

Chip-immune Inductive Proximity Sensor

E2EZ-X8D1-N 5M

Shielded, Cylinder type (with screw) M30, DC 2-wire models, Sensing distance 8 mm \pm 10%, NO, Pre-wired models



Image

Sensing head size	M30
Type	Cylinder type (with screw), Shielded
Power source	DC 2-wire models
Sensing distance	8 mm \pm 10%
Setting distance	0 to 6.4 mm
Operation mode	NO

Ratings/Performance

As of July 16, 2020

Sensing head size	M30
Type	Cylinder type (with screw), Shielded
Power source	DC 2-wire models
Sensing distance	8 mm \pm 10%
Setting distance	0 to 6.4 mm
Differential distance	20% max. of sensing distance
Sensing object	Ferrous metal (Sensitivity lowers with non-ferrous metals.)
Standard sensing object	Iron 54 x 54 x 1 mm
Response frequency	30 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
Indicator	Operation indicator (red), Operation setting indicator (green)
Operation mode	NO
Protective circuit	Output short-cut protection Surge suppressor
Ambient temperature (Operating)	0 to 50 °C
Ambient temperature (Storage)	0 to 50 °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 0 to 50 °C
Voltage influence	\pm 2.5% max. of sensing distance at rated voltage in the rated voltage \pm 10% range
Insulation resistance	Between charged parts and the case: 5 M Ω min. at 500 VDC

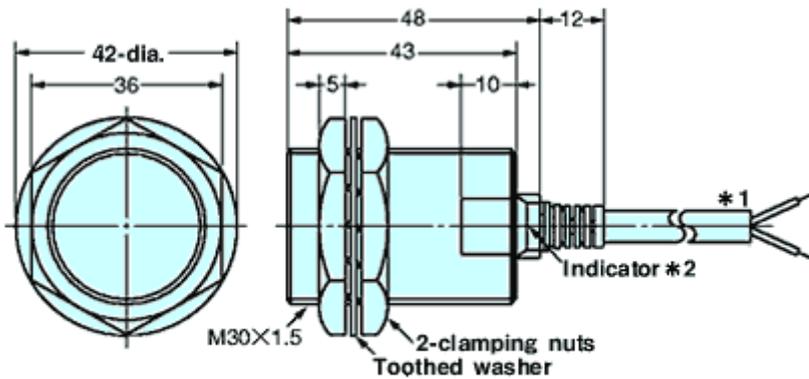
Dielectric strength	Between charged parts and the case: 1,000 VAC 50/60 Hz 1 min
Vibration resistance	Destruction: 10 to 55 Hz, 1.5 mm double amplitude each in X, Y, and Z directions for 2 h
Shock resistance	Destruction: 1000 m/s ² 10 times each in X, Y, and Z directions
Degree of protection	IEC: IP67 Company standard: Oil-proof
Connection method	Pre-wired models (5 m)
Material	Case: Brass nickel plating Sensing surface: Polybutylene terephthalate (PBT) Clamping nuts: Iron zinc plating Toothed washers: Iron zinc plating
Accessories	Instruction manual

As of July 16, 2020

Dimensions

As of July 16, 2020

Dimensions



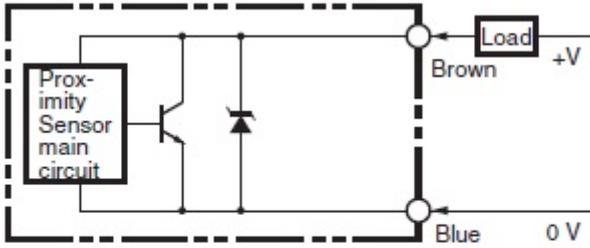
- *1. 6-dia. vinyl-insulated round cable with 2 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm)
Standard length: 2m
The cable can be extended (separate metal conduit) up to 200 m.
- *2. D1 type: Operation indicator(red), setting indicator(green)
D2 type: Operation indicator(red)

As of July 16, 2020

Output circuit

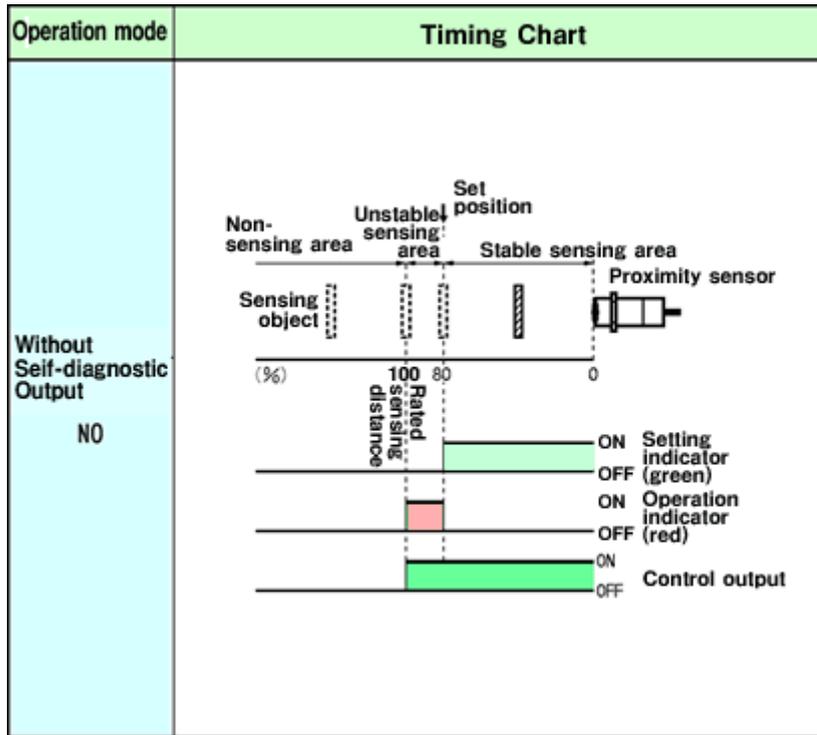
As of July 16, 2020

Output circuit



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

Timing chart

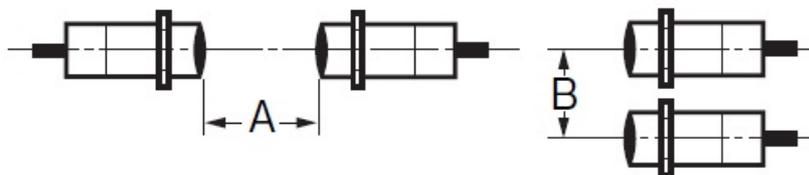


As of July 16, 2020

Mutual interference

As of July 16, 2020

Mutual interference

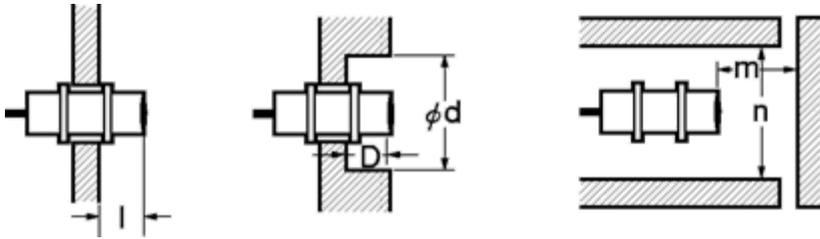


A: 60 mm min., B: 100 mm min.

Effects of surrounding metals

As of July 16, 2020

Effects of surrounding metals



Iron

l: 0 mm min., dia. d: 30 mm min., D: 0 mm min., m: 32 mm min., n: 45 mm min.

Aluminum

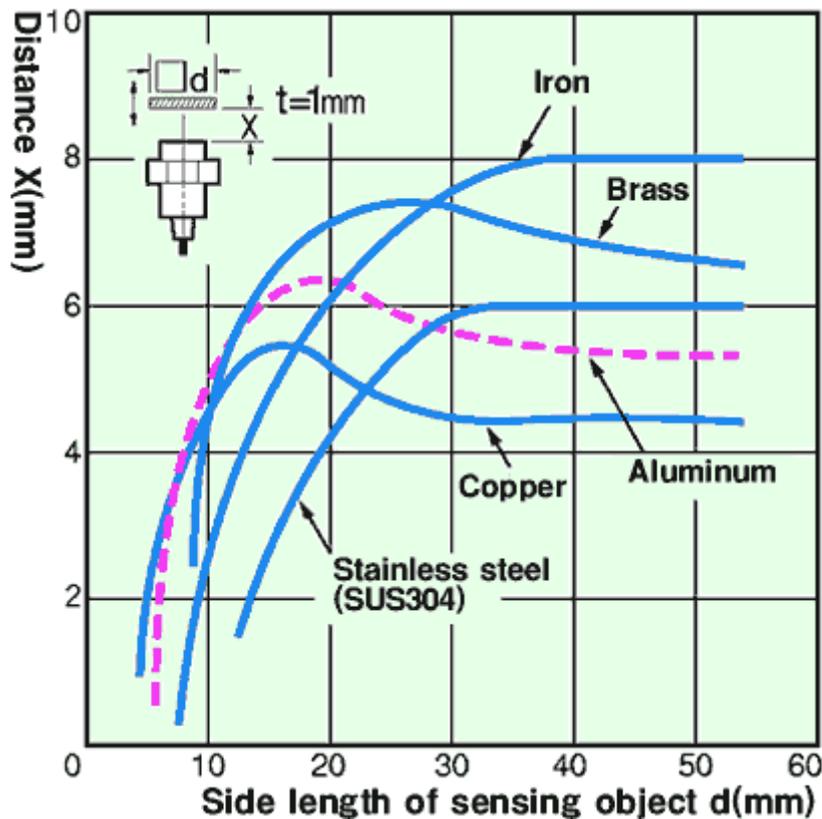
l: 10 mm min., dia. d: 70 mm min., D: 10 mm min., m: 32 mm min., n: 90 mm min.

As of July 16, 2020

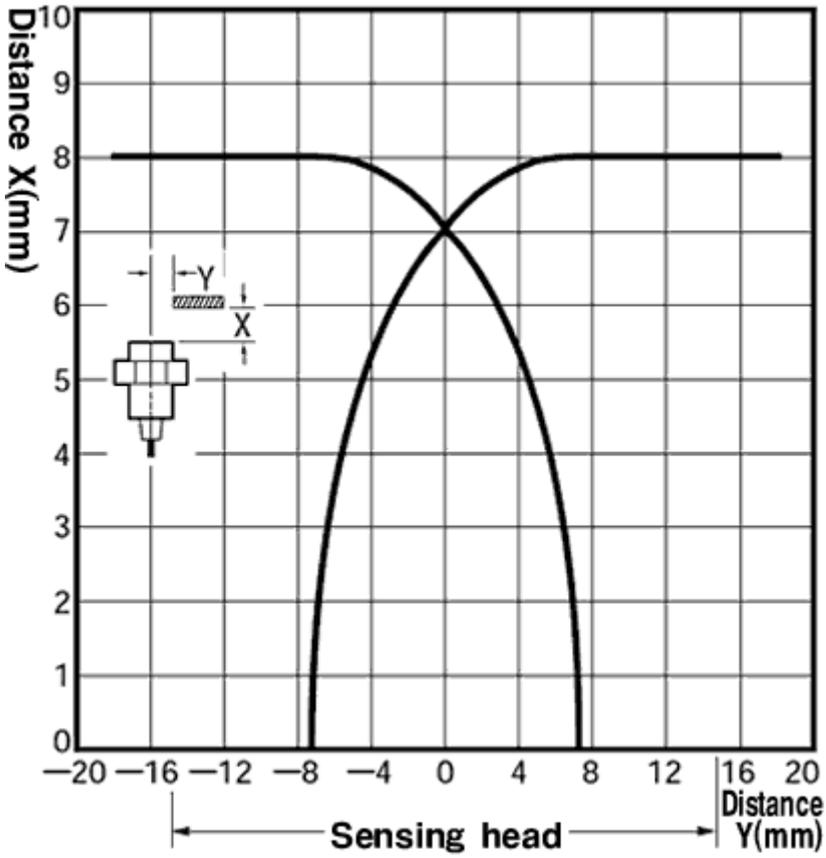
Characteristic chart

As of July 16, 2020

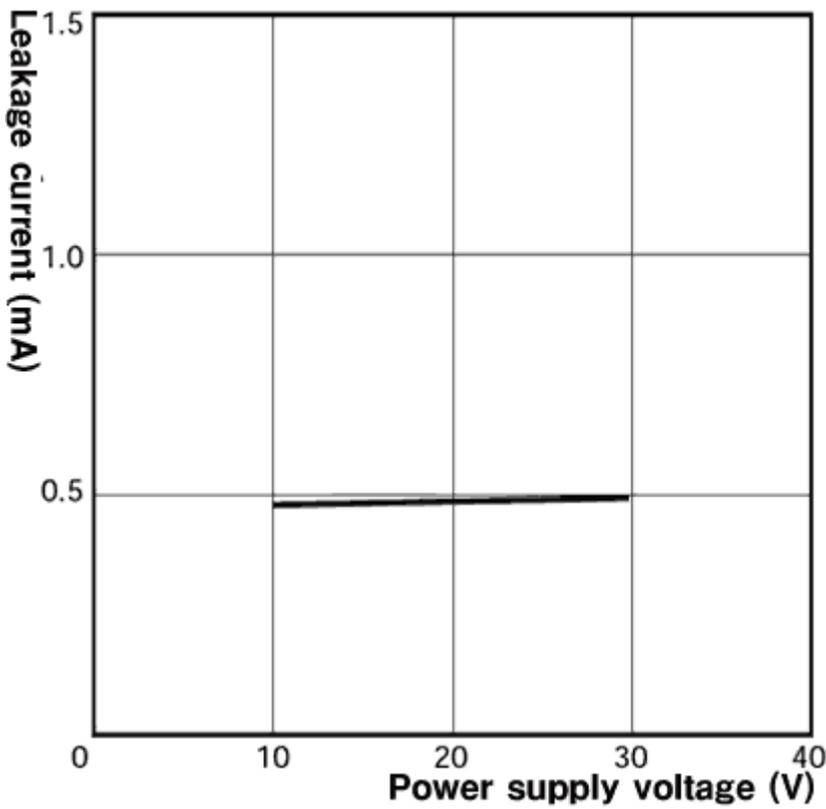
Sensing distance vs. size and material of sensing object



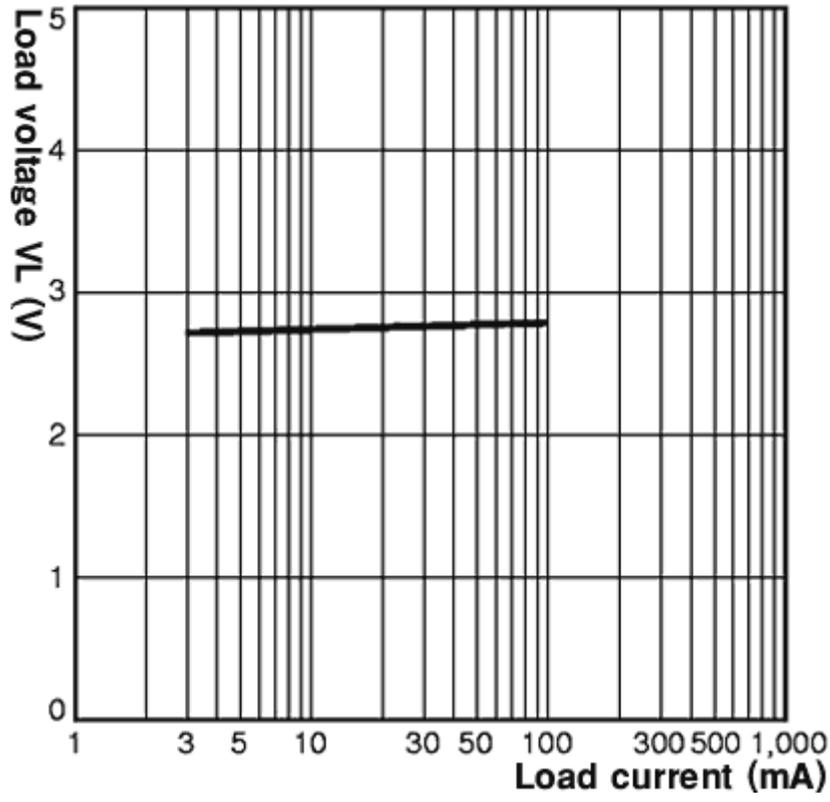
Sensing range



Leakage current



Residual voltage



As of July 16, 2020