

Photoelectric Sensors

Optex FA is now the second largest supplier of photoelectric sensors in Japan.

Optex provides an extensive selection of sensors to solve most applications.

All sensors are available in Cabled or M8 QD versions and are offered with a choice of NPN or PNP outputs.

Photoelectric Sensor S series



M8 QD type

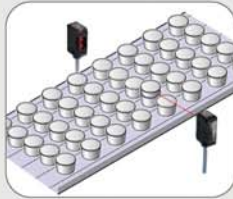
Cable type

Thru-beam type
(Sensing distance : 4m)
· ST-400N / P / CN / CP

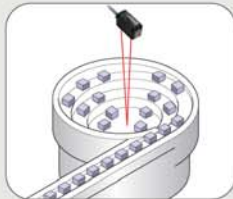
Retro-reflective type with polarizing filter
(Sensing distance : 1.5m)
· SR-150N / P / CN / CP

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Applications



Double feeding of ice cream cup
(ST-400)



Parts feeder
(BGS-S08)

- **BGS functionality built into a small package!**
- **Built-in polarizing filter (Retro-reflective) type.**
- **100G shock resistance rating.**
- **M8 QD for all types.**

Features

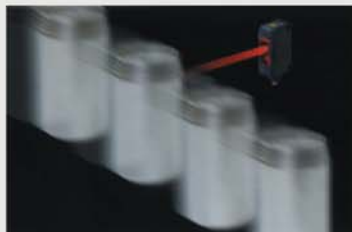
Extremely small BGS type sensors (BGS-S08 and S03) are only 17×10×20 mm. Ideal for use in OEM equipment such as Printed Circuit Board processing machines.

High rigidity for 100G shock resistance / IP67

Rigid design for high resistance to mechanical shock such as contact or collision.

0.5ms high speed response

High speed response even with transparent targets.



BGS-S03, with 1.5φ spot at 30mm distance



Photoelectric Sensor

C

E

J

J2

J3

V

V2

V3

V4

SR-Q

S

Z
BGS-Z

K

FGS-D
BGS-D

BGS-2S

Y

DM-18T

Accessory

Diffuse reflective type

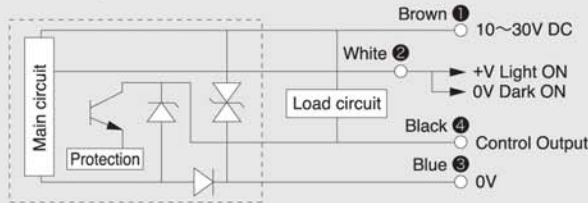
(Sensing distance : 200mm)
 · SR-20N / P / CN / CP

BGS type

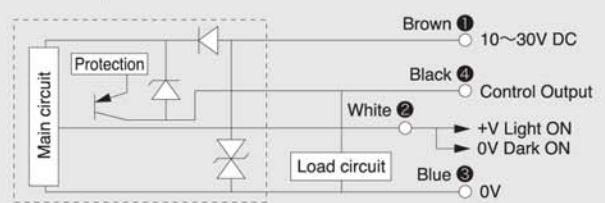
(Sensing distance : 10 to 80mm) (Sensing distance : 10 to 30mm)
 · BGS-S08N / P / CN / CP · BGS-S03N / P / CN / CP

Circuit diagram

NPN output



PNP output



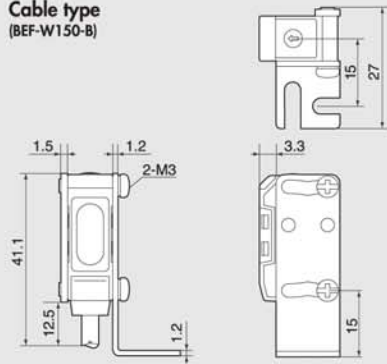
Emitter



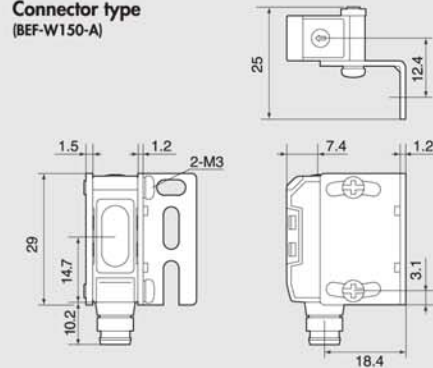
Dimensions

S series

Cable type
 (BEF-W150-B)

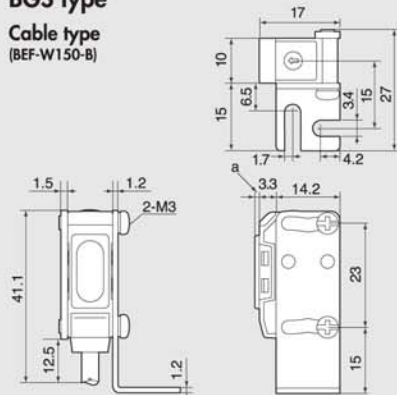


Connector type
 (BEF-W150-A)

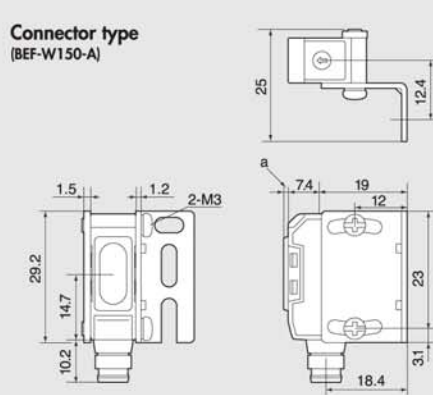


BGS type

Cable type
 (BEF-W150-B)



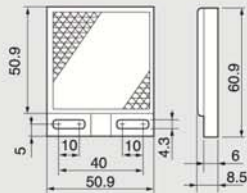
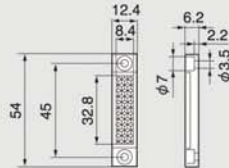
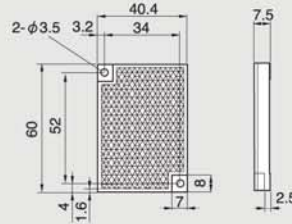
Connector type
 (BEF-W150-A)



<4 Pin configuration>



- C
- E
- J
- J2
- J3
- V
- V2
- V3
- V4
- SR-Q
- S**
- Z
- BGS-Z
- K
- FGS-D
- BGS-D
- BGS-2S
- Y
- DM-18T
- Accessory

Standard reflector V-61

Tiny reflector P-45

Anti-cloud reflector V-60K


(Unit : mm)

Specifications

Model	Thru-beam	Retro-reflective with polarizing Filter	Diffuse reflective	BGS	
Cable type	NPN ST-400N PNP ST-400P	SR-150N SR-150P	SD-20N SD-20P	BGS-S08N BGS-S08P	BGS-S03N BGS-S03P
Connector type	NPN ST-400CN PNP ST-400CP	SR-150CN SR-150CP	SD-20CN SD-20CP	BGS-S08CN BGS-S08CP	BGS-S03CN BGS-S03CP
Sensing distance	4 m	1.5 m	200 mm	10 to 80 mm	10 to 30 mm
Supply voltage	10 to 30V DC including 10% of ripple				
Power consumption	30mA	20mA Max			
Hysteresis	—		20% MAX	10% MAX	
Minimum detectable object	φ 6 opaque object	□ 45mm opaque object	—		
Response time	0.5msec Max				
Control output	NPN or PNP Open collector, 100mA Max / 30V DC				
Operating mode	Light ON / Dark ON selectable				
Sensitivity adjustment	1-turn potentiometer			5-turn potentiometer	
LED Indicator	Red				
Operating temp / humidity	-25 to +55°C / 35 to 85%RH				
Protection category	IP67				
Environmental illuminance	Sun Light:10,000 lux max. Incandescent lamp:3,000 lux max.				
Shock resistance	100G (1,000m/S ²) X,Y,Z, axis 3 times				
Vibration resistance	10 to 55 Hz amplitude 1.5mm, X-Y-Z for 2 hours				
Connection	*Cable type: Cable length 2m φ3.5mm (Longer cable type of 5m is available as option) Connector type: M8 x 4-pin connector*				

Options

Standard reflector V-61

Tiny reflector P-45

Anti-cloud reflector V-60K

**Sensor stand
PLN-1**

**Fixture of Reflector
PLN-1M**
JCN-S : M8 Straight type

 JCN-S : 2 meter
 JCN-5S : 5 meter
 JCN-10S : 10 meter

JCN-L : M8 L-shape type

 JCN-L : 2 meter
 JCN-5L : 5 meter
 JCN-10L : 10 meter

Protective mounting brackets.
**L-shape type
LS-S01**

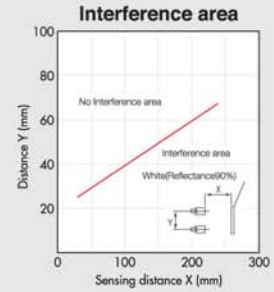
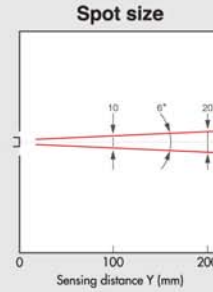
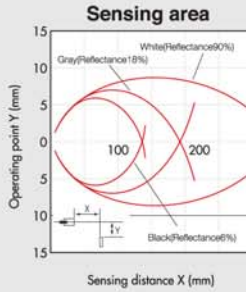
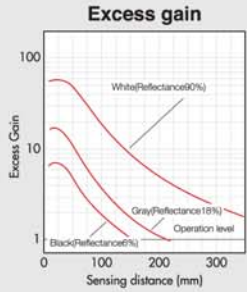
**Straight type
LS-S02**

BL-150-10
Slit mask for ST-400

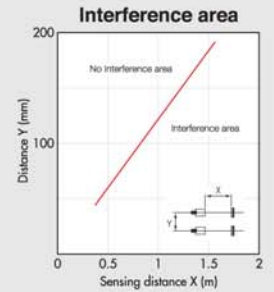
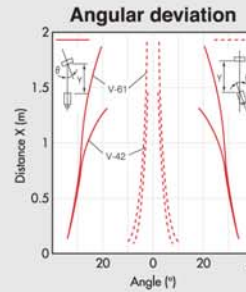
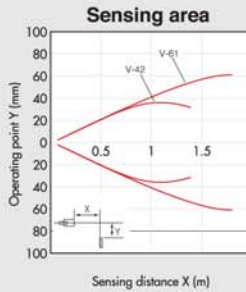
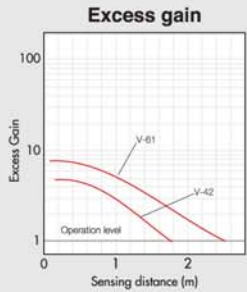

Accessory

Reference (typical)

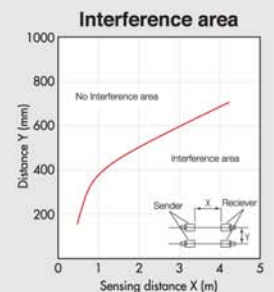
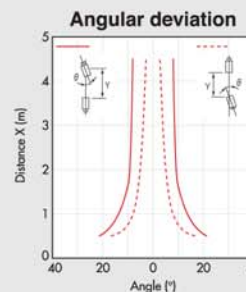
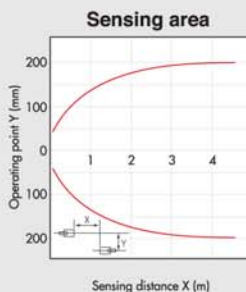
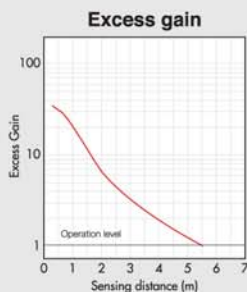
SD-20N



SR-150N



ST-400N



ST-400N & SLIT
BL-150-10

