

OPTEX
FA

Photoelectric Sensor

D SERIES Laser type

•BGS-DL10T□□(E)
•BGS-DL25T□□(E)

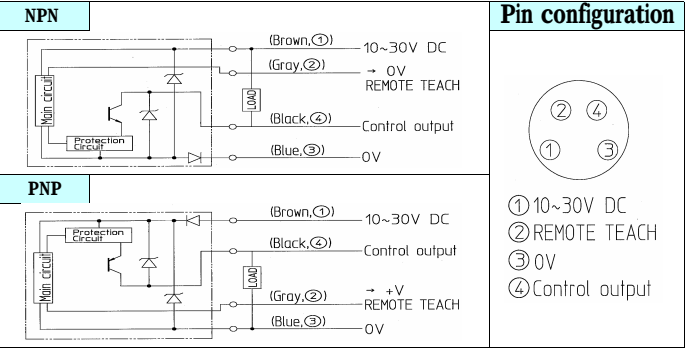
INSTRUCTION MANUAL

● Confirm if the item meets your needs.

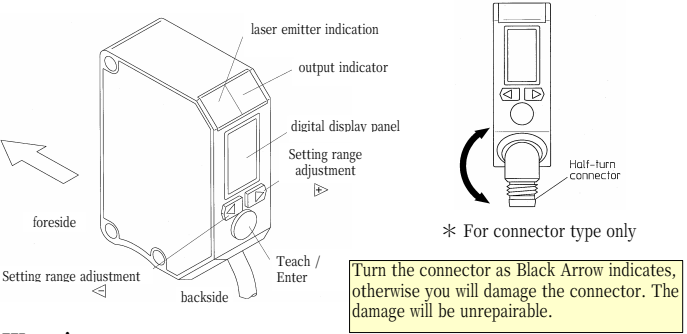
● Before the use, you should first thoroughly read this manual and operate correctly as mentioned.

● You should keep this manual at hand for proper use.

Input/ Output circuit design



Parts name



Warnings
Laser beam

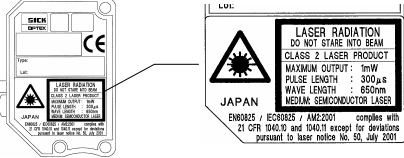
- This item utilizes visible light laser beam and is subject to safety standard class 2(II) of JIS C6802 as well as IEC and FDA regulations.
- Must not stare into laser beam directly or reflection by mirror.
- Must not disassemble.
- Automation stop function of laser emission is not equipped.

Digital indicator

- The numerical display is given in non-linear, and mean just relative values.
- 999 or 000 appears in case background or objects are out of scanning range.
- The far sensor is positioned to object, the bigger numerical value is.

Cautions

- Warm-up period (approx. 100 msec) must be secured.
- Should avoid to use sensor at any place where the receiver is influenced by environmental illuminance directly.
- Gaps in indicated values and detection features are possible due to dispersion.
- Use of controls or adjustments or performance of procedures other than the specified herein may result in hazardous radiation exposure.
- This product have already been registered at CDRH (Center for Devices and Radiological Health).



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

Specification

Type	Accurate type	Longer type
Cable type	BGS-DL10T(N,P)-(E)	BGS-DL25T(N,P)-(E)
M8 connector type	BGS-DL10TC(N,P)-(E)	BGS-DL25TC(N,P)-(E)
Setting range	*1 40~100mm	100~250mm
Supply voltage	DC10 ~ 30V including 10% ripple (P-P)	
Current consumption	40mA max. (12V) , 27mA max (24V)	
Response time	1.5ms max. fixed sensitivity)	
Repeat accuracy	*2 0.3mm/100mm	0.4mm/200mm
Timer	Off delay / On delay / One shot delay (1msec increment :0-999msec, 1sec increment for 1-10sec)	
Light source	Red laser diode (wave :650nm Max. 1mW class 2)	
Indicator	Output indicator (Orange LED), Laser emitter indication(Green LED)	
Digital indicator	7 segment, 3 digits Red LED (function indicator, 0~999 distance index)	
Control output	NPN/PNP open collector DC30V 100mA max.	
Operation mode	Light ON/ Dark ON selectable	
Scanning range adjustment	Teaching /Manual setting	
Ambient temp/ humid	-10~40℃ / 35~85%	
Protection category/ material	IEC standard IP67 housing : heat-resistant ABS(antibacterial) lens : PC button : TEEE	
Weight	cable type: about 68g / connector type: about 20g	

*1 100x100mm gray paper (reflectance 90%) *2 in the direction of optical axis

Setting range and adjustment

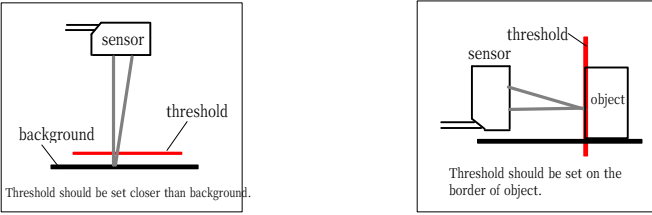
BGS teaching

- ① Choose proper setting between default functions)

- 1-point teaching

- ② Push and hold button until is shown on digital display panel. (about 2 sec.)
 - ③ Present value appears on digital display panel. Then setting range adjustment is done.
- positioning teaching

- ② Push and hold button until is shown on digital display panel. (about 2 sec.)
 - ③ Present value appears on digital display panel. Then setting range adjustment is done.



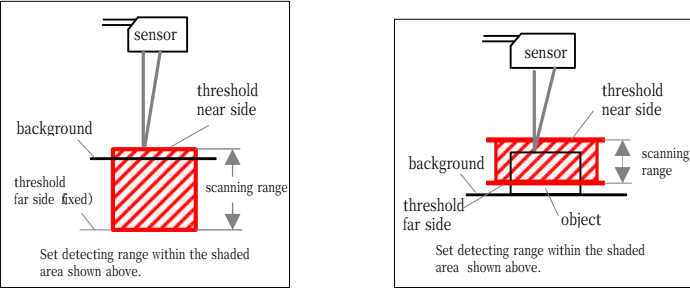
FGS teaching

- ① Choose proper setting between default functions)

- 1-point teaching

- ② Push and hold button on background until appears . (about 2 sec.)
 - ③ Present value appears on digital display panel. Then scanning range adjustment is done.
- 2-point teaching

- ② Push and hold button on background until appears. (first point: about 2 sec.)
 - ③ After blinking on digital display panel, push button on object. (second point)
 - ④ Present value appears on digital display panel. Then scanning range adjustment is done.



Manual setting

BGS/FGS(1-point teaching)

- ① Press button briefly (2 sec. Max). Present value of threshold appears on digital display panel.
- ② While threshold is blinking, adjust with either button. Adjustment range: BGS : 50~950 FGS : 50~930 Push and hold for fast-forwarding)
- ③ Press button, then return to "RUN". Also no button operation for more than 10 sec return to "RUN".

FGS (2-point teaching)

- ① Press button briefly (2 sec. Max).
- ② Choose (near side) or (far side) by either button. Then press button.
- ② While threshold is blinking, adjust with either button. Adjustment range: Near : 50~930 Far : 70~950 Push and hold for fast-forwarding)
- ③ Press button, then return to "RUN". Or no button operation for more than 10 sec returns it to "RUN".

Function to set up

Press button or button until appears on digital display panel (about 2 sec.). After releasing button, function choice is available.

