

Stainless Steel Sensing Surface Amplifier Proximity Sensor

E2EC-MC2D1 2M

Shielded, Cylinder type 8 dia., DC 2-wire models, Sensing distance 2 mm $\pm 10\%$, NO, Pre-wired models



Image

Ratings/Performance

As of July 16, 2020

Sensing head size	8 dia.
Type	Cylinder type, Shielded
Power source	DC 2-wire models
Sensing distance	2 mm $\pm 10\%$
Setting distance	0 to 1.4 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	100 Hz
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 50 mA
Control output (Residual voltage)	3 V max. (Load current 50 mA with cable length of 2 m)
Indicator	Operation indicator (red), Operation setting indicator (green)
Operation mode	NO
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	$\pm 1\%$ max. of sensing distance at rated voltage in the rated voltage $\pm 15\%$ 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 Company standard: Oil-proof (For Sensor Head only)
Connection method	Pre-wired models (2 m)
Weight	Package: Approx. 65 g
Material	Sensor Head Case: Stainless steel (SUS303) Sensing surface: Stainless steel (SUS303) Sensor Head Cable: Polyester elastomer (TPEE) (Shielded) Cable Amplifier Case: ABS resin Cable Amplifier Cable: PVC
Accessories	Instruction manual, Amplifier Mounting Brackets

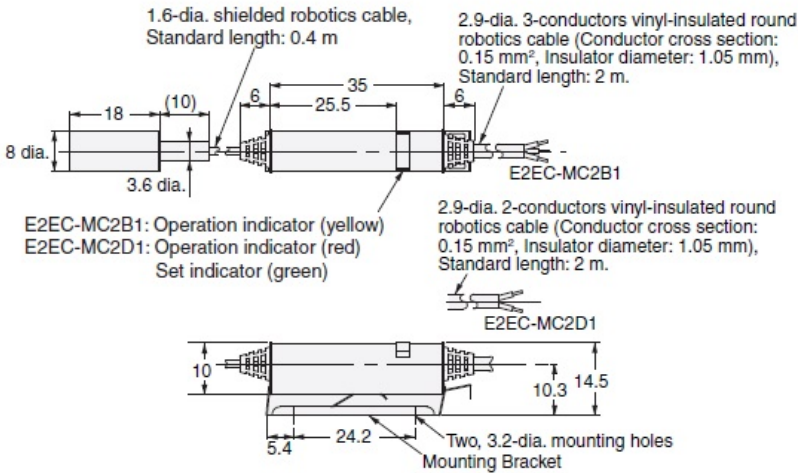
As of July 16, 2020

Dimensions

As of July 16, 2020

Dimensions

E2EC-MC2B1, E2EC-MC2D1

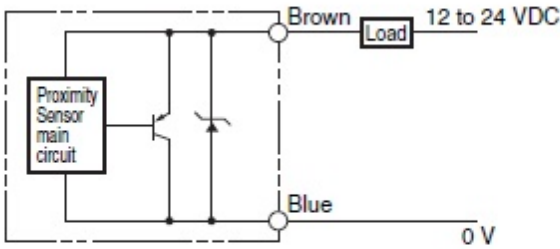


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Output circuit

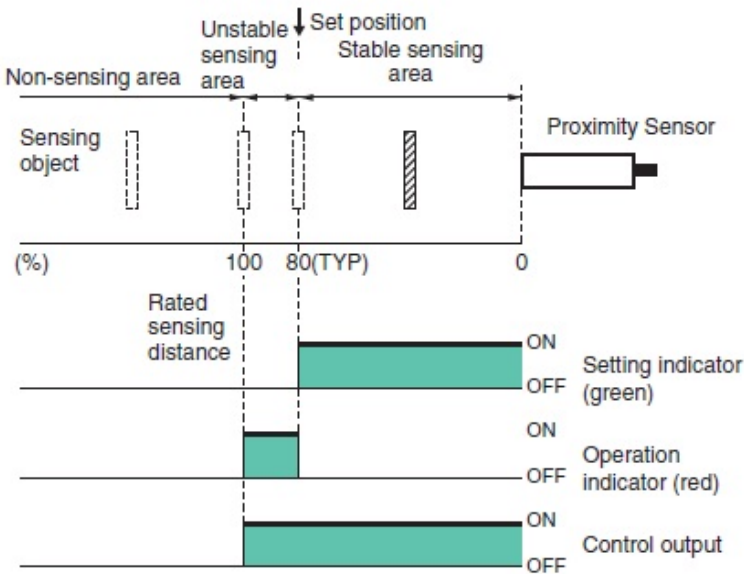
As of July 16, 2020

Output circuit



Note: The load can be connected to either the +V or 0 V side.

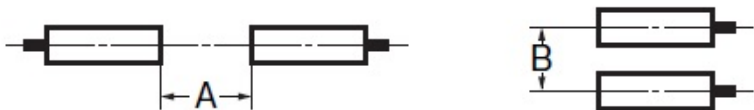
Timing chart



As of July 16, 2020

Mutual interference

Mutual interference



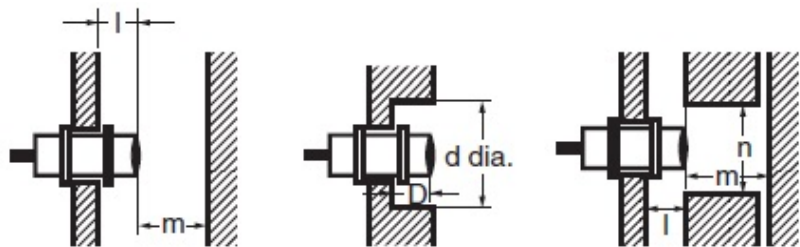
A: 40 mm min., B: 30 mm min.

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Effects of surrounding metals

As of July 16, 2020

Effects of surrounding metals



Iron

l: 0 mm min., dia. d: 8 mm min., D: 0 mm min., m: 6 mm min., n: 30 mm min.

Aluminum

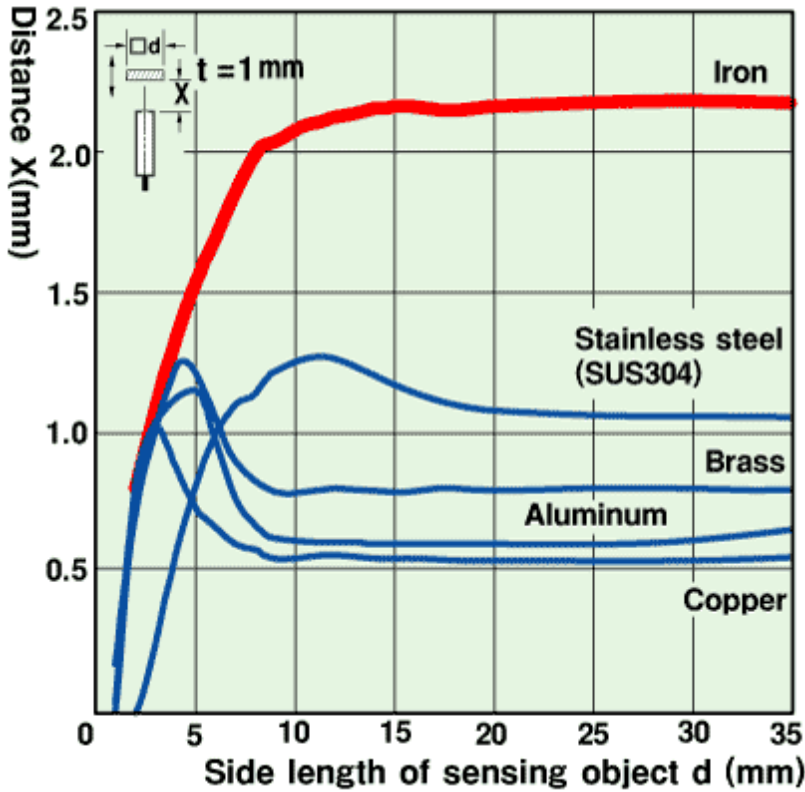
l: 10 mm min., dia. d: 50 mm min., D: 10 mm min., m: 6 mm min., n: 50 mm min.

As of July 16, 2020

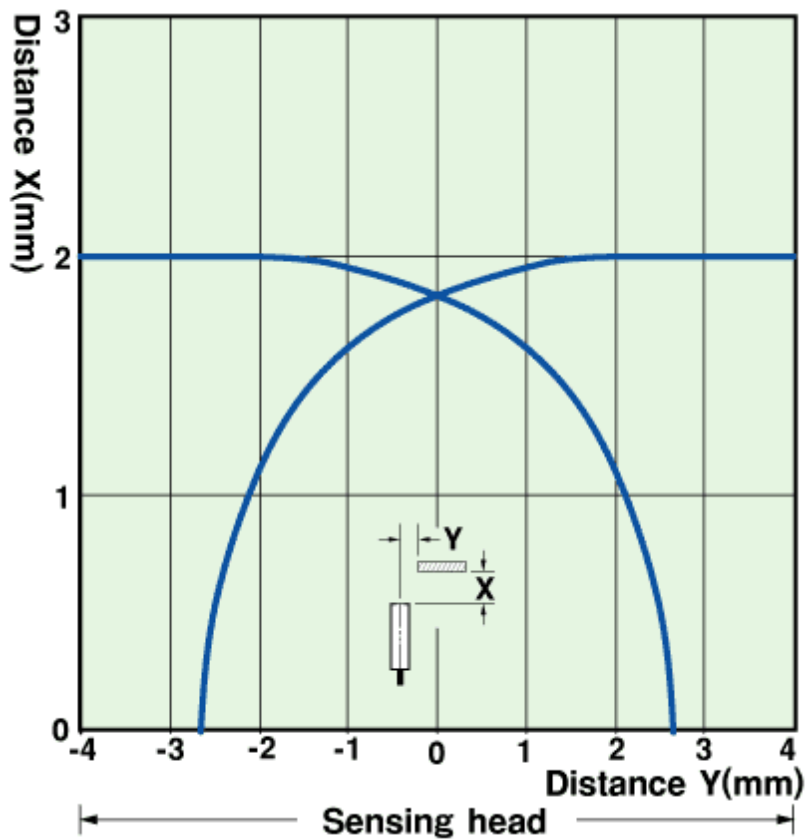
Characteristic chart

As of July 16, 2020

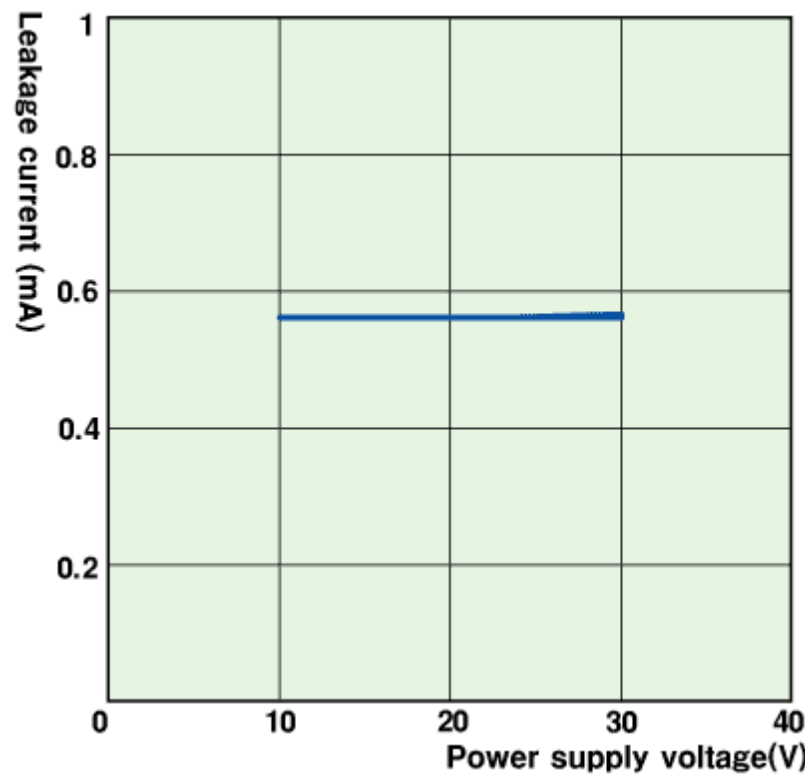
Sensing distance vs. size and material of sensing object



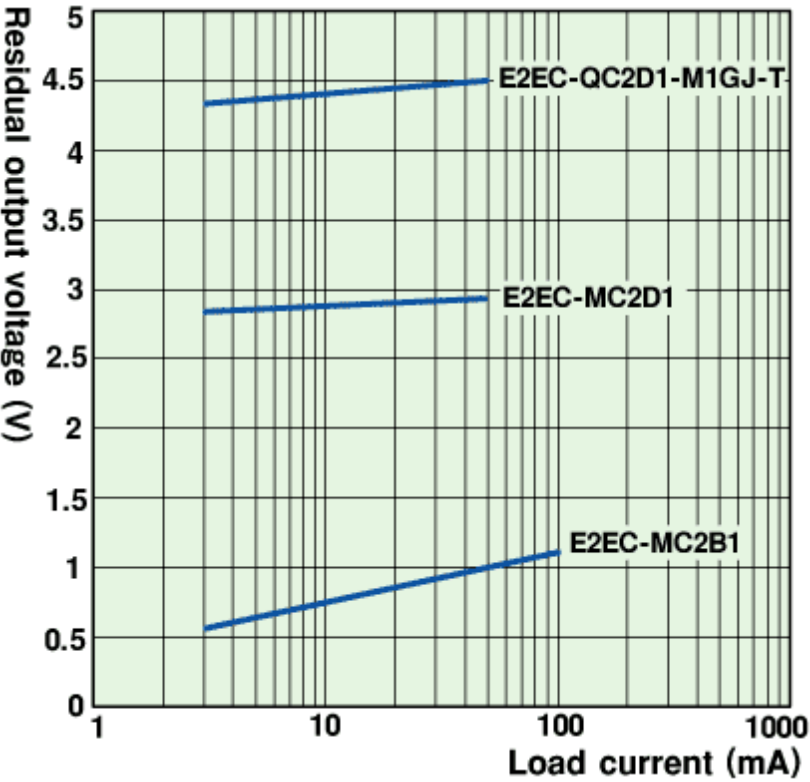
Sensing range



Leakage current



Residual voltage



As of July 16, 2020