


## Sensor Distribution Box (M12 4-Pin/5-Pin Connector Type)

### ■ Features

- Easy check operation by operation indicator (red, green)
- Single power operates several sensors
- Convenient wiring and power line
- IP67 protection structure with water-proof cover (IP52 protection structure with protection cover)
- Supports 1-signal, 2-signal (DC 4-wire)

 Please read "Caution for your safety" in operation manual before using.



M12 4-pin  
connector type

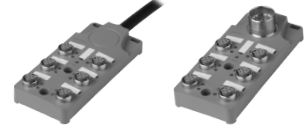
Cable type



M12 5-pin  
connector type

Cable type

Connector type



### ■ Ordering Information

PT	4	—	3D	N	5	—	5
							Cable length※2
							Number of M12 connector pins
							Input logic※1
							Output type
							Connection method for external signal
							Number of ports
							Item
							M12 4-pin connector type
							No-mark
							5m
							M12 5-pin connector type
							5
							5m
							10
							10m
							No-mark
							4-pin
							5
							5-pin
							N
							NPN type
							P
							PNP type
							2D
							DC 2-wire (1-signal)
							3D
							DC 3-wire (1-signal)
							4D
							DC 4-wire (1-signal, 2-signal)
							No-mark
							Cable type
							C
							Connector type
							4
							4
							6
							6
							8
							8
							PT
							Sensor distribution box

※1: It is not applied for DC 2-wire (1-signal) type of output.

※2: Cable length is only for Cable type models.

### ■ Specifications

Type		M12 4-pin connector type			M12 5-pin connector type					
Model	Cable type	PT4-2D□ PT4-3D□	PT6-2D□ PT6-3D□	PT8-2D□ PT8-3D□	PT4-3D□-5□	PT4-4D□-5□	PT6-3D□-5□	PT6-4D□-5□	PT8-3D□-5□	PT8-4D□-5□
	Connector type	—			PT4-C3D□-5	PT4-C4D□-5	PT6-C3D□-5	PT6-C4D□-5	PT8-C3D□-5	PT8-C4D□-5
Port		4	6	8	4		6		8EA	
Output type※ <sup>1</sup>		2-wire (1-signal), 3-wire (1-signal)			3-wire (1-signal)	4-wire (2-signal)	3-wire (1-signal)	4-wire (2-signal)	3-wire (1-signal)	4-wire (2-signal)
Power supply		12-24VDC (10-30VDC)								
Rated current		2A (per signal), 4A (per port), 10A (total)								
Leakage current		Max. 0.5mA								
Connection life cycle		Min. 200 operations								
Cable tensile strength		10kgf (98N)/15S								
Insulation resistance		Over 50MΩ (at 500VDC megger)								
Dielectric strength		1,500VAC 50/60Hz for 1minute								
Vibration		1mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours								
Shock		500m/s <sup>2</sup> (approx. 50G) in each X, Y, Z direction for 3 times								
Indicator		Power indicator: Green, Operation indicator: Red			Power indicator: Red, Operation indicator: Green					
Environment	Ambient temp.	-25 to 75, storage: -30 to 80								
	Ambient humi.	35 to 95%RH, storage: 35 to 95%RH			35 to 85%RH, storage: 35 to 85%RH					
Protection structure※ <sup>2</sup>		IP67 (IEC standards/when mounting connector, waterproof cover) or IP52 (IEC standards/when mounting protection cover)								
Material		Case: PBT (G15%), General cable (gray): Polyvinyl chloride (PVC)			Case: PBT (G15%), Name plate: PC, General cable (black): Polyvinyl chloride (PVC)					
Approval		CE								
Weight※ <sup>3</sup>	Cable type※ <sup>4</sup>	Approx. 700g (approx. 660g)	Approx. 720g (approx. 680g)	Approx. 820g (approx. 780g)	Approx. 1100g (approx. 900g)	Approx. 1400g (approx. 1200g)	Approx. 1130g (approx. 930g)	Approx. 1430g (approx. 1230g)	Approx. 1160g (approx. 960g)	Approx. 1460g (approx. 1260g)
	Connector type	—			Approx. 230g (approx. 120a)	Approx. 235g (approx. 125a)	Approx. 260g (approx. 150a)	Approx. 265g (approx. 155a)	Approx. 290g (approx. 180a)	Approx. 295g (approx. 185g)

※1: Connect the sensor to the proper output type.

※2: This is not applicable when connectors and protection/waterproof covers are not mounted.

※3: The weight includes packaging. The weight in parentheses is for unit only.

※4: The weights are for 5m cable.

※Environment resistance is rated at no freezing or condensation.

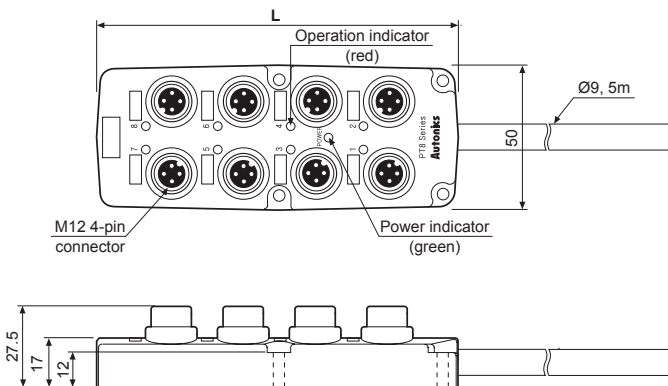
# Sensor Distribution Box

## ■ Dimensions

※The below dimensions are based on 8-port.

(unit: mm)

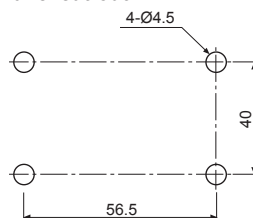
### ● M12 4-pin connector type



Model	L
PT4-□□	73
PT6-□□	98
PT8-□□	123

※Cable specification: Ø9, 10-wire (conductor cross section: 0.3mm<sup>2</sup>, insulator diameter: Ø1.67)

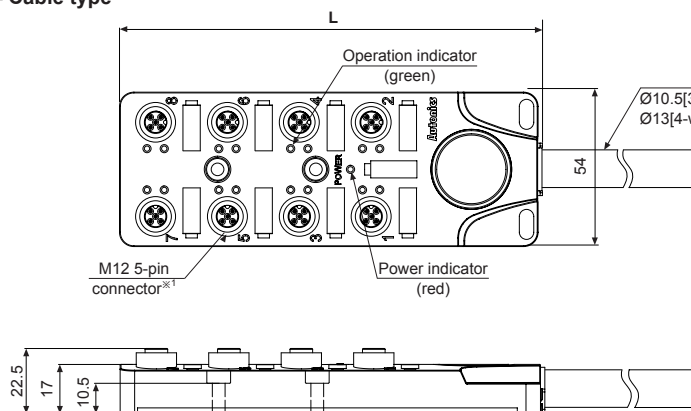
### ● Panel cut-out



※Mounting holes are same as 4, 6, 8-port.

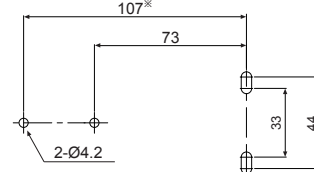
### ● M12 5-pin connector type

#### - Cable type



Model	L
PT4-□□□□	95
PT6-□□□□	120
PT8-□□□□	145

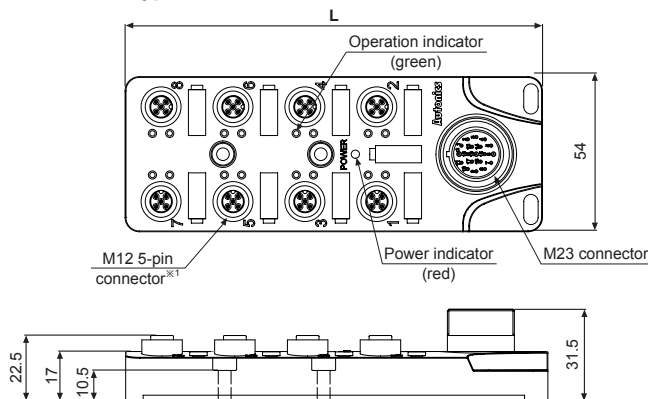
### ● Panel cut-out



※Except 4-port model.

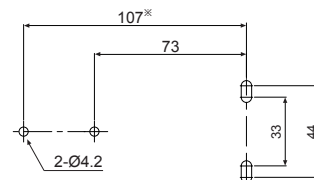
※1: When connecting L type connectors, connection direction may be different by the manufacturers of the connector.

#### - Connector type



Model	L
PT4-C□□□	95
PT6-C□□□	120
PT8-C□□□	145

### ● Panel cut-out



※Except 4-port model.

※1: When connecting L type connectors, connection direction may be different by the manufacturers of the connector.

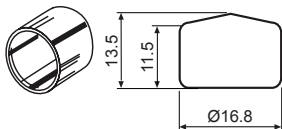
(A)	Photoelectric Sensors
(B)	Fiber Optic Sensors
(C)	Door/Area Sensors
(D)	Proximity Sensors
(E)	Pressure Sensors
(F)	Rotary Encoders
(G)	Connectors/ Connector Cables/ Sensor Distribution Boxes/ Sockets
(H)	Temperature Controllers
(I)	SSRs / Power Controllers
(J)	Counters
(K)	Timers
(L)	Panel Meters
(M)	Tacho / Speed / Pulse Meters
(N)	Display Units
(O)	Sensor Controllers
(P)	Switching Mode Power Supplies
(Q)	Stepper Motors & Drivers & Controllers
(R)	Graphic/ Logic Panels
(S)	Field Network Devices
(T)	Software

# PT Series

## ■ Sold Separately

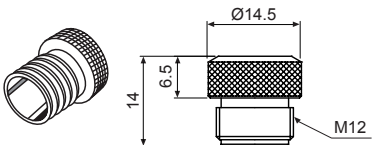
(unit: mm)

### - Protection cover (CAP-PT)



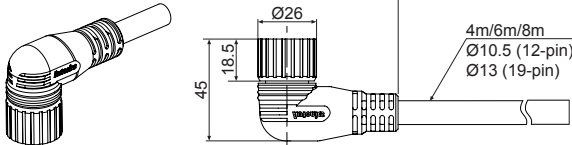
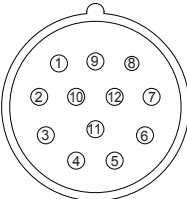
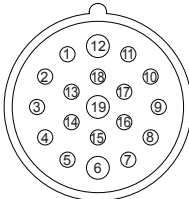
※ This protection cover is used for protecting connection holes from dust or particle, etc. Please push it into hole.  
※ If using protection covers, protection structure of the sensor distribution box is IP52.

### - Waterproof cover (P96-M12-1)



※ 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.

### - M23 connector cable (only for M12 5-pin connector type)

12-pin [3-wire (1-signal)]				19-pin [4-wire (2-signal)]		
Model	CLDH12C -040	CLDH12C -060	CLDH12C -080	CLDH19C -040	CLDH19C -060	CLDH19C -080
Dimensions	<div></div> <div>(unit: mm)</div>					
Pin arrangement						
Cable length※1	4m	6m	8m	4m	6m	8m
Applied model	PT4-C3DN5, PT4-C3DP5, PT6-C3DN5, PT6-C3DP5 PT8-C3DN5, PT8-C3DP5			PT4-C4DN5, PT4-C4DP5, PT6-C4DN5, PT6-C4DP5 PT8-C4DN5, PT8-C4DP5		
Connection cable	Pin no.	Cable color	AWG	Pin no.	Cable color	AWG
	1	White	AWG22	1	Purple	AWG22
	2	Green		2	Red	
	3	Yellow		3	Gray	
	4	Gray		4	Red/Blue	
	5	Pink		5	Green	AWG17
	6	Red		6	Blue	
	7	Black	AWG17	7	Gray/Pink	AWG22
	8	Purple		8	White/Green	
	9	Blue		9	White/Yellow	
	10	—		10	White/Gray	
	11	Brown		11	Black	AWG17
	12	Green/Yellow		12	Green/Yellow	
				13	Yellow/Brown	AWG22
				14	Brown/Green	
				15	White	
				16	Yellow	
				17	Pink	
				18	Gray/Brown	
				19	Brown	AWG17

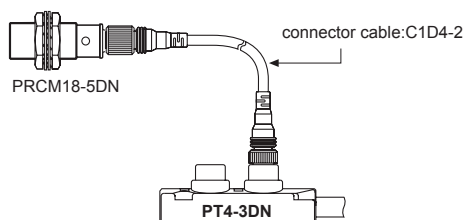
※1: Cable length can be customized.

# Sensor Distribution Box

## Example of Connections

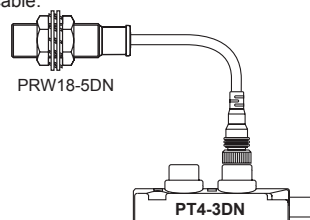
### ● Connection with connector type sensor

When connecting a connector type proximity sensor (PRCM Series) with a sensor distribution box, use only connector cable.



### ● Connection with cable type sensor

It is available to connect a cable type sensor proximity sensor (PRW Series) with a sensor distribution box directly. When installation distance is longer, use a connector cable.



## Connectable Autonics Proximity Sensors, Photoelectric Sensors, Door/Area Sensors

Sensor distribution box	Input logic	Proximity sensor		Photoelectric sensor	Door/Area sensor	Connection method
PT□-2D	DC 2-wire	PRCMT12-2/4DO, DC	PRDCMT12-4/8DO, DC	—	—	Use connector cable
		PRCMT18-5/8DO, DC	PRDCMT18-7/14DO, DC			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire NPN output type	PRCMT30-10/15DO, DC	PRDCMT30-15/25DO, DC	BRP3M-MDT-C BR3M-MDT-C	—	Use connector cable
		PRWT12-2/4DO, DC	PRDWT12-4/8DO, DC			Connect directly, Use connector cable
PT□-3DP PT□-3DP5□ PT□□-3DP5	DC 3-wire PNP output type	PRWT18-5/8DO, DC	PRDWT18-7/14DO, DC	—	—	Use connector cable
		PRWT30-10/15DO, DC	PRDWT30-15/25DO, DC			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire NPN output type	PRCM12-2/4DN, DN2	PRDCM12-4/8DN, DN2	BRP3M-MDT-C-P BR3M-MDT-C-P	—	Use connector cable
		PRCM18-5/8DN, DN2	PRDCM18-7/14DN, DN2			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	PRCM30-10/15DN, DN2	PRDCM30-15/25DN, DN2	—	—	Use connector cable
		PRCML18-5/8DN, DN2	PRDCML18-7/14DN, DN2			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	PRCML30-10/15DN, DN2	PRDCML30-15/25DN, DN2	—	—	Use connector cable
		PRW12-2/4DN, DN2	PRDW12-4/8DN, DN2			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	PRW18-5/8DN, DN2	PRDW18-7/14DN, DN2	—	—	Use connector cable
		PRW30-10/15DN, DN2	PRDW30-15/25DN, DN2			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	PRWL18-5/8DN, DN2	PRDWL18-7/14DN, DN2	—	—	Use connector cable
		PRWL30-10/15DN, DN2	PRDWL30-15/25DN, DN2			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	PRW12-2/4DP, DP2	PRDW12-4/8DP, DP2	BRP100-DDT-C BR100-DDT-C	BWC40-□H, HD BWC80-□H, HD BW20-□ BW40-□	Use connector cable
		PRW18-5/8DP, DP2	PRDW18-7/14DP, DP2			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	PRW30-10/15DP, DP2	PRDW30-15/25DP, DP2	BRP400-DDT-C BR400-DDT-C	BW20-□P BW40-□P	Use connector cable
		PRWL18-5/8DP, DP2	PRDWL18-7/14DP, DP2			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	PRWL30-10/15DP, DP2	PRDWL30-15/25DP, DP2	BRP200-DDTN-C BR200-DDTN-C	—	Use connector cable
		—	—			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	—	—	BRP100-DDT-C-P BR100-DDT-C-P	—	Use connector cable
		—	—			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	—	—	BRP400-DDT-C-P BR400-DDT-C-P	—	Use connector cable
		—	—			Connect directly, Use connector cable
PT□-3DN PT□-3DN5□ PT□□-3DN5	DC 3-wire PNP output type	—	—	BRP200-DDTN-C-P BR200-DDTN-C-P	—	Use connector cable
		—	—			Connect directly, Use connector cable

※Standard cable type sensors can also connect a sensor distribution box by using plug type connector cable.

(A)	Photoelectric Sensors
(B)	Fiber Optic Sensors
(C)	Door/Area Sensors
(D)	Proximity Sensors
(E)	Pressure Sensors
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(G)	Connectors/ Connector Cables/ Sensor Distribution Boxes/ Sockets
(H)	Temperature Controllers
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■ Connections

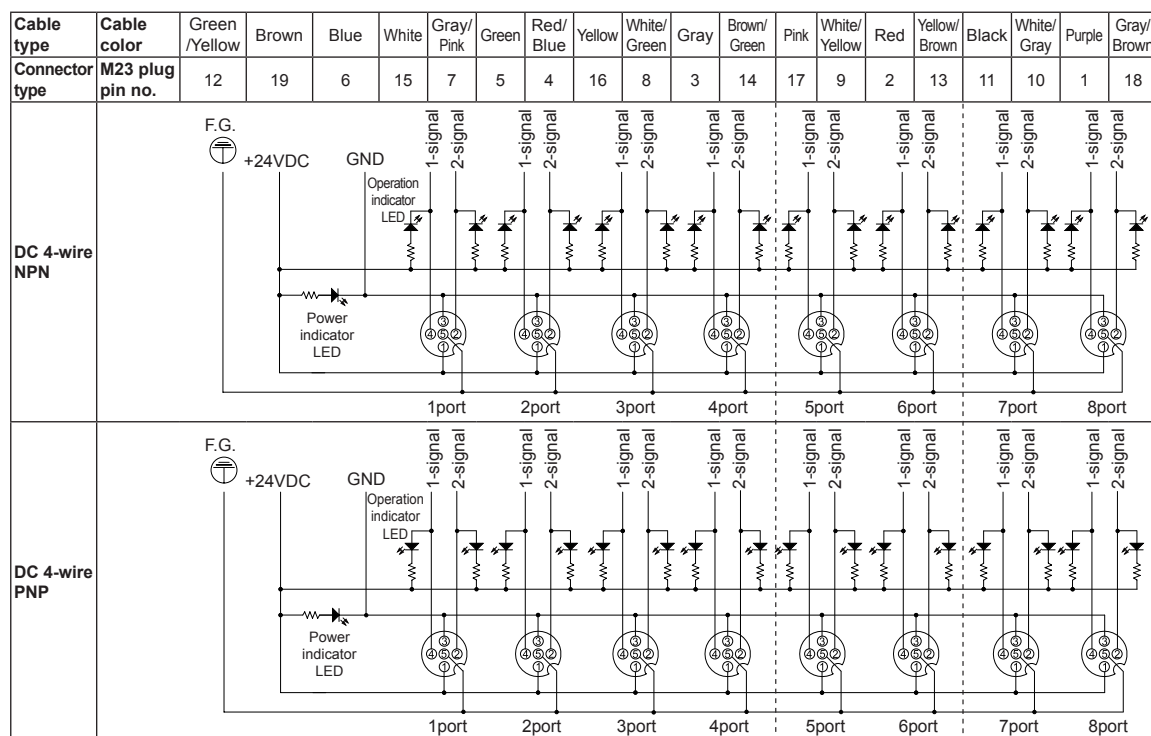
● M12 4-pin connector type

Cable color	Blue	Brown	White	Gray	Pink	Red	Black	Purple	Orange	Yellow
DC 2-wire										
	1port	2port	3port	4port	5port	6port	7port	8port		
DC 3-wire NPN										
	1port	2port	3port	4port	5port	6port	7port	8port		
DC 3-wire PNP										
	1port	2port	3port	4port	5port	6port	7port	8port		

● M12 5-pin connector type

Cable type	Cable color	Green/ Yellow	Brown	Blue	White	Green	Yellow	Gray	Pink	Red	Black	Purple
Connector type	M23 plug pin no.	12	11	9, 10	1	2	3	4	5	6	7	8
DC 3-wire NPN												
		1port	2port	3port	4port	5port	6port	7port	8port			
DC 3-wire PNP												
		1port	2port	3port	4port	5port	6port	7port	8port			

# Sensor Distribution Box



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## ■ Cautions During Use

1. This connection box is only for DC. Do not use this unit for AC.
2. Use DC 2-wire, DC 3-wire, DC 4-wire separately.  
DC 3-wire, DC 4-wire are separated by NPN type and PNP type.
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. Be sure that wire power cable (blue: -, brown: +) properly.
5. Check the voltage variation range of power not to over the rated specifications for power input.
6. In case of M12 5-pin connector type, Tighten the screws and connector with the proper tightening strength.  
(M4 mounting screw: max. 1.2N·m / M12 Connector: 0.6 to 0.7N·m/ M23 Connector: 2.0 to 2.5N·m)  
When tightening is bad, protection is not effective and it may loose by vibration.
7. In case of M12 4-pin connector type, the power indicator (green LED) does not operate when polarity is not correctly connected.
8. If transceiver is close to wire connections, it may cause malfunction.
9. When take out the connector from the box, cut off the power.
10. It might cause malfunction, if particle of metal etc. inflow in to engaging.
11. Do not use this unit when external force loaded on contact block and connection of cover. It may cause loss of efficiency of protection.
12. Follow the connections when wiring the signals. After connecting loads, operate proximity sensors.
13. Check the operation indicator when operating the sensors.
14. Please use protection cover (CAP-PT, sold separately) or water-proof cover (P96-M12-1, sold separately) for not using connector (M12 socket).
15. Do not use in place there are water or oil etc.
16. Main body is made by plastic, therefore do not put heavy load on this product.
17. Please avoid below environment for long-term storage.
  - ① Lots of dust or high humidity
  - ② Ammonia or sulfide gas