

# PROXIMITY SENSOR CONNECTION BOX

M A N U A L



Thank you very much for selecting Autonics products.  
For your safety, please read the following before using.

## 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.

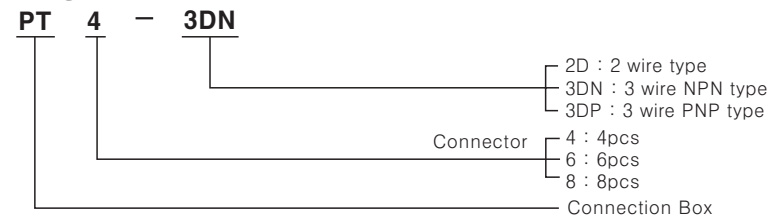
### Warning

1. In case of using this unit with machineries (Nuclear power control, medical equipment vehicle, train, airplane, combustion apparatus, entertainment or safety device etc), it requires installing fail-safe device, or contact us for information on type required. It may result in serious damage, fire or human injury.

### Caution

1. 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.
2. Do not impact on this unit. It may result in malfunction or damage to the product.
3. Do not use this connection box with AC power, this is DC power only. It may result in serious damage to the product.
4. Please avoid wrong wire connection. ( Blue: -, Brown: +)

## Ordering information



## Specifications

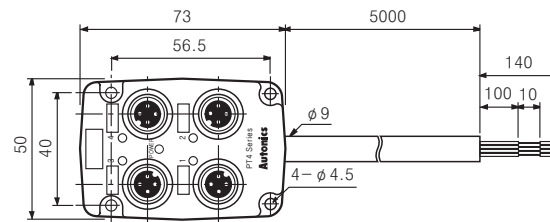
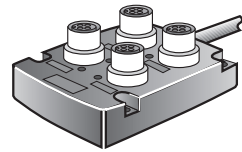
| Model                            | PT4-2D   | PT4-3DN<br>PT4-3DP  | PT6-2D           | PT6-3DN<br>PT6-3DP  | PT8-2D           | PT8-3DN<br>PT8-3DP  |
|----------------------------------|--|---------------------|------------------|---------------------|------------------|---------------------|
| Power supply (Operating voltage) | 24VDC (15-30VDC)   | 12-24VDC (10-30VDC) | 24VDC (15-30VDC) | 12-24VDC (10-30VDC) | 24VDC (15-30VDC) | 12-24VDC (10-30VDC) |
| Connection life cycle            | Min. 200 times   |                     |                  |                     |                  |                     |
| Cable tensile strength           | 10kgf(98N) [15sec.]  |                     |                  |                     |                  |                     |
| Insulation resistance            | Min. 50MΩ (DC500V)   |                     |                  |                     |                  |                     |
| Dielectric strength              | 1500VAC 50/60Hz for 1minute  |                     |                  |                     |                  |                     |
| Vibration                        | 1mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 2 hours |                     |                  |                     |                  |                     |
| Shock                            | 500m/s <sup>2</sup> (50G) X, Y, Z direction for 3 times                            |                     |                  |                     |                  |                     |
| Indicator                        | Power indicator: Green, Operating indicator: Red                                   |                     |                  |                     |                  |                     |
| Ambient temperature              | -25 to +70°C (Non-freezing condition)  |                     |                  |                     |                  |                     |
| Storage temperature              | -30 to +80°C (Non-freezing condition)  |                     |                  |                     |                  |                     |
| Ambient humidity                 | 35 to 95%RH  |                     |                  |                     |                  |                     |
| Protection                       | IP66 (IEC specification) (Note1)   |                     |                  |                     |                  |                     |
| Weight                           | Approx. 630g   |                     | Approx. 690g     |                     | Approx. 745g     |                     |

※ (Note1) When use a cover for water-proof : IP67 (IEC specification)

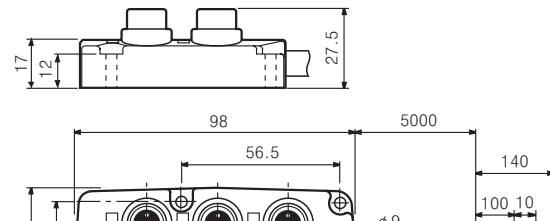
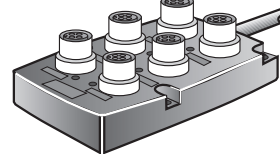
※ The above specification are changeable without notice anytime.

## Dimensions

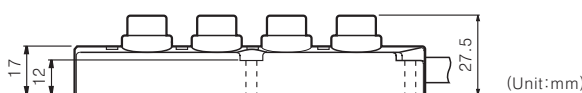
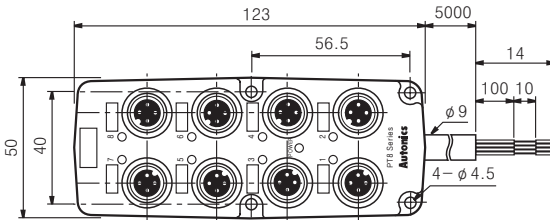
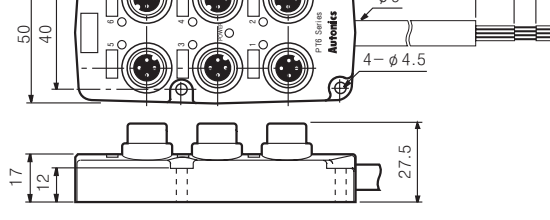
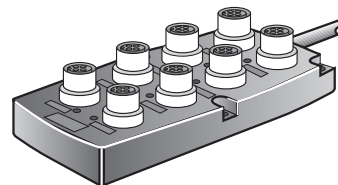
●PT4-□□



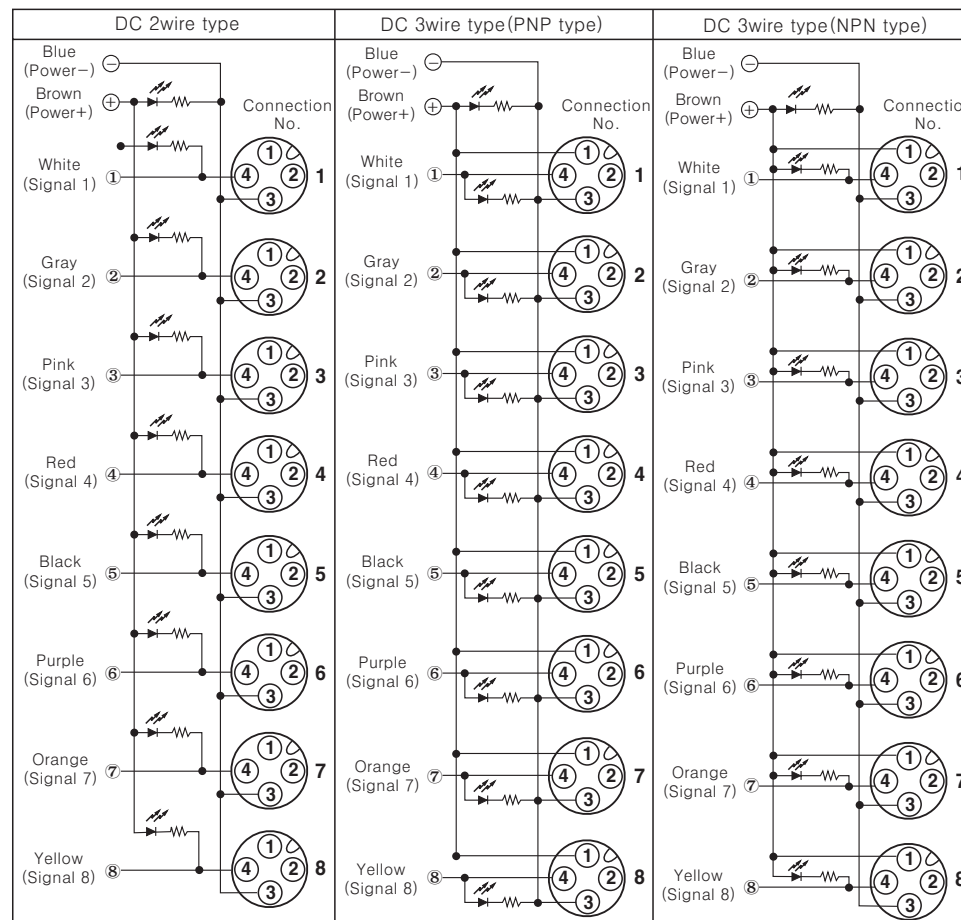
●PT6-□□



●PT8-□□

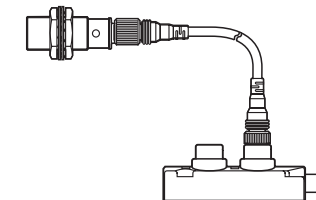


## Connections

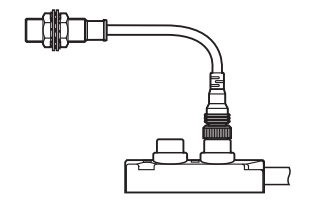


## Connection form

●PRCM Type (Cable connector type)



●PRW Type (Direct connector type)



## Input sensor

| Connection Box | Connector type proximity sensor | Transiation Cable   |
|----------------|---------------------------------|---|
| PT□-2D         | Cable connector type            | PRCMT12-2/4DO, DC<br>PRCMT18-5/8DO, DC<br>PRCMT30-10/15DO, DC   |
|                | Direct connector type           | PRW12-2/4DO, DC<br>PRW18-5/8DO, DC<br>PRWT30-10/15DO, DC  |
| PT□-3DN        | Cable connector type            | PRCM12-2/4DN, DN2<br>PRCM18-5/8DN, DN2<br>PRCM30-10/15DN, DN2<br>PRCML18-5/8DN, DN2<br>PRCML30-10/15DN, DN2 |
|                | Direct connector type           | PRW12-2/4DN, DN2<br>PRW18-5/8DN, DN2<br>PRW30-10/15DN, DN2<br>PRWL18-5/8DN, DN2<br>PRWL30-10/15DN, DN2      |
| PT□-3DP        | Cable connector type            | PRCM12-2/4DP, DP2<br>PRCM18-5/8DP, DP2<br>PRCM30-10/15DP, DP2<br>PRCML18-5/8DP, DP2<br>PRCML30-10/15DP, DP2 |
|                | Direct connector type           | PRW12-2/4DP, DP2<br>PRW18-5/8DP, DP2<br>PRW30-10/15DP, DP2<br>PRWL18-5/8DP, DP2<br>PRWL30-10/15DP, DP2      |

※ It is able to use lead type proximity sensor with connection box, if use plug type connector cable.

## Caution for using

1. This equipment shall not be used outdoors and beyond specification rating of temperature range.
2. Do not load over 98N on cable.
3. Do not use the same conduit with cord of this unit and electric power line and power line. Also avoid the same connection.
4. Tighten strength of installing bolts should be under 15kgf • cm.
5. If close transeiver to proximity sensor or wire connection, it may cause malfunction.
6. When take out the connector from box, please cut off the power.
7. Please tighten fixing plumb firmly by hand. It can be loosened by vibration and protection might not be maintained. (Proper tightening strength : 4 to 5kgf • cm)
8. It might cause malfunction, if particle of metal etc. inflow in to engaging.
9. Do not use this unit when external force loaded on contact block and connection of cover. It may cause loss of efficiency of protection. (IP65)
10. Do not use in place there are water or oil etc.
11. Main body is made by plastic, therefore do not put heavy load on this product.
12. Please avoid below environment.
  - ① Lots of dust or high humidity
  - ② Ammonia or sulfide gas
13. Please use 2 wire or 3 wire type (NPN, PNP) separately.
14. Green LED will not on if connect power line wrongly.
15. Please connect signal line following the diagram and load must be install when operating sensor.
16. Please check Red LED when operating sensor.
17. Please use protection cover or water-proof cover (※P96-M12-1) for not using connector. (※Water-proof cover is optional)

※ It may cause malfunction if above instructions are not followed.

## Main products

- COUNTER
- TIMER
- TEMPERATURE CONTROLLER
- PANEL METER
- TACHO/LINE SPEED/PULSE METER
- DISPLAY UNIT
- PROXIMITY SENSOR
- PHOTOELECTRIC SENSOR
- FIBER OPTIC SENSOR
- PRESSURE SENSOR
- ROTARY ENCODER
- SENSOR CONTROLLER
- POWER CONTROLLER
- STEPPING MOTOR & DRIVER & CONTROLLER
- LASER MARKING SYSTEM (CO<sub>2</sub>, Nd:YAG)

**Autonics** Corporation  
<http://www.autonics.com>

**Satisfiable Partner For Factory Automation**

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