

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 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.

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

**Ordering information**

PT	4	-	3DN	Output
Connector	2D	2 wire type		
	3DN	3 wire NPN type		
	3DP	3 wire PNP type		
Item	4	4ea		
	6	6ea		
	8	8ea		
	PT	Connection box		

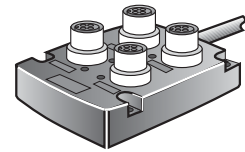
**Specifications**

Model	PT4-2D	PT4-3DN PT4-3DP	PT6-2D	PT6-3DN PT6-3DP	PT8-2D	PT8-3DN PT8-3DP
Power supply (Operating voltage)	12-24VDC(10-30VDC)					
Leakage current	Max. 0.5mA					
Connection life cycle	Min. 200 times					
Cable tensile strength	10kgf(98N)[15sec.]					
Insulation resistance	Min. 50MΩ (at 500VDC megger)					
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*(50G) X, Y, Z direction for 3 times					
Indicator	Power indicator:Green, Operating indicator:Red					
Ambient temperature	-25 to 70°C, Storage: -30 to 80°C					
Ambient humidity	35 to 95%RH, Storage: 35 to 95%RH					
Protection	IP66(IEC specification) <sup>※1</sup>					
Material	Case: PC, General cable(gray): Polyvinyl chloride(PVC)					
Weight	Approx. 630g		Approx. 690g		Approx. 745g	

※1: When use a cover for water-proof (P96-M12-1, sold separately): IP67(IEC specification)  
※Condition for use in Environment is no freezing or condensation  
※The above specification are changeable without notice anytime.

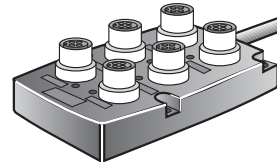
**Dimension**

●PT4-□□



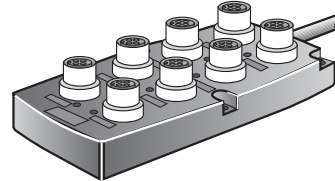
※Cable specification: ø 9/6 cores  
(Conductor cross section: 0.3mm<sup>2</sup>, Insulator diameter: ø 1.67)

●PT6-□□

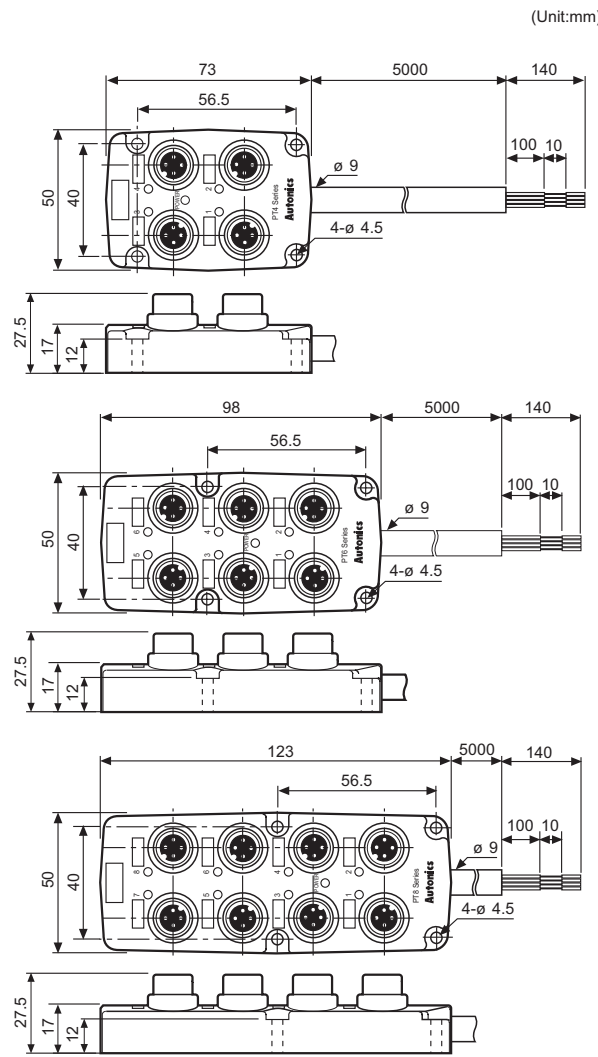


※Cable specification: ø 9/8 cores  
(Conductor cross section: 0.3mm<sup>2</sup>, Insulator diameter: ø 1.67)

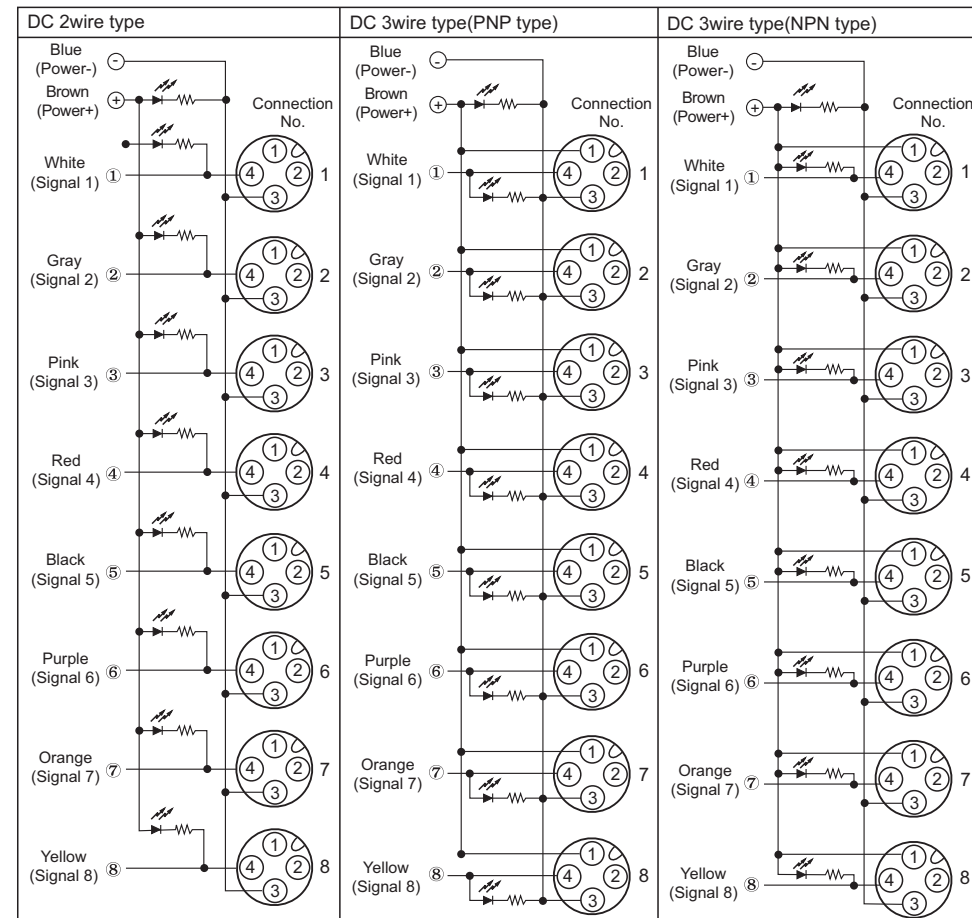
●PT8-□□



※Cable specification: ø 9/10 cores  
(Conductor cross section: 0.3mm<sup>2</sup>, Insulator diameter: ø 1.67)

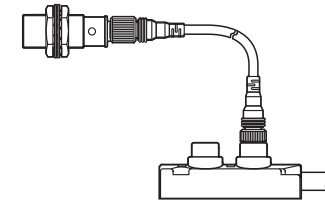


**Connection**

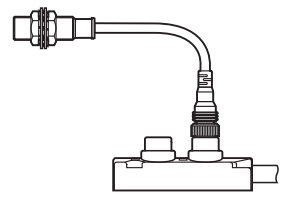


**Connection form**

●PRCM Type(Cable connector type)



●PRW Type(Direct connector type)



**Input sensor**

Connection Box	Connector type proximity sensor	Transiation Cable
PT□ -2D	DC 2-wire type	PRCMT12-2/4DO, DC PRCMT18-5/8DO, DC PRCMT30-10/15DO, DC
		PRDWT12-4/8DO, DC PRDWT18-7/14DO, DC PRDWT30-15/25DO, DC
PT□ -3DN	DC 3-wire type (NPN type)	PRCML12-2/4DN, DN2 PRCML18-5/8DN, DN2 PRCML30-10/15DN, DN2
		PRDML12-4/8DN, DN2 PRDML18-7/14DN, DN2 PRDML30-15/25DN, DN2
PT□ -3DP	DC 3-wire type (PNP type)	PRCML12-2/4DP, DP2 PRCML18-5/8DP, DP2 PRCML30-10/15DP, DP2
		PRDML12-4/8DP, DP2 PRDML18-7/14DP, DP2 PRDML30-15/25DP, DP2

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

**Caution for using**

- This equipment shall not be used outdoors and beyond specification rating of temperature range.
  - Do not load over 10Kgf(98N) on cable.
  - Do not use the same conduit with cord of this unit and electric power line and power line.  
Also avoid the same connection.
  - Tighten strength of installing bolts should be under 15kgf-cm.
  - If close transceiver to proximity sensor or wire connection, it may cause malfunction.
  - When take out the connector from box, please cut off the power.
  - 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)
  - It might cause malfunction, if particle of metal etc. inflow in to engaging.
  - 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)
  - Do not use in place there are water or oil etc.
  - Main body is made by plastic, therefore do not put heavy load on this product.
  - Please avoid below environment.  
①Lots of dust or high humidity  
②Ammonia or sulfide gas
  - Please use 2 wire or 3 wire type(NPN, PNP) separately.
  - Green LED will not on if connect power line wrongly.
  - Please connect signal line following the diagram and load must be install when operating sensor.
  - Please check Red LED when operating sensor.
  - Please use protection cover or water-proof cover(P96-M12-1, sold separately) for not using connector.
- ※It may cause malfunction if above instructions are not followed.

**Main products**

- Proximity sensors
- Area sensors
- Door/Door side sensors
- Counters
- Rotary encoders
- Power controllers
- Panel meters
- Temperature controllers
- Tachometer/Pulse(Rate) meters
- Temperature/Humidity transducers
- Switching power supplies
- Stepping motors/drivers/motion controllers
- Field network devices
- Laser marking system(CO<sub>2</sub>, Nd: YAG)
- Laser welding/soldering system
- Photoelectric sensors
- Fiber optic sensors
- Pressure sensors
- Timers
- Display units
- Sensor controllers
- Graphic/Logic panels

**Autonics Corporation**  
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