



# Photoelectric Sensor BGS-V2000 SERIES

AC/DC Type  
DC Type

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

## INSTRUCTION MANUAL

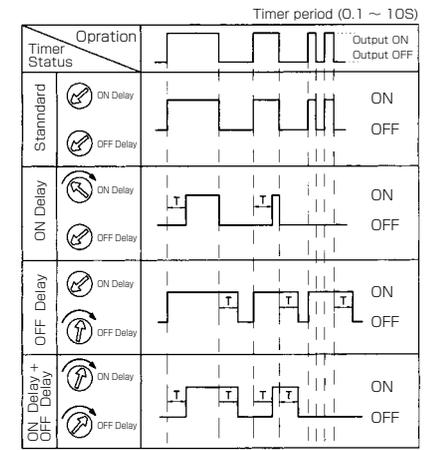
- Confirm if the item meets your needs.
- Before the use, you should first thoroughly read this manual and operate correctly as mentioned.
- You should keep this manual at hand for proper use.

## SPECIFICATIONS

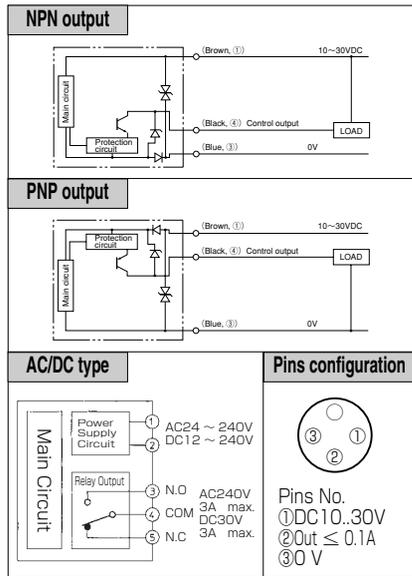
Cable type Connector type	AC/DC type	DC type
	BGS-V2000(T)	BGS-V2000(N,P) BGS-V2000(CN,CP)
Detection distance detecting object	0.5-2m *1 Opaque object	
Supply voltage	DC12~240V±10% AC24~240V±10% 50/60Hz	DC10~30V±10%
Current consumption	5VA max.	50mA max.
Response time	20ms max.	5ms max.
Hysteresis	15% 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	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

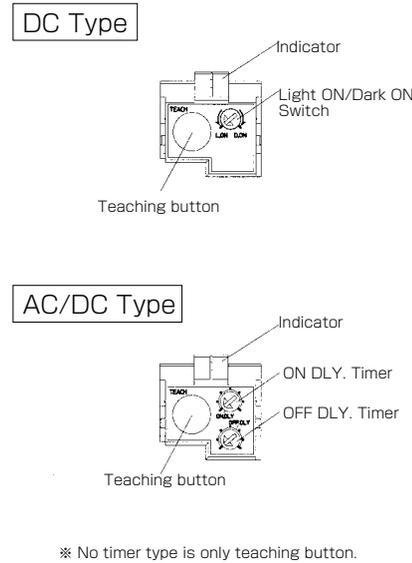
## TIMER CHART



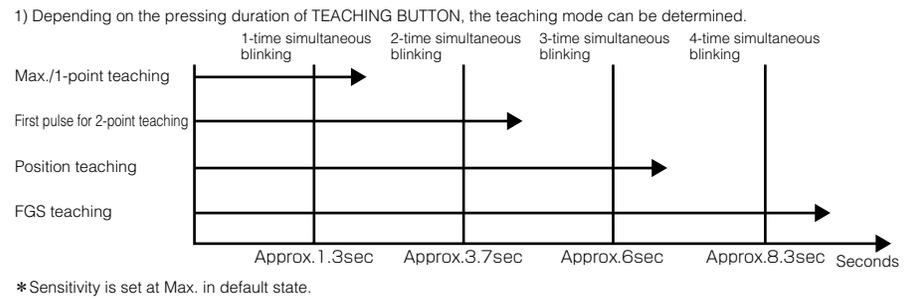
## INOUT AND OUTPUT CIRCUIT DIAGRAMS



## PARTS NAME

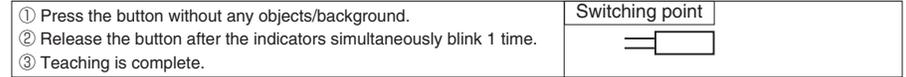


## TEACHING PROCEDURE (SENSITIVITY ADJUSTMENT)

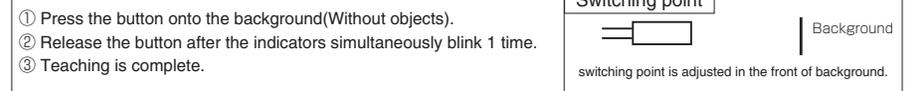


\* Sensitivity is set at Max. in default state.

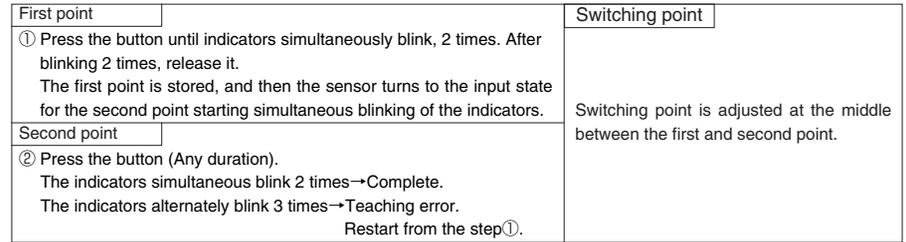
### MAX. TEACHING (Max. sensitivity adjustment)



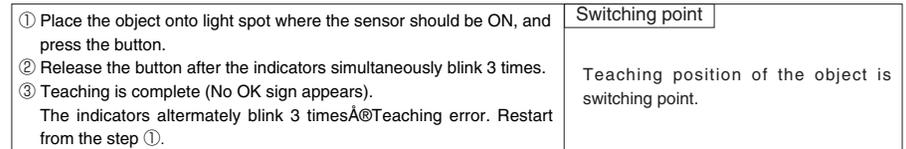
### ONE-POINT TEACHING



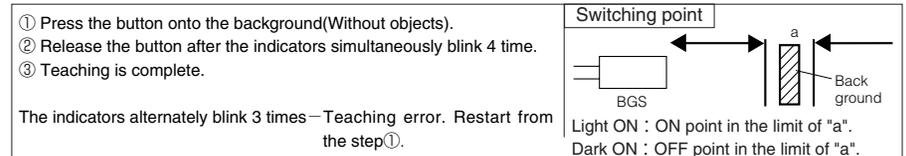
### TWO-POINT TEACHING



### POSITION TEACHING



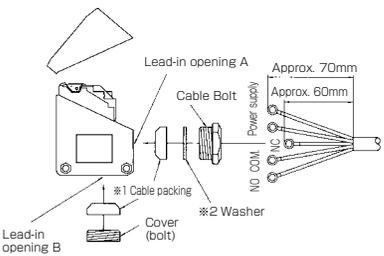
### FGS TEACHING (FGS is a function that detecting range can be adjusted as desired, out of the range is suppressed.)



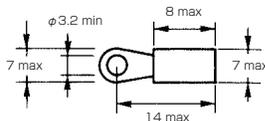
Note:  
1. Releasing the button the indicators simultaneously blink 1 time, the switching point is not stored (Exclude the second point teaching)  
2. In case of teaching error, the sensor is automatically reset, and function with the previous state.

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

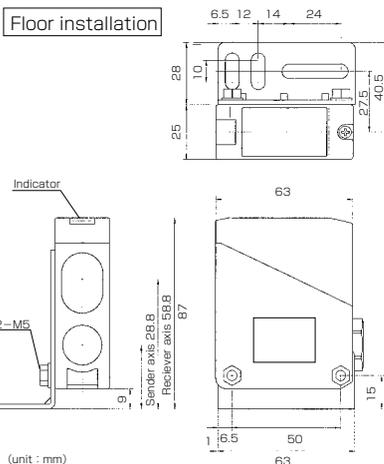


### ○ Dimensions of applicable solderless terminals



- 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.

## DIMENSIONS



(unit : mm)

## OTHER PRECAUTIONS

- Be careful not to install the sensor at the following locations, as it may otherwise malfunctions.
  - 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.

• 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.**

607-8085 Kyoto, Yamashina, Takehanadonomaecho 46-1, JAPAN  
Tel: +81-(0)75-594-8123  
Fax: +81-(0)75-594-8124

Website : <http://www.optex-fa.com>

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