

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 V2 series



Thru-beam type

(Sensing distance : 20m)
Relay output type · V2T-2000
Transistor output type · V2T-2000DN / DP
M12 QD Transister type · V2T-2000CDN / CDP

Retro-reflective type with polarizing filter

(Sensing distance : 8m)
Relay output type · V2R-800
Transistor output type · V2R-800DN / DP
M12 QD Transister type · V2R-800CDN / CDP

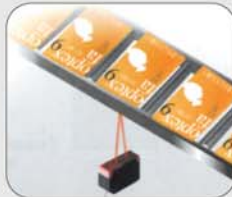
Photoelectric Sensor

- **BGS series with a rugged duty housing.**
- **Up to 80 cm sensing distance (BGS-V80).**
- **The large lenses assure stable sensing.**
- **IP67, QD types are available.**

Applications



**Gate control
(V2T-2000)**



**Magazines on roller conveyor
(BGS-V50)**



**Parking control
(V2T-2000)**



**Tire counting
(V2R-800)**

Features

A large projecting and receiving lens results in a strong projected beam. Ideal for use in tough conditions.

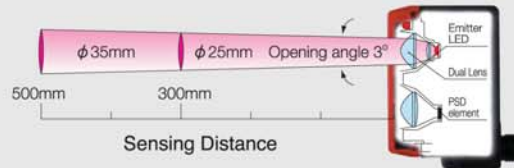


Only 1 cm of dead area



Large projecting and receiving lens assures stable sensing even in misty or dusty conditions.

The sensor uses a condenser lens to project a beam that is only 3 degrees in diameter. This makes it possible to detect small objects at a long distance.



Connector can be rotated for added flexibility when mounting.
(DC Power type)

The connector rotates 90 degrees for added flexibility when mounting.
IP67 is maintained even with the connector.



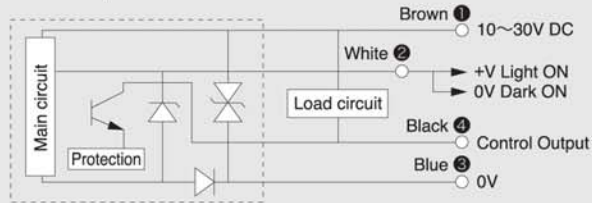
- C
- E
- J
- J2
- J3
- V
- V2**
- V3
- V4
- SR-Q
- S
- Z
- BGS-Z
- K
- FGS-D
- BGS-D
- BGS-2S
- Y
- DM-18T
- Accessory

BGS type

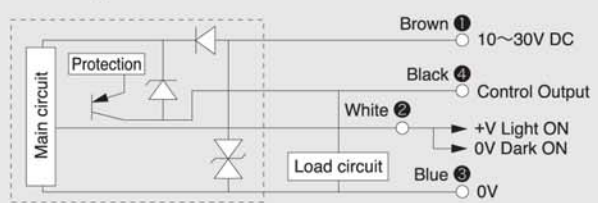
(Sensing distance : 80cm) (Sensing distance : 50cm) (Sensing distance : 30cm)
 ·BGS-V80 / N / P / CN / CP ·BGS-V50 / N / P / CN / CP ·BGS-V30 / N / P / CN / CP

Circuit diagram

NPN output



PNP output

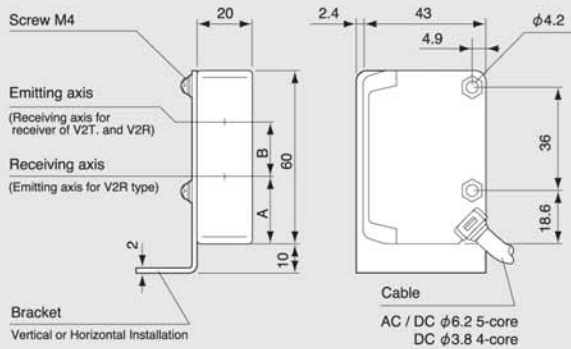


Emitter



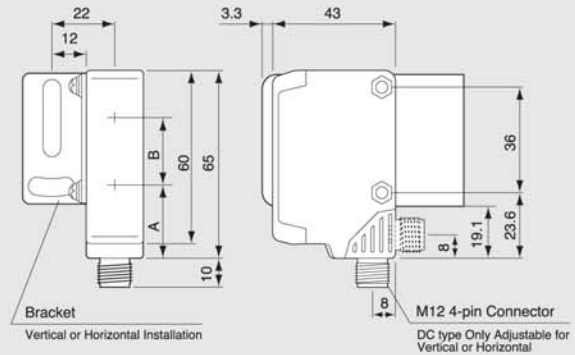
Dimensions

Cable type



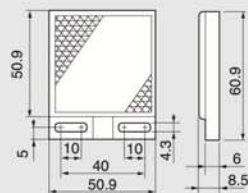
	V2T-2000	V2T-800	BGS-V50	BGS-V30
A	44	19	18	18.7
B	-	17.4	26	25.3

Connector type

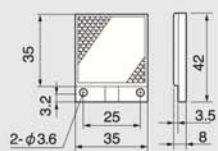


	V2T-2000	V2T-800	BGS-V50	BGS-V30
A	44	19	18	18.7
B	-	17.4	26	25.3

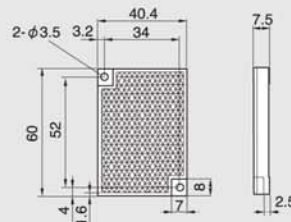
Standard reflector V-61



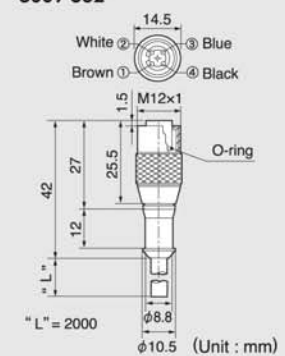
Small reflector V-42



Anti-cloud reflector V-60K



M12 connector cable 6009 382



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

Specifications

Model	Relay Output Type						Transistor Output Type				
	Thru-beam	Retro-reflective	BGS			Thru-beam	Retro-reflective	BGS			
Cable type	NPN V2T-2000	V2R-800	BGS-V80	BGS-V50	BGS-V30	V2T-2000DN	V2R-800DN	BGS-V80N	BGS-V50N	BGS-V30N	
	PNP	Relay contact				V2T-2000DP	V2R-800DP	BGS-V80P	BGS-V50P	BGS-V30P	
Connector type	NPN	—	—	—	—	V2T-2000CDN	V2R-800CDN	BGS-V80CN	BGS-V50CN	BGS-V30CN	
	PNP	—	—	—	—	V2T-2000CDP	V2R-800CDP	BGS-V80CP	BGS-V50CP	BGS-V30CP	
Sensing distance	20 m	8 m	80 cm	50 cm	30 cm	20 m	8 m	80 cm	50 cm	30 cm	
Supply voltage	24-240V AC, or 12-240V DC +/- 10%					10-30V DC including 10% of ripple					
Indicator	Single LED										
Power consumption	2VA Max					35mA Max		25mA Max			
Sensitivity adjustment	2-turn potentiometer										
Response time	1.5msec Max					1msec	0.7msec	2msec			
Control output	Relay output 1C, 250V AC, 0.3A / 30V DC 2A					NPN or PNP open collector (total 100mA 30V DC)					
Hysteresis	NIL		5% Max			NIL		5% Max			
Operating mode	—					Light ON / Dark ON selectable					
Light source	Red LED										
Noise resistance	IEC 1000-4-2, Level 4, IEC 1000-4-3, Level 3, C4525 1000V JIS										
Operating temp / humidity	-25 to +55°C / 35 to 85%/RH										
Environmental illuminance	Sun Light:10,000 lux max. Incandescent lamp:3,000 lux max.										
Shock resistance	50G (500m/s ²) X,Y,Z, axis 3 times										
Protection category	IP67										
Housing material	Housing: ABS Glassfiber reinforced. Front lens: PC (PMMA for retro-reflection)										

Options

Standard reflector V-61



Small reflector V-42



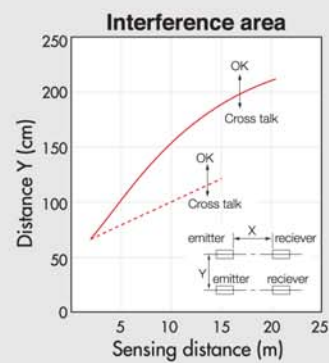
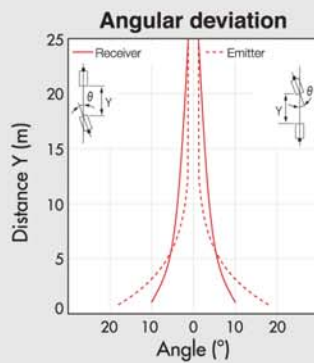
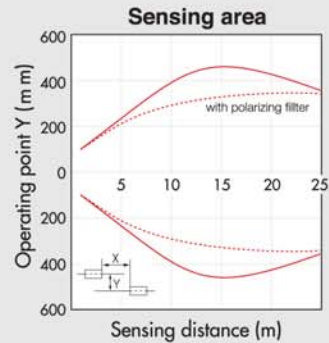
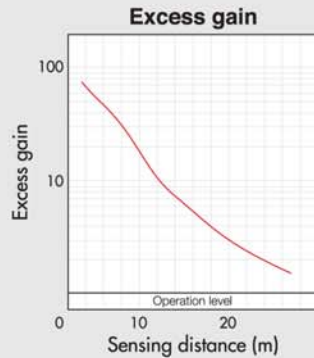
Anti-cloud reflector V-60K


 Connector cable
6009 382

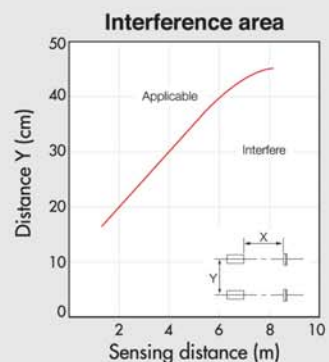
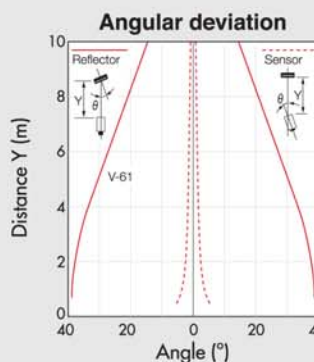
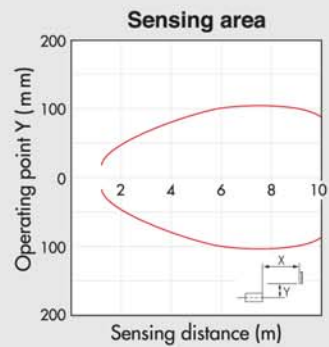
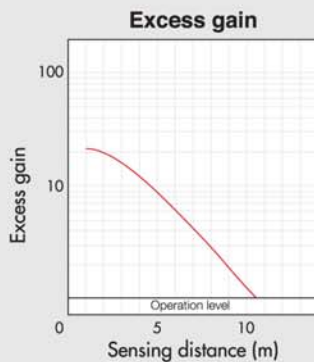

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- BGS-D
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- DM-18T
- Accessory

Reference (typical)

V2T-2000
V2T-2000DN



V2R-800
V2R-800DN



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