

Autonics

INDUCTIVE PROXIMITY SENSOR

DC 2-WIRE TYPE

M A N U A L



Thank you for choosing our Autonics product.

Please read the following safety considerations before use.

Caution for your safety

- Please keep these instructions and review them before using this unit.
Please observe the cautions that follow;
Warning Serious injury may result if instructions are not followed.
Caution Product may be damaged, or injury may result if instructions are not followed.
The following is an explanation of the symbols used in the operation manual.
caution: Injury or danger may occur under special conditions.

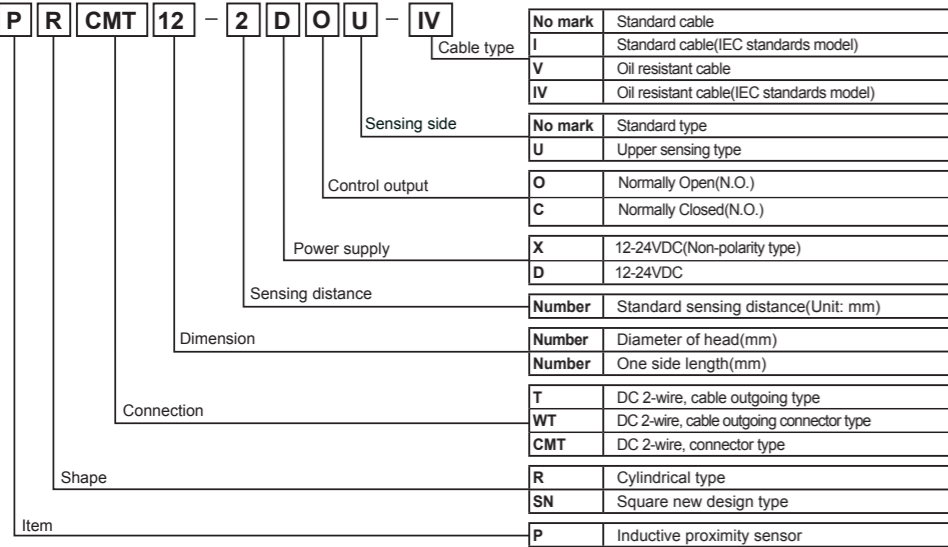
Warning

- In case of using this unit with machinery (Ex: nuclear power control, medical equipment, ship, vehicle, train, airplane, combustion apparatus, safety device, crime/disaster prevention equipment, etc) which may cause damages to human life or property, it is required to install fail-safe device.
It may cause a fire, human injury or damage to property.
Do not connect power directly without load.
It may cause damage to inner components or burn them out.

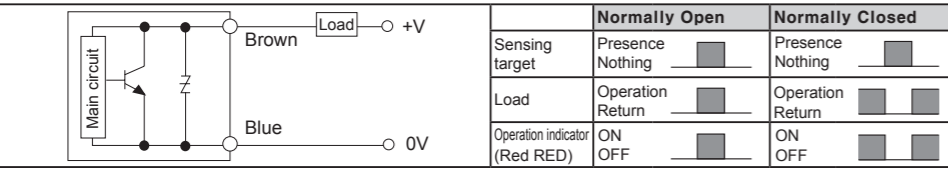
Caution

- Do not use this unit in place where there is flammable, explosive gas, chemical or strong alkalis, acids.
It may cause a fire or explosion.
Do not impact on this unit.
It may cause malfunction or damage to the product.
Do not use this product beyond rated voltage or apply AC power to DC power.
It may cause serious damage to the product.

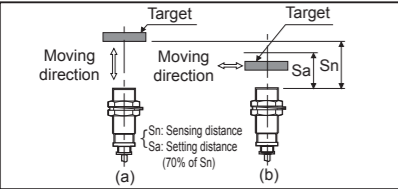
Ordering information



Control output diagram & Load operation



Setting distance



Detecting distance can be changed by the shape, size or material of the target. Therefore please check the detecting distance like (a), then pass the target within range of setting distance(Sa).
Setting distance(Sa) = Sensing distance(Sn) x 70%
Ex) PRCMT12-2DC
Setting distance(Sa) = 2mm x 0.7 = 1.4mm

The above specifications are subject to change and some models may be discontinued without notice.

Specifications

Table with columns for Model, Sensing distance, Hysteresis, Standard sensing target, Setting distance, Power supply, Leakage current, Response frequency, Residual voltage, Affection by Temp., Control output, Insulation resistance, Dielectric strength, Vibration, Shock, Indicator, Environment, Protection circuit, Protection, Cable, Materials, Approval, Weight.

\*1: The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance.
\*2: Before using non-polarity type, check the condition of connected device because residual voltage is 5V.
\*3: The weight with packaging and the weight in parentheses is only unit weight.
\*Environment resistance is rated at no freezing or condensation.

Dimensions

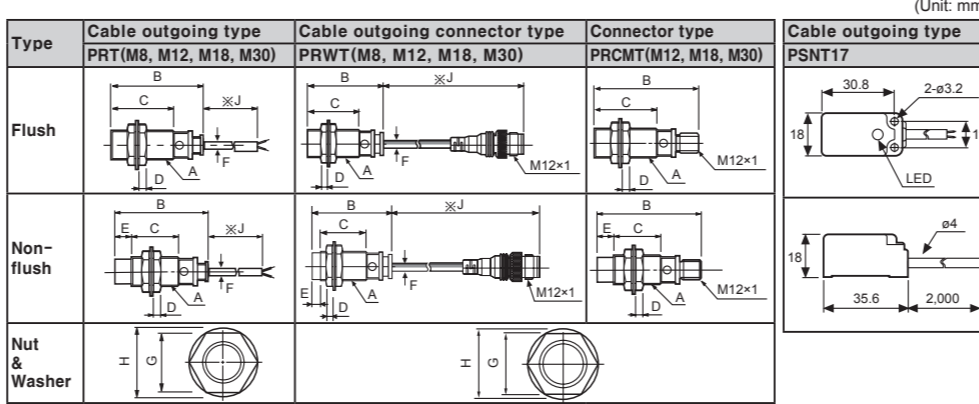


Table with columns for Type, Cable outgoing type, Cable outgoing connector type, Connector type, Cable outgoing type, and dimensions (A, B, C, D, E, F, G, H, J).

\*J type standard : Cable outgoing type/2,000mm, Cable outgoing connector type/300mm

Mutual-interference & Influence by surrounding metals

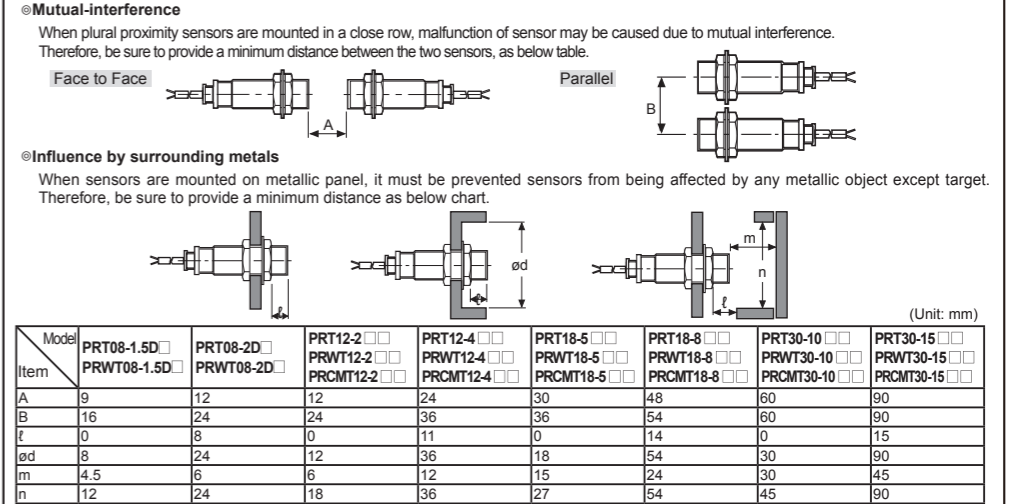
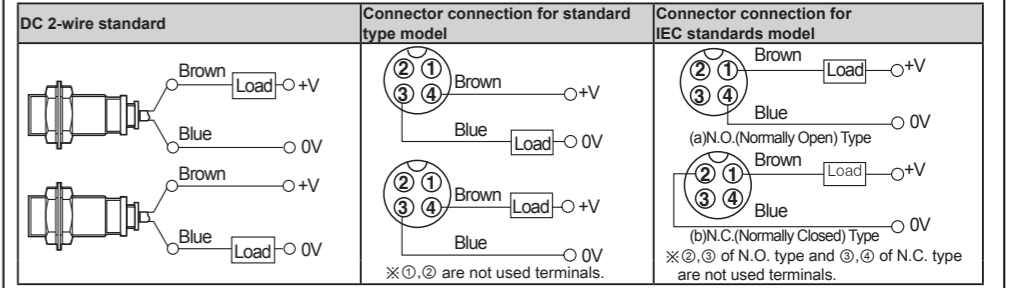


Table with columns for Model, Item, and dimensions A, B, C, d, m, n for various sensor models.

Connections



\*Load can be wired to any direction. \*No need to consider polarity for non-polarity type of power supply.

Caution for using

- 1. This equipment shall not be used outdoors or beyond specified temperature range.
2. Do not load over than tensile strength of cord.
3. Do not use the same conduit with cord of this unit and electric power line or power line.
4. Do not put overload to tighten nut, please use washer for tightening.
5. Please check the voltage changes of power source in order not to excess rating power input.
6. Do not use this unit during transient time(80ms) after apply power.
7. Do not connect capacity load to output part directly.
8. It may result in damage to the product, if use automatic transformer.
9. Please make wire short as much as possible in order to avoid noise.
10. Be sure to cable as indicated specification on this product.
11. It is possible to extend cable with over 0.3mm and max. 200m.
12. If the target is plated, the sensing distance can be changed by the plating material.
13. It may result in malfunction by metal particle on product.
14. If there are machines(motor, welding etc), which occurs big surge around this unit, please install the Varistor or absorber to source of surge, even though there is built-in surge absorber in this unit.
15. If connect the load with big inrush current(DC type bulb) to this unit, the big inrush current will flow due to the initial resistance is low.
16. In case of the load current is small - Make the residual current is less than return current to connect the bleeder resistor to load in parallel.
Vs: Power supply, Io: Min operating current for proximity sensor, Ioff: Return current of load, P: Resistance W of Bleeder resistor
Rs <= Vs / (Io - Ioff) (kΩ) P > Vs^2 / R (mW)

Major products

- Photoelectric Sensors, Fiber Optic Sensors, Door Sensors, Door Side Sensors, Area Sensors, Proximity Sensors, Pressure Sensors, Rotary Encoders, Connectors/Sockets, Switching Mode Power Supplies, Control Switches/Lamps/Buzzers, I/O Terminal Blocks & Cables, Stepper Motors/Drivers/Motion Controllers, Temperature Controllers, Temperature/Humidity Transducers, SSRs/Power Controllers, Counters, Timers, Panel Meters, Tachometers/Pulse(Rate) Meters, Display Units, Sensor Controllers, Graphic/Logic Panels, Field Network Devices, Laser Marking System(Fiber, CO2, Nd:YAG), Laser Welding/Cutting System.

Autonics Corporation logo and contact information including Headquarters, Overseas Sales, and phone/fax numbers.

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