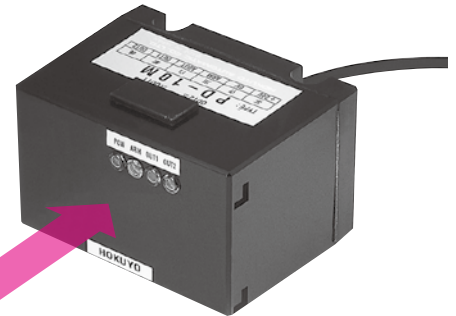


Optical distance sensor

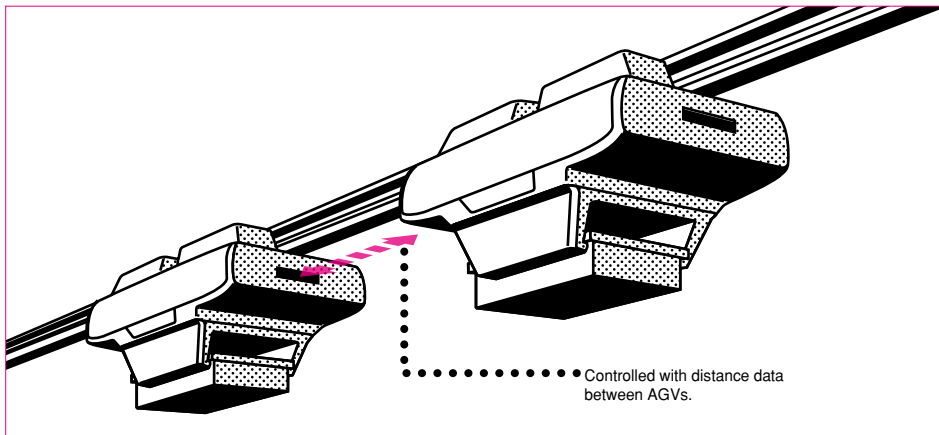
PD-10M/8NM

Converting distance data to analog voltage! Comparator output is provided

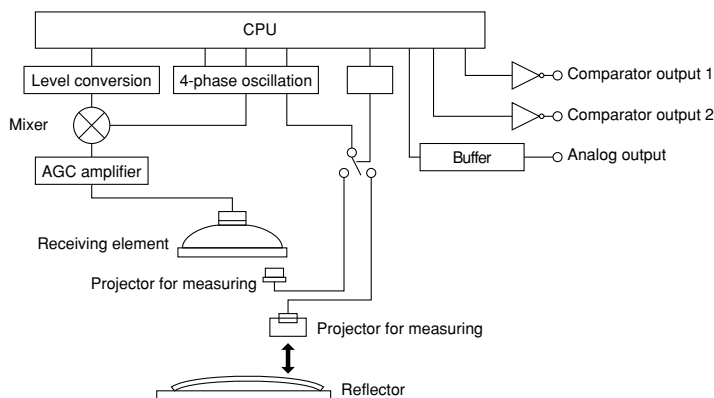
- Range-finder type sensor with infrared LED.
- This sensor provides comparator output (2 output) that can set optional distance value and alarm output that executes at the out of detectable area. (provided PD-10M only)
- This sensor provides light-emission stop output for interference.



■ Application



■ Operating principle



Light which was modulated by high frequency is irradiated from projector and light from reflector is amplified. After converting to the distance by phase-difference with projecting signal for measuring, the voltage output is executed.

■ Specifications

PD-10M

Kind		Basic type
Model No.		PD-10M
Power source		24VDC (+10%, -10%, ripple 10% or less)
Current consumption		125mA or less
Detecting distance		0.2 to 10m (when using reflector attached)
Detecting objects		φ 100mm plastic retro-reflector (Specified one)* ¹
Repeatability		±100mm
Absolute precision		±200mm
Hysteresis		300mm
Resolution		40mm
Output	Analog output	0→10V (output impedance 100Ω)
	Warning output	NPN open-collector output (30VDC, 50mA or less), 「ON」 during normal, 「OFF」 when out of area or less than specified value
	Comparator output (OUT 1, 2)	NPN open-collector output (30VDC, 50mA or less) OFF when within detecting distance
Input		Contact or transistor input, emission-stop by shorted to -VIN (0V) (Warning lamp lights up)
Indication lamps		Power lamp (green): Lights up by putting power source in Warning lamp (red): Lights up when warning output is OFF Comparator lamp (orange): Lights up when within detecting distance
Directional angle		±2.5°
Response time		50msec or less* ²
Connection		Cable 1m long
Ambient illuminance		Halogen/mercury lamp: 10,000lux or less, Fluorescent lamp: 6,000lux or less
Ambient temperature		-10°C to +50°C
Ambient humidity		85%RH or less (not icing/not condensing)
Case material		Polycarbonate
Weight		Sensor: approx. 200g, reflector RRP-100: approx. 65g
Accessory		Reflector RRP-100

*1. Reflection sheet is also available. Ask us in details.

*2. It doesn't operate for 200msec after putting power source in.

★PD-10M1 with 3 output type and PD-10M2 with reverse output type are also available.

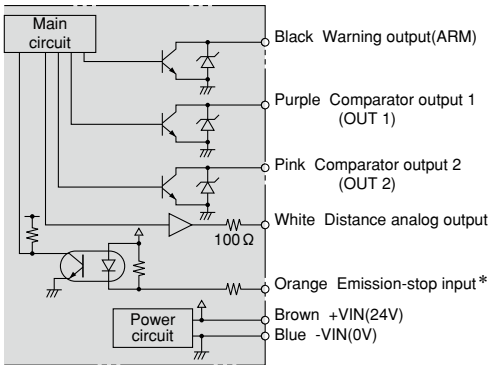
PD-8NM1

Kind		With polarized filter
Model No.		PD-8NM1
Power source		24VDC (+10%, -10%, ripple 10% or less)
Current consumption		125mA or less
Detecting distance		0.2 to 8m(when using 2 pcs of reflector attached)
Detecting objects		80mm X 80mm plastic retro-reflector×2 (specified one)
Repeatability		±100mm
Absolute precision		±200mm (5m or less), ±300mm (5m or less)
Hysteresis		300mm
Resolution		40mm
Output	Analog output	0→10V (output impedance 100Ω)
	Comparator output (OUT 1, 2, 3)	NPN open-collector output (30VDC, 50mA or less) OFF when within detecting distance
Input		Contact or transistor input, emission-stop by shorted to -VIN (0V) (Warning lamp lights up)
Indication lamps		Power lamp (green): Lights up by putting power source in Comparator lamp (orange): Lights up when within detecting distance
Directional angle		±2.5°
Response time		50msec or less*
Connection		Cable 1m long
Ambient illuminance		Halogen/mercury lamp: 10,000lux or less, Fluorescent lamp: 6,000lux or less
Ambient temperature		-10°C to +50°C
Ambient humidity		85%RH or less (not icing/not condensing)
Case material		Polycarbonate
Weight		Sensor: approx. 200g, exclusive reflector for PD-8NM1: approx. 42g
Accessory		PD-8NM1 exclusive reflector

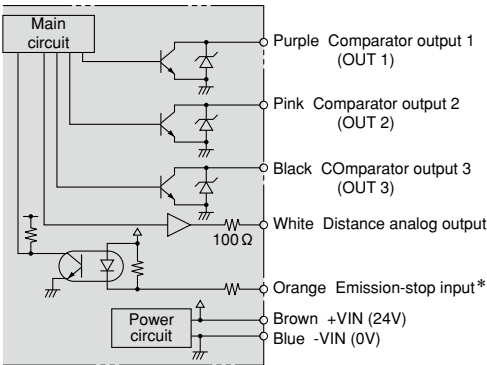
*It doesn't operate for 200msec after putting power source in.

Input/output circuit

PD-10M



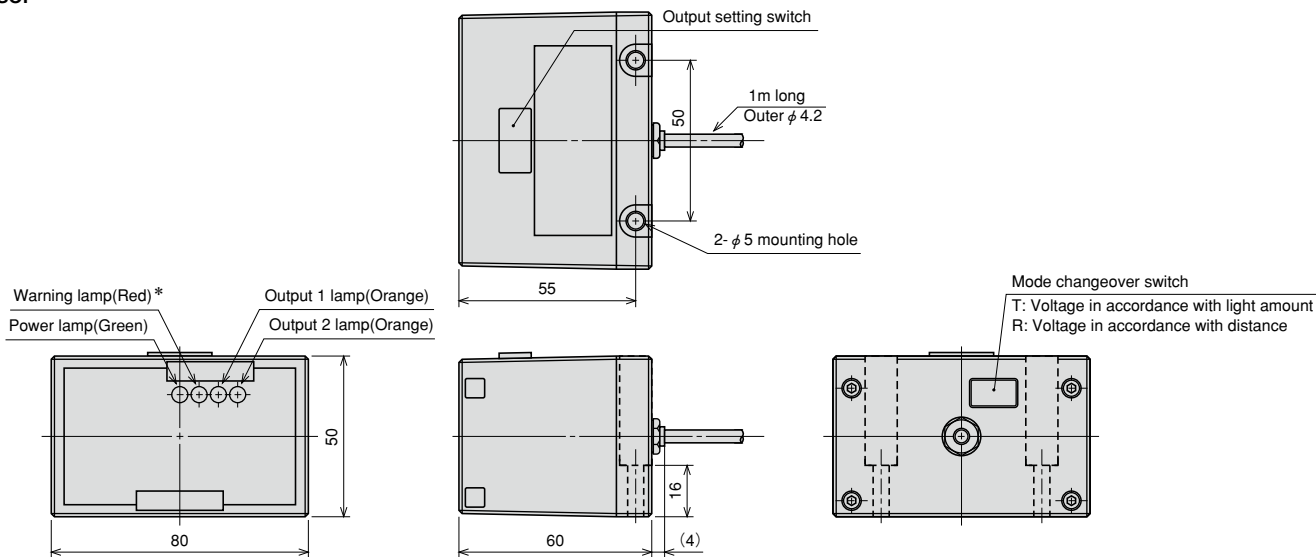
PD-8NM1



* Light-emission stops by shorted between emission-stop and -VIN(0V).

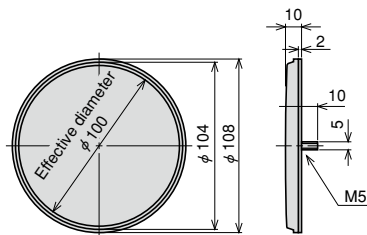
External dimension

Sensor

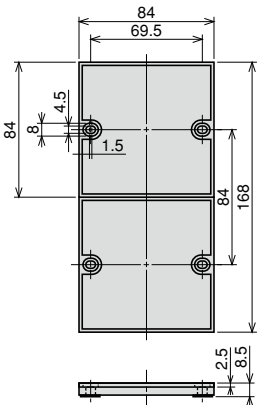


* Output 3 lamp in case of PD-8NM1.

Reflector RRP-100



PD-8NM1 exclusive reflector



Note) Make sure to use 2 pcs of reflector attached in case of PD-8NM1.