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# Long-barrel Inductive Proximity Sensor

# E2E2

CSM_E2E2_DS_E_4_3

## Proximity Sensor with a Long Screw Length

- Increased tightening strength. Cable protectors provided as a standard feature.
- Increased indicator visibility. A milled section for wrench grip on all models.



⚠ Be sure to read *Safety Precautions* on page 9.

## Ordering Information

### Sensors

#### DC 2-Wire Models

| Appearance | | Sensing distance | Model | |
|---|---|---|---|---|
| | | | Operation mode | |
| | | | NO | NC |
| Shielded | M12 | 3 mm | E2E2-X3D1 2M * | E2E2-X3D2 2M |
| | M18 | 7 mm | E2E2-X7D1 2M * | E2E2-X7D2 2M |
| | M30 | 10 mm | E2E2-X10D1 2M * | E2E2-X10D2 2M |
| Unshielded | M12 | 8 mm | E2E2-X8MD1 2M * | E2E2-X8MD2 2M |
| | M18 | 14 mm | E2E2-X14MD1 2M * | E2E2-X14MD2 2M |
| | M30 | 20 mm | E2E2-X20MD1 2M * | E2E2-X20MD2 2M |

* Models with different frequencies are also available. The model numbers are E2E2-X□D15 (example: E2E2-X3D15).

#### DC 3-Wire Models

| Appearance | | Sensing distance | Model | |
|---|---|---|---|---|
| | | | Operation mode | |
| | | | NO | NC |
| Shielded | M12 | 2 mm | E2E2-X2C1 2M | E2E2-X2C2 2M |
| | M18 | 5 mm | E2E2-X5C1 2M | E2E2-X5C2 2M |
| | M30 | 10 mm | E2E2-X10C1 2M | E2E2-X10C2 2M |
| Unshielded | M12 | 5 mm | E2E2-X5MC1 2M | E2E2-X5MC2 2M |
| | M18 | 10 mm | E2E2-X10MC1 2M | E2E2-X10MC2 2M |
| | M30 | 18 mm | E2E2-X18MC1 2M | E2E2-X18MC2 2M |

#### AC 2-Wire Models

| Appearance | | Sensing distance | Model | |
|---|---|---|---|---|
| | | | Operation mode | |
| | | | NO | NC |
| Shielded | M12 | 2 mm | E2E2-X2Y1 2M | E2E2-X2Y2 2M |
| | M18 | 5 mm | E2E2-X5Y1 2M | E2E2-X5Y2 2M |
| | M30 | 10 mm | E2E2-X10Y1 2M | E2E2-X10Y2 2M |
| Unshielded | M12 | 5 mm | E2E2-X5MY1 2M | E2E2-X5MY2 2M |
| | M18 | 10 mm | E2E2-X10MY1 2M | E2E2-X10MY2 2M |
| | M30 | 18 mm | E2E2-X18MY1 2M | E2E2-X18MY2 2M |

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## Accessories (Order Separately)

Mounting Brackets
Protective Covers
Sputter Protective Covers

## Ratings and Specifications

### E2E2-X□D□ DC 2-Wire Models

| Item \ Size | | M12 | | M18 | | M30 | |
|---|---|---|---|---|---|---|---|
| | Shielding | Shielded | Unshielded | Shielded | Unshielded | Shielded | Unshielded |
| | Model | E2E2-X3D□ | E2E2-X8MD□ | E2E2-X7D□ | E2E2-X14MD□ | E2E2-X10D□ | E2E2-X20MD□ |
| Sensing distance | | 3 mm±10% | 8 mm±10% | 7 mm±10% | 14 mm±10% | 10 mm±10% | 20 mm±10% |
| Set distance *1 | | 0 to 2.4 mm | 0 to 6.4 mm | 0 to 5.6 mm | 0 to 11.2 mm | 0 to 8 mm | 0 to 16 mm |
| Differential travel | | 10% max. of sensing distance | | | | | |
| Sensing object | | Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to *Engineering Data* on page 5.) | | | | | |
| Standard sensing object | | Iron, 12 × 12 × 1 mm | Iron, 30 × 30 × 1 mm | Iron, 18 × 18 × 1 mm | Iron, 30 × 30 × 1 mm | Iron, 30 × 30 × 1 mm | Iron, 54 × 54 × 1 mm |
| Response frequency *2 | | 1 kHz | 800 Hz | 500 Hz | 400 Hz | | 100 Hz |
| Power supply voltage (operating voltage range) | | 12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max. | | | | | |
| Leakage current | | 0.8 mA max. | | | | | |
| Control output | Switching capacity | 3 to 100 mA | | | | | |
| | Residual voltage | 3 V max. (Load current: 100 mA, Cable length: 2 m) | | | | | |
| Indicators | | D1 Models: Operation indicator (red) and setting indicator (green)<br>D2 Models: Operation indicator (red) | | | | | |
| Operation mode (with sensing object approaching) | | D1 Models: NO<br>D2 Models: NC Refer to the timing charts under *I/O Circuit Diagrams* on page 8 for details. | | | | | |
| Protection circuits | | Surge absorber, Load short-circuit protection | | | | | |
| Ambient temperature | | Operating/Storage: –25 to 70°C (with no icing or condensation) | | | | | |
| Ambient humidity | | Operating/Storage: 35% to 95% (with no condensation) | | | | | |
| Temperature influence | | ±10% 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 | | 50 MΩ min. (at 500 VDC) between current-carrying parts and case | | | | | |
| Dielectric strength | | 1000 VAC, 50/60 Hz for 1 minute between current-carrying parts and case | | | | | |
| Vibration resistance (destruction) | | 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions | | | | | |
| Shock resistance (destruction) | | 1,000 m/s$^2$ 10 times each in X, Y, and Z directions | | | | | |
| Degree of protection | | IEC IP67, in-house standard for oil resistance | | | | | |
| Connection method | | Pre-wired Models (Standard cable length: 2 m) | | | | | |
| Weight (packed state) | | Approx. 65 g | | Approx. 150 g | | Approx. 210 g | |
| Materials | Case | Brass | | | | | |
| | Sensing surface | PBT | | | | | |
| | Clamping nuts | Nickel-plated brass | | | | | |
| | Toothed washer | Zinc-plated iron | | | | | |
| Accessories | | Instruction sheet | | | | | |

*1. Use the E2E2 within the range in which the setting indicator (green LED) is ON (except D2 Models).
*2. The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard sensing object, and a set distance of half the sensing distance.

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## E2E2-X□C□ DC 3-Wire Models

| Item | Size | M12 | | M18 | | M30 | |
|---|---|---|---|---|---|---|---|
| | Shielding | Shielded | Unshielded | Shielded | Unshielded | Shielded | Unshielded |
| | Model | E2E2-X2C□ | E2E2-X5MC□ | E2E2-X5C□ | E2E2-X10MC□ | E2E2-X10C□ | E2E2-X18MC□ |
| Sensing distance | | 2 mm±10% | 5 mm±10% | 5 mm±10% | 10 mm±10% | 10 mm±10% | 18 mm±10% |
| Set distance | | 0 to 1.6 mm | 0 to 4 mm | 0 to 4 mm | 0 to 8 mm | 0 to 8 mm | 0 to 14 mm |
| Differential travel | | 10% max. of sensing distance | | | | | |
| Sensing object | | Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to *Engineering Data* on page 5.) | | | | | |
| Standard sensing object | | Iron, 12 × 12 × 1 mm | Iron, 15 × 15 × 1 mm | Iron, 18 × 18 × 1 mm | Iron, 30 × 30 × 1 mm | Iron, 30 × 30 × 1 mm | Iron, 54 × 54 × 1 mm |
| Response frequency *1 | | 1.5 kHz | 400 Hz | 600 Hz | 200 Hz | 400 Hz | 100 Hz |
| Power supply voltage (operating voltage range) *2 | | 12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max. | | | | | |
| Leakage current | | 13 mA max. | | | | | |
| Control output | Load current | NPN open-collector output, 200 mA max. (30 VDC max.) | | | | | |
| | Residual voltage | 2 V max. (Load current: 200 mA, Cable length: 2 m) | | | | | |
| Indicators | | Operation indicator (red) | | | | | |
| Operation mode (with sensing object approaching) | | C1 Models: NO<br>C2 Models: NC | Refer to the timing charts under *I/O Circuit Diagrams* on page 8 for details. | | | | |
| Protection circuits | | Reverse polarity protection, Surge absorber, Load short-circuit protection | | | | | |
| Ambient temperature | | Operating/Storage: –40 to 85°C (with no icing or condensation) | | | | | |
| Ambient humidity | | Operating/Storage: 35% to 95% (with no condensation) | | | | | |
| Temperature influence | | ±15% max. of sensing distance at 23°C in the temperature range of –40 to 85°C<br>±10% 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 | | 50 MΩ min. (at 500 VDC) between current-carrying parts and case | | | | | |
| Dielectric strength | | 1,000 VAC, 50/60 Hz for 1 minute between current carry parts and case | | | | | |
| Vibration resistance (destruction) | | 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions | | | | | |
| Shock resistance (destruction) | | 1,000 m/s$^2$ 10 times each in X, Y, and Z directions | | | | | |
| Degree of protection | | IEC IP67, in-house standard for oil resistance | | | | | |
| Connection method | | Pre-wired Models (Standard cable length: 2 m) and Connector Models | | | | | |
| Weight (packed state) | | Approx. 75 g | | Approx. 160 g | | Approx. 220 g | |
| Materials | Case | Brass | | | | | |
| | Sensing surface | PBT | | | | | |
| | Clamping nuts | Nickel-plated brass | | | | | |
| | Toothed washer | Zinc-plated iron | | | | | |
| Accessories | | Instruction sheet | | | | | |

*1. The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard sensing object, and a set distance of half the sensing distance.
*2. A full-wave rectification power supply of 24 VDC ±20% (average value) can be used.

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## E2E2-X□Y□ AC 2-Wire Models

| Item | Size | M12 | | M18 | | M30 | |
|---|---|---|---|---|---|---|---|
| | Shielding | Shielded | Unshielded | Shielded | Unshielded | Shielded | Unshielded |
| | Model | E2E2-X2Y□ | E2E2-X5MY□ | E2E2-X5Y□ | E2E2-X10MY□ | E2E2-X10Y□ | E2E2-X18MY□ |
| Sensing distance | | 2 mm±10% | 5 mm±10% | 5 mm±10% | 10 mm±10% | 10 mm±10% | 18 mm±10% |
| Set distance | | 0 to 1.6 mm | 0 to 4 mm | 0 to 4 mm | 0 to 8 mm | 0 to 8 mm | 0 to 14 mm |
| Differential travel | | 10% max. of sensing distance | | | | | |
| Sensing object | | Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to *Engineering Data* on page 5.) | | | | | |
| Standard sensing object | | Iron, 12 × 12 × 1 mm | Iron, 15 × 15 × 1 mm | Iron, 18 × 18 × 1 mm | Iron, 30 × 30 × 1 mm | Iron, 30 × 30 × 1 mm | Iron, 54 × 54 × 1 mm |
| Response frequency | | 25 Hz | | | | | |
| Power supply voltage (operating voltage range) *1 | | 24 to 240 VAC (20 to 264 VAC), 50/60 Hz | | | | | |
| Leakage current | | 1.7 mA max. | | | | | |
| Control output | Load current *2 | 5 to 200 mA | | 5 to 300 mA | | | |
| | Residual voltage | Refer to *Engineering Data* on page 5. | | | | | |
| Indicators | | Operation indicator (red) | | | | | |
| Operation mode (with sensing object approaching) | | Y1 Models: NO<br>Y2 Models: NC | Refer to the timing charts under *I/O Circuit Diagrams* on page 8 for details. | | | | |
| Ambient temperature *1, 2 | | Operating/Storage: –40 to 85°C (with no icing or condensation) | | | | | |
| Ambient humidity | | Operating/Storage: 35% to 95% (with no condensation) | | | | | |
| Temperature influence | | ±15% max. of sensing distance at 23°C in the temperature range of –40 to 85°C,<br>±10% 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 | | 50 MΩ min. (at 500 VDC) between current-carrying parts and case | | | | | |
| Dielectric strength | | 4,000 VAC, 50/60 Hz for 1 minute between current carry parts and case | | | | | |
| Vibration resistance (destruction) | | 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions | | | | | |
| Shock resistance (destruction) | | 1,000 m/s$^2$ 10 times each in X, Y, and Z directions | | | | | |
| Degree of protection | | IEC IP67, in-house standard for oil resistance | | | | | |
| Connection method | | Pre-wired Models (Standard cable length: 2 m) and Connector Models | | | | | |
| Weight (packed state) | | Approx. 65 g | | Approx. 150 g | | Approx. 210 g | |
| Materials | Case | Brass | | | | | |
| | Sensing surface | PBT | | | | | |
| | Clamping nuts | Nickel-plated brass | | | | | |
| | Toothed washer | Zinc-plated iron | | | | | |
| Accessories | | Instruction sheet | | | | | |

*1. When supplying 24 VAC to any of the above models, make sure that the operating ambient temperature range is at least –25°C to 85°C.
*2. When using an M18 or M30 Connector Model at an ambient temperature between 70 and 85°C, make sure that the Sensor has a control output (load current) of 5 to 200 mA max.

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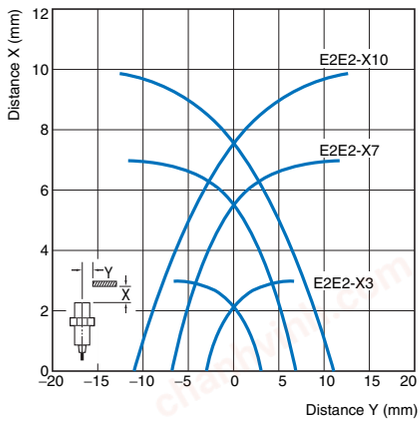


# Engineering Data (Reference Value)

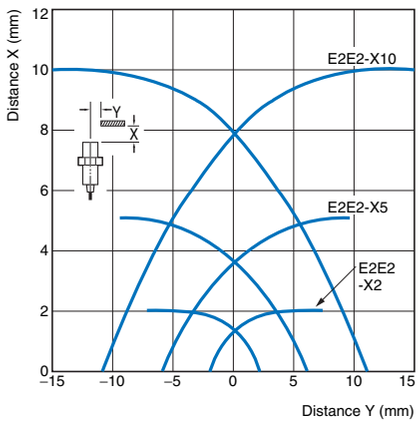
## Sensing Area

### Shielded Models

**E2E2-X□D□**

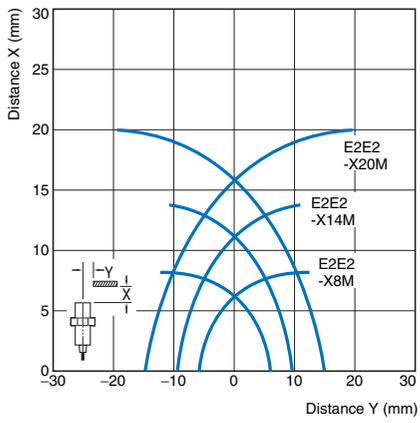



**E2E2-X□C□/-X□Y□**

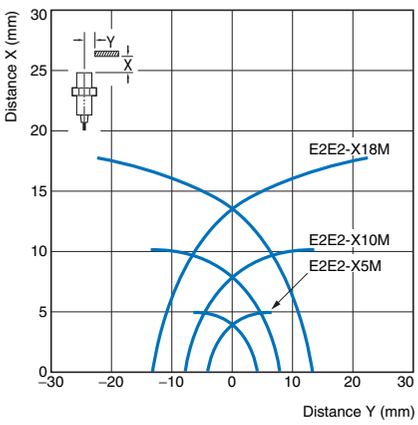



### Unshielded Models

**E2E2-X□MD□**

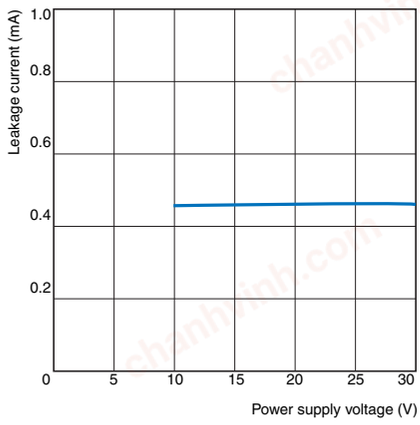



**E2E2-X□MC□/-X□MY□**

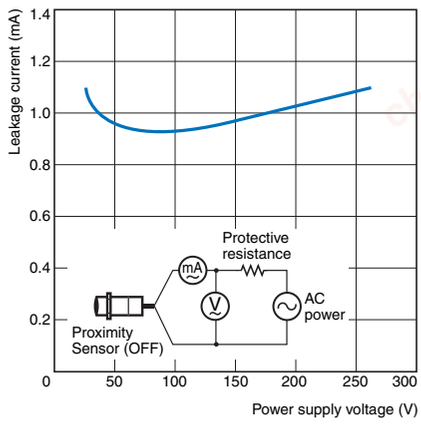



## Leakage Current

**E2E2-X□D□**

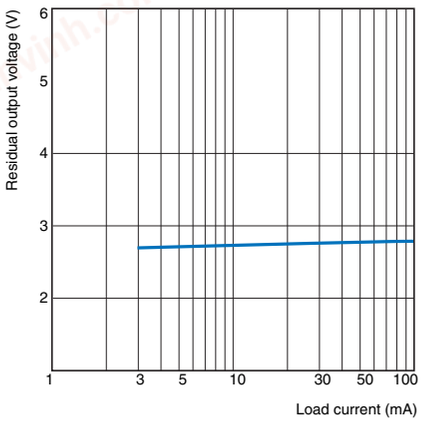



**E2E2-X□Y□**




## Residual Output Voltage

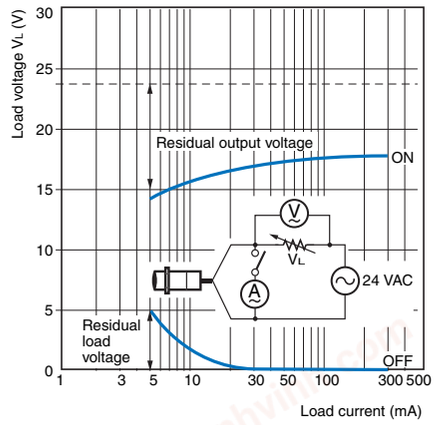
**E2E2-X□D□**



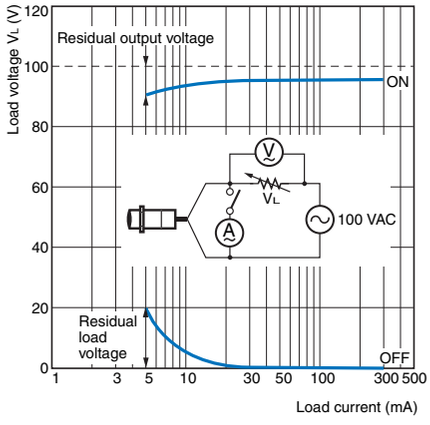
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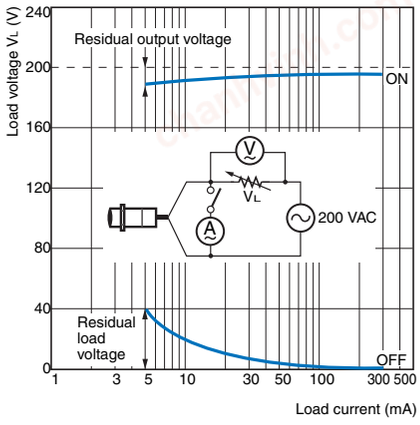
**E2E2-X□Y□ at 24 VAC**




**E2E2-X□Y□ at 100 VAC**

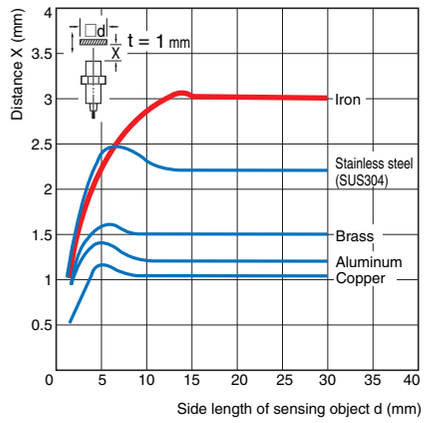



**E2E2-X□Y□ at 200 VAC**

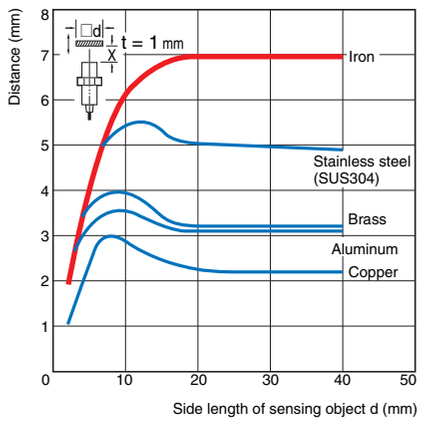



## Influence of Sensing Object Size and Material

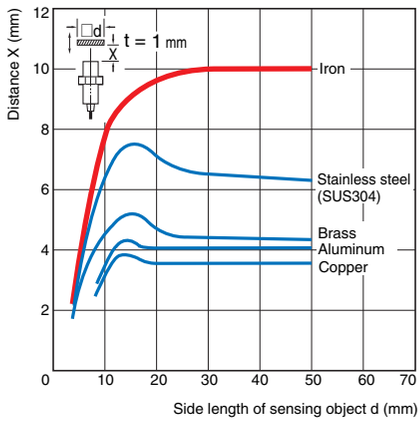
**E2E2-X3D□**



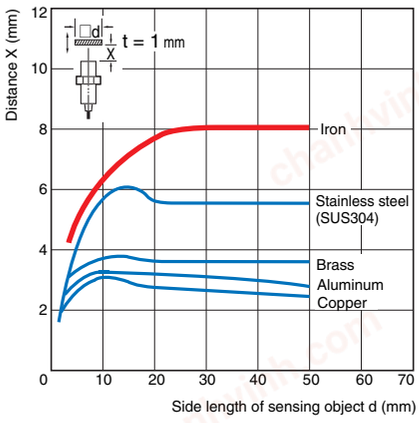

**E2E2-X7D□**



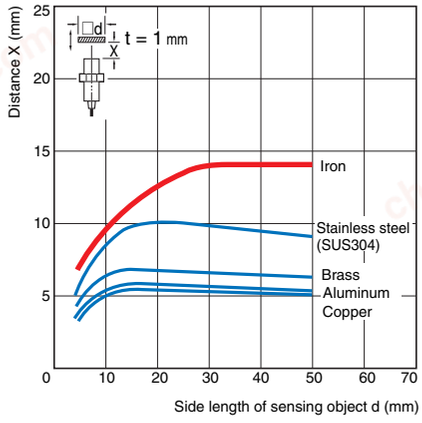

**E2E2-X10D□**



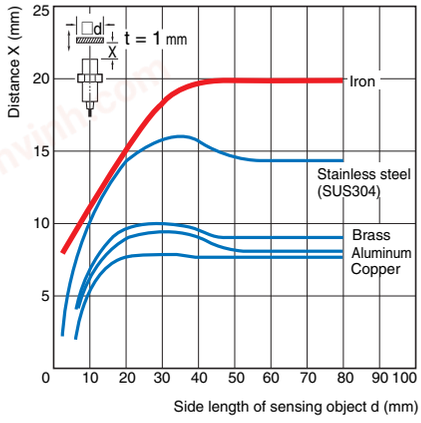

**E2E2-X8MD□**




**E2E2-X14MD□**



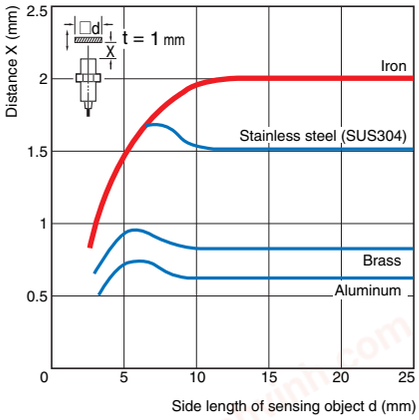

**E2E2-X20MD□**



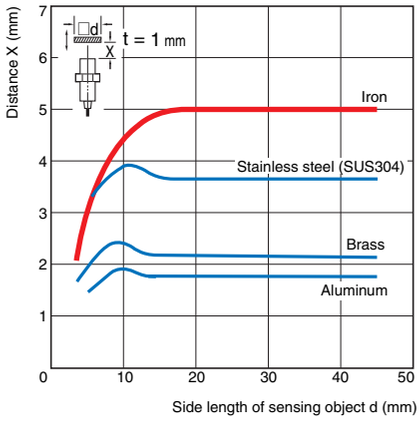
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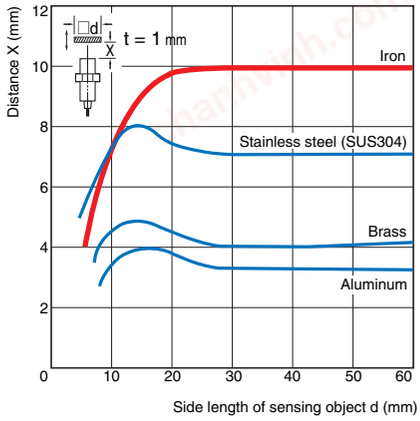
### E2E2-X2C□/-X2Y□



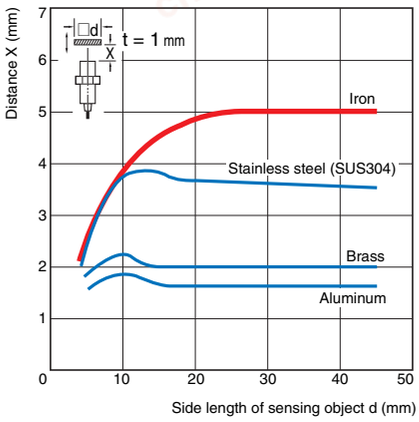

### E2E2-X5C□/-X5Y□



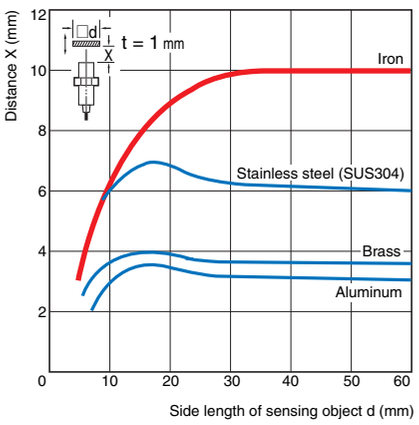

### E2E2-X10C□/-X10Y□



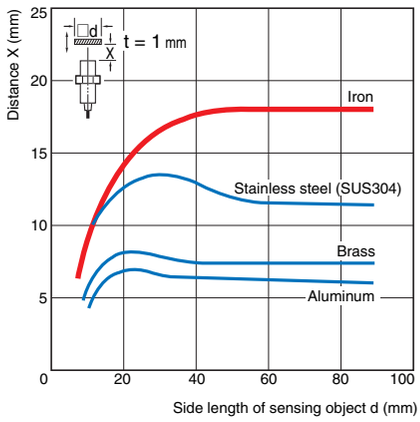

### E2E2-X5MC□/-X5MY□




### E2E2-X10MC□/-X10MY□




### E2E2-X18MC□/-X18MY□

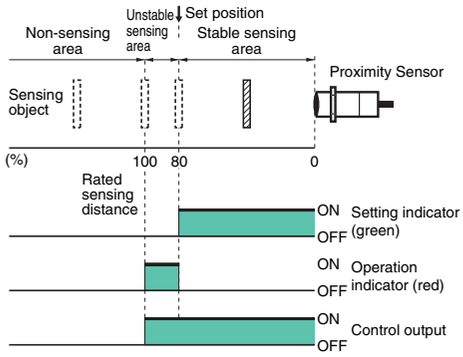
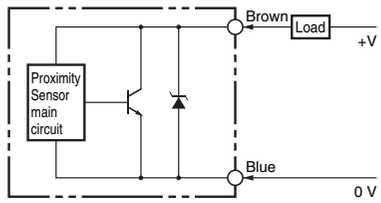
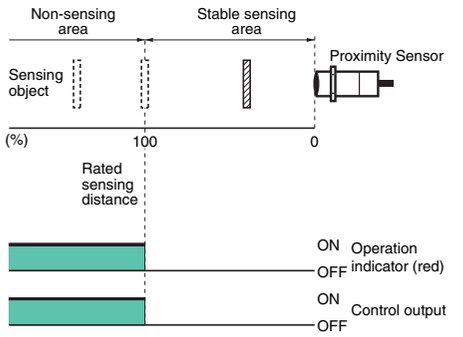


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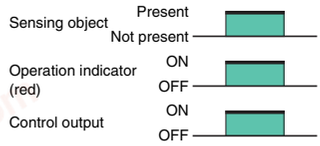
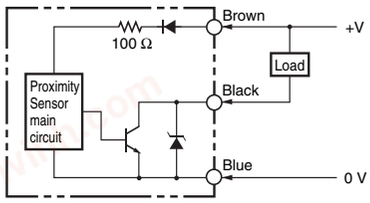
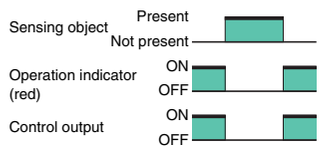


# I/O Circuit Diagrams

## DC 2-Wire Models

| Operation mode | Model | Timing Charts | Output circuit |
|---|---|---|---|
| NO | E2E2-X3D1<br>E2E2-X7D1<br>E2E2-X10D1<br>E2E2-X8MD1<br>E2E2-X14MD1<br>E2E2-X20MD1 |  | <br>Note: The load can be connected to either the +V or 0 V side. |
| NC | E2E2-X3D2<br>E2E2-X7D2<br>E2E2-X10D2<br>E2E2-X8MD2<br>E2E2-X14MD2<br>E2E2-X20MD2 |  | |

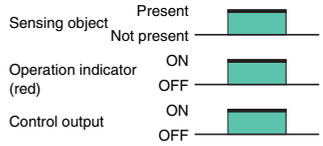
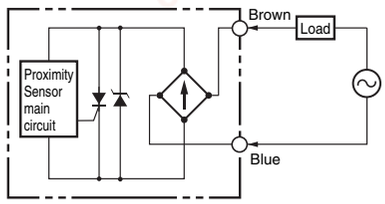
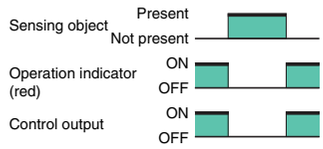
## DC 3-Wire Models

| Operation mode | Model | Timing Charts | Output circuit |
|---|---|---|---|
| NO | E2E2-X2C1<br>E2E2-X5C1<br>E2E2-X10C1<br>E2E2-X5MC1<br>E2E2-X10MC1<br>E2E2-X18MC1 |  |  |
| NC | E2E2-X2C2<br>E2E2-X5C2<br>E2E2-X10C2<br>E2E2-X5MC2<br>E2E2-X10MC2<br>E2E2-X18MC2 |  | |

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### AC 2-Wire Models

| Operation mode | Model | Timing Charts | Output circuit |
|---|---|---|---|
| NO | E2E2-X2Y1<br>E2E2-X5Y1<br>E2E2-X10Y1<br>E2E2-X5MY1<br>E2E2-X10MY1<br>E2E2-X18MY1 |  |  |
| NC | E2E2-X2Y2<br>E2E2-X5Y2<br>E2E2-X10Y2<br>E2E2-X5MY2<br>E2E2-X10MY2<br>E2E2-X18MY2 |  | |

## Safety Precautions

**⚠ WARNING**

**This product is not designed or rated for ensuring safety of persons either directly or indirectly.**
**Do not use it for such purposes.**



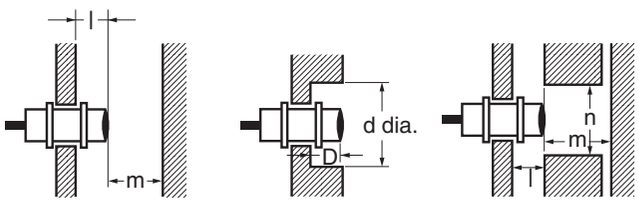
### Precautions for Correct Use

Do not use this product under ambient conditions that exceed the ratings.

● **Design**

**Influence of Surrounding Metal**

When mounting the Sensor within a metal panel, ensure that the clearances given in the following table are maintained.




(Unit: mm)

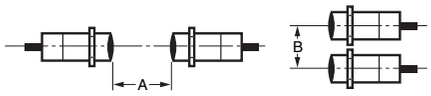
| Model | | Item | M12 | M18 | M30 |
|---|---|---|---|---|---|
| DC 2-Wire Models E2E2-X□D□ | Shielded | l | 0 | 0 | 0 |
| | | d | 12 | 18 | 30 |
| | | D | 0 | 0 | 0 |
| | | m | 8 | 20 | 40 |
| | | n | 18 | 27 | 45 |
| | Unshielded | l | 15 | 22 | 30 |
| | | d | 40 | 70 | 90 |
| | | D | 15 | 22 | 30 |
| | | m | 20 | 40 | 70 |
| | | n | 40 | 70 | 90 |
| DC 3-Wire Models E2E2-X□C□<br>AC 2-Wire Models E2E2-X□Y□ | Shielded | l | 0 | 0 | 0 |
| | | d | 12 | 18 | 30 |
| | | D | 0 | 0 | 0 |
| | | m | 8 | 20 | 40 |
| | | n | 18 | 27 | 45 |
| | Unshielded | l | 15 | 22 | 30 |
| | | d | 40 | 55 | 90 |
| | | D | 15 | 22 | 30 |
| | | m | 20 | 40 | 70 |
| | | n | 36 | 54 | 90 |

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### Mutual Interference

When installing Sensors face-to-face or side-by-side, ensure that the minimum distances given in the following table are maintained.




**Mutual Interference**

(Unit: mm)

| Model | | Item | M12 | M18 | M30 |
|---|---|---|---|---|---|
| DC 2-Wire Models E2E2-X□D□ | Shielded | A | 30 (20) | 50 (30) | 100 (50) |
| | | B | 20 (12) | 35 (18) | 70 (35) |
| | Unshielded | A | 120 (60) | 200 (100) | 300 (100) |
| | | B | 100 (50) | 110 (60) | 200 (100) |
| DC 3-Wire Models E2E2-X□C□ AC 2-Wire Models E2E2-X□Y□ | Shielded | A | 30 | 50 | 100 |
| | | B | 20 | 35 | 70 |
| | Unshielded | A | 120 | 200 | 300 |
| | | B | 100 | 110 | 200 |

Note: Values in parentheses apply to Sensors operating at different frequencies.

**Relationship between Sizes and Models**

| Size | | Model |
|---|---|---|
| M12 | Shielded | E2E2-X3D□<br>E2E2-X2C□<br>E2E2-X2Y□ |
| | Unshielded | E2E2-X8MD□<br>E2E2-X5MC□<br>E2E2-X5MY□ |
| M18 | Shielded | E2E2-X7D□<br>E2E2-X5C□<br>E2E2-X5Y□ |
| | Unshielded | E2E2-X14MD□<br>E2E2-X10MC□<br>E2E2-X10MY□ |
| M30 | Shielded | E2E2-X10D□<br>E2E2-X10C□<br>E2E2-X10Y□ |
| | Unshielded | E2E2-X20MD□<br>E2E2-X18MC□<br>E2E2-X18MY□ |

### ● Mounting

#### tening Torque

Do not tighten the nut with excessive force.
A washer must be used with the nut.
The following strengths assume washers are being used.



| Model | Torque |
|---|---|
| M12 | 30 N·m |
| M18 | 70 N·m |
| M30 | 180 N·m |

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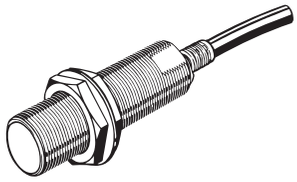


(Unit: mm)

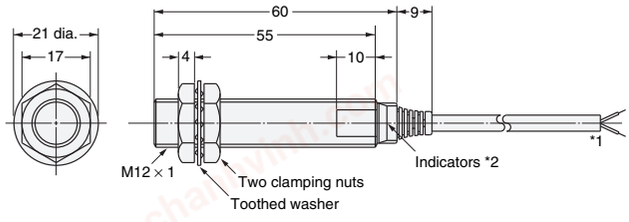
# Dimensions

Unless otherwise specified, the tolerance class IT16 is used for dimensions in this data sheet.

## Shielded

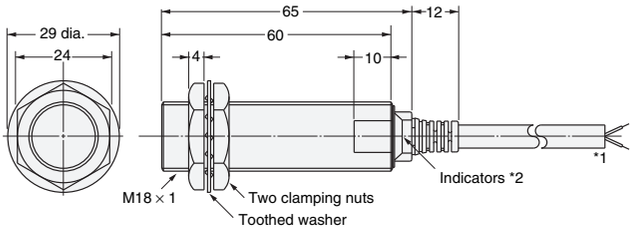


### E2E2-X3D□/E2E2-X2C□/E2E2-X2Y□



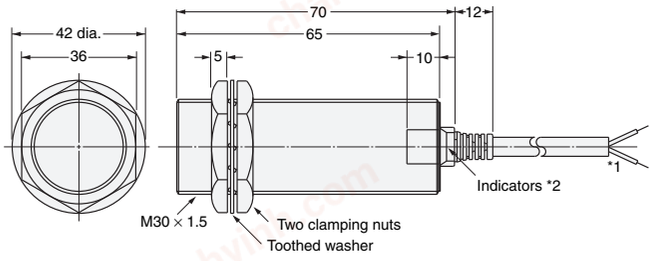

*1. 4-dia. vinyl-insulated round cable with 2 conductors
(Conductor cross section: 0.3 mm², Insulator diameter: 1.3 mm),
Standard length: 2 m
4-dia. vinyl-insulated round cable with 3 conductors
(Conductor cross section: 0.3 mm², Insulator diameter: 1.3 mm),
Standard length: 2 m
The cable can be extended to up to 200 m (Separate metal conduit.)
*2. D Models: Operation indicator (red) and setting indicator (green),
C/Y Models: Operation indicator (red)

### E2E2-X7D□/E2E2-X5C□/E2E2-X5Y□



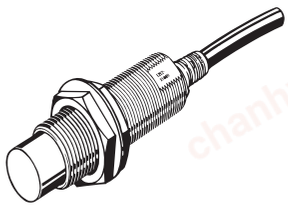

*1. 6-dia. vinyl-insulated round cable with 2 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm),
Standard length: 2 m
6-dia. vinyl-insulated round cable with 3 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm),
Standard length: 2 m
The cable can be extended to up to 200 m (Separate metal conduit.)
*2. D Models: Operation indicator (red) and setting indicator (green),
C/Y Models: Operation indicator (red)

### E2E2-X10D□/E2E2-X10C□/E2E2-X10Y□

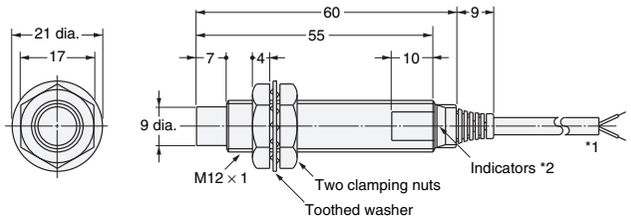



*1. 6-dia. vinyl-insulated round cable with 2 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm),
Standard length: 2 m
6-dia. vinyl-insulated round cable with 3 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm),
Standard length: 2 m
The cable can be extended to up to 200 m (Separate metal conduit.)
*2. D Models: Operation indicator (red) and setting indicator (green),
C/Y Models: Operation indicator (red)

## Unshielded

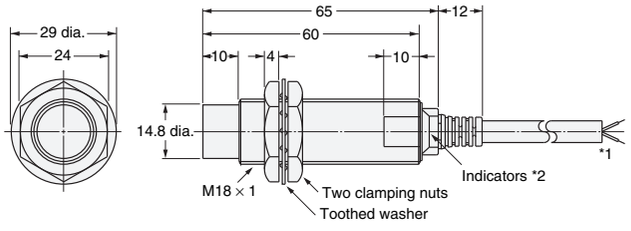


### E2E2-X8MD□/E2E2-X5MC□/E2E2-X5MY□



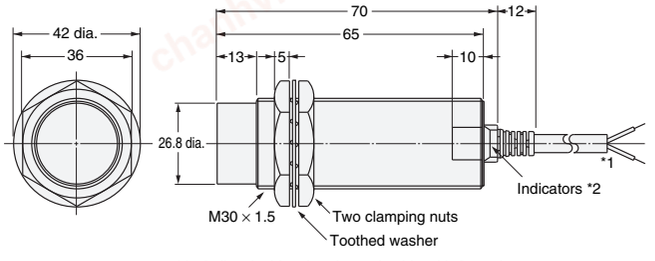

*1. 4-dia. vinyl-insulated round cable with 2 conductors
(Conductor cross section: 0.3 mm², Insulator diameter: 1.3 mm),
Standard length: 2 m
4-dia. vinyl-insulated round cable with 3 conductors
(Conductor cross section: 0.3 mm², Insulator diameter: 1.3 mm),
Standard length: 2 m
The cable can be extended to up to 200 m (Separate metal conduit.)
*2. D Models: Operation indicator (red) and setting indicator (green),
C/Y Models: Operation indicator (red)

### E2E2-X14MD□/E2E2-X10MC□/E2E2-X10MY□



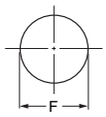

*1. 6-dia. vinyl-insulated round cable with 2 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm),
Standard length: 2 m
6-dia. vinyl-insulated round cable with 3 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm),
Standard length: 2 m
The cable can be extended to up to 200 m (Separate metal conduit.)
*2. D Models: Operation indicator (red) and setting indicator (green),
C/Y Models: Operation indicator (red)

### E2E2-X20MD□/E2E2-X18MC□/E2E2-X18MY□




*1. 6-dia. vinyl-insulated round cable with 2 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm),
Standard length: 2 m
6-dia. vinyl-insulated round cable with 3 conductors
(Conductor cross section: 0.5 mm², Insulator diameter: 1.9 mm),
Standard length: 2 m
The cable can be extended to up to 200 m (Separate metal conduit.)
*2. D Models: Operation indicator (red) and setting indicator (green),
C/Y Models: Operation indicator (red)

## Mounting Hole Dimensions




| Dimension | M12 | M18 | M30 |
|---|---|---|---|
| F (mm) | $12.5^{+0.5}_{0}$ dia. | $18.5^{+0.5}_{0}$ dia. | $30.5^{+0.5}_{0}$ dia. |

Note 1. Two clamping nuts and one toothed washer are provided with each Sensors.
2. The model number is laser-marked on the cable section and milled section.

**In the interest of product improvement, specifications are subject to change without notice.**

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