

Short Barrel 2-Wire AC Prox Sensors Meet IP67











- Thick nickel-plated brass barrel has wrench flats for easy installation
- Solid potted internal circuitry withstands shocks and water washdown to IP67
- High visibility indicator
- Choose prewired models with or without short-circuit protection and connector models



Ordering Information


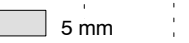



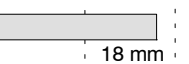
■ PREWIRED SENSORS WITHOUT SHORT-CIRCUIT PROTECTION

WHEN ORDERING, PLEASE NOTE: Omron has added the suffix “-N” to E2E part numbers for ordering purposes only; the suffix “-N” will not appear on the product.



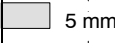
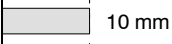

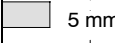
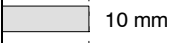
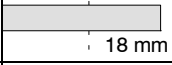


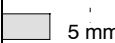


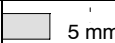

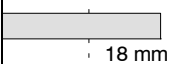
Type	Size	Sensing distance	Part number	
			NO	NC
Shielded 	M8	 1.5 mm	E2E-X1R5Y1-N	E2E-X1R5Y2-N
	M12	 2 mm	E2E-X2Y1-US-N	E2E-X2Y2-US-N
	M18	 5 mm	E2E-X5Y1-US-N*	E2E-X5Y2-US-N
	M30	 10 mm	E2E-X10Y1-US-N*	E2E-X10Y2-US-N
Unshielded 	M8	 2 mm	E2E-X2MY1-US-N*	E2E-X2MY2-US-N
	M12	 5 mm	E2E-X5MY1-US-N*	E2E-X5MY2-US-N*
	M18	 10 mm	E2E-X10MY1-US-N*	E2E-X10MY2-US-N*
	M30	 18 mm	E2E-X18MY1-US-N*	E2E-X18MY2-US-N

*Note: A different oscillating frequency is available to prevent mutual interference. Add a “5” to the part number (e.g., E2E-X5Y15-US-N).

■ PREWIRED SENSORS WITH SHORT-CIRCUIT PROTECTION

Type	Size	Sensing distance	Part number	
			NO	NC
Shielded 	M18	 5 mm	E2E-X5Y1-53-US	E2E-X5Y2-53-US
	M30	 10 mm	E2E-X10Y1-53-US	E2E-X10Y2-53-US
Unshielded 	M18	 10 mm	E2E-X10MY1-53-US	E2E-X10MY2-53-US
	M30	 18 mm	E2E-X18MY1-53-US	E2E-X18MY2-53-US

■ SENSORS WITH BUILT-IN CONNECTORS

Connector	Type	Size	Sensing distance	Part number	
				NO	NC
4-pin connector (M12) See Note 1.	Shielded 	M12	 2 mm	E2E-X2Y1-M1-N	E2E-X2Y2-M1-N
		M18	 5 mm	E2E-X5Y1-M1-N	E2E-X5Y2-M1-N
		M30	 10 mm	E2E-X10Y1-M1-N	E2E-X10Y2-M1-N
	Unshielded 	M12	 5 mm	E2E-X5MY1-M1-N	E2E-X5MY2-M1-N
		M18	 10 mm	E2E-X10MY1-M1-N	E2E-X10MY2-M1-N
		M30	 18 mm	E2E-X18MY1-M1-N	E2E-X18MY2-M1-N
3-pin connector (M12) See Note 2.	Shielded 	M12	 2 mm	E2E-X2Y1-M4	E2E-X2Y2-M4
		M18	 5 mm	E2E-X5Y1-M4	E2E-X5Y2-M4
		M30	 10 mm	E2E-X10Y1-M4	E2E-X10Y2-M4
	Unshielded 	M12	 5 mm	E2E-X5MY1-M4	E2E-X5MY2-M4
		M18	 10 mm	E2E-X10MY1-M4	E2E-X10MY2-M4
		M30	 18 mm	E2E-X18MY1-M4	E2E-X18MY2-M4

Note: 1. Use Omron's Y96E-44□A□ connector cordsets.

2. Use Omron's Y96E-33□A□ connector cordsets.

■ ACCESSORIES

Description	Part number
Mounting brackets	Fits M8 size sensors Fits M12 size sensors Fits M18 size sensors Fits M30 size sensors Y92E-B8 Y92E-B12 Y92E-B18 Y92E-B30
Silicone rubber covers for shielded sensors	Fits M12 size sensors Fits M18 size sensors Fits M30 size sensors Y92E-E12-2 Y92E-E18-2 Y92E-E30-2
Connector cordsets	See Y96E Connector Cordsets data sheet for details

REPLACEMENT PARTS

Description	Part number
Mounting hardware including one pair of metal nuts and one washer	Fits M8 size sensors Fits M12 size sensors Fits M18 size sensors Fits M30 size sensors
	M8-MHWS M12-MHWS M18-MHWS M30-MHWS

Specifications

SENSORS WITHOUT SHORT-CIRCUIT PROTECTION (E2E-X□Y□)

Part number	E2E-X1R5Y□-N	E2E-X2MY□-N	E2E-X2Y□ -US-N	E2E-X5MY □-US-N	E2E-X5Y □-US-N	E2E-X10MY □-US-N	E2E-X10Y □-US-N	E2E-X18MY □-US-N
Size	M8		M12		M18		M30	
Type	Shielded	Unshielded	Shielded	Unshielded	Shielded	Unshielded	Shielded	Unshielded
Sensing distance	1.5 mm (0.06 in) ±10%	2 mm (0.08 in) ±10%	2 mm (0.08 in) ±10%	5 mm (0.20 in) ±10%	5 mm (0.20 in) ±10%	10 mm (0.39 in) ±10%	10 mm (0.39 in) ±10%	18 mm (0.71 in) ±10%
Supply voltage (operating voltage range) (See note 1)	24 to 240 VAC, 50/60 Hz (20 to 264 VAC)							
Current consumption	1.7 mA max.							
Sensing object	Magnetic metals (refer to <i>Engineering Data</i> for non-magnetic metals)							
Setting distance	0 to 1.2 mm (0 to 0.05 in)	0 to 1.6 mm (0 to 0.06 in)	0 to 1.6 mm (0 to 0.06 in)	0 to 4.0 mm (0 to 0.16 in)	0 to 4.0 mm (0 to 0.16 in)	0 to 8.0 mm (0 to 0.31 in)	0 to 8.0 mm (0 to 0.31 in)	0 to 14.0 mm (0 to 0.55 in)
Standard object (mild steel)	8 x 8 x 1 mm (0.31 x 0.31 x 0.04 in)	12 x 12 x 1 mm (0.47 x 0.47 x 0.04 in)	12 x 12 x 1 mm (0.47 x 0.47 x 0.04 in)	15 x 15 x 1 mm (0.59 x 0.59 x 0.04 in)	18 x 18 x 1 mm (0.71 x 0.71 x 0.04 in)	30 x 30 x 1 mm (1.18 x 1.18 x 0.04 in)	30 x 30 x 1 mm (1.18 x 1.18 x 0.04 in)	54 x 54 x 1 mm (2.13 x 2.13 x 0.04 in)
Differential travel	10% max. of sensing distance							
Response frequency	25 Hz							
Operation (with sensing object approaching)	Y1 models: Load ON Y2 models: Load OFF							
Control output (switching capacity)	5 to 100 mA max.		5 to 200 mA max.		5 to 300 mA max.			
Indicator	Operation indicator (red LED)							
Ambient temperature (See note 2)	Operating: -25°C to 70°C (-13°F to 158°F) with no icing		Operating: -40°C to 85°C (-40°F to 185°F) with no icing					
Ambient humidity	Operating: 35% to 95%							
Temperature influence	±15% max. of sensing distance at 23°C in temperature range of -40°C to 85°C (-40°F to 185°F) ±10% max. of sensing distance at 23°C in temperature range of -25°C to 70°C (-13°F to 158°F)							
Voltage influence	±1% max. of sensing distance in rated voltage range ±15%							
Residual voltage	Refer to <i>Engineering Data</i>							
Insulation resistance	50 MΩ min. (at 500 VDC) between current carry parts and case							
Dielectric strength	4,000 VAC for 1 min between current carry parts and case (2,000 VAC for M8 types)							
Vibration resistance	10 to 55 Hz, 1.5-mm double amplitude for 2 hrs each in X, Y, and Z directions							
Shock resistance	500 m/s ² (approx. 50G) for 10 times each in X, Y, and Z axes		1,000 m/s ² (approx. 50G) for 10 times each in X, Y, and Z axes 500 m/s ² (approx. 50G) for E2E-X5M					
Enclosure rating	IEC	IP67						
	NEMA	1, 4, 6, 12, 13						

- Note: 1. When using an M18 or M30 size E2E at an ambient temperature between 70°C and 85°C (158°F and 185°F), make sure that the E2E has a control output of 200 mA maximum.
2. When supplying 24 VAC to any of the above models, make sure that the operating ambient temperature range is -25°C to 85°C (-13°F to 185°F).

(This table continues on the next page.)

Specifications Table - continued from previous page

Part number	E2E-X1R5Y □-N	E2E-X2MY □-N	E2E-X2Y□- US-N	E2E-X5MY□ -US-N	E2E-X5Y□- US-N	E2E-X10MY □-US-N	E2E-X10Y □-US-N	E2E-X18MY □-US-N
Approvals	UL	-		Recognized, File Number E76675				
	CSA	-		Certified, File Number LR45951				
Weight	Prewired	Approx. 45 g		Approx. 120 g		Approx. 160 g		Approx. 270 g
	Connector	---	Approx. 25 g		Approx. 45 g		Approx. 125 g	Approx. 124 g
Material	Body	Stainless steel		Brass				
	Sensing face	PBT						

■ SENSORS WITH SHORT-CIRCUIT PROTECTION (E2E-X□Y□-53-US)

Part number	E2E-X5Y□-53-US		E2E-X10MY□-53-US		E2E-X10Y□-53-US		E2E-X18MY□-53-US	
Body	Size	M18			M30			
	Type	Shielded		Unshielded		Shielded		Unshielded
Supply voltage		90 to 140 VAC, 50/60 Hz						
Effective maximum detecting distance (with standard target)		5 mm (0.20 in) ±10%		10 mm (0.40 in) ±10%			18 mm (0.71 in) ±10%	
Usable detecting range (with standard target)		0 to 4 mm (0 to 0.16 in)		0 to 8 mm (0 to 0.31 in)			0 to 14 mm (0 to 0.55 in)	
Standard target size (mild steel, L x W x H)		18 x 18 x 1 mm (0.71 x 0.71 x 0.04 in)		30 x 30 x 1 mm (1.18 x 1.18 x 0.04 in)			54 x 54 x 1 mm (2.13 x 2.13 x 0.04 in)	
Differential travel		10% max. of effective detecting distance						
Control output	AC solid state	Type	SCR-NO (E2E-X□□□Y1-□□-□□) SCR-NC (E2E-X□□□Y2-□□-□□)					
		Max. load	300 mA					
		Min. load	5 mA					
		Max. offstate leakage current	1.5 mA (See "Leakage Current Characteristics" graph in <i>Engineering Data</i> .)					
		Max. on-state voltage drop	(See "Leakage Current Characteristics" graph in <i>Engineering Data</i> .)					
Response frequency		25 Hz						
Circuit protection	Output short-circuit	Provided						
	Weld field immunity	Not provided						
	RFI immunity	Not provided						
Indicators		Target present (red LED)						
Materials	Housing	Nickel-plated brass						
	Sensing face	Plastic						
	Cable sheath	Plastic						
Mounting		Two lock washers and M18 nuts included. Bracket Y92E-B18 optional.			Two lock washers and M30 nuts included. Bracket Y92E-B30 optional.			
Connections	Prewired	2-conductor cable, 2 m (6.56 ft) length						
Weight with cable		Approx. 160 g (5.6 oz.)			Approx. 270 g (9.5 oz.)			
Enclosure ratings	UL	1						
	NEMA	1, 4, 6, 12, 13						
	IEC 144	IP67						
Approvals	UL	Recognized, File Number E76675						
	CSA	Certified, File Number LR45951						
Ambient operating temperature		-25° to 70°C (-13° to 158°F)						
Vibration		10 to 55 Hz, 1.5 mm (0.06 in) double amplitude						
Shock		Approx. 100 G's						