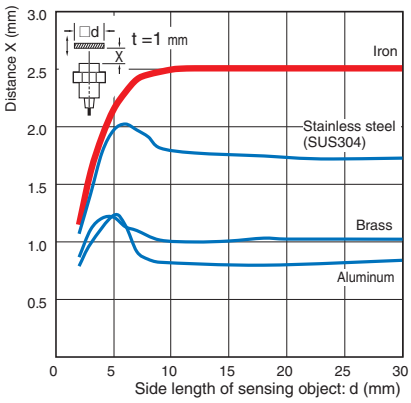
Single distance model

Shielded Models

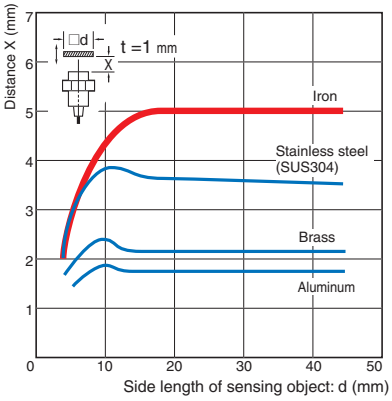
E2E-X1R5D□

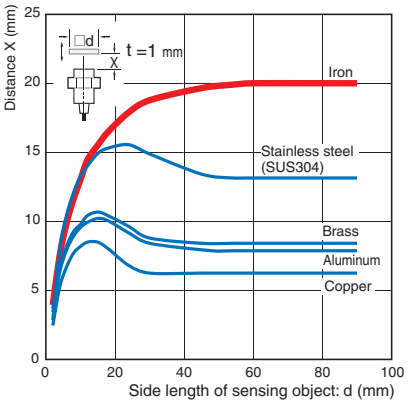


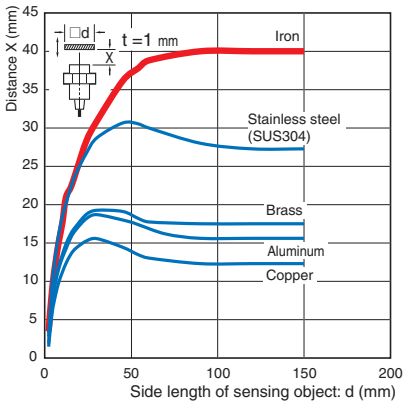
E2E-X2R5D□



E2E-X5D□



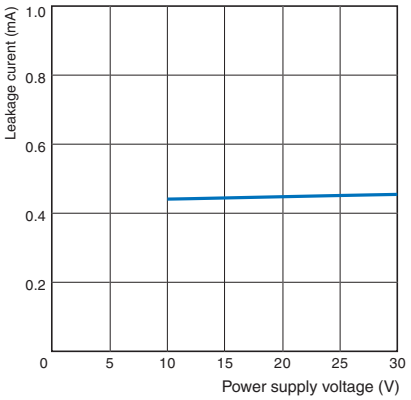

Distance X (mm)
25
20
15
10
5
0
□d
t =1 mm
X
Iron
Stainless steel
(SUS304)
Brass
Aluminum
Copper
0
20
40
60
80
100
Side length of sensing object: d (mm)


Distance X (mm)
45
40
35
30
25
20
15
10
5
0
□d
t =1 mm
X
Iron
Stainless steel
(SUS304)
Brass
Aluminum
Copper
0
50
100
150
200
Side length of sensing object: d (mm)

Leakage Current

Triple distance model, Spatter-resistant Triple distance model, Single distance model

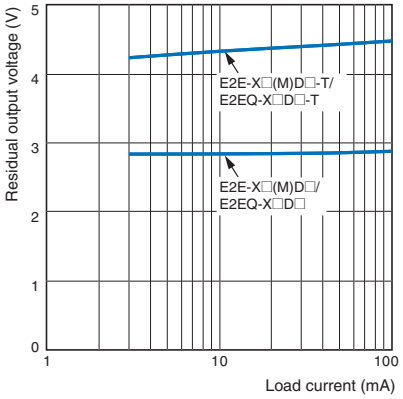
E2E-X□(M)D□(-T)/E2EQ-X□D□(-T)



Residual Output Voltage

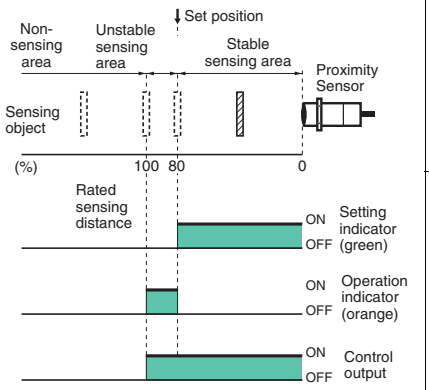
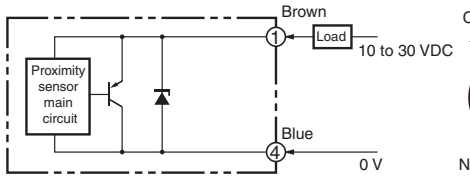
Triple distance model, Spatter-resistant Triple distance model, Single distance model

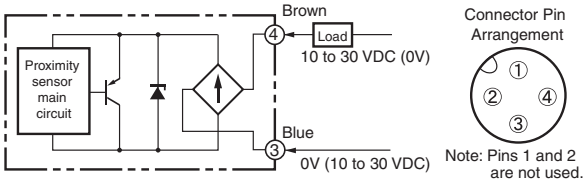
E2E-X□(M)D□(-T)/E2EQ-X□D□(-T)

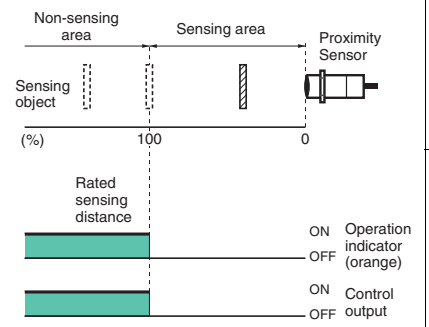
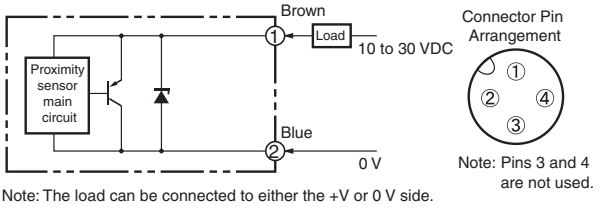


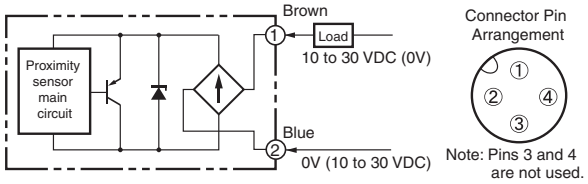
I/O Circuit Diagrams

DC 2-Wire Models

<table>
<tr><th>Operation mode</th><th>Model</th><th>Timing Chart</th><th>Output circuit</th></tr>
<tr><td rowspan="2">NO</td><td>E2E(Q)-X□D1□</td><td rowspan="2"> 
</td><td> 

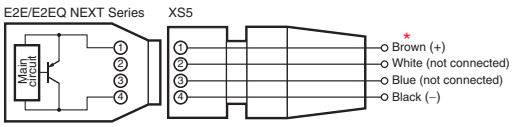
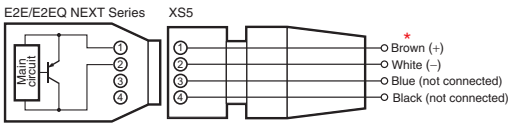
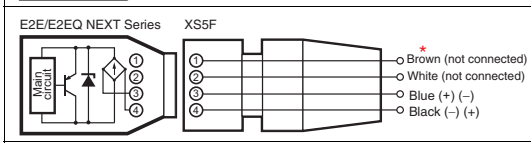
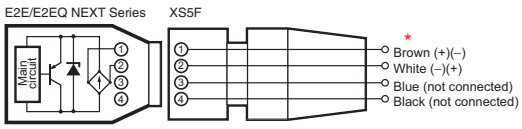
Note: The load can be connected to either the +V or 0 V side.</td></tr>
<tr><td>E2E(Q)-X□D1□-T</td><td> 

Note1. The load can be connected to either the +V or 0 V side.
2. The E2E□-X□D1□(-M1TGJ)-T has no polarity. There is no need to be concerned about the polarity of brown and blue wires, or pins 3 and 4.</td></tr>
<tr><td rowspan="2">NC</td><td>E2E(Q)-X□D2□</td><td rowspan="2"> 
</td><td> 

Note: The load can be connected to either the +V or 0 V side.</td></tr>
<tr><td>E2E(Q)-X□D2□-T</td><td> 

Note1. The load can be connected to either the +V or 0 V side.
2. The E2E□-X□D1□(-M1TGJ)-T has no polarity. There is no need to be concerned about the polarity of brown and blue wires, or pins 1 and 2.</td></tr>
</table>

Connections to Sensor I/O Connectors

Proximity Sensor				Sensor I/O Connector model number	Connections
Type	Polarity	Operation mode	Model		
DC 2-wire (Smartclick Connector)	Yes	NO	E2E-X□D1□-M1TGJ E2EQ-X□D1□-M1TGJ	XS5F-D421-□80-X□ XS5F-D42□-□80-F XS5W-D421-□81-X□ XS5W-D42□-□81-F **Note:** For details of the connector, refer to *XS5 NEXT Series* on page 87. *XS5 Series* on page 94.	
	No	NC	E2E-X□D2□-M1TGJ E2EQ-X□D2□-M1TGJ		
	Yes	NO	E2E-X□D1□-M1TGJ-T E2EQ-X□D1□-M1TGJ-T		
	No	NC	E2E-X□D2□-M1TGJ-T E2EQ-X□D2□-M1TGJ-T		

Note: Different from Proximity Sensor wire colors.

* If the XS5W Series Connector which has a socket and plug on the cable ends is connected to the Sensor, this part will be a plug.

Safety Precautions

Be sure to read the precautions for all models in the website at: http://www.ia.omron.com/.

Warning Indications

⚠WARNING	**Warning level** Indicates a potentially hazardous situation which, if not avoided, will result in minor or moderate injury, or may result in serious injury or death. Additionally there may be significant property damage.
Precautions for Safe Use	Supplementary comments on what to do or avoid doing, to use the product safely.
Precautions for Correct Use	Supplementary comments on what to do or avoid doing, to prevent failure to operate, malfunction or undesirable effect on product performance.

Meaning of Product Safety Symbols

	**General prohibition** Indicates the instructions of unspecified prohibited action.
	**Caution, explosion** Indicates the possibility of explosion under specific conditions.

⚠WARNING

This product is not designed or rated for ensuring safety of persons either directly or indirectly.
Do not use it for such purposes.

Risk of explosion.
Do not connect sensor to AC power supply.

Precautions for Safe Use

The following precautions must be observed to ensure safe operation.

1. Do not use the product in an environment where flammable or explosive gas is present.
2. Do not attempt to disassemble, repair, or modify the product.
3. Do not use a voltage that exceeds the rated operating voltage range. Applying a voltage that is higher than the operating voltage range may result in damage or burnout.
4. Be sure that the power supply polarity and other wiring is correct. Incorrect wiring may cause explosion or burnout.
5. If the power supply is connected directly without a load, the internal elements may explode or burn. Be sure to insert a load when connecting the power supply.
6. Dispose of this product as industrial waste.

Precautions for Correct Use

Do not use this product under ambient conditions that exceed the ratings.

Operating Environment

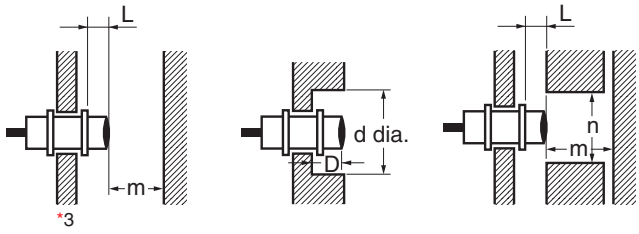
1. Do not install the product in the following locations.
   Doing so may result in product failure or malfunction.
   (1) Outdoor locations directly subject to sunlight, rain, snow, water droplets, or oil.
   (2) Locations subject to atmospheres with chemical vapors, in particular solvents and acids.
   (3) Locations subject to corrosive gases.
2. The Sensor may malfunction if used near ultrasonic cleaning equipment, high-frequency equipment, transceivers, cellular phones, inverters, or other devices that generate a high-frequency electric field. Please refer to the Precautions for Correct Use on the OMRON website (www.ia.omron.com) for typical measures.
3. Laying the Proximity Sensor wiring in the same conduit or duct as high-voltage wires or power lines may result in incorrect operation and damage due to induction. Wire the Sensor using a separate conduit or independent conduit.
4. Never use thinner or other solvents. Otherwise, the Sensor surface may be dissolved.
5. The following conditions shall be observed if you use the product under an environment using cutting oil that may affect product's life and/or performance.
   - Usage under the cutting oil condition designated by the specification
   - Usage under the cutting oil dilution ratio recommended by its manufacturer
   - Usage in oil or water is prohibited

   Impact on the product life may differ depending on the oil you use. Before using the cutting oil, make sure that it should not cause deterioration or degradation of sealing components.

Design

Influence of Surrounding Metal

When mounting the Proximity Sensor using a nut, only use the provided nut. And ensure that the minimum distances given in the following table are maintained.

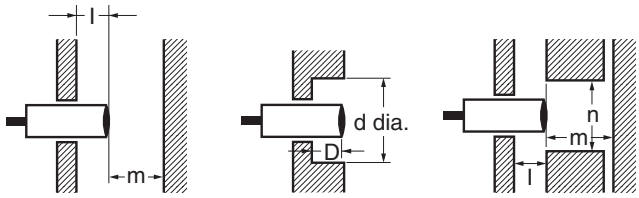


(Unit: mm)

Type		Item	M8	M12	M18	M30
Triple distance model/ Spatter-resistant Triple distance model E2E(Q)-X□D□(-T) *1	Shielded	L	0	0	0	0
		d	20	20	50	70
		D	2	4	4	8
		m	9	18	33	60
		n	18	20	54	90
Triple distance model E2E-X□MD□(-T) *2	Unshielded	L	10	16	31	50 *3
		d	30	50	90	170
		D	13	20	35	55
		m	18	30	60	120
		n	30	50	80	140
Single distance model E2E-X□R5D□(-T) E2E-X5D□(-T) *2	Shielded	L	0	0	0	---
		d	8	12	18	
		D	0	0	0	
		m	4.5	8	20	
		n	12	18	27	

Note: Nuts that are supplied along with each Sensor (*1, *2) are different. Refer to *Dimensions* for details on shapes.
*3. If you use the M30 Triple distance model of Unshielded Model, the panel thickness (t) is 4 mm or less.

When the Proximity Sensor is mounted in metal, ensure that the minimum distances given in the following table are maintained.

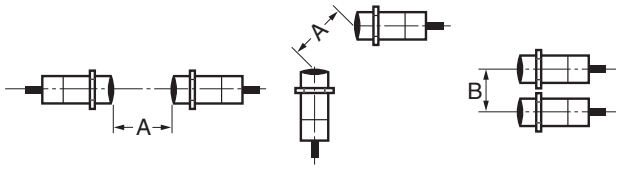


(Unit: mm)

Type		Item	M8	M12	M18	M30
Triple distance model/ Spatter-resistant Triple distance model E2E(Q)-X□D□(-T)	Shielded	l	2	4	4	8
		d	20	20	50	70
		D	2	4	4	8
		m	9	18	33	60
		n	18	20	54	90
Triple distance model E2E-X□MD□(-T)	Unshielded	l	13	20	35	55
		d	30	50	90	170
		D	13	20	35	55
		m	18	30	60	120
		n	30	50	80	140
Single distance model E2E-X□R5D□(-T) E2E-X5D□(-T)	Shielded	l	0	0	0	---
		d	8	12	18	
		D	0	0	0	
		m	4.5	8	20	
		n	12	18	27	

Mutual Interference

When the Proximity Sensor is embedded in metal, ensure that the minimum distances given in the following table are maintained.



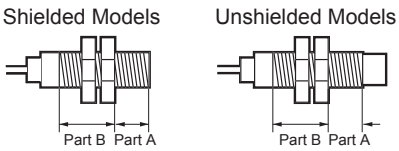
(Unit: mm)

Type		Item	M8	M12	M18	M30
Triple distance model/ Spatter-resistant Triple distance model E2E(Q)-X□D□(-T)	Shielded	A	25	40	70	140
		B	20	30	45	70
Triple distance model E2E-X□MD□(-T)	Unshielded	A	80	120	200	380
		B	60	100	120	280
Single distance model E2E-X□R5D□(-T) E2E-X5D□(-T)	Shielded	A	20	30	50	---
		B	15	20	35	

Mounting

Tightening Force

Do not tighten the nut with excessive force.
A washer must be used with the nut.



Note: 1. The allowable tightening strength depends on the distance from the edge of the head, as shown in the following table. (A is the distance from the edge of the head. B includes the nut on the head side. If the edge of the nut is in part A, the tightening torque for part A applies instead.)

2. The following strengths assume washers are being used.

Triple distance model

Model		Part A		Part B
		Dimension (mm)	Torque	Torque
M8	Shielded	9	4 N·m	10 N·m
	Unshielded	3		
M12	Shielded	16	6 N·m	15 N·m
	Unshielded	9		
M18	Shielded	16	15 N·m	60 N·m
	Unshielded	3		
M30	Shielded	23	40 N·m	80 N·m
	Unshielded	8		

Spatter-resistant Triple distance model

Model	Part A		Part B
	Dimension (mm)	Torque	Torque
M8	9	4 N·m	10 N·m
M12	16	6 N·m	15 N·m
M18	16	15 N·m	30 N·m
M30	23	40 N·m	80 N·m

Single distance model

Model	Part A		Part B
	Dimension (mm)	Torque	Torque
M8	9	9 N·m	12 N·m
M12	---	30 N·m	
M18		70 N·m	

Dimensions

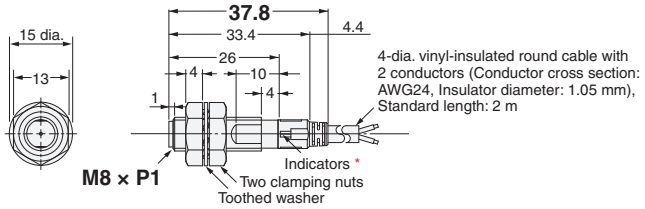
(Unit: mm)
Tolerance class IT16 applies to dimensions in this data sheet unless otherwise specified.

Sensors
E2E NEXT Series (Triple distance model)
DC 2-wire

Pre-wired Models Shielded

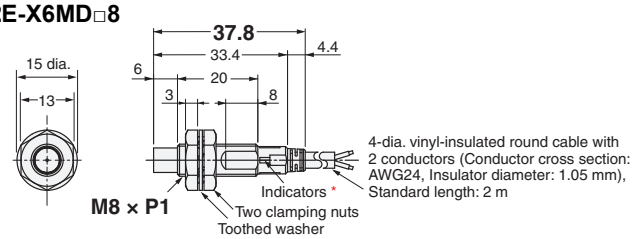
Pre-wired Models Unshielded

E2E-X3D□8



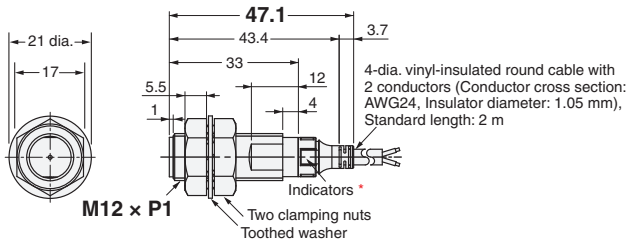
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X6MD□8



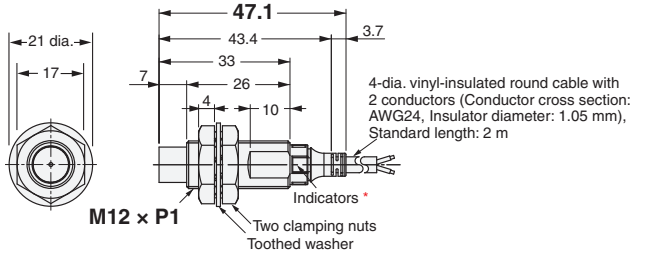
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X7D□12



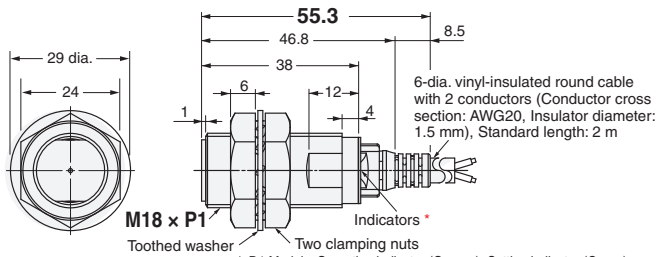
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X10MD□12



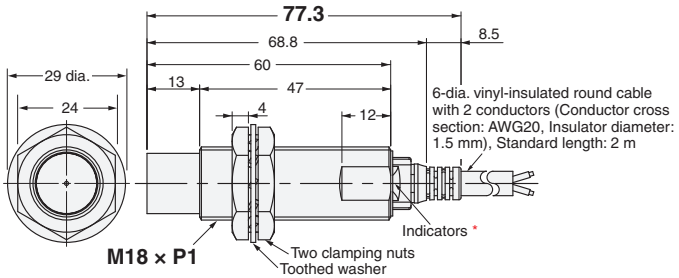
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X11D□18



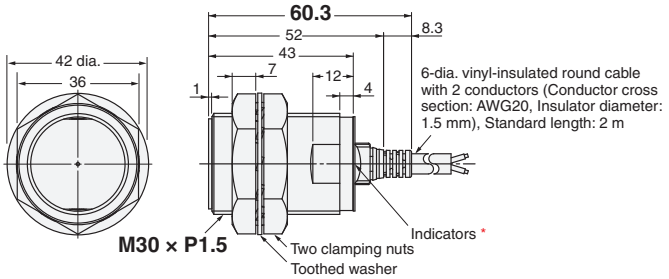
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X20MD□L18



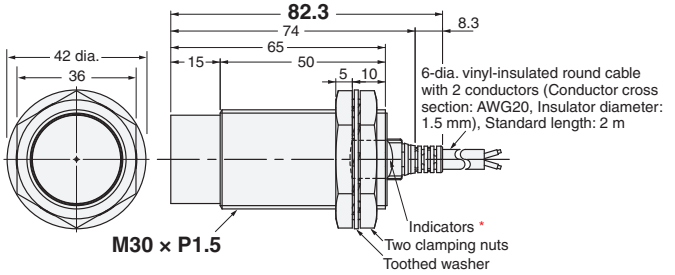
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X20D□30



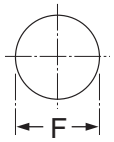
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X40MD□L30



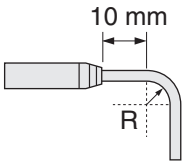
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

Mounting Hole Dimensions



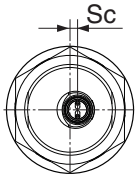
Dimensions	F (mm)
M8	8.5 dia. $^{+0.5}_{0}$
M12	12.5 dia. $^{+0.5}_{0}$
M18	18.5 dia. $^{+0.5}_{0}$
M30	30.5 dia. $^{+0.5}_{0}$

Angle R of the Bending Wire



Dimensions	R (mm)
M8	12
M12	
M18	18
M30	

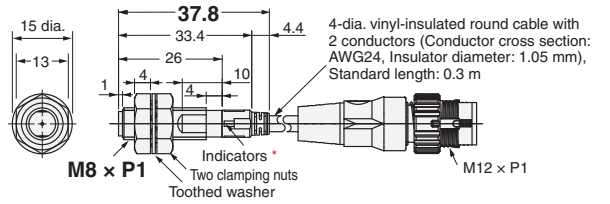
Wire pullout position



Dimensions	Sc (mm)
M8	- (0)
M12	
M18	2.5
M30	

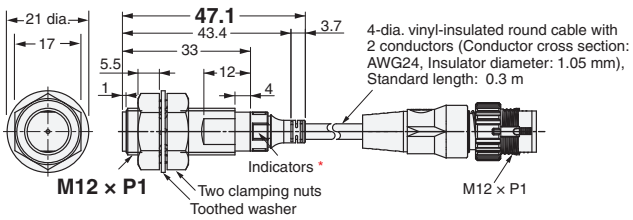
Pre-wired Connector Models Shielded

E2E-X3D□8-M1TGJ



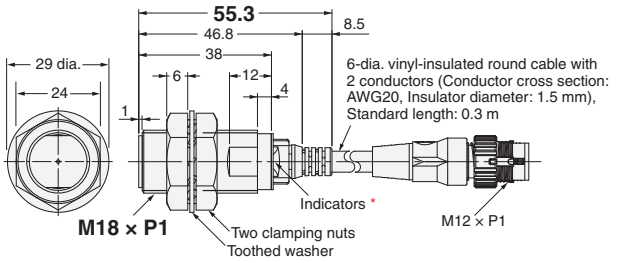
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X7D□12-M1TGJ



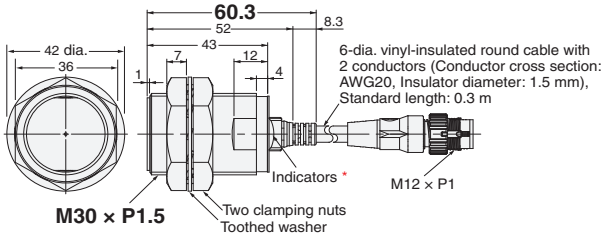
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X11D□18-M1TGJ



* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

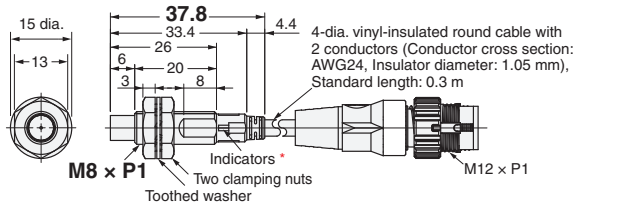
E2E-X20D□30-M1TGJ



* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

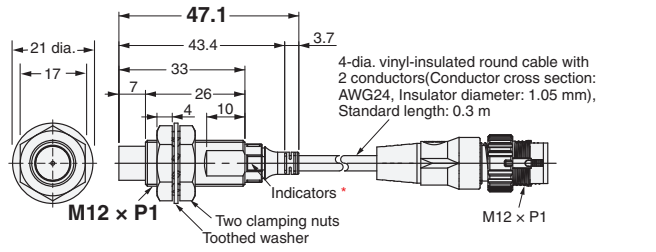
Pre-wired Connector Models Unshielded

E2E-X6MD□8-M1TGJ



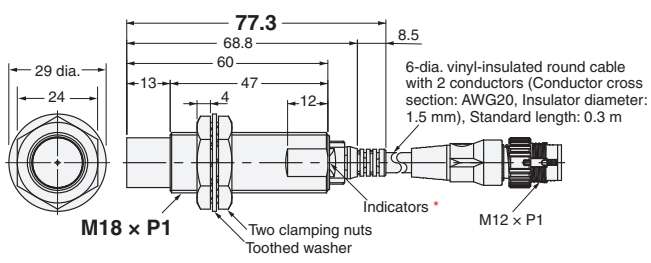
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X10MD□12-M1TGJ



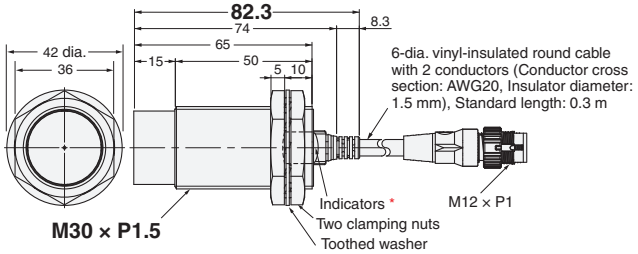
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X20MD□L18-M1TGJ



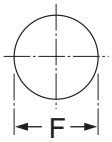
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2E-X40MD□L30-M1TGJ



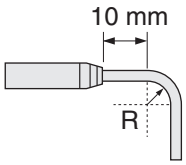
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

Mounting Hole Dimensions



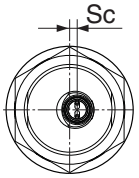
Dimensions	F (mm)
M8	8.5 dia. $^{+0.5}_{0}$
M12	12.5 dia. $^{+0.5}_{0}$
M18	18.5 dia. $^{+0.5}_{0}$
M30	30.5 dia. $^{+0.5}_{0}$

Angle R of the Bending Wire



Dimensions	R (mm)
M8	12
M12	
M18	18
M30	

Wire pullout position

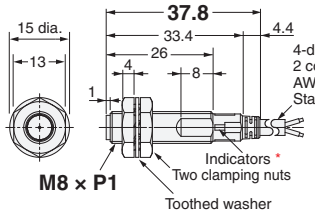


Dimensions	Sc (mm)
M8	- (0)
M12	
M18	2.5
M30	

Sensors
E2EQ NEXT Series (Spatter-resistant Triple distance model)
DC 2-wire

Pre-wired Models
Shielded

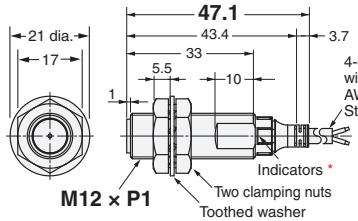
E2EQ-X3D□8



4-dia. vinyl-insulated round cable with 2 conductors (Conductor cross section: AWG24, Insulator diameter: 1.05 mm), Standard length: 2 m

* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

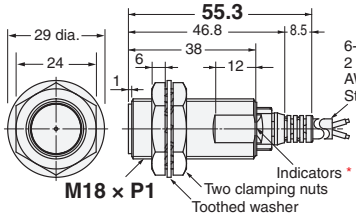
E2EQ-X7D□12



4-dia. vinyl-insulated round cable with 2 conductors (Conductor cross section: AWG24, Insulator diameter: 1.05 mm), Standard length: 2 m

* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

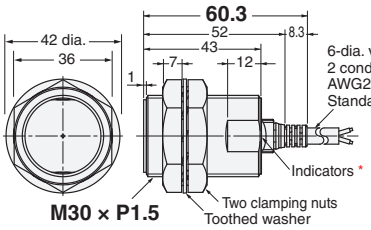
E2EQ-X11D□18



6-dia. vinyl-insulated round cable with 2 conductors (Conductor cross section: AWG20, Insulator diameter: 1.5 mm), Standard length: 2 m

* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

E2EQ-X20D□30

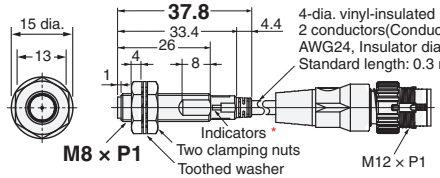


6-dia. vinyl-insulated round cable with 2 conductors (Conductor cross section: AWG20, Insulator diameter: 1.5 mm), Standard length: 2 m

* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

Pre-wired Connector Models
Shielded

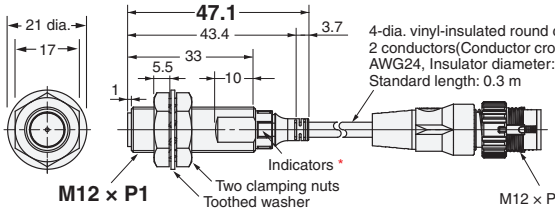
E2EQ-X3D□8-M1TGJ



4-dia. vinyl-insulated round cable with 2 conductors(Conductor cross section: AWG24, Insulator diameter: 1.05 mm), Standard length: 0.3 m

* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

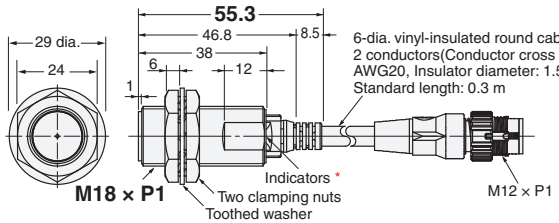
E2EQ-X7D□12-M1TGJ



4-dia. vinyl-insulated round cable with 2 conductors(Conductor cross section: AWG24, Insulator diameter: 1.05 mm), Standard length: 0.3 m

* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

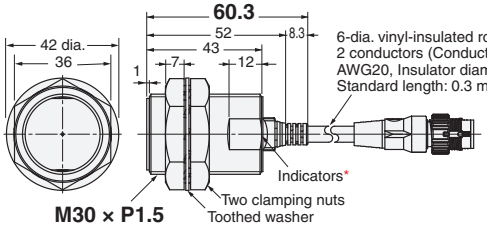
E2EQ-X11D□18-M1TGJ



6-dia. vinyl-insulated round cable with 2 conductors(Conductor cross section: AWG20, Insulator diameter: 1.5 mm), Standard length: 0.3 m

* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

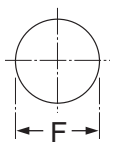
E2EQ-X20D□30-M1TGJ



6-dia. vinyl-insulated round cable with 2 conductors (Conductor cross section: AWG20, Insulator diameter: 1.5 mm), Standard length: 0.3 m

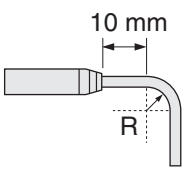
* D1 Models: Operation indicator (Orange), Setting indicator (Green)
D2 Models: Operation indicator (Orange)

Mounting Hole Dimensions



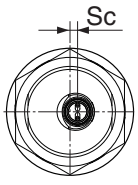
Dimensions	F (mm)
M8	8.5 dia. $^{+0.5}_{0}$
M12	12.5 dia. $^{+0.5}_{0}$
M18	18.5 dia. $^{+0.5}_{0}$
M30	30.5 dia. $^{+0.5}_{0}$

Angle R of the Bending Wire



Dimensions	R (mm)
M8	12
M12	
M18	18
M30	

Wire pullout position

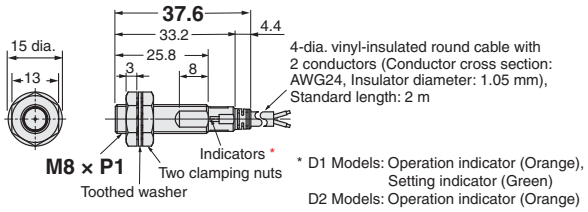


Dimensions	Sc (mm)
M8	- (0)
M12	
M18	2.5
M30	

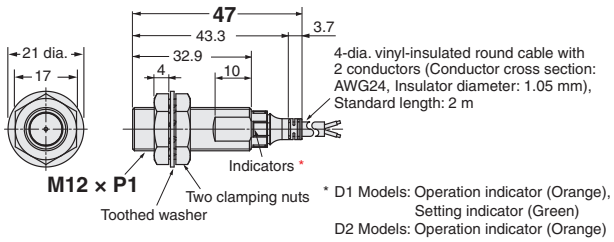
Sensors
E2E NEXT Series (Single distance model)
DC 2-wire

Pre-wired Models
Shielded

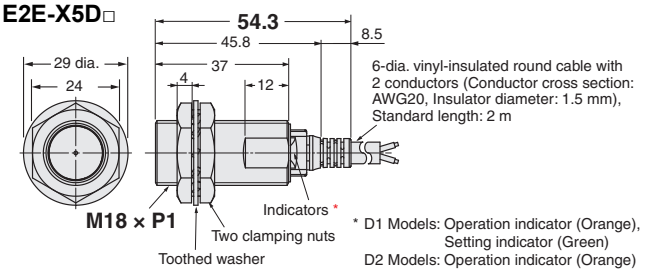
E2E-X1R5D□



E2E-X2R5D□

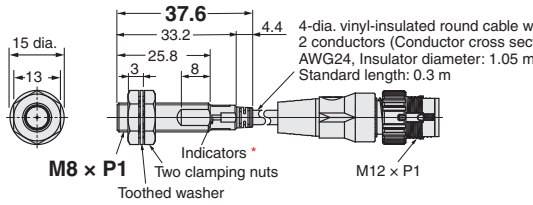


E2E-X5D□

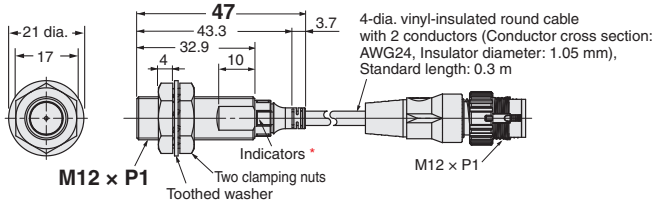


Pre-wired Connector Models
Shielded

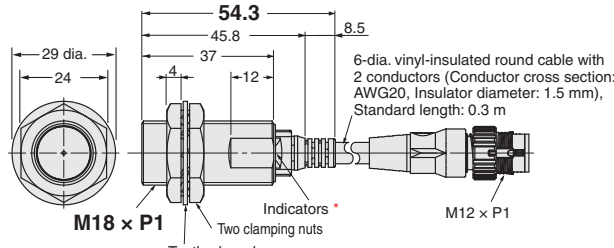
E2E-X1R5D□-M1TGJ



E2E-X2R5D□-M1TGJ



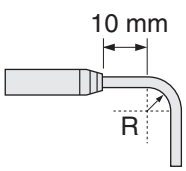
E2E-X5D□-M1TGJ



Mounting Hole Dimensions

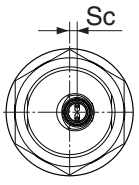
Dimensions	F (mm)
M8	8.5 dia. $^{+0.5}_{0}$
M12	12.5 dia. $^{+0.5}_{0}$
M18	18.5 dia. $^{+0.5}_{0}$
M30	30.5 dia. $^{+0.5}_{0}$

Angle R of the Bending Wire



Dimensions	R (mm)
M8	12
M12	
M18	18
M30	

Wire pullout position

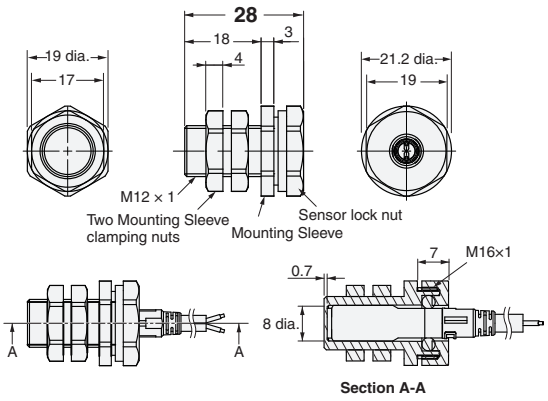


Dimensions	Sc (mm)
M8	- (0)
M12	
M18	2.5
M30	

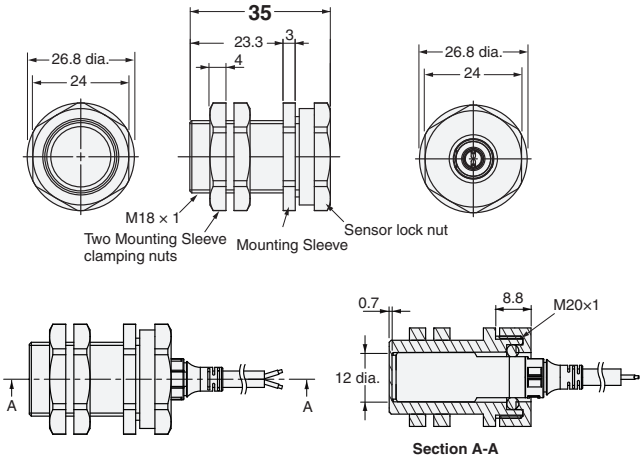
Accessories (Sold Separately)

Quick fix (Mounting Sleeves)

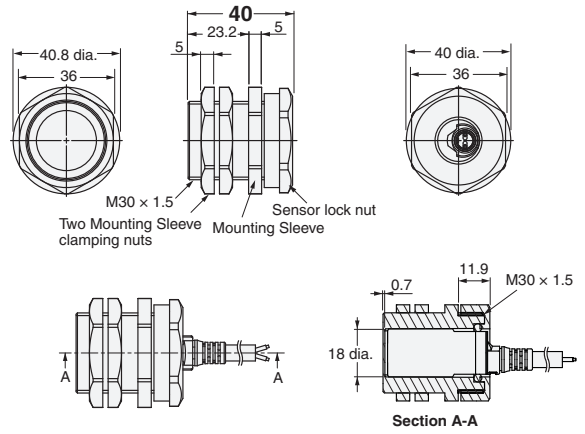
Y92E-J8S12



Y92E-J12S18



Y92E-J18S30



Material

Mounting Sleeve	Polyetheretherketone (PEEK) / Polybutylene terephthalate (PBT)
Mounting Sleeve clamping nut	Polybutylene terephthalate (PBT)
Sensor lock nut	Polybutylene terephthalate (PBT)
Sensor lock O-ring	Material combining HNBR and fluororubber

Tightening Force

Model	Torque	
	Mounting Sleeve clamping nut	Sensor lock nut
Y92E-J8S12	0.6 N·m	0.6 N·m
Y92E-J12S18	1.2 N·m	1.2 N·m
Y92E-J18S30	5 N·m	3.5 N·m

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