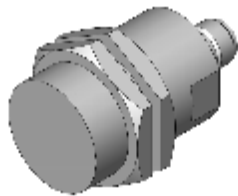


Proximity Sensor Ideal for High Temperatures and Cleaning Processes

E2EH-X12B1-M1

Proximity Sensor Ideal for High Temperatures and Cleaning Processes,
Sensing distance 12 mm, DC 3-Wire, PNP open-collector output, NO, M12
connector models



Image

Ratings/Performance

As of September 10, 2023

Sensing head size	M30
Type	Cylinder type (with screw), Shielded
Power source	DC Three-wires models
Sensing distance	12 mm ±10%
Setting distance	0 to 9.6 mm
Differential distance	15% max. of sensing distance
Sensing object	Ferrous metal (Sensitivity lowers with non-ferrous metals.)
Standard sensing object	Iron 36 x 36 x 1 mm
Response frequency	100 Hz (Average value)
Power supply voltage	12 to 24 VDC ripple (p-p) 10% max.
Operating voltage range	10 to 32 VDC
Current consumption	10 mA max.
Control output (Output type)	PNP open collector
Control output (Switching capacity)	100 mA max.
Control output (Residual voltage)	2 V max.(Load current 100 mA with cable length of 2 m)
Indicator	Operation indicator (yellow)
Operation mode	NO
Protective circuit	Output short-cut protection Output reverse polarity protection Power supply reverse polarity protection Surge suppressor
Ambient temperature (Operating)	0 to 100 °C
Ambient temperature (Storage)	-25 to 70 °C
Ambient humidity (Operating)	35 to 95 %
Ambient humidity (Storage)	35 to 95 %

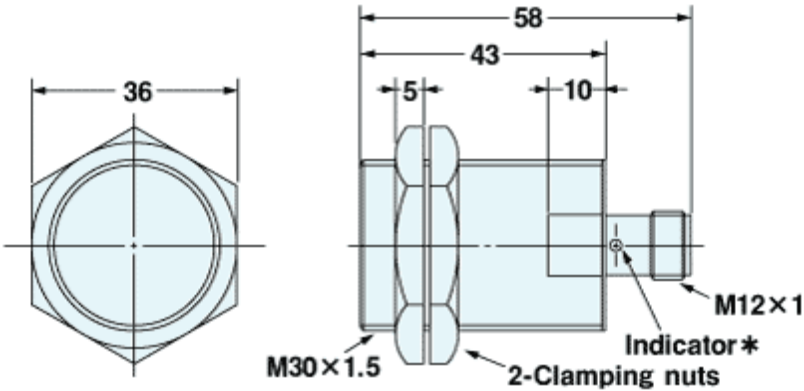
Temperature influence	±10% max. of sensing distance at 23 °C in the temperature range of 0 to 70 °C ±15% max. of sensing distance at 23 °C in the temperature range of +70 to +100 °C
Voltage influence	±10% max. of sensing distance at rated voltage in the rated voltage ±15% range
Insulation resistance	Between charged parts and the case: 50 MΩ min. at 500 VDC
Dielectric strength	Between charged parts and the case: 1,000 VAC 50/60 Hz 1 min
Vibration resistance	Destruction: 10 to 55 Hz, 1.5 mm double amplitude each in X, Y, and Z directions for 2 h
Shock resistance	Destruction: 1000 m/s ² 10 times each in X, Y, and Z directions
Degree of protection	IEC: IP67 DIN40050-9 IP69K
Connection method	M12 connector models
Weight	Package: Approx. 125 g
Material	Case: Stainless steel (SUS316L) Sensing surface: Polybutylene terephthalate (PBT) Clamping nuts: Stainless steel (SUS316L)
Accessories	Instruction manual

As of September 10, 2023

Dimensions

As of September 10, 2023

Dimensions



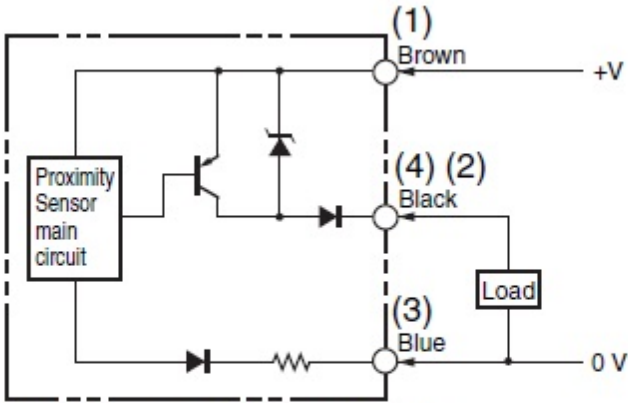
* D1 type: Operation indicator(red), Setting indicator(yellow)
D2,B,C type: Operation indicator(yellow)

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Output circuit

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Output circuit



Note: Use pin 1, 4, and 3 for NO.
Use pin 1, 2, and 3 for NC.

Timing chart

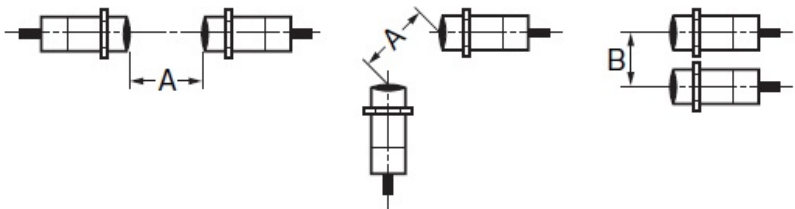
Operation mode	Timing Chart
NO	Sensing object Yes
	No
	Operation indicator (yellow) ON
	OFF
	Control output ON
	OFF

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Mutual interference

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Mutual interference

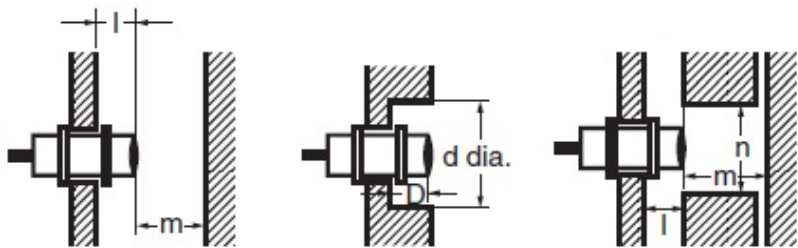


A: 110 mm min., B: 90 mm min.

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Effects of surrounding metals

Effects of surrounding metals

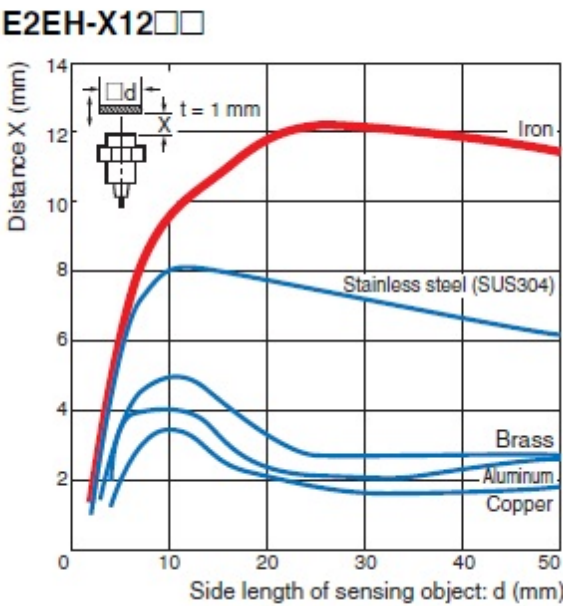


l: 6 mm min., dia. d: 50 mm min., D: 6 mm min., m: 45 mm min., n: 50 mm min.

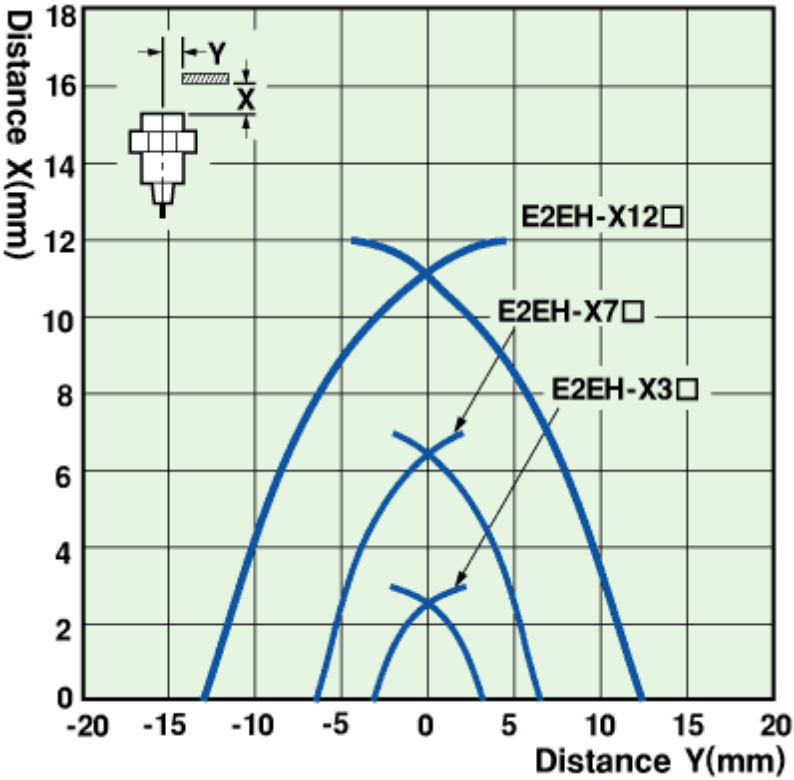
As of September 10, 2023

Characteristic chart

Sensing distance vs. size and material of sensing object



Sensing range



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