

- BGS-D30 ☐
- BGS-D10 ☐
- FGS-D25 ☐
- FGS-D10 ☐

## 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

TYPE	BGS		FGS	
Cable type	BGS-D30 (N,P)	BGS-D10 (N,P)	FGS-D25 (N,P)	FGS-D10 (N,P)
Connector type	BGS-D30 (CN,CP)	BGS-D10 (CN,CP)	FGS-D25 (CN,CP)	FGS-D10 (CN,CP)
Presettable 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.
Light Source	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℃/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			

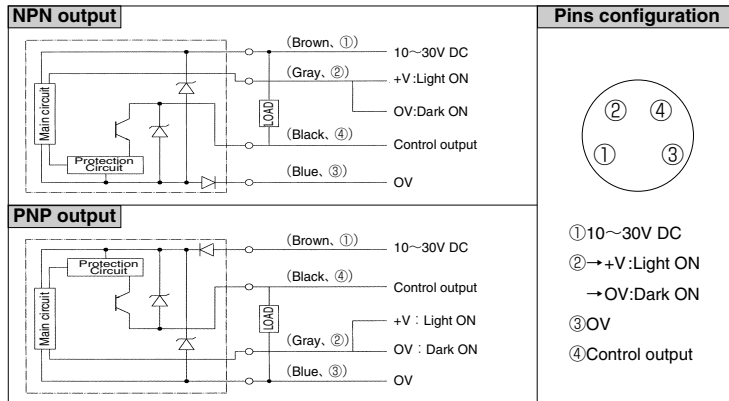
\*1 10cm×10cm white paper

## CAUTIONS

- 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 cased 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.

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

## INPUT AND OUTPUT CIRCUIT DIAGRAMS



## THRESHOLD ADJUSTMENT

- ① Push / , 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 / key.  
! Keep pressing / key, the value runs fast while adjusting.

## KEY LOCK AND UNLOCK

- To avoid unnecessary change of threshold, / key can be locked.
- LOCK**

  - ① Press both keys more than 2sec...
  - ② appears on the display, and back to detection state.
- UNLOCK**

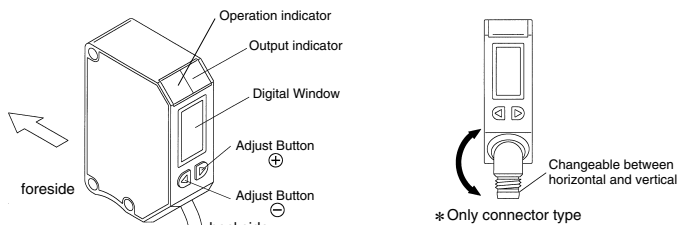
  - ① Press both keys more than 2sec...
  - ② appears on the display, and back to detection state.

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

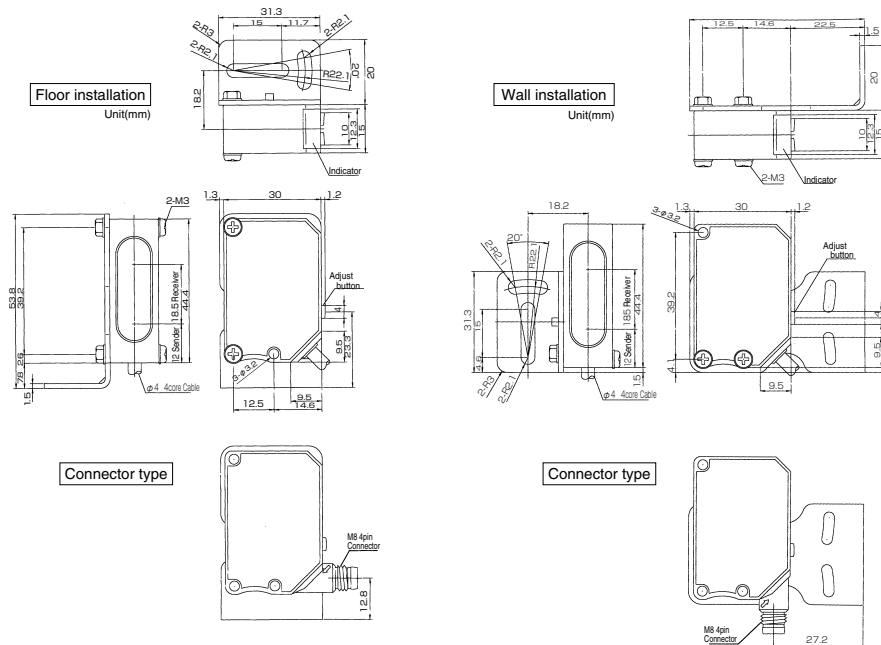
## ! DIGITAL DISPLAY

- The value is relative, not absolute distance.
- The display shows or 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.

## PARTS NAME



## DIMENSIONS



- 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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