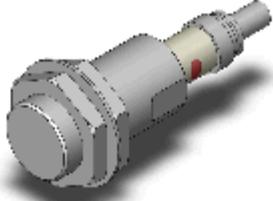


Proximity Sensor with All-stainless Housing

E2FM-X5B1 2M

Shielded, Cylinder type (with screw) M18, DC Three-wires models, Sensing distance 5 mm \pm 10%, NO, PNP open collector, Pre-wired models



Image

Sensing head size	M18
Type	Cylinder type (with screw), Shielded
Power source	DC Three-wires models
Sensing distance	5 mm \pm 10%
Setting distance	0 to 3.5 mm
Operation mode	NO

Ratings/Performance

As of July 16, 2020

Sensing head size	M18
Type	Cylinder type (with screw), Shielded
Power source	DC Three-wires models
Sensing distance	5 mm \pm 10%
Setting distance	0 to 3.5 mm
Differential distance	15% 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	100 Hz (Average value)
Power supply voltage	12 to 24 VDC ripple (p-p) 10% max.
Operating voltage range	10 to 30 VDC
Current consumption	10 mA max.
Control output (Output type)	PNP open collector
Control output (Switching capacity)	200 mA max.
Control output (Residual voltage)	2 V max. (Load current 200 mA max. 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)	-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	±20% max. of sensing distance at 23 °C in the temperature range of -25 to 70 °C
Voltage influence	±1% 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: IP67
Connection method	Pre-wired models (2 m)
Weight	Package: Approx. 190 g
Material	Case: Stainless steel (SUS303) Sensing surface: Stainless steel (SUS303) Clamping nuts: Stainless steel Toothed washers: Iron zinc plating
Accessories	Instruction manual

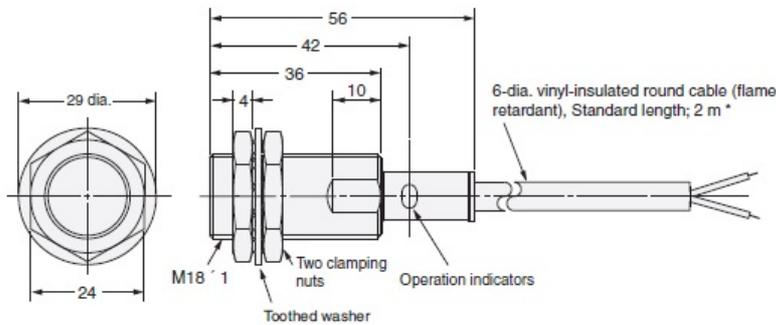
As of July 16, 2020

Dimensions

As of July 16, 2020

Dimensions

E2FM-X5□



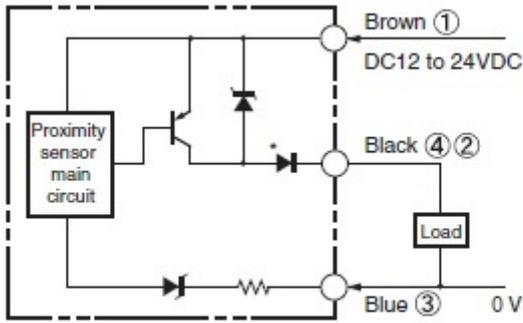
* 6-dia. vinyl-insulated round cable with 2 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.75 mm)
6-dia. vinyl-insulated round cable with 3 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.75 mm)

As of July 16, 2020

Output circuit

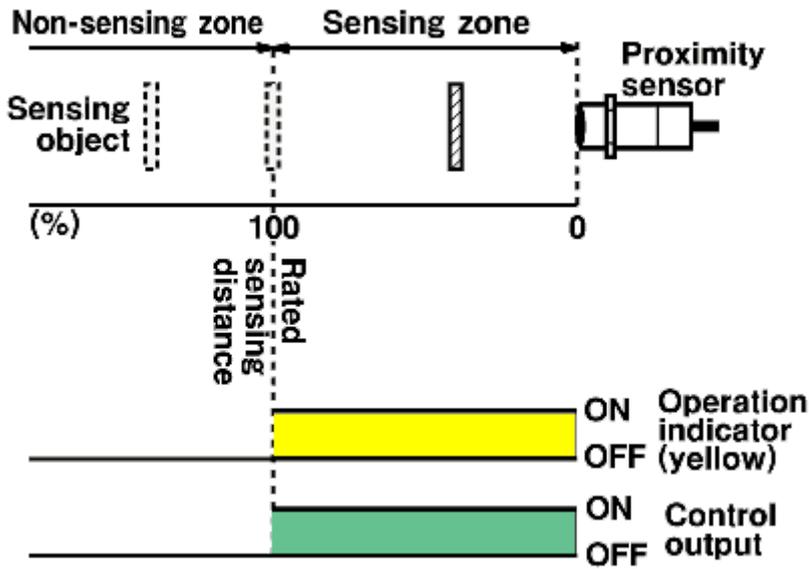
As of July 16, 2020

Output circuit



* There is no reversed output polarity protection diode.

Timing chart

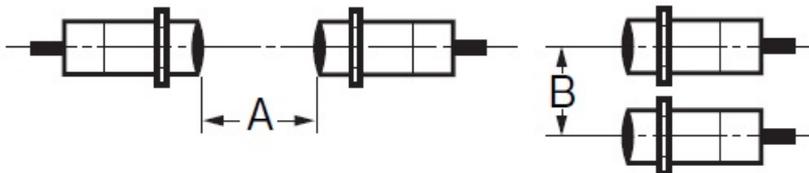


As of July 16, 2020

Mutual interference

As of July 16, 2020

Mutual interference



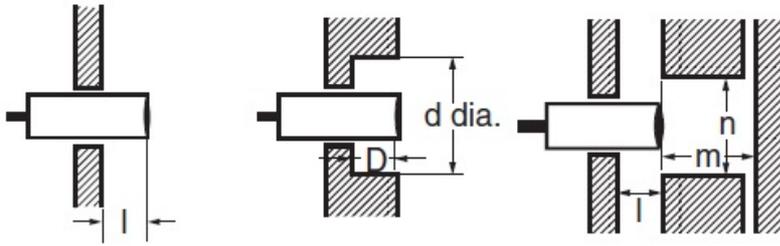
A: 65 mm min., B: 60 mm min.

As of July 16, 2020

Effects of surrounding metals

As of July 16, 2020

Effects of surrounding metals



Iron

l: 0 mm min., dia. d: 18 mm min., D: 0 mm min., m: 20 mm min., n: 60 mm min.

Aluminum

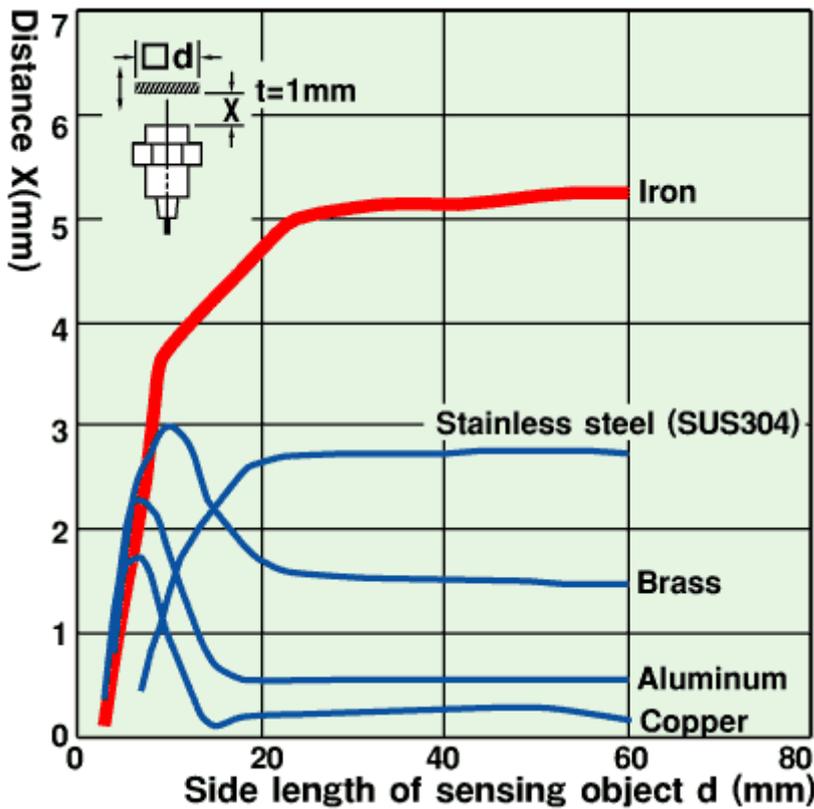
l: 16 mm min., dia. d: 80 mm min., D: 16 mm min., m: 20 mm min., n: 80 mm min.

As of July 16, 2020

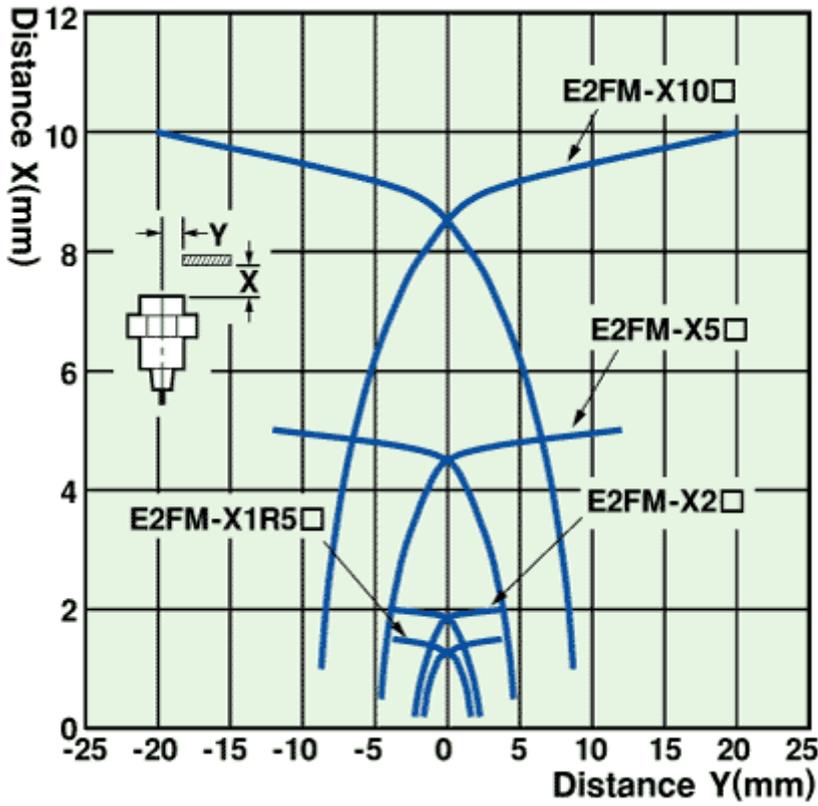
Characteristic chart

As of July 16, 2020

Sensing distance vs. size and material of sensing object

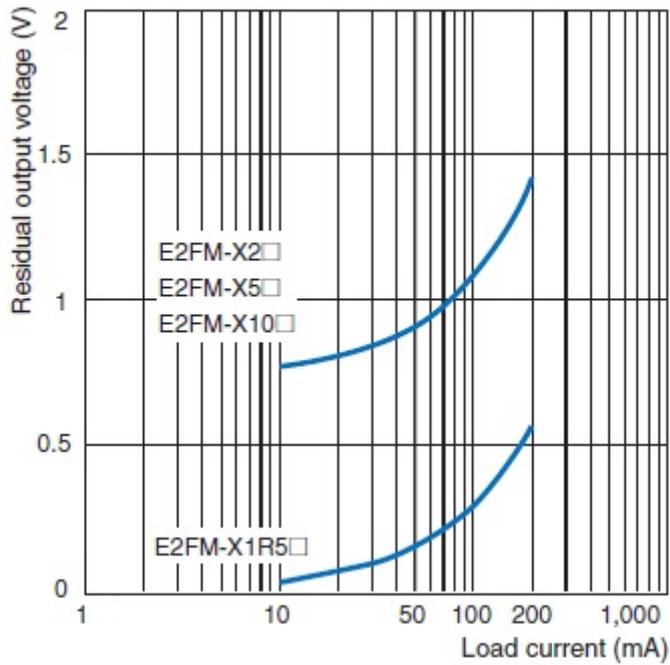


Sensing range



Residual voltage

E2FM-X□C□/B□



As of July 16, 2020