

Small-diameter Proximity Sensor

E2E-S05S12-WC-B1 5M

Shielded, Cylinder type (with screw) M5, DC Three-wires models, Sensing distance 1.2 mm $\pm$ 10%, NO, PNP open collector, Pre-wired models



Image

Ratings/Performance

As of July 16, 2020

Sensing head size	M5
Type	Cylinder type (with screw), Shielded
Power source	DC Three-wires models
Sensing distance	1.2 mm $\pm$ 10%
Setting distance	0 to 0.84 mm
Differential distance	15% max. of sensing distance
Sensing object	Ferrous metal (Sensitivity lowers with non-ferrous metals.)
Standard sensing object	Iron 4 x 4 x 1 mm
Response frequency	4 kHz
Power supply voltage	10 to 30 VDC ripple (p-p) 10% included
Operating voltage range	10 to 30 VDC
Current consumption	10 mA max.
Control output (Output type)	PNP open collector
Control output (Switching capacity)	100 mA max.
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)	-25 to 70 °C
Ambient temperature (Storage)	-25 to 70 °C
Ambient humidity (Operating)	35 to 95% RH
Ambient humidity (Storage)	35 to 95% RH
Temperature influence	$\pm$ 15% max. of sensing distance at 23 °C in the temperature range of -25 to 70 °C

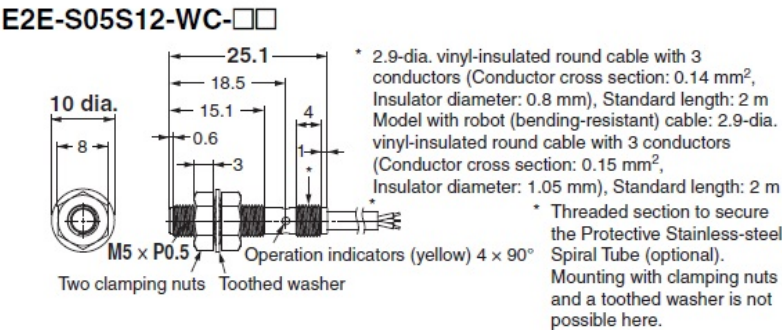
Voltage influence	±2.5% max. of sensing distance at rated voltage in the rated voltage ±15% range
Insulation resistance	Between charged parts and the case: 5 MΩ min. at 500 VDC
Dielectric strength	Between charged parts and the case: 500 VAC 50/60 Hz 1 min
Vibration resistance	Destruction: 10 to 55 Hz, 1.5 mm double amplitude each in X, Y, and Z directions for 2 h
Shock resistance	Destruction: 500 m/s ² 10 times each in X, Y, and Z directions
Degree of protection	IEC: IP67 Company standard: Oil-proof
Connection method	Pre-wired models (5 m)
Material	Case: SUS303 (EN1.4305) Sensing surface: Heat-resistant ABS resin Cable: PVC Clamping nuts: SUS430 (EN1.4016) Toothed washers: SUS303 (EN1.4305)
Accessories	Instruction manual, Model label, Nut Set

As of July 16, 2020

Dimensions

As of July 16, 2020

Dimensions

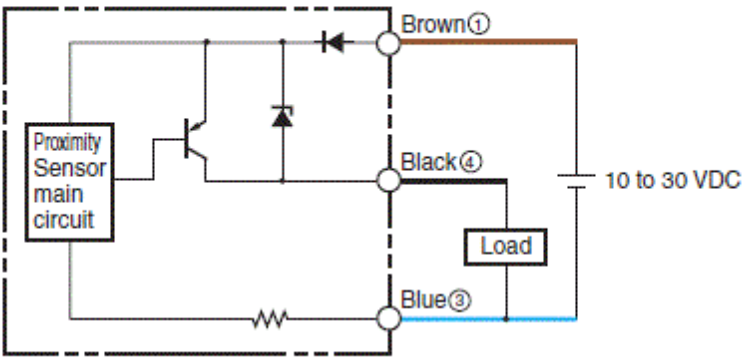


As of July 16, 2020

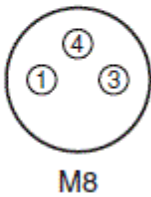
Output circuit

As of July 16, 2020

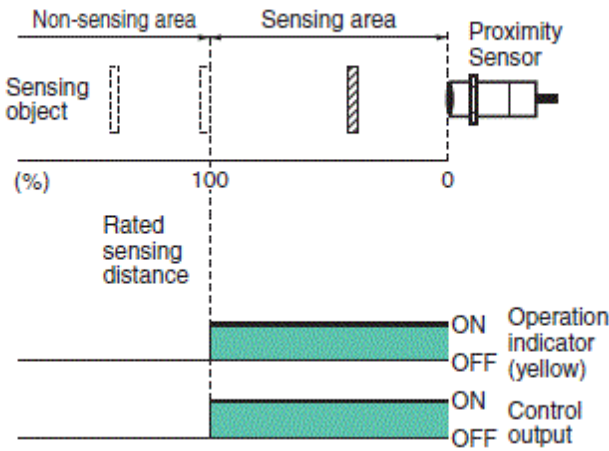
Output circuit



Connector pin arrangement



Timing chart

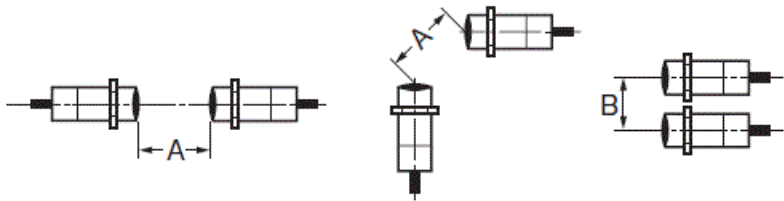


As of July 16, 2020

Mutual interference

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Mutual interference



A: 20 mm min., B: 15 mm min.

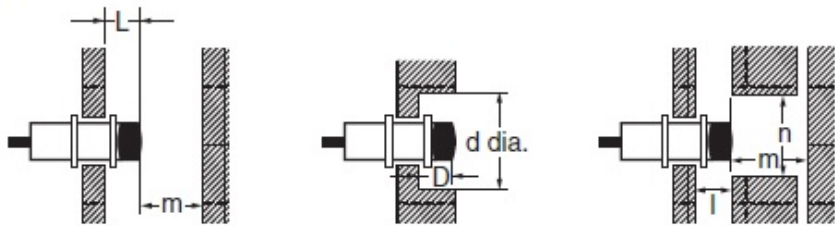
As of July 16, 2020

Effects of surrounding metals

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Effects of surrounding metals

〈Unshielded Models〉



L: 0 mm min., dia. d: 5 mm min., m: 5 mm min., D: 0 mm min., n: 10 mm min., c: 0 mm min.

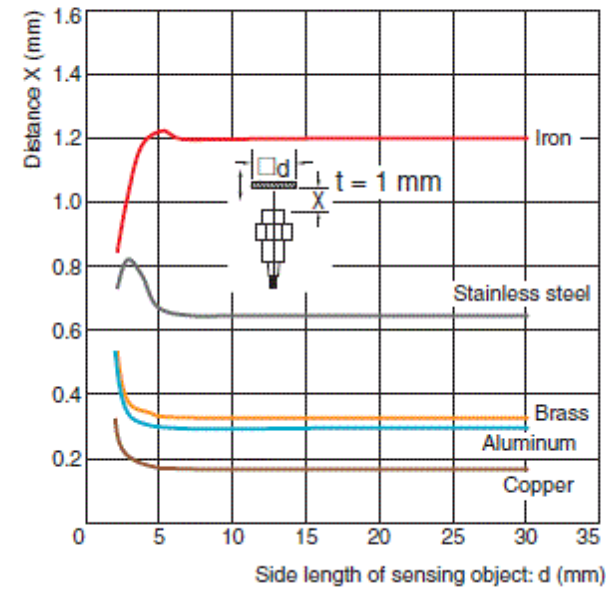
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Characteristic chart

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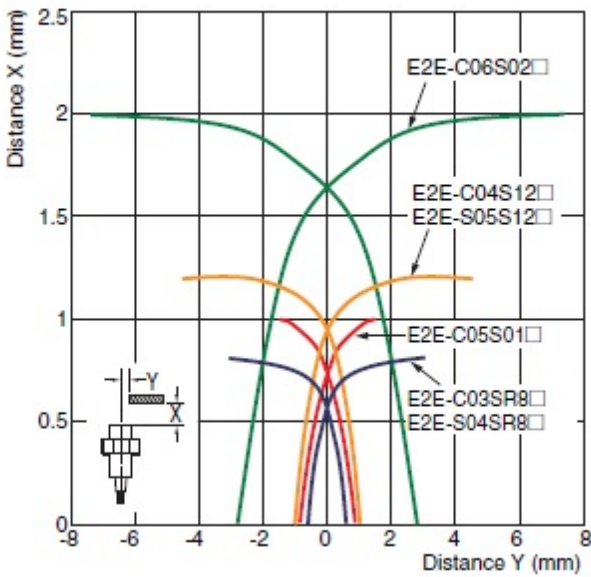
Sensing distance vs. size and material of sensing object

E2E-C04S12□/E2E-S05S12□



Sensing range

E2E-C/S□S□



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