

Long Barrel Inductive Prox

E2E2 3-Wire DC



Rugged Inductive Prox Sensors Meet IP67 Requirements

- Solid potted internal circuitry withstands shocks and water washdown to IP67
- Thick nickel-plated brass barrel has wrench flats for easy installation
- High visibility indicator
- Connector and prewired versions





Ordering Information

■ PRE-WIRED SENSORS

Type	Size	Sensing distance	Output	Part number	
				NO	NC
Shielded 	M12	2 mm	NPN	E2E2-X2C1	E2E2-X2C2
			PNP	E2E2-X2B1	E2E2-X2B2
	M18	5 mm	NPN	E2E2-X5C1	E2E2-X5C2
			PNP	E2E2-X5B1	E2E2-X5B2
	M30	10 mm	NPN	E2E2-X10C1	E2E2-X10C2
			PNP	E2E2-X10B1	E2E2-X10B2
Unshielded 	M12	5 mm	NPN	E2E2-X5MC1	E2E2-X5MC2
			PNP	E2E2-X5MB1	E2E2-X5MB2
	M18	10 mm	NPN	E2E2-X10MC1	E2E2-X10MC2
			PNP	E2E2-X10MB1	E2E2-X10MB2
	M30	18 mm	NPN	E2E2-X18MC1	E2E2-X18MC2
			PNP	E2E2-X18MB1	E2E2-X18MB2

■ SENSORS WITH M12 CONNECTORS

Type	Size	Sensing distance	Output	Part number	
				NO	NC
Shielded 	M12	2 mm	NPN	E2E2-X2C1-M1	E2E2-X2C2-M1
			PNP	E2E2-X2B1-M1	E2E2-X2B2-M1
	M18	5 mm	NPN	E2E2-X5C1-M1	E2E2-X5C2-M1
			PNP	E2E2-X5B1-M1	E2E2-X5B2-M1
	M30	10 mm	NPN	E2E2-X10C1-M1	E2E2-X10C2-M1
			PNP	E2E2-X10B1-M1	E2E2-X10B2-M1
Unshielded 	M12	5 mm	NPN	E2E2-X5MC1-M1	E2E2-X5MC2-M1
			PNP	E2E2-X5MB1-M1	E2E2-X5MB2-M1
	M18	10 mm	NPN	E2E2-X10MC1-M1	E2E2-X10MC2-M1
			PNP	E2E2-X10MB1-M1	E2E2-X10MB2-M1
	M30	18 mm	NPN	E2E2-X18MC1-M1	E2E2-X18MC2-M1
			PNP	E2E2-X18MB1-M1	E2E2-X18MB2-M1

■ ACCESSORIES

Description		Part number
Mounting brackets	Fits M12 size sensors Fits M18 size sensors Fits M30 size sensors	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 M12 size sensors Fits M18 size sensors Fits M30 size sensors	M12-MHWS M18-MHWS M30-MHWS

Specifications

Part number	E2E2-X2C□/B□	E2E2-X5MC□/B□	E2E2-X5C□/B□	E2E2-X10MC□/B□	E2E2-X10C□/B□	E2E2-X18MC□/B□
Size	M12		M18		M30	
Type	Shielded	Unshielded	Shielded	Unshielded	Shielded	Unshielded
Sensing distance	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)	12 to 24 VDC, ripple (p-p): 10% max., (10 to 55 VDC)					
Current consumption	13 mA max.					
Sensing object	Magnetic metals (refer to <i>Engineering Data</i> for non-magnetic metals)					
Setting distance	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)	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	1.5 kHz	0.4 kHz	0.6 kHz	0.2 kHz	0.4 kHz	0.1 kHz
Operation (with sensing object approaching)	B1/C1 models: Load ON B2/C2 models: Load OFF					
Control output (switching capacity)	200 mA max., open collector					
Circuit protection	Reverse connection protection, surge absorber, load short-circuit protection					
Indicator	Operation indicator (red LED)					
Ambient temperature	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	2.0 V max. (under load current of 200 mA with cable length of 2 m)					
Insulation resistance	50 MΩ min. (at 500 VDC) between current carry parts and case					
Dielectric strength	1,000 VAC for 1 min between current carry parts and case					
Vibration resistance	10 to 55 Hz, 1.5-mm double amplitude for 10 times each in X, Y, and Z axes					
Shock resistance	1,000 m/s ² (approx. 100G) for 10 times each in X, Y, and Z axes					

(This table continues on the next page.)

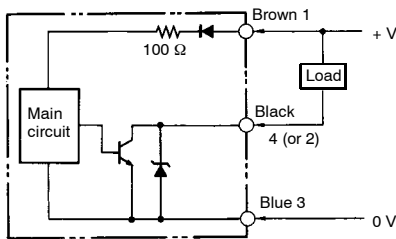
Specifications Table - continued from previous page

Part number		E2E2-X2C□/B□	E2E2-X5MC□/B□	E2E2-X5C□/B□	E2E2-X10MC□/B□	E2E2-X10C□/B□	E2E2-X18MC□/B□
Enclosure rating	IEC	IP67					
	NEMA	1, 4, 6, 12, 13					
Weight		75 g	160 g		220 g		
Material	Body	Brass					
	Sensing face	PBT					

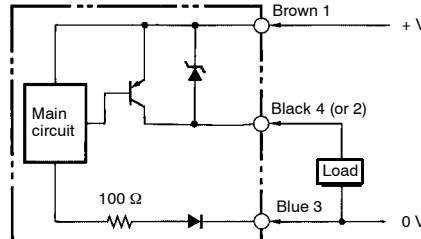
Operation

OUTPUT CIRCUITS

E2E2-X□C□ DC 3-wire Models



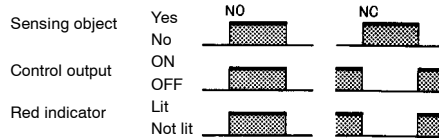
E2E2-X□B□ DC 3-wire Models



TIMING CHART

E2E2-X□C□/B□ DC 3-wire Models

NPN/PNP Open Collector Output

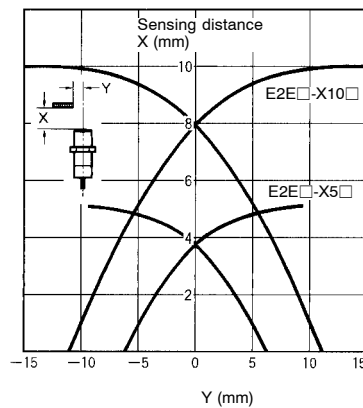
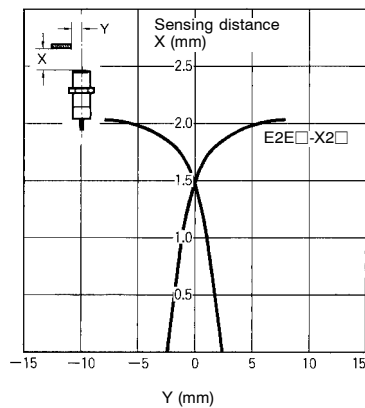


Engineering Data

OPERATING RANGE (TYPICAL)

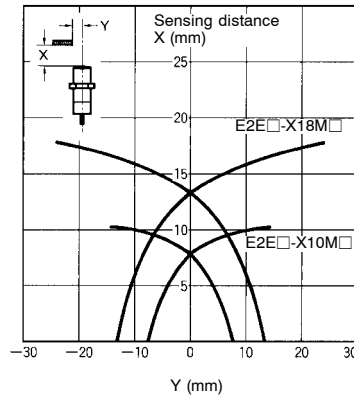
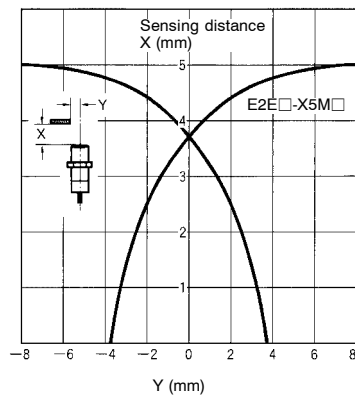
Shielded Models

E2E2-X□C□/B□



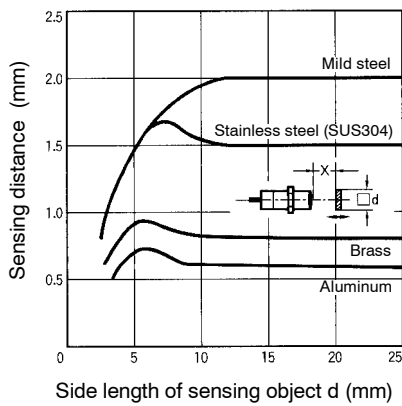
Unshielded Models

E2E2-X□MC□/B□

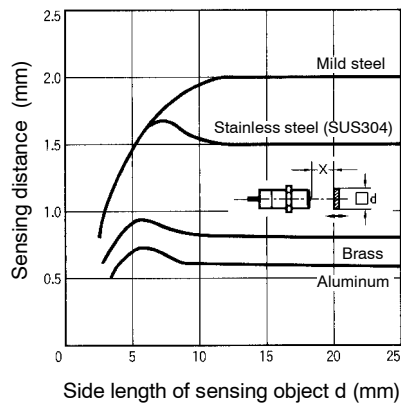


■ SENSING DISTANCE VS. SENSING OBJECT (TYPICAL)

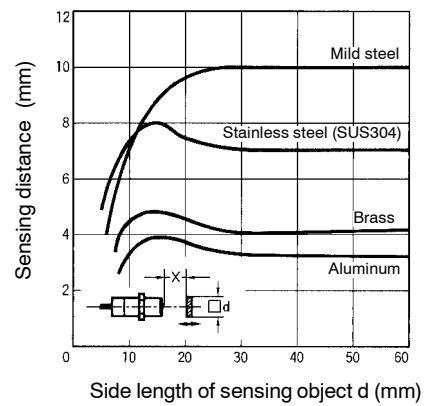
E2E2-X2C□/B□



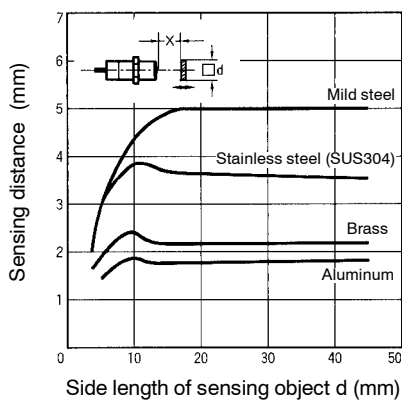
E2E2-X5C□/B□



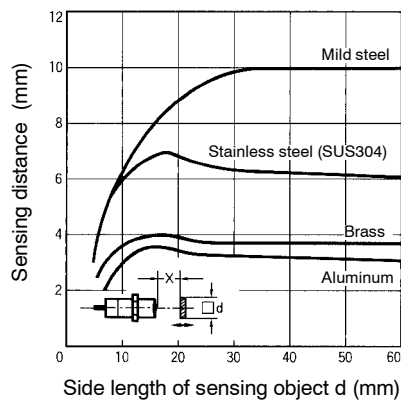
E2E2-X10C□/B□



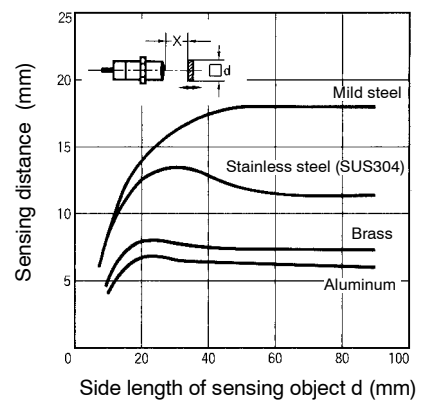
E2E2-X5MC□/B□



E2E2-X10MC□/B□



E2E2-X18MC□/B□

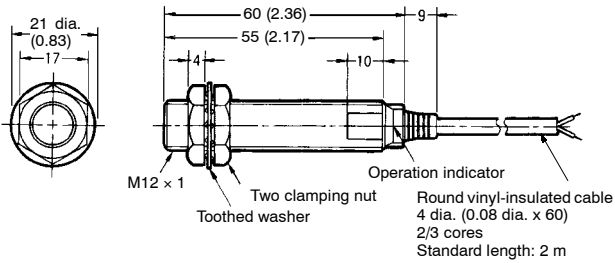


Dimensions

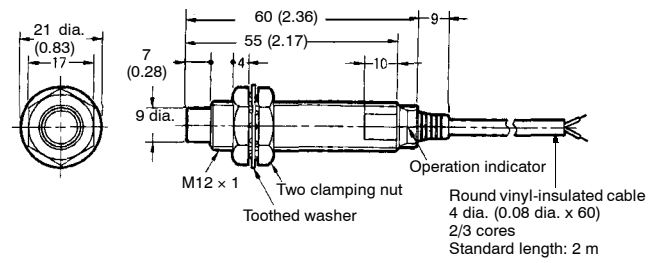
Unit: mm (inch)

PRE-WIRED SENSORS

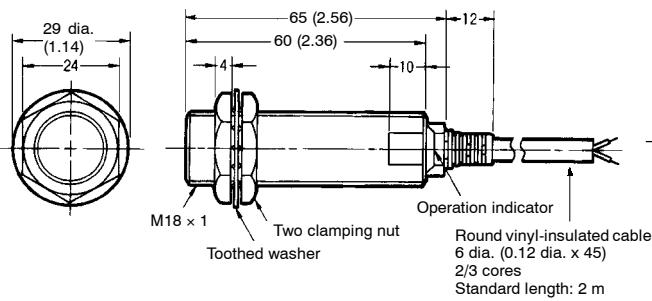
E2E2-X2□□



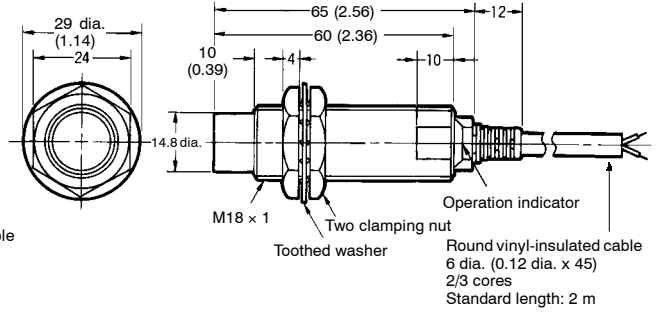
E2E2-X5M□□



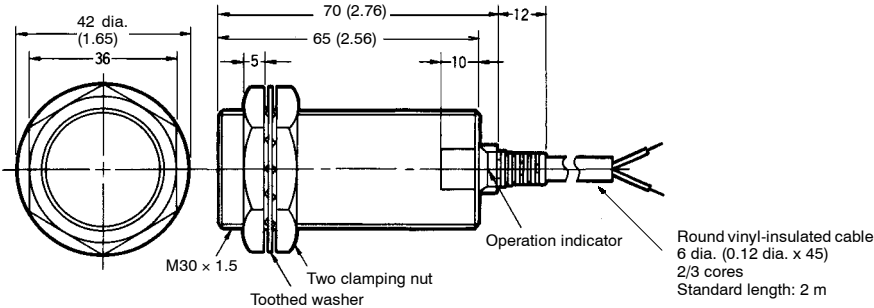
E2E2-X5□□



E2E2-X10M□□



E2E2-X10□□



E2E2-X18M□□

