



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

Connection	AC/DC type					
	Through Beam		Retro Reflection		Diffused Reflection	
Terminal Chamber	Cable	Terminal Chamber	Cable	Terminal Chamber	Cable	
Item	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			10m / Reflector V-61		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 Illuminance	10,000lx 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					

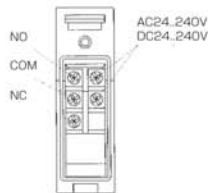
OTHER PRECAUTIONS

- 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.

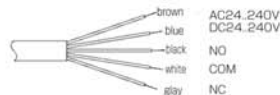
Must not use this item as safety equipment for the purpose of human body protection.

HOW TO USE

AC/DC model Terminal Chamber type

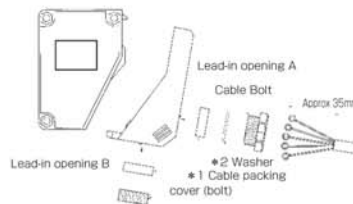


AC/DC model Cable type

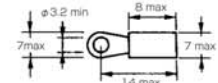


Connection

- 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.



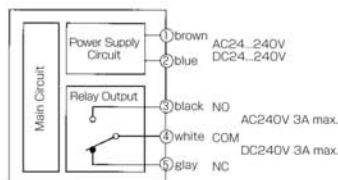
○ Dimensions of applicable solderless terminals



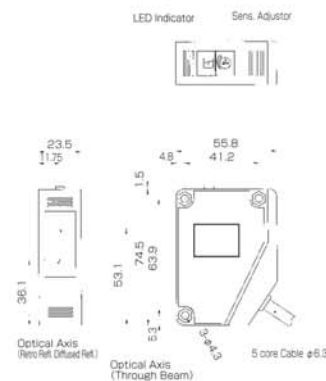
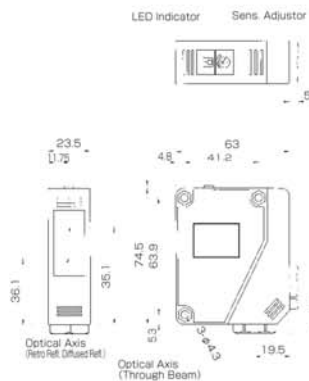
- Use solderless terminals with insulating tube.
- Use 6 to 10 mm diameter cables circular in section to maintain watertightness.
- Wrong wiring may be a cause of burned or damaged sensor. Pay due attention to wiring.
- Be careful not to install the cable near power lines, for otherwise the sensor may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

INPUT AND OUTPUT CIRCUIT DIAGRAMS

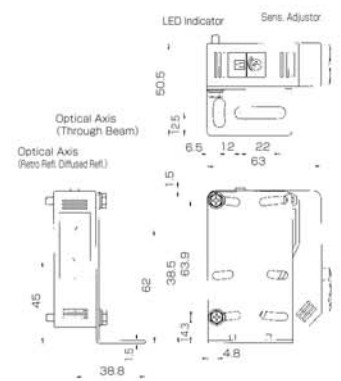
AC/DC type



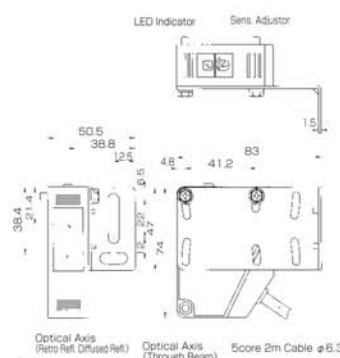
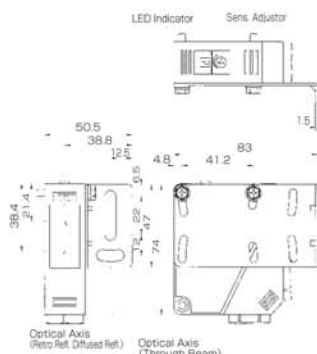
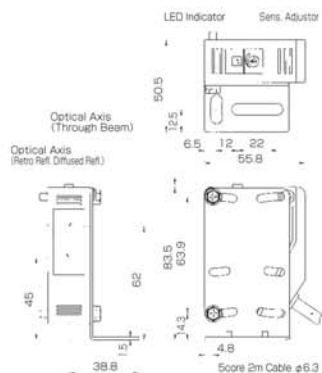
DIMENSIONS



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



Photoelectric Sensor V3, V4 SERIES

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

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 Sun Light Illuminance	10,000lx 3,000lx								
Ambient Temperature	-25~55°C								
Ambient Humidity	35~85%/RH								
Storage Temperature/Humidity	-40~70°C/35~95%/RH								
Insulation Resistance	Min.20MΩ/DC500V								
Vibration Resistance	10~55Hz amplitude 1.5mm X,Y,Z each 2h								
Shock Resistance	500m/s ² X,Y,Z each 3 times								
Protection Category	IEC144 IP66								

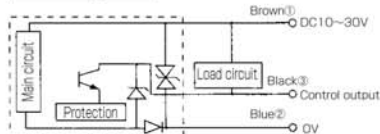
OTHER PRECAUTIONS

- 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.

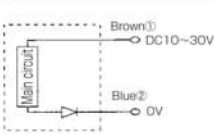
Must not use this item as safety equipment for the purpose of human body protection.

INPUT AND OUTPUT CIRCUIT DIAGRAMS

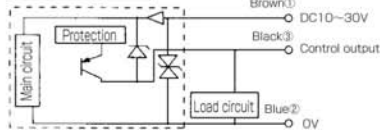
NPN type



Through beam emitter

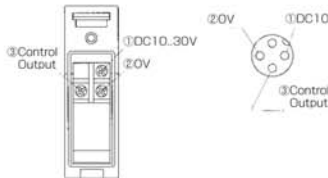


PNP type



HOW TO USE

Terminal Chamber type M12 Connector type

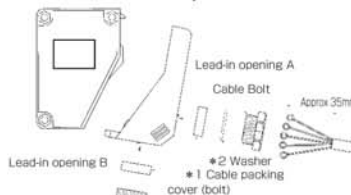


Cable type

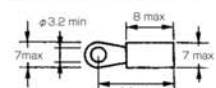


Connection

- 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.
 - Large : φ8~φ10 Small : φ6~φ8
 - ※2 Washer is to be used exclusively to the cable bolt.

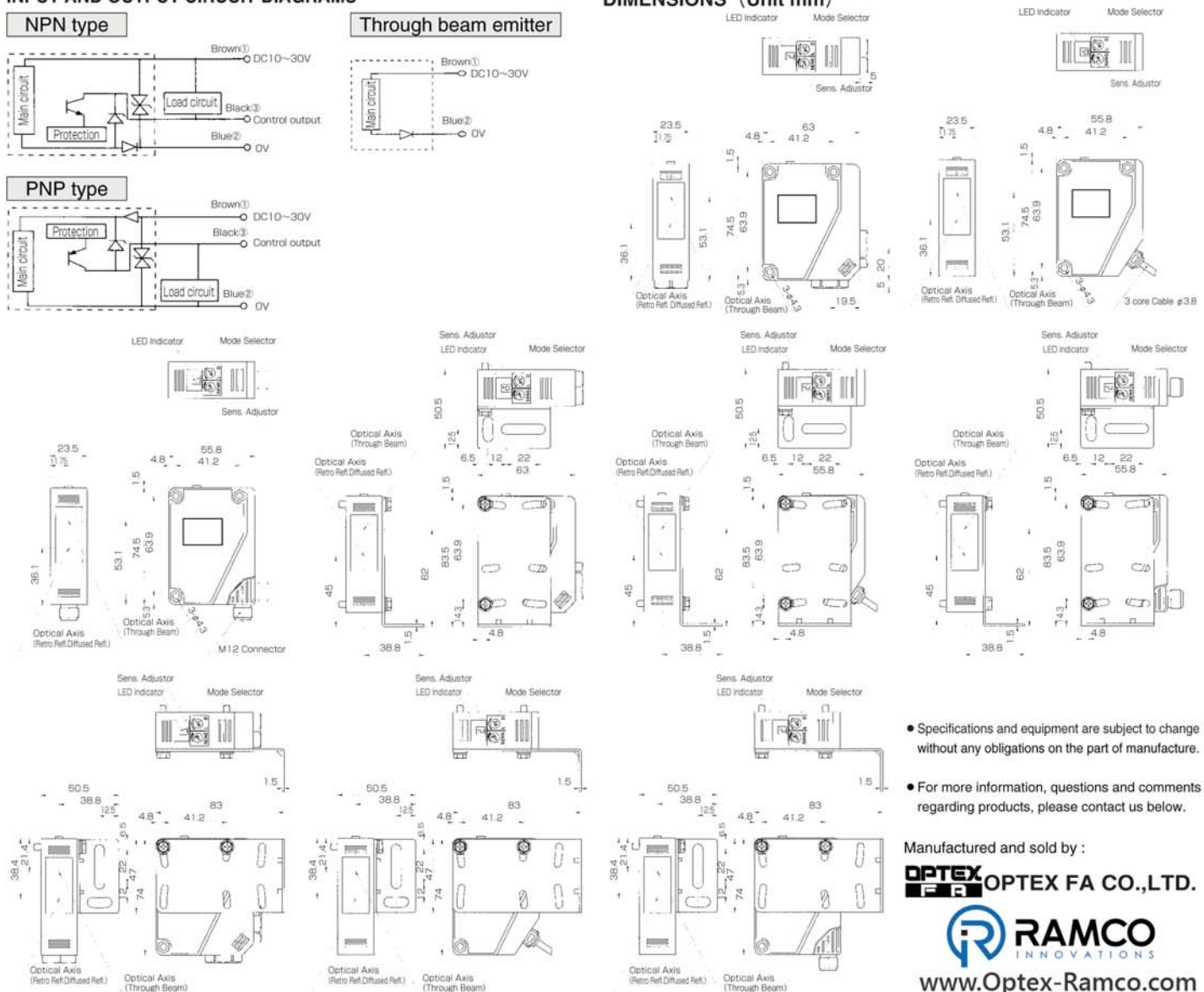


○ Dimensions of applicable solderless terminals



- 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.

DIMENSIONS (Unit mm)



● 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