

Proximity Sensor with All-stainless Housing

E2FM-X1R5D1-M1TGJ 0.3M



Image

Shielded, Cylinder type (with screw) M8, DC 2-wire models, Sensing distance 1.5 mm $\pm$ 10%, NO, Polarity, Prewired M12 smart click connector model

Sensing head size	M8
Type	Cylinder type (with screw), Shielded
Power source	DC 2-wire models
Sensing distance	1.5 mm $\pm$ 10%
Setting distance	0 to 1.05 mm
Operation mode	NO

Ratings/Performance

As of July 16, 2020

Sensing head size	M8
Type	Cylinder type (with screw), Shielded
Power source	DC 2-wire models
Sensing distance	1.5 mm $\pm$ 10%
Setting distance	0 to 1.05 mm
Differential distance	15% max. of sensing distance
Sensing object	Ferrous metal (Sensitivity lowers with non-ferrous metals.)
Standard sensing object	Iron 8 x 8 x 1 mm
Response frequency	200 Hz (Average value)
Power supply voltage	12 to 24 VDC ripple (p-p) 10% max.
Operating voltage range	10 to 30 VDC
Leakage current	0.8 mA max.
Control output (Switching capacity)	3 to 100 mA
Control output (Residual voltage)	3 V max. (Load current 100 mA max. with cable length of 2 m)
Indicator	Operation indicator (red), Operation setting indicator (green)
Operation mode	NO
Polarity	Polarity
Protective circuit	Output short-cut 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	$\pm$ 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: 500 m/s ² 10 times each in X, Y, and Z directions
Degree of protection	IEC: IP67
Connection method	Prewired M12 smart click connector model (0.3 m)
Weight	Package: Approx. 65 g
Material	Case: Stainless steel (SUS303) Sensing surface: Stainless steel (SUS303) Clamping nuts: Stainless steel Toothed washers: Iron zinc plating
Accessories	Instruction manual

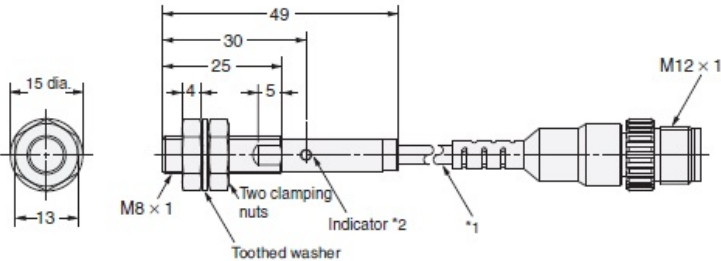
As of July 16, 2020

Dimensions

As of July 16, 2020

Dimensions

E2FM-X1R5D□-M1TGJ-□



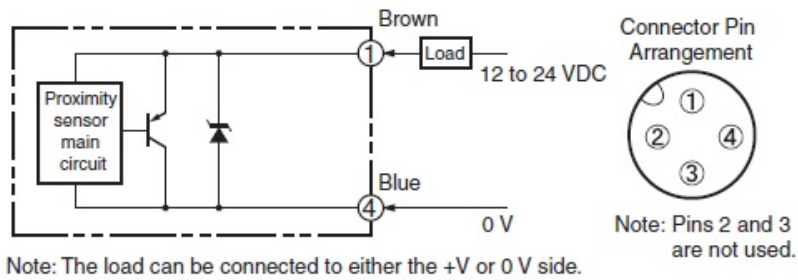
*1. 4-dia. vinyl-insulated round cable (flame retardant), Standard length; 300 mm
*2. Operation indicator (red/green)
Setting indicator (green)

As of July 16, 2020

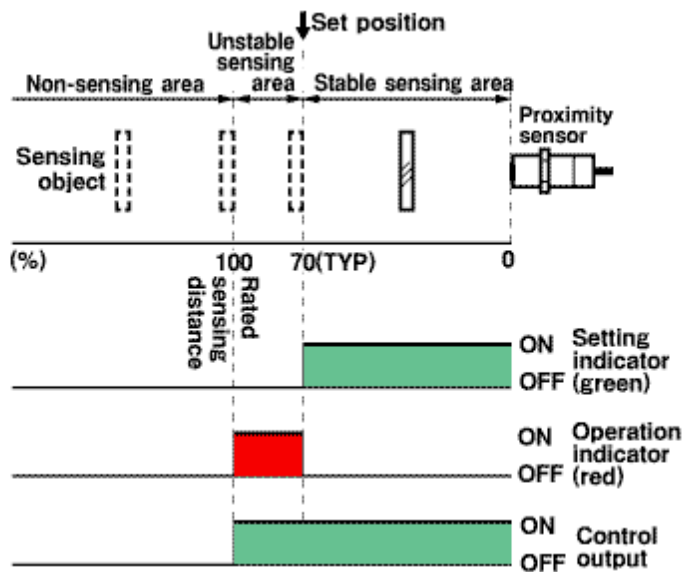
Output circuit

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Output circuit



Timing chart

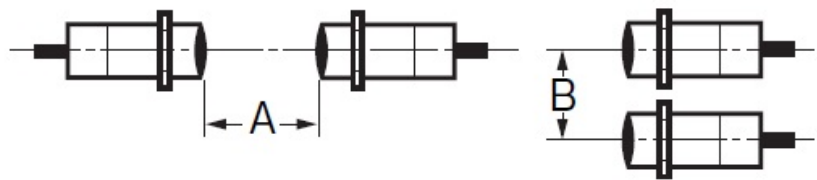


As of July 16, 2020

Mutual interference

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Mutual interference



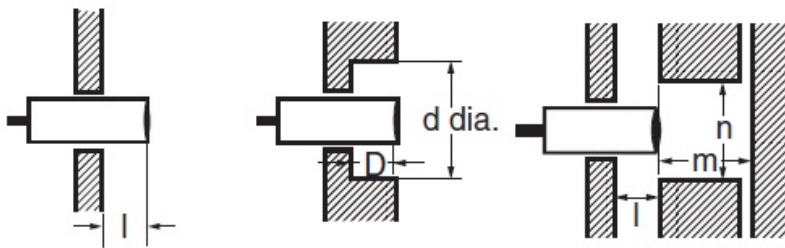
A: 35 mm min., B: 30 mm min.

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Effects of surrounding metals

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Effects of surrounding metals



Iron

l: 0 mm min., dia. d: 8 mm min., D: 0 mm min., m: 4.5 mm min., n: 30 mm min.

Aluminum

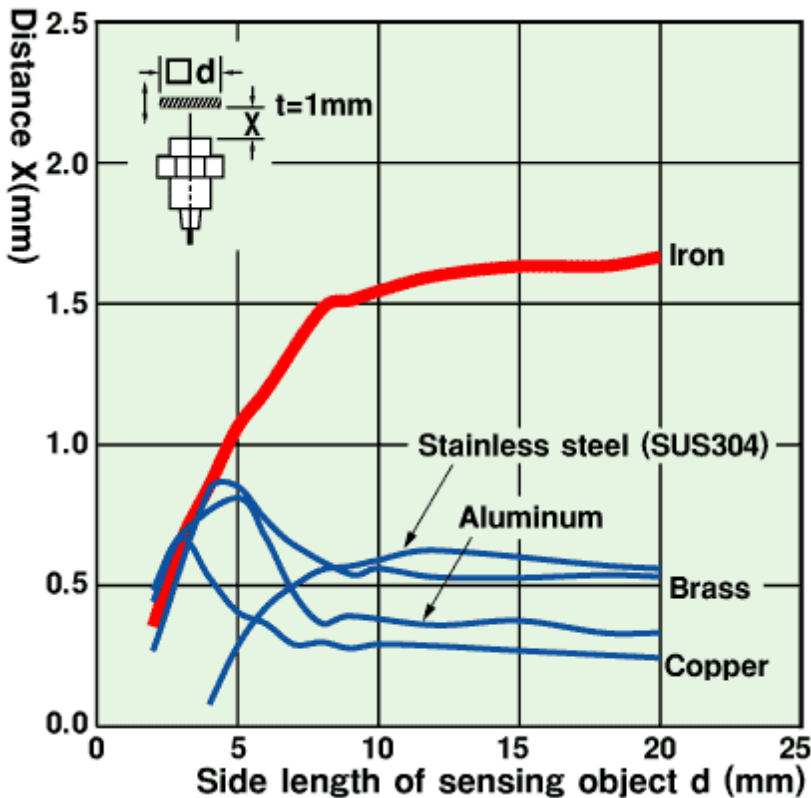
l: 10 mm min., dia. d: 50 mm min., D: 10 mm min., m: 4.5 mm min., n: 50 mm min.

As of July 16, 2020

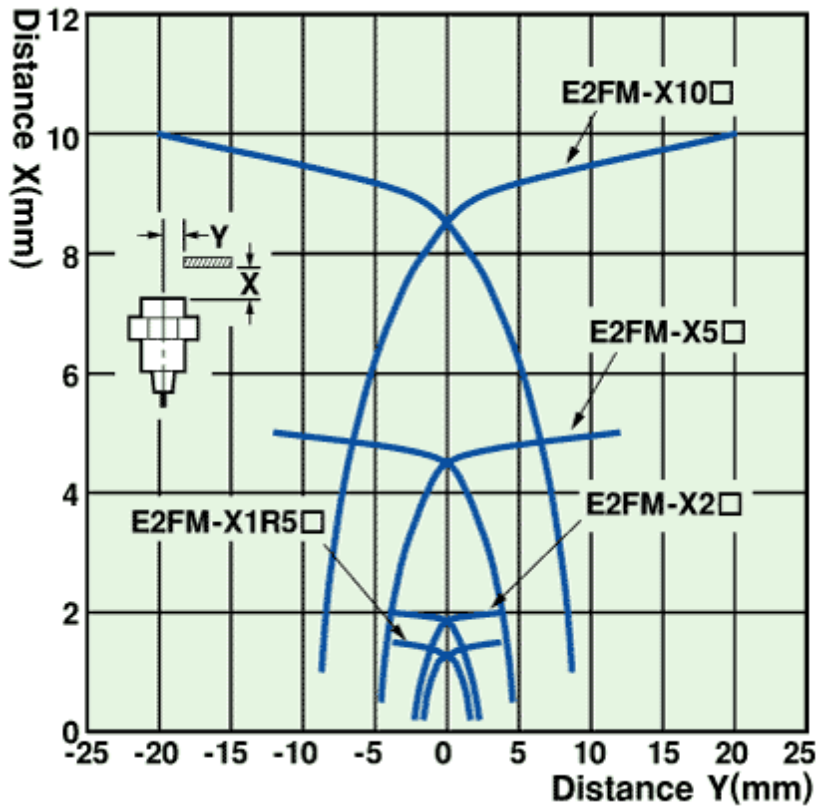
Characteristic chart

As of July 16, 2020

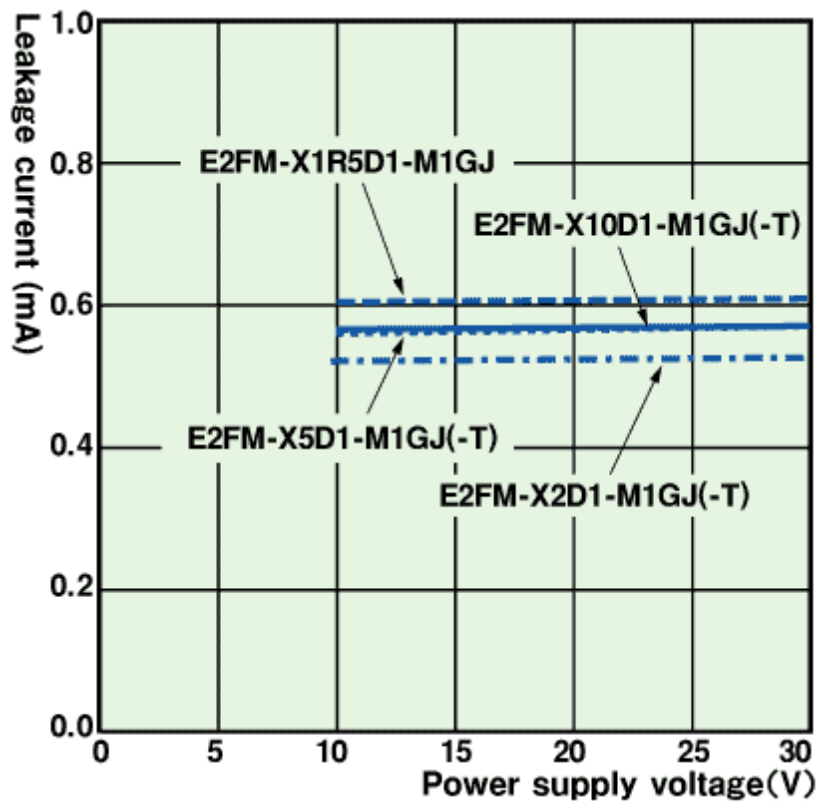
Sensing distance vs. size and material of sensing object



Sensing range

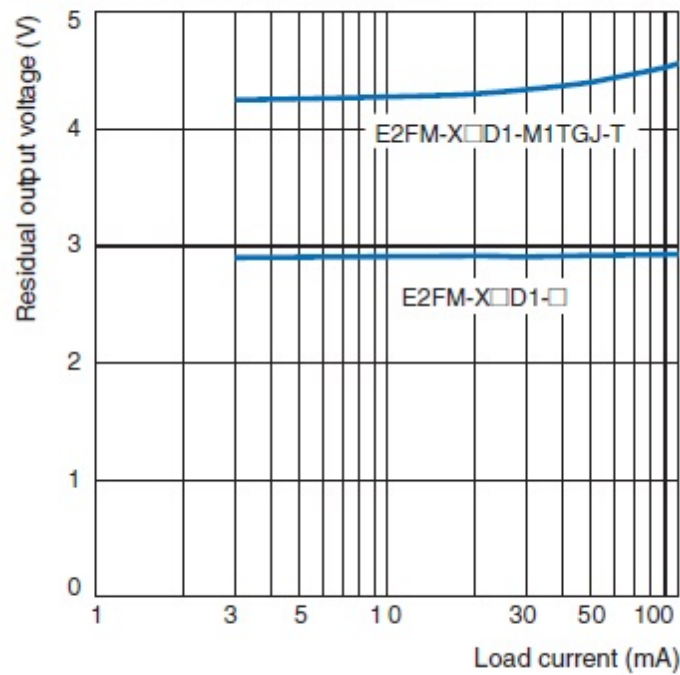


Leakage current



Residual voltage

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