

# INSTRUCTION MANUAL

## AC/DC type PHOTOELECTRIC SENSOR V3, V4-SERIES

- Thank you for purchasing V3, V4 series photoelectric sensor. Check that the specifications agree with yours.
- Please read this manual through before using the sensor, and retain it for future reference.

### 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	20% max.					
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 X 10 <sup>7</sup> / Electrical : 10 <sup>6</sup>					
Environmental Illuminance	Sun Light 10,000lx		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 <sup>2</sup> X, Y, Z each 3 times					
Protection Category	IEC 144 IP 66					

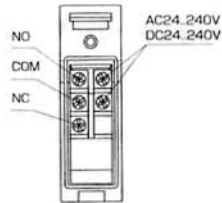
### OTHER PRECAUTIONS

- 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.

• Do not use this product at a safety device for ensuring safety of persons.

### HOW TO USE

#### AC/DC model Terminal Chamber type

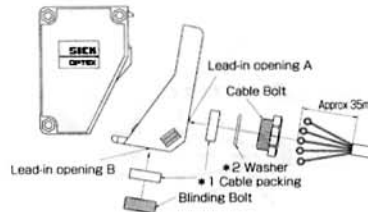


#### AC/DC model Cable type

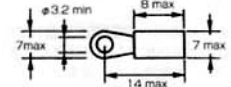


#### Connection

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



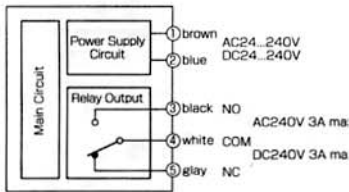
#### ○ Dimensions of applicable solderless terminals



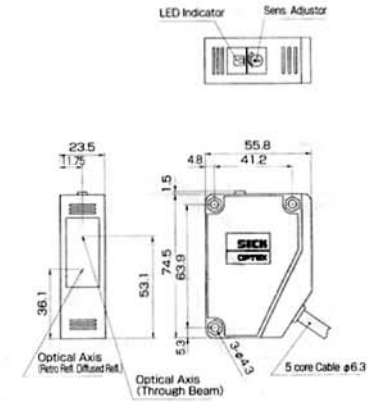
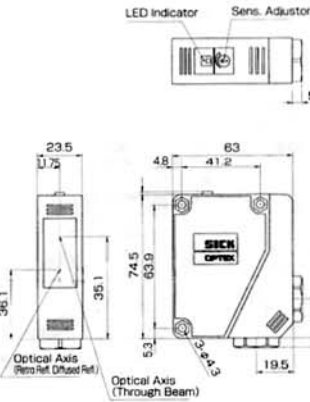
- Use solderless terminals with insulating tube.
- Use 6 to 10 mm diameter cables circular in section to maintain watertightness.
- Wrong wiring may be a cause of burned or damaged sensor. Pay due attention to wiring.
- Be careful not to install the cable near power lines, for otherwise the sensor may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

### INPUT AND OUTPUT CIRCUIT DIAGRAMS

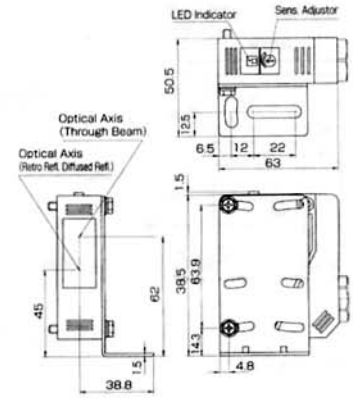
#### AC/DC type



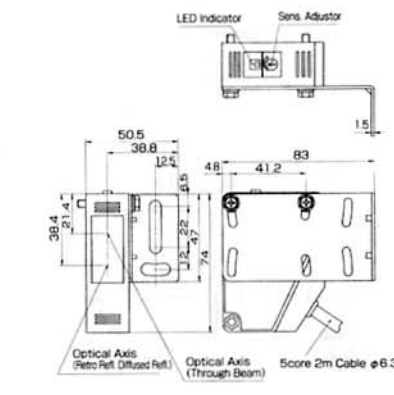
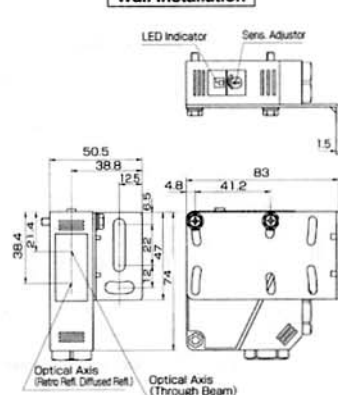
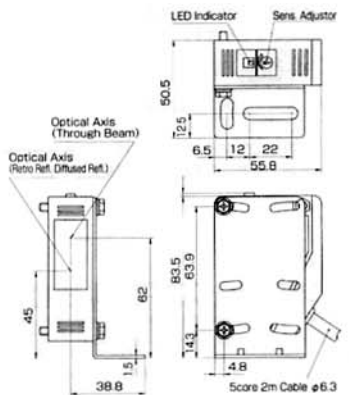
### DIMENSIONS



### Floor Installation



### Wall Installation



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