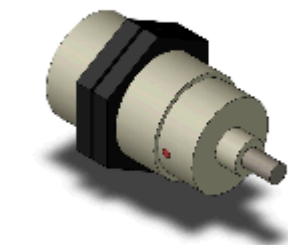


Resin-case Proximity Sensor

E2F-X10E2 2M

Shielded, Cylinder type (with screw) M30, DC Three-wires models, Sensing distance 10 mm ±10%, NC, NPN, Pre-wired models



Image

Ratings/Performance

As of July 16, 2020

Sensing head size	M30
Type	Cylinder type (with screw), Shielded
Power source	DC Three-wires models
Sensing distance	10 mm ±10%
Setting distance	0 to 8 mm
Differential distance	10% max. of sensing distance
Sensing object	Ferrous metal (Sensitivity lowers with non-ferrous metals.)
Standard sensing object	Iron 30 x 30 x 1 mm
Response frequency	400 Hz (Average value)
Power supply voltage	12 to 24 VDC ripple (p-p) 10% max.
Operating voltage range	10 to 30 VDC
Current consumption	17 mA max.
Control output (Output type)	NPN
Control output (Switching capacity)	200 mA max.
Control output (Residual voltage)	2 V max. (Load current 200 mA with cable length of 2 m)
Indicator	Operation indicator (red)
Operation mode	NC
Protective circuit	Output short-cut protection 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

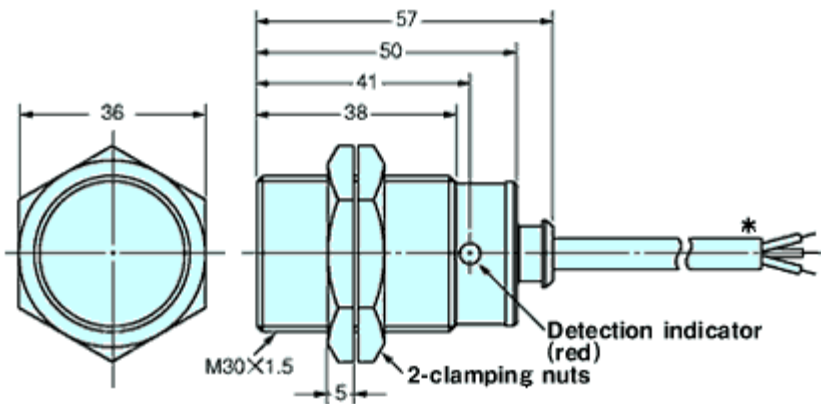
Temperature influence	±10% max. of sensing distance at 23 °C in the temperature range of -25 to 70 °C
Voltage influence	±2.5% max. of sensing distance at rated voltage in the rated voltage ±15% range
Insulation resistance	Between charged parts and the case: 5 MΩ min. at 500 VDC
Dielectric strength	Between charged parts and the case: 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: IP68 Company standard: Oil-proof
Connection method	Pre-wired models (2 m)
Weight	Package: Approx. 170 g
Material	Case: Polyarylate Sensing surface: Polyarylate Clamping nuts: Polyacetal
Accessories	Instruction manual

As of July 16, 2020

Dimensions

As of July 16, 2020

Dimensions



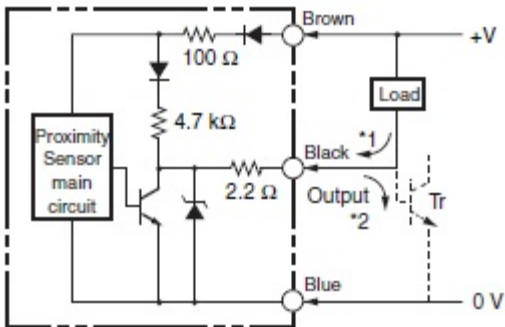
* 6-dia. vinyl-insulated round cable with 3 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm)
Standard length: 2m
The cable can be extended (separate metal conduit) up to 200 m.

As of July 16, 2020

Output circuit

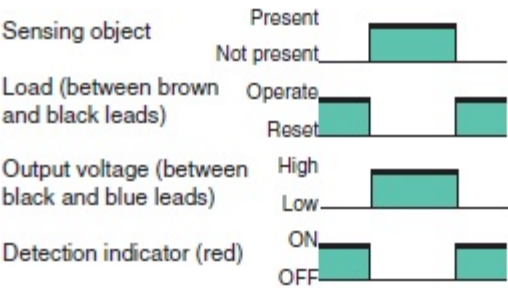
As of July 16, 2020

Output circuit



- *1. Load current: 200 mA max.
- *2. When a transistor is connected.

Timing chart

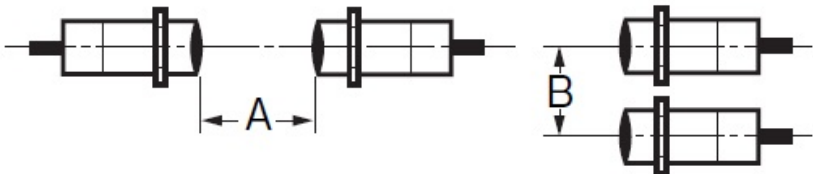


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Mutual interference

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Mutual interference



A: 100 mm min., B: 70 mm min.

Different frequency

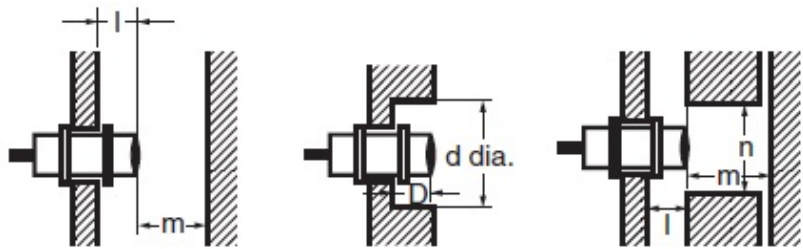
A: 50 mm min., B: 35 mm min.

As of July 16, 2020

Effects of surrounding metals

As of July 16, 2020

Effects of surrounding metals



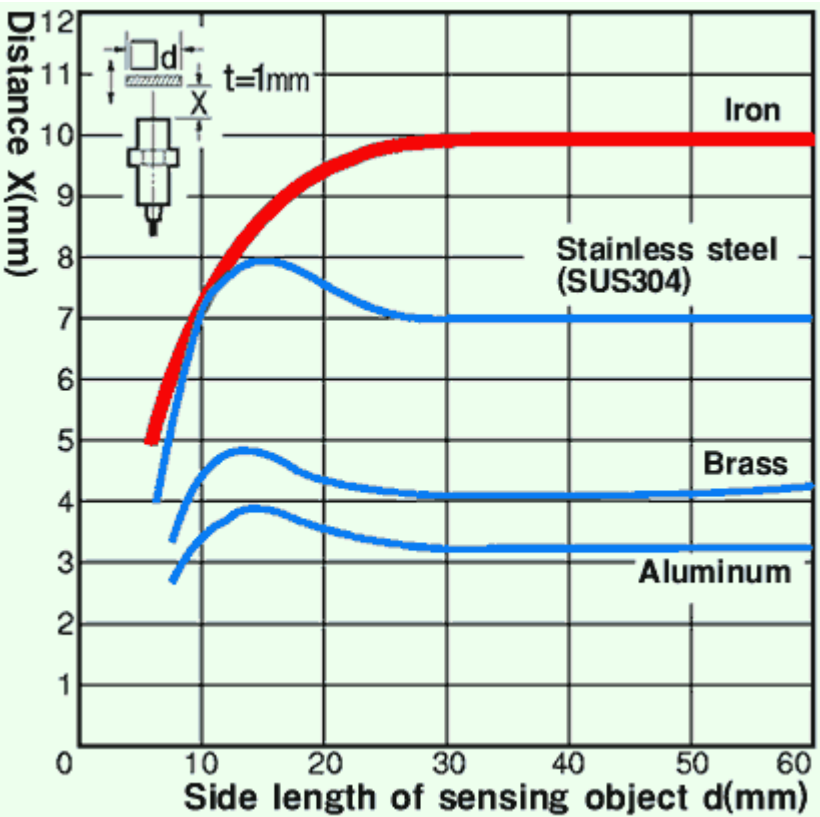
l : 0 mm min., dia. d : 30 mm min., D : 0 mm min., m : 40 mm min., n : 45 mm min.

As of July 16, 2020

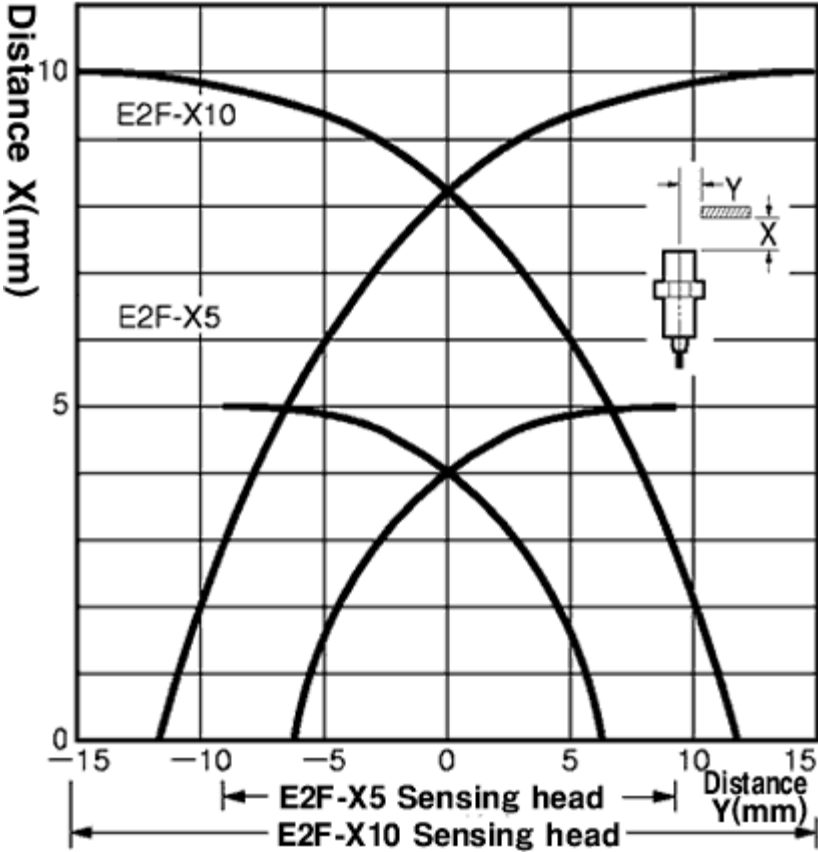
Characteristic chart

As of July 16, 2020

Sensing distance vs. size and material of sensing object



Sensing range



As of July 16, 2020