



PHOTOELECTRIC SENSOR

BGS-D SERIES

INSTRUCTION MANUAL

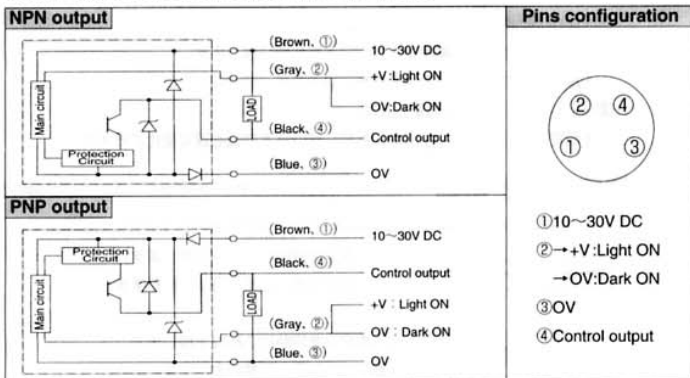
TYPE	BGS		FGS	
	Cable type	BGS-D30 (N,P)	BGS-D10 (N,P)	FGS-D25 (N,P)
Connector type	BGS-D30 (CN,CP)	BGS-D10 (CN,CP)	FGS-D25 (CN,CP)	FGS-D10 (CN,CP)
Pre-settable distance	100-300mm *1	50-100mm *1	100-250mm *1	80±20mm *1
Supply voltage	DC10~30V			
Current consumption	50mA max.(12V), 25mA max.(24V)			
Response time	2ms (~2.5 max.)			
Hysteresis	10% max.	3% max.	10% max.	3% max.
Sender LED	Red LED			
Distance adjustment	Adjust button			
Indicator	Output indicator (orange LED) operation indicator (Green LED)			
Digital indicator	7 Segment Red LED			
Control output	NPN/PNP Open collector DC30V 100mA max.			
Operation mode	Light ON / dark ON Selectable by wiring			
Protective circuit	Reverse-phase connection protection, Short circuit protection, Surge protection			
Ambient temp./Humidity	-25~55°C / 35~95%			
Ambient light	Ambient light Sunlight : 10,000lx max. Incandescent lamp : 3,000lx max.			
Protection category / Material	IP67 Case : ABS Lens : PC Button : NBR Bracket : SUS			
Weight	Cable type about 66g / Connector type about 20g			

*1 10cm x 10cm white paper

- Thank you for purchasing 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.

- Be careful not to install the sensor at the following locations, as it may otherwise malfunction.
 - Where a lot of dust, vapor, or the make 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 is 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 as a safety device for ensuring safety of persons.

INPUT AND OUTPUT CIRCUIT DIAGRAMS



THRESHOLD ADJUSTMENT

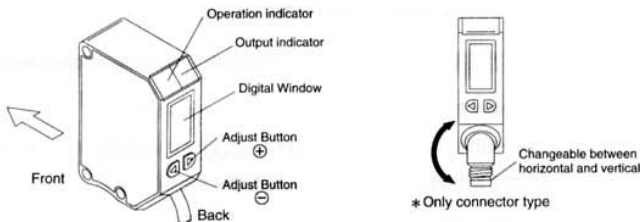
- ① Push Δ / ∇ key, shortly.
- ② Present threshold value is shown and able to be adjustable.
 - ! If the key is not pushed within 5 sec., the sensor is back to detection state(previous setting).
- ③ Adjust threshold by pushing Δ / ∇ key.
 - ! Keep pressing Δ / ∇ key, the value runs fast while adjusting.

KEY LOCK AND UNLOCK

- To avoid unnecessary change of threshold, Δ / ∇ key can be locked.
- LOCK**
- ① Press both Δ ∇ keys more than 2sec...
 - ② LCK appears on the display, and back to detection state.
- UNLOCK**
- ① Press both Δ ∇ keys more than 2sec...
 - ② UNL appears on the display, and back to detection state.

! On LOCK state, present threshold value is shown by pushing Δ / ∇ key. To change threshold, unlock the keys.

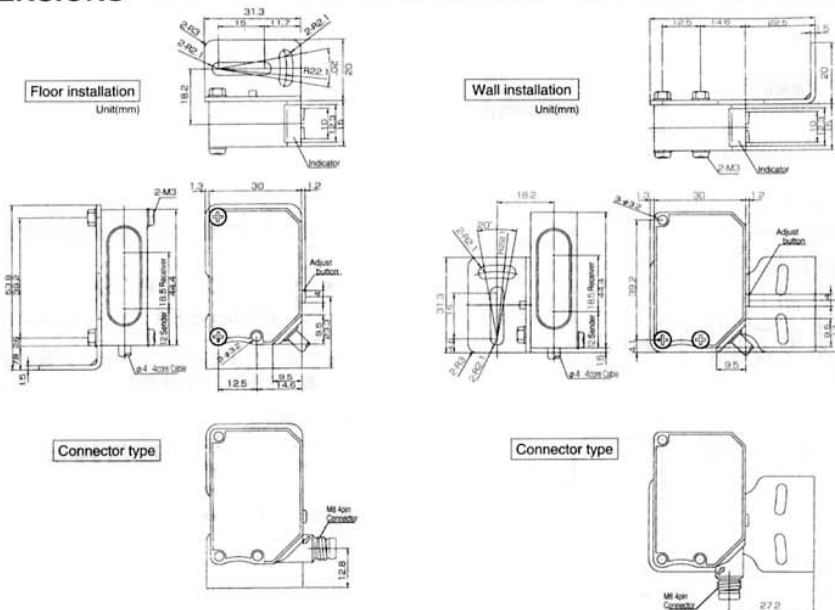
NAME OF PARTS



! DIGITAL DISPLAY

- The value is relative, not absolute distance.
- The display shows $\square\square\square$ or $\square\square\square$ if background or object is out of range.
- The value beomes large, so that the distance from the sensor to the object become far.
- If object approaches over the near-end of detection range, the value may be larger.

DIMENSIONS



Developed by
• OPTEx CO.,LTD.



OPTEx FA CO., LTD.
 46-1 Takehanadounomae-cho Yamashina-ku Kyoto 607-8085 Japan
 TEL +81-75-594-8123 FAX +81-75-594-8124
 http://www.optex.co.jp

2001.11 0550820

Optex-FA U.S. Sales
 Ramco Innovations
 (800) 280-6933
 www.optex-ramco.com