

Ultra Small Inductive Proximity Sensor

# E2EC

## Subminiature Sensor for demanding mounting conditions

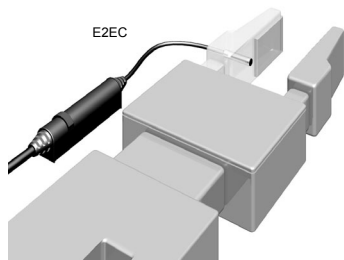
- 3 mm dia sensing head for most demanding mounting conditions
- 18 mm long ultra short M12 size housing



### Applications

Check of a robot hand chucking


The proximity sensor which can be attached to a moving part like a chucking robot.



### Ordering Information

Sensors


DC 2-wire

Shape	Sensing distance				Model	
					Operating status	
					NO	NC
Shield 	3-mm dia. *	0.8mm			<b>E2EC-CR8D1</b>	<b>E2EC-CR8D2</b>
	5.4-mm dia. *	1.5mm			<b>E2EC-C1R5D1</b>	<b>E2EC-C1R5D2</b>
	8-mm dia. *		3mm		<b>E2EC-C3D1</b>	<b>E2EC-C3D2</b>
	M12*		4mm		<b>E2EC-X4D1</b>	<b>E2EC-X4D2</b>

Note: A different frequency type is available. (E2EC-□□5; e.g.E2EC-CR8D15)

Accessories (Order Separately)

Mounting Brackets

Shape	Model	Applicable models
	<b>Y92E-F5R4</b>	E2EC-C1R5D□

Rating/performance

Item	Type Model	DC 2-wire			
		E2EC-CR8D□	E2EC-C1R5D□	E2EC-C3D□	E2EC-X4D□
Sensing distance		0.8 mm ±15%	1.5 mm ±10%	3 mm ±10%	4 mm ±10%
Setting distance		0 to 0.56 mm	0 to 1.05 mm	0 to 2.1 mm	0 to 2.8 mm
Differential distance		10% max.			
Sensing object		Ferrous metal (Sensitivity lowers with non-ferrous metals)			
Standard sensing object		Iron, 5 × 5 × 1 mm		Iron, 8 × 8 × 1 mm	Iron, 12 × 12 × 1 mm
Response frequency		1.5 kHz		1 kHz	
Power supply (Operating voltage range)		12 to 24 VDC (10 to 30 VDC) ripple (p-p): 10% max.			
Current consumption		---			
Leakage current		0.8 mA max.			
Control output	Switching capacity	5 to 100 mA			
	Residual voltage	3.0 V max. (under load current of 100 mA with cable length of 2 m)			
Indicator lamp		D1 type: Operation indicator (red LED), Operation set indicator (green LED) D2 type: Operation indicator (red LED)			
Operating status (with sensing object approaching)		D1 models: NO D2 models: NC			
Protective circuits		Surge absorber, short-circuit protection			
Ambient temperature		Operating/Storage: -25° C to 70° C (with no icing or condensation)			
Ambient humidity		Operating/Storage: 35% to 95%RH (with no condensation)			
Temperature influence		±20% max. of sensing distance at 23° in temperature range of -25° to 70°			
Voltage influence		±2.5% max. of sensing distance within a range of ±15% of rated power supply voltage			
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 2 hours each in X, Y, and Z directions			
Shock resistance		Destruction: 1,000 m/s <sup>2</sup> for 10 times each in X, Y, and Z directions			
Protective structure		IEC60529 IP67			
Connection method		Pre-wired models (standard length: 2 m)			
Weight (Packed state)		Approx. 45 g			
Material	Case	Brass			
	Sensing surface	ABS			
Accessories		Mounting bracket, instruction manual			

\* The response frequencies for DC switching are average values measured on condition that the distance between each sensing object is twice as large as the size of the sensing object and the sensing distance set is half of the maximum sensing distance.