

Proximity Sensor with All-stainless Housing

**E2FM-X10D1-M1TGJ 0.3M**No Image  
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Image

**Shielded, Cylinder type (with screw) M30, DC 2-wire models, Sensing distance 10 mm  $\pm$ 10%, NO, Polarity, Prewired M12 smart click connector model**

<b>Sensing head size</b>	M30
<b>Type</b>	Cylinder type (with screw), Shielded
<b>Power source</b>	DC 2-wire models
<b>Sensing distance</b>	10 mm $\pm$ 10%
<b>Setting distance</b>	0 to 7 mm
<b>Operation mode</b>	NO

## Ratings/Performance

As of July 16, 2020

<b>Sensing head size</b>	M30
<b>Type</b>	Cylinder type (with screw), Shielded
<b>Power source</b>	DC 2-wire models
<b>Sensing distance</b>	10 mm $\pm$ 10%
<b>Setting distance</b>	0 to 7 mm
<b>Differential distance</b>	15% max. of sensing distance
<b>Sensing object</b>	Ferrous metal (Sensitivity lowers with non-ferrous metals.)
<b>Standard sensing object</b>	Iron 54 x 54 x 1 mm
<b>Response frequency</b>	50 Hz (Average value)
<b>Power supply voltage</b>	12 to 24 VDC ripple (p-p) 10% max.
<b>Operating voltage range</b>	10 to 30 VDC
<b>Leakage current</b>	0.8 mA max.
<b>Control output (Switching capacity)</b>	3 to 100 mA
<b>Control output (Residual voltage)</b>	3 V max. (Load current 100 mA max. with cable length of 2 m)
<b>Indicator</b>	Operation indicator (red), Operation setting indicator (green)
<b>Operation mode</b>	NO
<b>Polarity</b>	Polarity
<b>Protective circuit</b>	Output short-cut protection Surge suppressor
<b>Ambient temperature (Operating)</b>	-25 to 70 °C
<b>Ambient temperature (Storage)</b>	-25 to 70 °C
<b>Ambient humidity (Operating)</b>	35 to 95% RH
<b>Ambient humidity (Storage)</b>	35 to 95% RH
<b>Temperature influence</b>	$\pm$ 20% max. of sensing distance at 23 °C in the temperature range of -25 to 70 °C

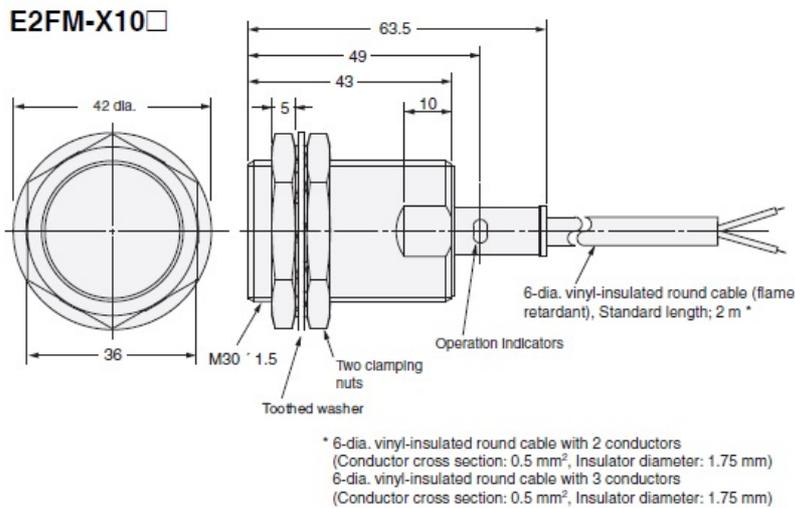
<b>Voltage influence</b>	±1% max. of sensing distance at rated voltage in the rated voltage ±15% range
<b>Insulation resistance</b>	Between charged parts and the case: 5 MΩ min. at 500 VDC
<b>Dielectric strength</b>	Between charged parts and the case: 1,000 VAC 50/60 Hz 1 min
<b>Vibration resistance</b>	Destruction: 10 to 55 Hz, 1.5 mm double amplitude each in X, Y, and Z directions for 2 h
<b>Shock resistance</b>	Destruction: 1000 m/s <sup>2</sup> 10 times each in X, Y, and Z directions
<b>Degree of protection</b>	IEC: IP67
<b>Connection method</b>	Prewired M12 smart click connector model (0.3 m)
<b>Weight</b>	Package: Approx. 190 g
<b>Material</b>	Case: Stainless steel (SUS303) Sensing surface: Stainless steel (SUS303) Clamping nuts: Stainless steel Toothed washers: Iron zinc plating
<b>Accessories</b>	Instruction manual

As of July 16, 2020

Dimensions

As of July 16, 2020

Dimensions

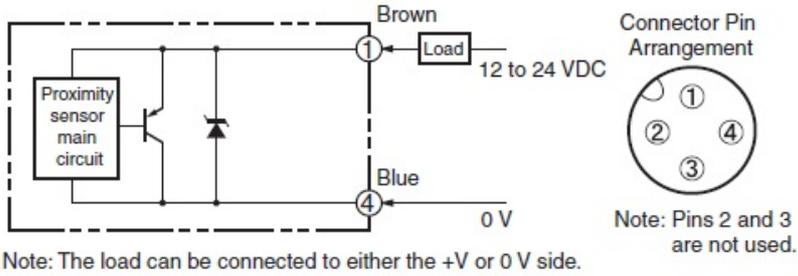


As of July 16, 2020

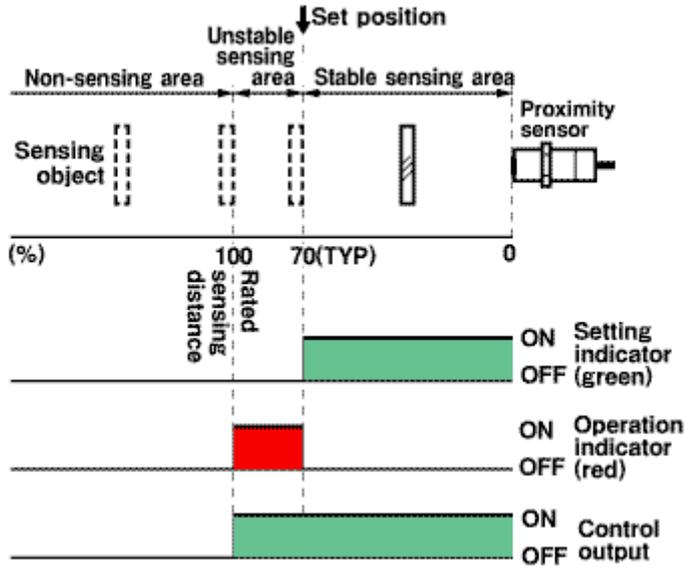
Output circuit

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Output circuit



Timing chart

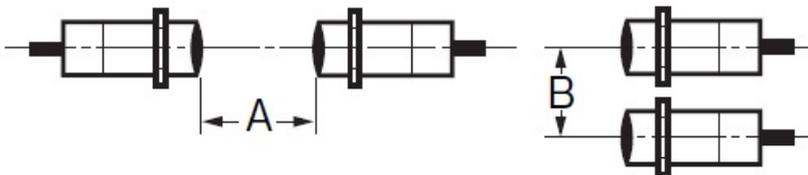


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Mutual interference

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Mutual interference

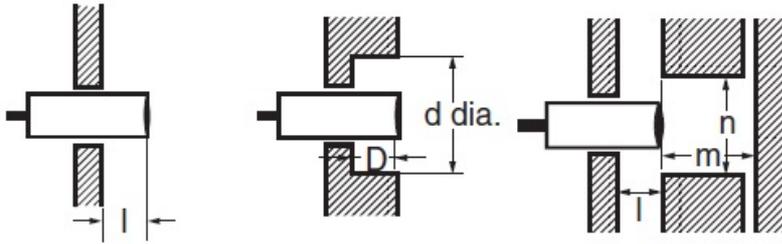


A: 110 mm min., B: 100 mm min.

As of July 16, 2020

Effects of surrounding metals

Effects of surrounding metals



**Iron**

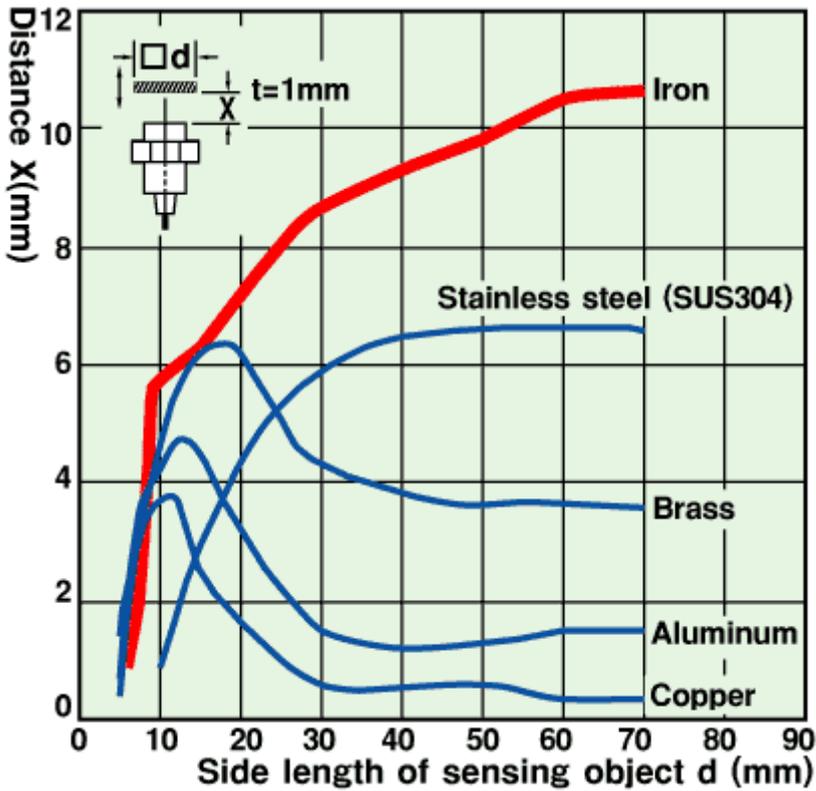
l: 0 mm min., dia. d: 30 mm min., D: 0 mm min., m: 40 mm min., n: 100 mm min.

**Aluminum**

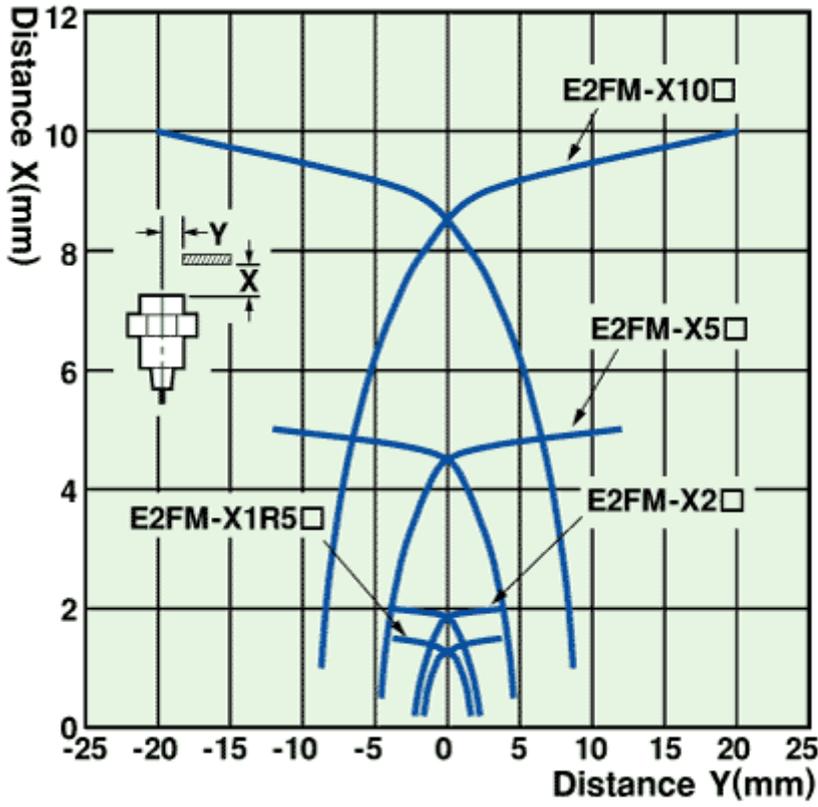
l: 24 mm min., dia. d: 120 mm min., D: 24 mm min., m: 40 mm min., n: 120 mm min.

Characteristic chart

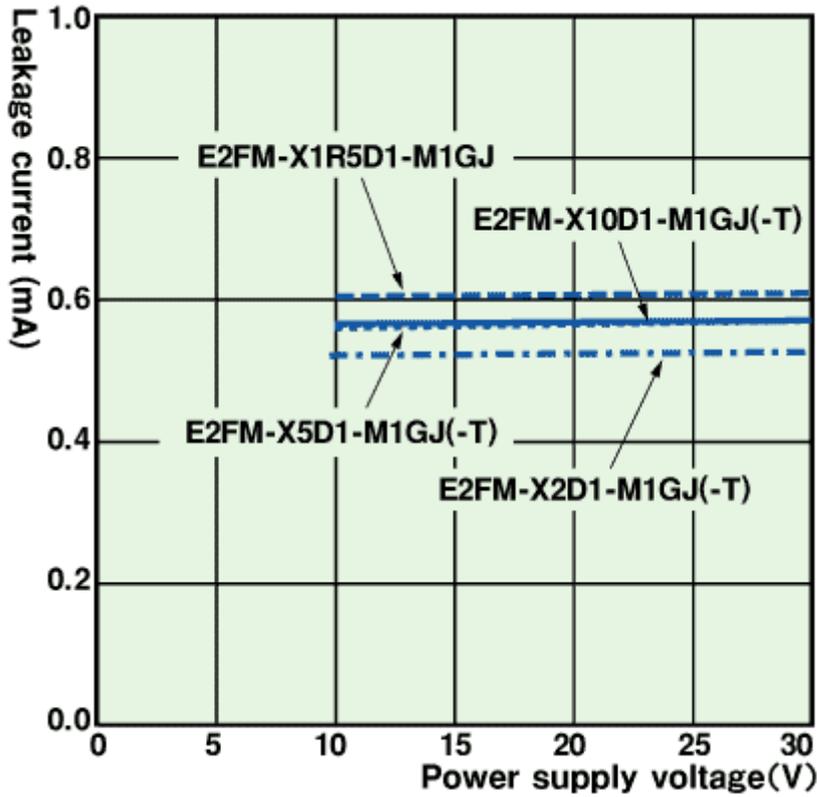
Sensing distance vs. size and material of sensing object



Sensing range

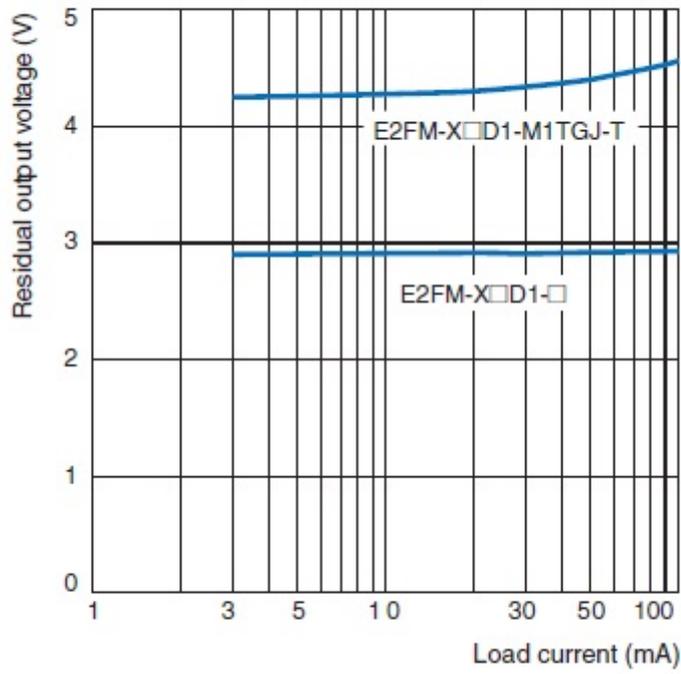


Leakage current



Residual voltage

### E2FM-X□D1-M1TGJ (-T)



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