



Photoelectric Sensor
V3, V4 SERIES
 AC/DC Type

- V4T/V3T-4000
- V4R/V3R-1000
- V4D/V3D-130

**INSTRUCTION
 MANUAL**

- Confirm if the item meets your needs.
- Before the use, you should first thoroughly read this manual and operate correctly as mentioned.
- You should keep this manual at hand for proper use.

SPECIFICATIONS

		AC/DC type					
		Through Beam		Retro Reflection		Diffused Reflection	
Connection	Terminal Chamber	Cable	Terminal Chamber	Cable	Terminal Chamber	Cable	
Item	Type	V4T-4000	V3T-4000	V4R-1000	V3R-1000	V4D-130	V3D-130
Supply Voltage		DC24~240V ±10% AC24~240V ±10% 50/60Hz					
Current Consumption		9.5VA (Transmitter 5VA, Receiver 4.5VA)				5VA	
Light Source		Red LED (680nm)					
Detecting Distance		40m				1.3m	
Hysteresis		—					
Sensitivity Adjustment		One turn volume					
Response Time		20ms					
Indicator		Output Indicator (Orange LED)					
Operating Mode		Light ON					
Control Output		Relay Output 1Form C AC240V / DC30V, 3A max.					
Relay Lifetime		Mechanical : 5 × 10 ⁶ / Electrical : 10 ⁶					
Environmental Sun Light		10,000lx					
Illuminance Incandescent Light		3,000lx					
Ambient Temperature		-25 ~ 55°C					
Ambient Humidity		35 ~ 85 %/RH					
Strong Temperature/Humidity		-40~70°C/35~95%/RH					
Insulation Resistance		Min.20MΩ / DC500V					
Withstand Voltage		AC2700V 50/60Hz 1minute					
Vibration Resistance		10 ~ 55Hz amplitude 1.5mm X, Y, Z each 2h					
Shock Resistance		500 m/s ² X, Y, Z each 3 times					
Protection Category		IEC 144 IP 66					

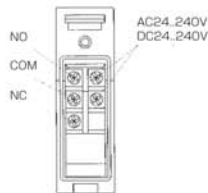
OTHER PRECAUTIONS

- Be careful not to install the sensor at the following locations, as it may otherwise malfunction.
 - Where a lot of dust, vapor, or the like is present.
 - Where corrosive gas is produced.
 - Where water, oil or the like files directly onto the sensor.
 - Where strong vibration or shock is caused to the sensor.
- Do not use organic solvent, such as thinner, to remove contaminants from the body case, lid, and lens which are all of plastics. Using a dry rag, just wipe clean.
- When a switching regulator is to be used with a power supply, be sure to ground the Frame Ground Terminal.
- Do not use the sensor in a transient state at power on. (about 100ms)
- Do not run sensor cable near a high-voltage lines, or power lines or put them together in the same raceway. This warning should be strictly observed to prevent malfunctions caused by inductive interference.

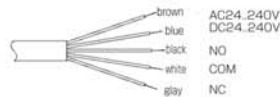
Must not use this item as safety equipment for the purpose of human body protection.

HOW TO USE

AC/DC model Terminal Chamber type

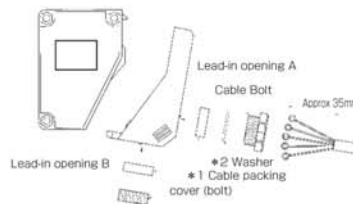


AC/DC model Cable type

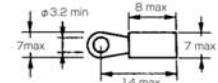


Connection

- Install the cables to match the connection terminal No. as shown below.
- Use either lead-in opening A or B according to the installation method involved.
- Install a cover (bolt) at the lead-in opening not to be used.
 - The figure below shows how the cables are installed when lead-in opening A is used.
 - ※1 Cable packing is selected separately either for cable or cover (bolt) according to cable diameter. Large : φ8~φ10 Small : φ6~φ8
 - ※2 Washer is to be used exclusively to the cable bolt.



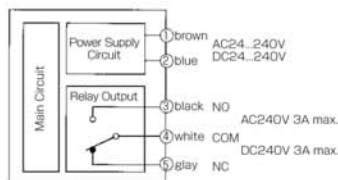
○ Dimensions of applicable solderless terminals



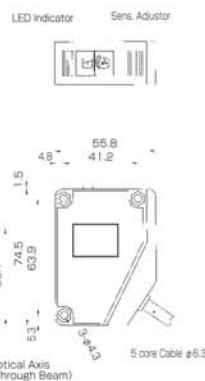
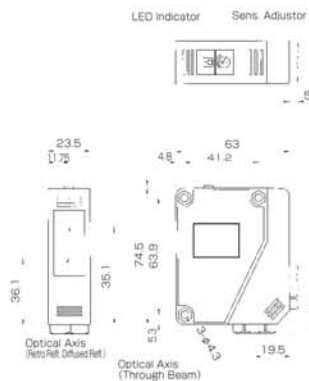
- Use solderless terminals with insulating tube.
- Use 6 to 10 mm diameter cables circular in section to maintain watertightness.
- Wrong wiring may be a cause of burned or damaged sensor. Pay due attention to wiring.
- Be careful not to install the cable near power lines, for otherwise the sensor may malfunction.
- Using the mounting accessories supplied, the sensor can be installed on either floor or wall.

INPUT AND OUTPUT CIRCUIT DIAGRAMS

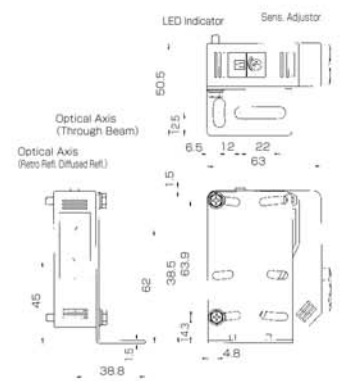
AC/DC type



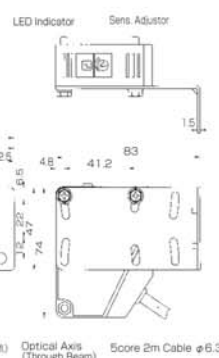
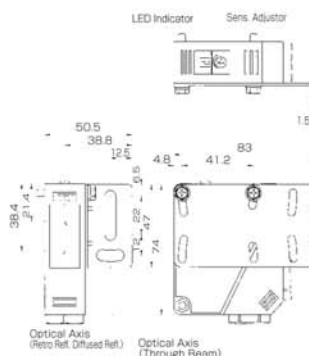
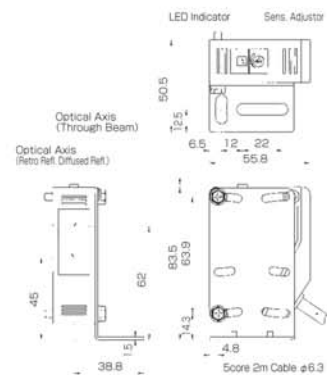
DIMENSIONS



Floor Installation



Wall Installation



- Specifications and equipment are subject to change without any obligations on the part of manufacture.
- For more information, questions and comments regarding products, please contact us below.

Manufactured and sold by :

OPTEX FA CO., LTD.



www.Optex-Ramco.com
 800.280.6933



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DC Type

- V4T/V3T-4000 □□
- V4R/V3R-1000 □□
- V4D/V3D-130 □□

INSTRUCTION MANUAL

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SPECIFICATIONS

Connection	DC type								
	Through Beam			Retro Reflection			Diffused Reflection		
Terminal Chamber	2m Cable	M12 Connector	Terminal Chamber	2m Cable	M12 Connector	Terminal Chamber	2m Cable	M12 Connector	
Item Type	V4T-4000N,P	V3T-4000N,P	V3T-4000CN,CP	V4R-1000N,P	V3R-1000N,P	V3R-1000CN,CP	V4D-130N,P	V3D-130N,P	V3D-130CN,CP
Supply Voltage	DC10~30V ±10%								
Current Consumption	5mA max. (Transmitter 5VA, Receiver 4.5VA)			30mA max.					
Light Source	Red LED (680nm)								
Detecting Distance	40m			10m / Reflector V-61			1.3m		
Hysteresis							20% max.		
Sensitivity Adjustment	One turn volume								
Response Time	0.5ms								
Indicator	Output Indicator (Orange LED)								
Operating Mode	Light ON/Dark ON selectable by Switch								
Control Output	NPN/PNP Open collector DC30V, 100mA max.								
Environmental Illuminance	Sun Light			10,000lx			3,000lx		
Ambient Temperature	Incandescent Light			-25~55°C			35~85%/RH		
Ambient Humidity				-40~70°C / 35~95%/RH			Min. 20M / DC500V		
Storage Temperature/Humidity				10~55Hz amplitude 1.5mm X,Y,Z each 2h			500m/s ² X,Y,Z each 3 times		
Shock Resistance				IEC144 IP66					
Protection Category									

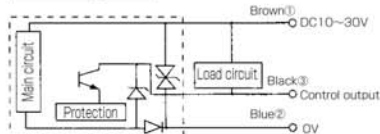
OTHER PRECAUTIONS

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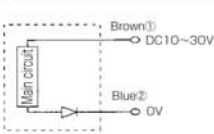
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INPUT AND OUTPUT CIRCUIT DIAGRAMS

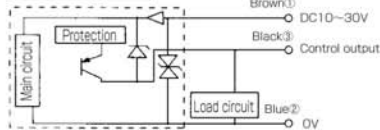
NPN type



Through beam emitter

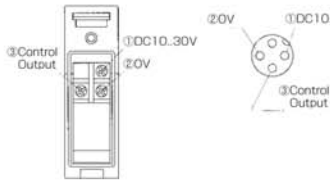


PNP type



HOW TO USE

Terminal Chamber type M12 Connector type

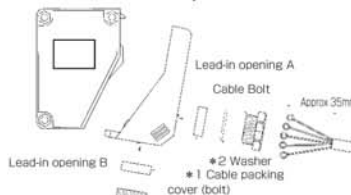


Cable type

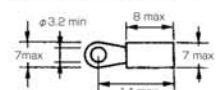


Connection

- Install the cables to match the connection terminal No. as shown below.
- Use either lead-in opening A or B according to the installation method involved.
- Install a cover (bolt) the lead-in opening not to be used.
- The figure below shows how the cables are installed when lead-in opening A is used.
 - ※1 Cable packing is selected separately either for cable cover (bolt) according to cable diameter.
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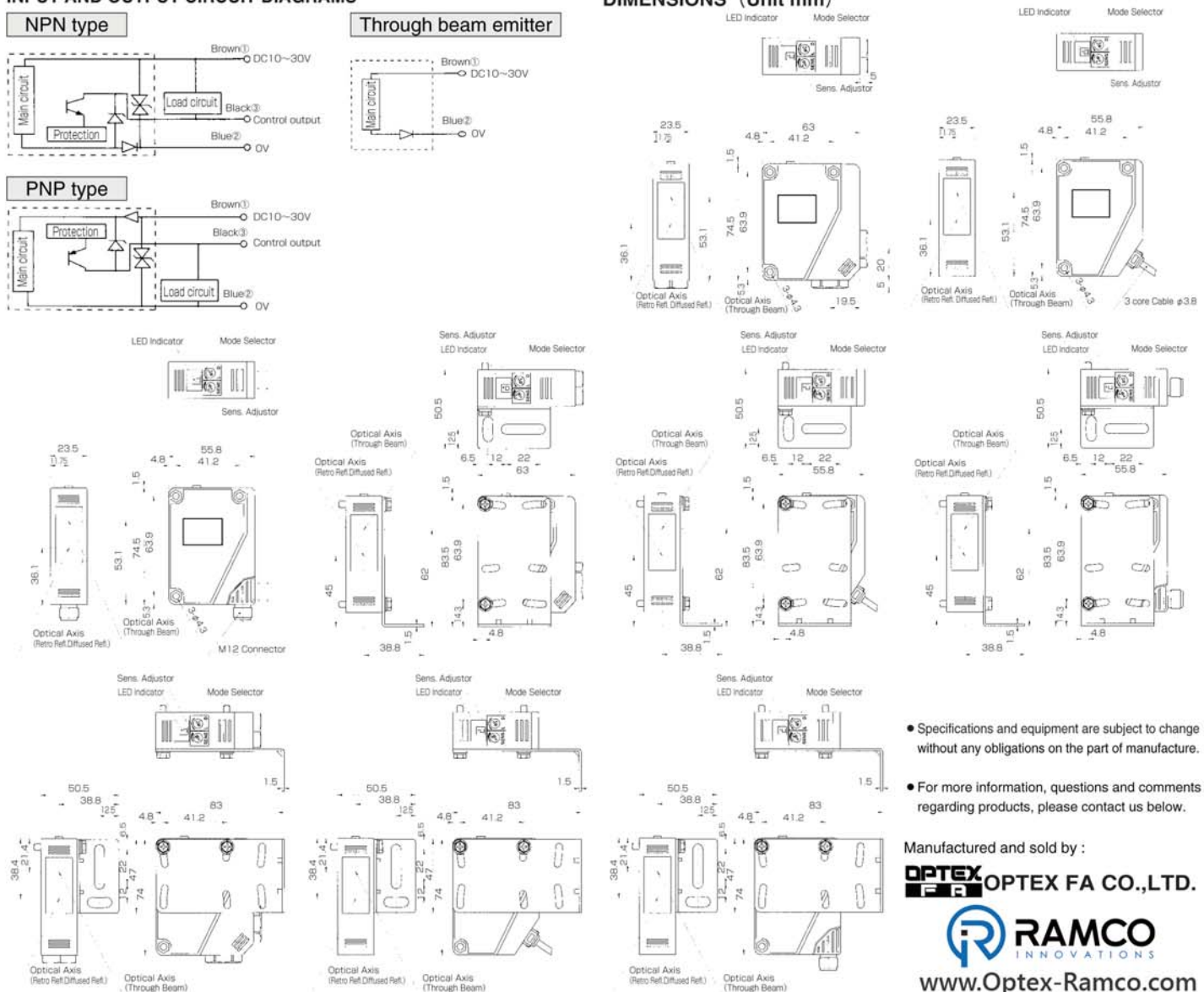


○ Dimensions of applicable solderless terminals



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- Use 6 to 10 mm diameter cables circular in section to maintain watertightness.
- Wrong wiring may be a cause of burned or damaged sensor. Pay due attention to wiring.
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DIMENSIONS (Unit mm)



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