

## Proximity Sensor with a Long Screw Length



- Increased tightening strength. Cable protectors provided as a standard feature.
- Increased indicator visibility. A milled section for wrench grip on all models.



Be sure to read *Safety Precautions* on page 9.

## Ordering Information

### Sensors

#### DC 2-Wire Models

Appearance	Sensing distance	Model		
		Operation mode		
		NO	NC	
	M12	3 mm	E2E2-X3D1 2M *	E2E2-X3D2 2M
	M18	7 mm	E2E2-X7D1 2M *	E2E2-X7D2 2M
	M30	10 mm	E2E2-X10D1 2M *	E2E2-X10D2 2M
	M12	8 mm	E2E2-X8MD1 2M *	E2E2-X8MD2 2M
	M18	14 mm	E2E2-X14MD1 2M *	E2E2-X14MD2 2M
	M30	20 mm	E2E2-X20MD1 2M *	E2E2-X20MD2 2M

\* Models with different frequencies are also available. The model numbers are E2E2-X□D15 (example: E2E2-X3D15).

#### DC 3-Wire Models

Appearance	Sensing distance	Model		
		Operation mode		
		NO	NC	
	M12	2 mm	E2E2-X2C1 2M	E2E2-X2C2 2M
	M18	5 mm	E2E2-X5C1 2M	E2E2-X5C2 2M
	M30	10 mm	E2E2-X10C1 2M	E2E2-X10C2 2M
	M12	5 mm	E2E2-X5MC1 2M	E2E2-X5MC2 2M
	M18	10 mm	E2E2-X10MC1 2M	E2E2-X10MC2 2M
	M30	18 mm	E2E2-X18MC1 2M	E2E2-X18MC2 2M

#### AC 2-Wire Models

Appearance	Sensing distance	Model		
		Operation mode		
		NO	NC	
	M12	2 mm	E2E2-X2Y1 2M	E2E2-X2Y2 2M
	M18	5 mm	E2E2-X5Y1 2M	E2E2-X5Y2 2M
	M30	10 mm	E2E2-X10Y1 2M	E2E2-X10Y2 2M
	M12	5 mm	E2E2-X5MY1 2M	E2E2-X5MY2 2M
	M18	10 mm	E2E2-X10MY1 2M	E2E2-X10MY2 2M
	M30	18 mm	E2E2-X18MY1 2M	E2E2-X18MY2 2M

## Accessories (Order Separately)

Mounting Brackets

Protective Covers

Sputter Protective Covers

## Ratings and Specifications

### E2E2-X□D□ DC 2-Wire Models

Item	Size Shielding Model	M12		M18		M30	
		Shielded	Unshielded	Shielded	Unshielded	Shielded	Unshielded
		E2E2-X3D□	E2E2-X8MD□	E2E2-X7D□	E2E2-X14MD□	E2E2-X10D□	E2E2-X20MD□
<b>Sensing distance</b>		3 mm±10%	8 mm±10%	7 mm±10%	14 mm±10%	10 mm±10%	20 mm±10%
<b>Set distance *1</b>		0 to 2.4 mm	0 to 6.4 mm	0 to 5.6 mm	0 to 11.2 mm	0 to 8 mm	0 to 16 mm
<b>Differential travel</b>		10% max. of sensing distance					
<b>Sensing object</b>		Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to <i>Engineering Data</i> on page 5.)					
<b>Standard sensing object</b>		Iron, 12 × 12 × 1 mm	Iron, 30 × 30 × 1 mm	Iron, 18 × 18 × 1 mm	Iron, 30 × 30 × 1 mm	Iron, 30 × 30 × 1 mm	Iron, 54 × 54 × 1 mm
<b>Response frequency *2</b>		1 kHz	800 Hz	500 Hz	400 Hz		100 Hz
<b>Power supply voltage (operating voltage range)</b>		12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max.					
<b>Leakage current</b>		0.8 mA max.					
<b>Control output</b>	<b>Switching capacity</b>	3 to 100 mA					
	<b>Residual voltage</b>	3 V max. (Load current: 100 mA, Cable length: 2 m)					
<b>Indicators</b>		D1 Models: Operation indicator (red) and setting indicator (green) D2 Models: Operation indicator (red)					
<b>Operation mode (with sensing object ap- proaching)</b>		D1 Models: NO    Refer to the timing charts under <i>I/O Circuit Diagrams</i> on page 8 for details. D2 Models: NC					
<b>Protection circuits</b>		Surge absorber, Load short-circuit protection					
<b>Ambient temperature</b>		Operating/Storage: -25 to 70°C (with no icing or condensation)					
<b>Ambient humidity</b>		Operating/Storage: 35% to 95% (with no condensation)					
<b>Temperature influence</b>		±10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C					
<b>Voltage influence</b>		±1% max. of sensing distance at rated voltage in the rated voltage ±15% range					
<b>Insulation resistance</b>		50 MΩ min. (at 500 VDC) between current-carrying parts and case					
<b>Dielectric strength</b>		1000 VAC, 50/60 Hz for 1 minute between current-carrying parts and case					
<b>Vibration resistance (destruction)</b>		10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions					
<b>Shock resistance (destruction)</b>		1,000 m/s <sup>2</sup> 10 times each in X, Y, and Z directions					
<b>Degree of protection</b>		IEC IP67, in-house standard for oil resistance					
<b>Connection method</b>		Pre-wired Models (Standard cable length: 2 m)					
<b>Weight (packed state)</b>		Approx. 65 g		Approx. 150 g		Approx. 210 g	
<b>Material- als</b>	<b>Case</b>	Brass					
	<b>Sensing surface</b>	PBT					
	<b>Clamping nuts</b>	Nickel-plated brass					
	<b>Toothed washer</b>	Zinc-plated iron					
<b>Accessories</b>		Instruction sheet					

\*1. Use the E2E2 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.