



Photoelectric Sensor
BGS-V2000 SERIES
 AC/DC Type
 DC Type

AC/DC Type
 ·BGS-V2000 ·BGS-V2000T
 DC Type
 ·BGS-V2000□□

**INSTRUCTION
 MANUAL**

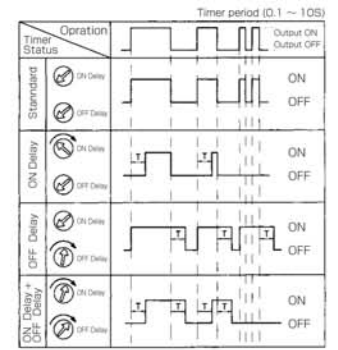
- Confirm if the item meets your needs.
- Before the use, you should first thoroughly read this manual and operate correctly as mentioned.
- You should keep this manual at hand for proper use.

SPECIFICATIONS

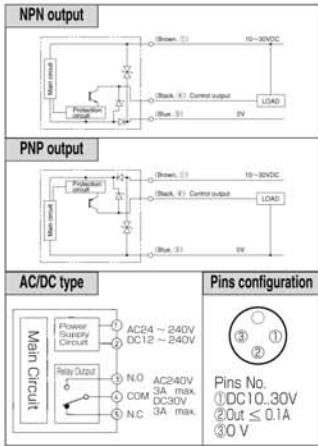
Cable type Connector type	AC/DC type	DC type
	BGS-V2000(T)	BGS-V2000(N,P) BGS-V2000(CN,CP)
Detection distance detecting object	0.5-2m *1 Opaque object	
Supply voltage	DC12~240V±10% AC24~240V±10% 50/60Hz	DC10~30V±10%
Current consumption	5VA max.	50mA max.
Response time	20ms max.	5ms max.
Hysteresis	15% max.(on 1m)	5% max.(on 2m)
Light Source	IR LED	
Sensitivity adjustment	Teaching button	
Timer function	ON/OFF Delay 1 ~ 10 sec.	—
Indicator	Output indicator(orange LED), Stable incident indicator Green LED	
Control output	Relay output 1c AC240V 3A max. DC30V 3A max.	NPN/PNP Open collector DC30V 100 mA max.
Operation mode	Light ON	Light ON Dark ON Selectable by switch
Connection	Terminal base	Terminal base/M12 connector
Insulation Resistor	20MΩ min. (DC500V)	
Withstand Voltage	AC2700V 1 minute	
Ambient temp./humidity	-25~55°C/35~95%	
Ambient light	Sunlight : F10,000lx max. Incandescent lamp : 3,000 lx max.	
Protection category/Material	IP67 Case : ABS Lens : PC	
Weight	110g *2	95g *2

*1 0.5m×0.5m white paper *2 without cable

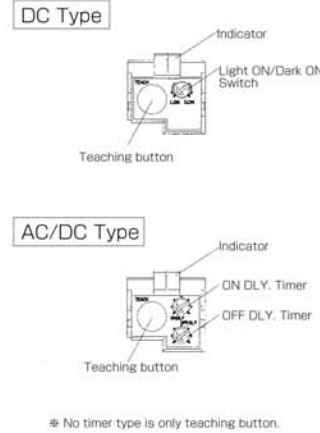
TIMER CHART



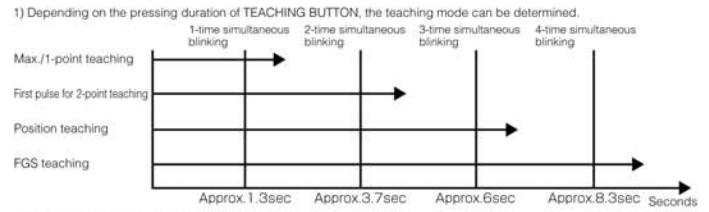
INOUT AND OUTPUT CIRCUIT DIAGRAMS



PARTS NAME



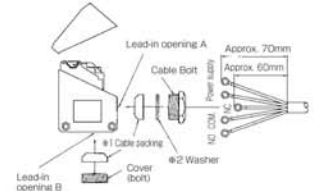
TEACHING PROCEDURE (SENSITIVITY ADJUSTMENT)



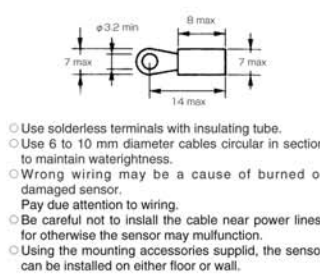
- 1) Depending on the pressing duration of TEACHING BUTTON, the teaching mode can be determined.
- *Sensitivity is set at Max. in default state.
- MAX. TEACHING (Max. sensitivity adjustment)**
 - Press the button without any objects/background.
 - Release the button after the indicators simultaneously blink 1 time.
 - Teaching is complete.
- ONE-POINT TEACHING**
 - Press the button onto the background(Without objects).
 - Release the button after the indicators simultaneously blink 1 time.
 - Teaching is complete.
- TWO-POINT TEACHING**
 - Press the button until indicators simultaneously blink, 2 times. After blinking 2 times, release it. The first point is stored, and then the sensor turns to the input state for the second point starting simultaneous blinking of the indicators.
 - Press the button (Any duration). The indicators simultaneous blink 2 times→Complete. The indicators alternately blink 3 times→Teaching error. Restart from the step 1.
- POSITION TEACHING**
 - Place the object onto light spot where the sensor should be ON, and press the button.
 - Release the button after the indicators simultaneously blink 3 times.
 - Teaching is complete (No OK sign appears). The indicators alternately blink 3 times→Teaching error. Restart from the step 1.
- FGS TEACHING (FGS is a function that detecting range can be adjusted as desired, out of the range is suppressed.)**
 - Press the button onto the background(Without objects).
 - Release the button after the indicators simultaneously blink 4 time.
 - Teaching is complete.

HOW TO USE

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

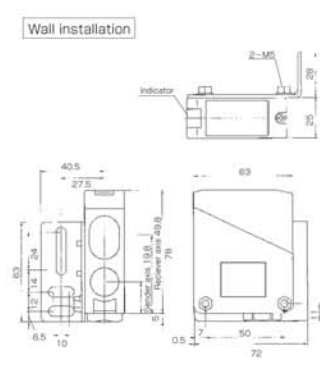
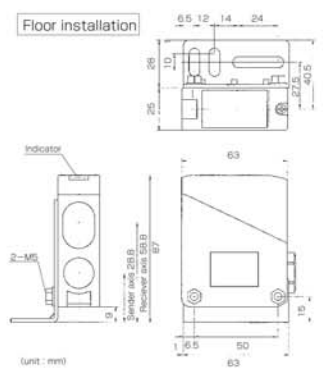


Dimensions of applicable solderless terminals



- 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



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 flies 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 such 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.



- 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.

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