

REPLACEMENT PARTS

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

Specifications

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

Part number	E2E-X18MY□□	E2E-X2MY□	E2E-X2Y□ -US□	E2E-X5MY □±US□	E2E-X5Y □±US□	E2E-X10MY □±US□	E2E-X10Y □±US□	E2E-X18MY □±US□
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 □	E2E-X2MY □□	E2E-X2Y□- US	E2E-X5MY□ -US	E2E-X5Y□- US□	E2E-X10MY □□US□	E2E-X10Y □□US	E2E-X18MY □□US
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			