

M12 4-pin Connector Distribution Boxes



PT Series PRODUCT MANUAL

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- 4-pin M12 connector type sensor distribution boxes
- Supply power to multiple sensors using a single power supply
- Simplify complicated wiring and maintenance work
- Check operation status with LED indicators (green, red LED)
- Supports 1-signal (DC 2-wire, 3-wire type)
- Protection structure: IP67 (with waterproof cover, sold separately)
IP52 (with protection cover, sold separately)

Safety Considerations

- Observe all 'Safety Considerations' for safe and proper operation to avoid hazards.
- ⚠ symbol indicates caution due to special circumstances in which hazards may occur.

⚠ Warning Failure to follow instructions may result in serious injury or death.

- 01. Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss.**(e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)
Failure to follow this instruction may result in personal injury, economic loss or fire.
- 02. Do not use or store the unit in the place where flammable/explosive/ corrosive gas, high humidity, direct sunlight, radiant heat, vibration, impact or salinity may be present.**
Failure to follow this instruction may result in explosion or fire.
- 03. Do not connect, repair, or inspect the unit while connected to a power source.**
Failure to follow this instruction may result in fire.
- 04. Check 'Connections' before wiring.**
Failure to follow this instruction may result in fire.
- 05. Do not disassemble or modify the unit.**
Failure to follow this instruction may result in fire.

⚠ Caution Failure to follow instructions may result in injury or product damage.

- 01. Use the unit within the rated specifications.**
Failure to follow this instruction may result in fire or product damage.
- 02. Use a dry cloth to clean the unit, and do not use water or organic solvent.**
Failure to follow this instruction may result in fire.
- 03. Keep the product away from metal chip, dust, and wire residue which flow into the unit.**
Failure to follow this instruction may result in fire or product damage.

Cautions during Use

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
- 12-24 VDC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
- Since sensor distribution box is only for DC, do not use for AC.
- Connect sensor after checking whether output is NPN or PNP.
- Operate sensor after connecting load.
- Tighten the mounting screw or connector with following tightening torque.
 - Mounting screw (M4): max. 1.2 N·m
 - M12 connector: 0.6 to 0.7 N·m
 - M23 connector: 2.0 to 2.5 N·m
- Do not pull the cable which is connected to the body.
- Do not put an object on the body.
- It is hard to maintain protection structure, when consistently using the product with external power applied to the connector joint.
- Keep away from high voltage lines or power lines to prevent inductive noise.
In case installing power line and input signal line closely, use line filter or varistor at power line and shielded wire at input signal line.
Do not use near the equipment which generates strong magnetic force or high frequency noise.
- If transceiver and sensor distribution box are installed closely, malfunction can occur.
- This unit may be used in the following environments.
 - Indoors (in the environment condition rated in 'Specifications')
 - Altitude max. 2,000 m
 - Pollution degree 2
 - Installation category II

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

PT ❶ - ❷ ❸

❶ No. of port

4: 4
6: 6
8: 8

❷ Output type

2D: DC 2-wire (1 signal)
3D: DC 3-wire (1 signal)

❸ Input logic

No mark: None
N: NPN
P: PNP

Product Components

- Product
- Instruction manual
- Nameplate sticker
- Bolt × 4
- Nut × 4

Sold Separately

- Protection Cover (CAP-PT)
- Waterproof cover (P96-M12-1)

Specifications

Model	PT4-2D	PT4-3D□	PT6-2D	PT6-3D□	PT8-2D	PT8-3D□
No. of port	4	4	6	6	8	8
Output type ⁰¹⁾	2-wire (1 signal)	3-wire (1 signal)	2-wire (1 signal)	3-wire (1 signal)	2-wire (1 signal)	3-wire (1 signal)
Output logic ⁰¹⁾	-	NPN/PNP model	-	NPN/PNP model	-	NPN/PNP model
Material	Case: PC, general cable (gray): PVC					
Certification	CE UK					
Unit weight (packaged) ⁰²⁾	≈ 660 g (≈ 700 g)		≈ 680 g (≈ 720 g)		≈ 780 g (≈ 820 g)	

01) Connect the sensor to the proper output type and logic.

02) It is based on 5 m cable.

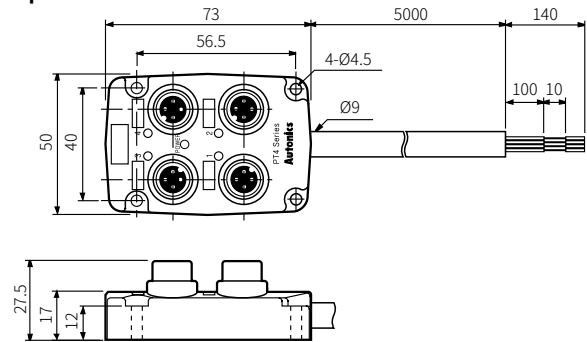
Power supply	12-24 VDC≡
Using power supply	10-30 VDC≡
Rated current	2 A (per signal), 4 A (per port), 10 A (body)
Leakage current	≤ 0.5 mA
Connection life cycle	≥ 200 operations
Insulation resistance	≥ 50 MΩ (500 VDC≡ megger)
Dielectric strength	1500 VAC ~ 50/60 Hz for 1 minute
Vibration	1.0 mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 2 hours
Shock	500 m/s ² (≈ 50 G) X, Y, Z in each X, Y, Z direction for 3 times
Indicator	Power indicator: green / operation indicator: red
Cable specification	Ø 9, 8-wire (conductor cross section: 0.3 mm ² , insulator diameter: Ø 1.67)
Ambient temperature	-25 to 75 °C, storage: -30 to 80 °C (a non freezing or condensation environment)
Ambient humidity	35 to 95 %RH, storage: 35 to 95 %RH (a non freezing or condensation environment)
Protection structure ⁰¹⁾	• With connector / waterproof cover: IP67 (IEC standard) • With protection cover: IP52 (IEC standard)

01) This is not applicable when connectors and protection/waterproof covers are not mounted.

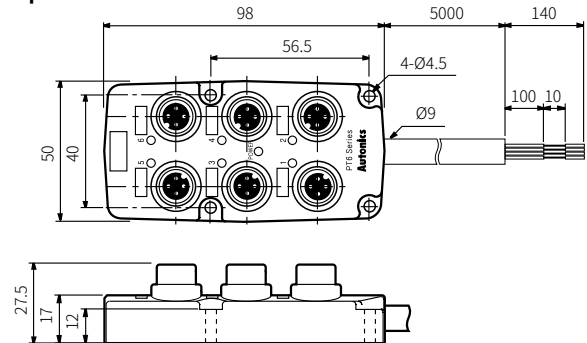
Dimensions

• Unit: mm, For the detailed drawings, follow the Autonics website.

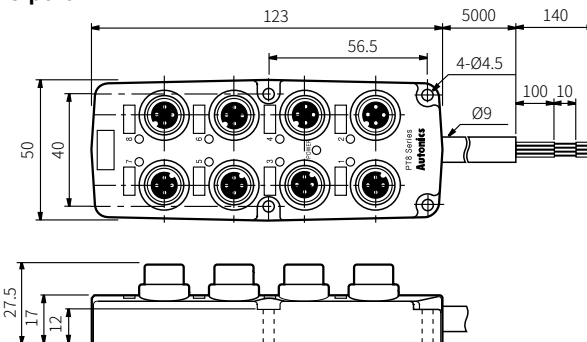
■ 4-port



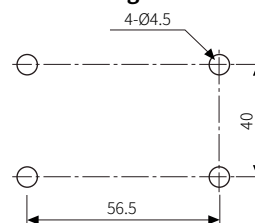
■ 6-port



■ 8-port



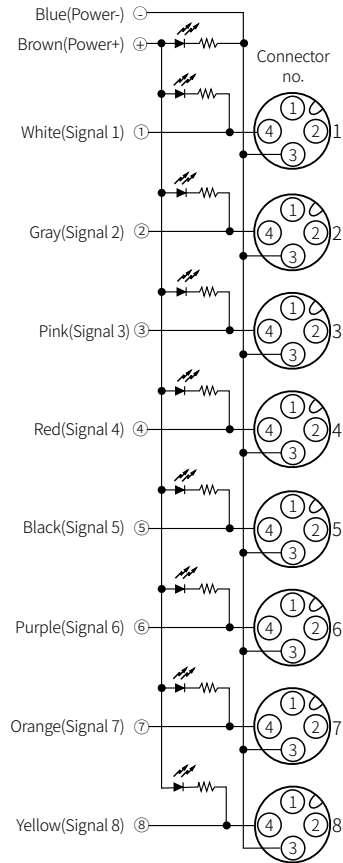
■ Mounting hole



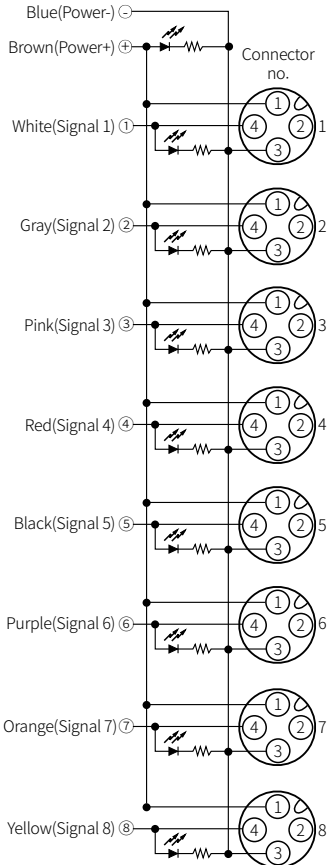
Connections

- It is based on 8-port model.

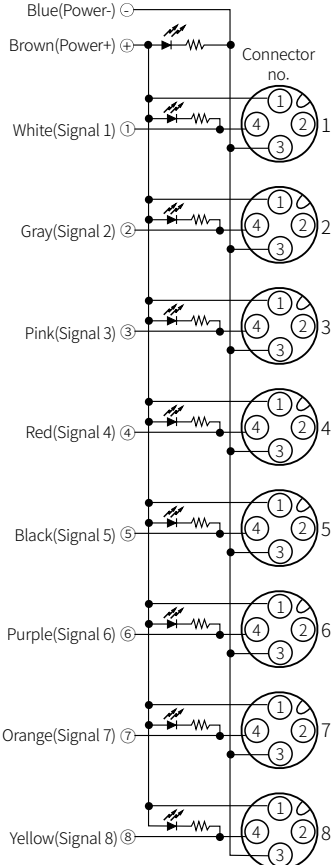
■ DC 2-wire (1 signal)



■ DC 3-wire NPN (1 signal)

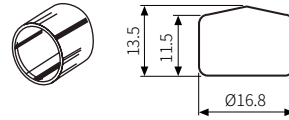


■ DC 3-wire PNP (1 signal)



Sold Separately: Protection Cover (CAP-PT)

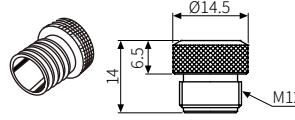
- Unit: mm, For the detailed drawings, follow the Autonics website.



- This protection cover is used for protecting connection holes from dust or particle, etc. Please push it into hole.
- If using protection covers, protection structure of the sensor distribution box is IP52.

Sold Separately: Waterproof Cover (P96-M12-1)

- Unit: mm, For the detailed drawings, follow the Autonics website.



- This waterproof cover is used for protecting unused connection hole from water or oil, etc. Please tighten it when applying to the ports.
- If using waterproof covers, protection structure of the sensor distribution box is IP67.