

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.

Easy Mount Photosensor Y series

M8 QD type

Cable type

Thru-beam type

(Sensing distance : 30m)
· YT-1180N / P / CN / CP / N-M12 / P-M12

Diffuse-reflective

(Sensing distance : 400mm)
· YD-15N / P / CN / CP / N-M12 / P-M12

Photoelectric Sensor

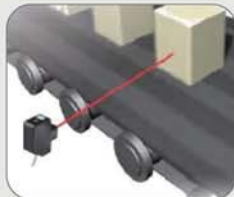
Applications



Verifying car position



For Detecting PWB



For Conveyor



For Beverage industry

- **Complete selection of sensing types including BGS and Transparent Object Detection.**
- **M18 Threaded Front Mounting.**
- **Stable Sensing Even For Plastic/Glass.**

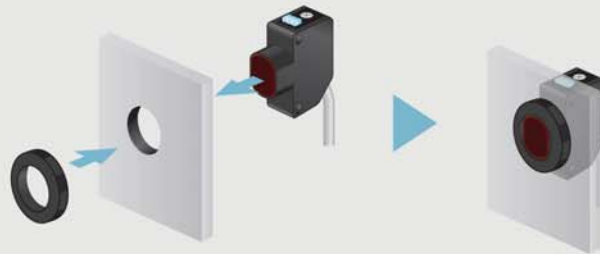
Features

Wide Selection

The Y series is offered with seven different models. Thru-beam, Diffuse, Retro-reflective, Transparent object detection, Convergent Beam (two types) and BGS (Background suppression). There is a model for use in almost any application.

M18 Threaded Front Mounting

The sensor can be easily mounted by inserting into an 18 mm opening. There are also conventional mounting holes in the sensor body for added flexibility.



Pig-tail Connector

M12 pig-tail type are available for easy maintenance.



Rugged Waterproof Construction

The sensor has an IP67 rating. It is ideal for use in applications where it may be exposed to water spray.



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

Polarized Retro-reflective

(Sensing distance : 3.5m)
 · YR-140N / P / CN / CP / N-M12 / P-M12

Retro - Glass

(Sensing distance : 1m)
 · YR-Q39N / P / CN / CP / N-M12 / P-M12

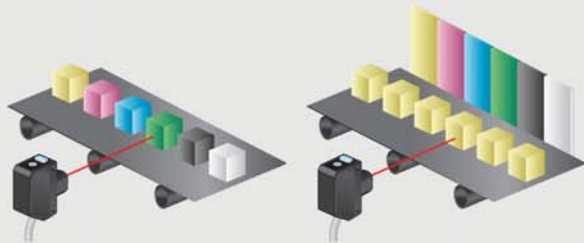
BGS

(Sensing distance : 200mm)
 · BGS-Y8N / P / CN / CP / N-M12 / P-M12

Next page →

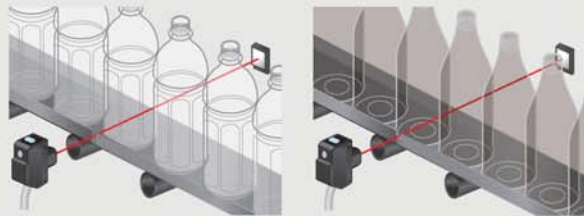
BGS Sensing

BGS (Background Suppression) sensors are not influenced by the color or texture of the target, the sensor is also able to ignore changes in the background.



Stable Sensing Even For Plastic/Glass

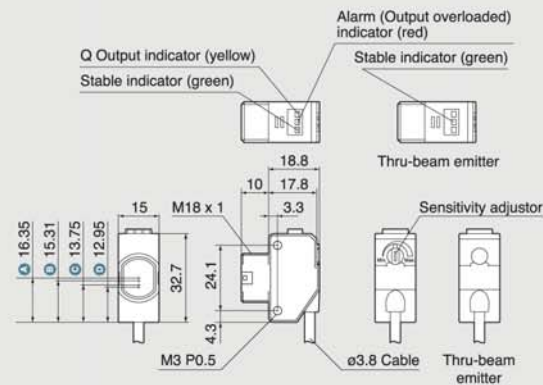
The YR-Q series was designed for the detection of transparent targets. These are ideally suited for clear plastic and glass bottle applications.



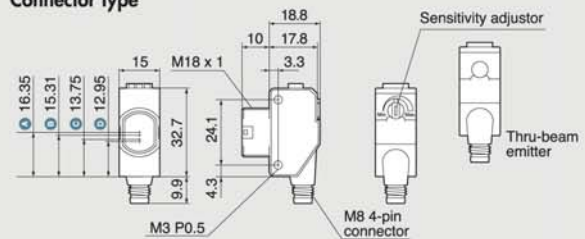
Dimensions

General Use Types except BGS

Cable type



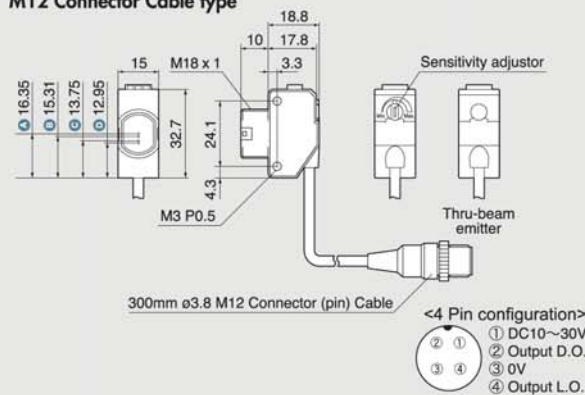
Connector type



<4 Pin configuration>

- ① DC10~30V
- ② Output D.O.
- ③ 0V
- ④ Output L.O.

M12 Connector Cable type



- A Thru-beam type
- B Convergent Beam short range type
- C Convergent Beam standard range type
- D Retro-reflective / Diffuse reflective type

(Unit : mm)

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

Convergent Beam close focus

 (Sensing distance : 16mm)
 · YD-L1N / P / CN / CP / N-M12 / P-M12

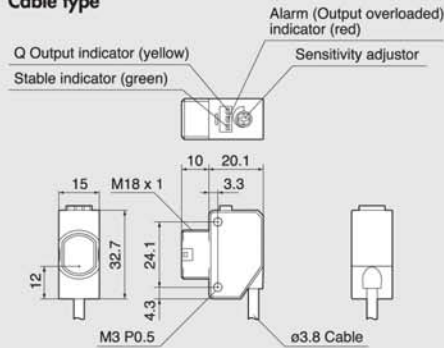
Convergent Beam regular focus

 (Sensing distance : 43mm)
 · YD-L2N / P / CN / CP / N-M12 / P-M12

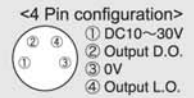
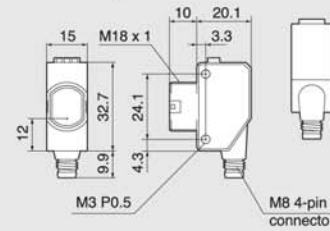
Dimensions

BGS Types

Cable type



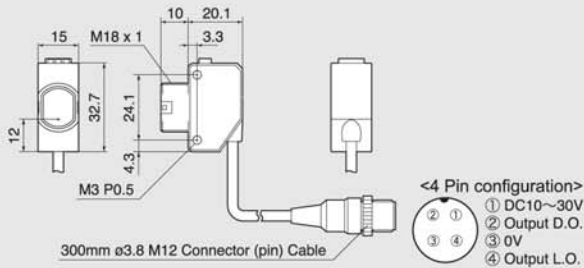
Connector type



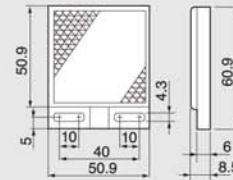
M18 x 1 Nut



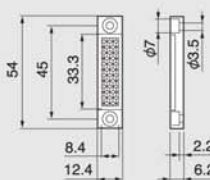
M12 Connector Cable type



V-61 for YR-140



P45A for YR-Q39



(Unit : mm)

Specifications

Model (NPN / PNP different model)	Thru-Beam	Diffuse reflective	Polarized Retro-reflective	Retro - Glass	Convergent Beam		BGS
					close focus	regular focus	
2 meter (approx. 78 inch) cable	YT-1180N / P	YD-15N / P	YR-140N / P	YR-Q39N / P	YD-L1N / P	YD-L2N / P	BGS-Y8N / P
M8 QD	YT-1180CN / CP	YD-15CN / 15CP	YR-140CN / CP	YR-Q39CN / CP	YD-L1CN / CP	YD-L2CN / CP	BGS-Y8CN / CP
M12 pig-tail	YT-1180N-M12 / P-M12	YD-15N-M12 / P-M12	YR-140N-M12 / P-M12	YR-Q39N-M12 / P-M12	YD-L1N-M12 / P-M12	YD-L2N-M12 / P-M12	BGS-Y8N-M12 / P-M12
Sensing distance	30m (1180 inch)	0.4m (15.7 inch)	3.5m (140 inch)	1m (39.3 inch)	16mm (0.6 inch)	43mm (1.7 inch)	200mm (7.9 inch) Setting range : 30-200mm
Light source	Red LED (visible)						
Hysteresis	N/A	20% max.	N/A	N/A	10% max.	10% max.	5%
Response time	0.5msec						
LED Indicator	3 Indicators (green indicator only :Emitter of YT-480) Yellow: output Green: stable Red: alarm - overload						
Operating mode	Light ON and Dark ON outputs provided						
Sensitivity adjustment	1turn potentiometer						4 turn potentiometer
Control output	NPN or PNP open collector, 100mA max. / 30VDC						
Shock resistance	100G , xyz three directions						
Environmental illuminance	Sunlight : 10,000 lux, Incandescent lamp : 3,000 lux max						
Operating temp / humidity	-25°C to 55°C / 35 to 85% RH						
Storage temp / humidity	-40°C to 70°C / 35 to 90 % RH						
Supply voltage	10 - 30VDC incl. 10% ripple						
Power consumption	emitter : 15mA max. 30mA max. receiver : 20mA max.						
Conformity	CE , JIS/C4525						
Circuit protection	Reverse polarity, transient voltages, Output overcurrent						
Material	ABS with 20% glass (case), PMMA (lens)						
Protection category	IEC 144, IP67						

Options

V-61 for YR-140



P45A for YR-Q39



JCN-S : M8 Straight type



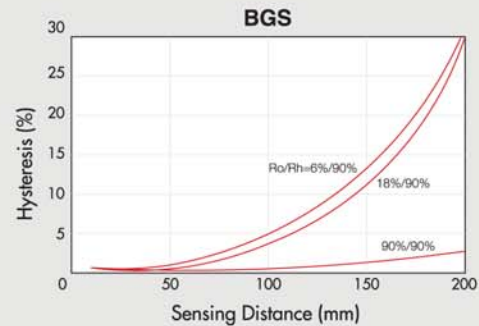
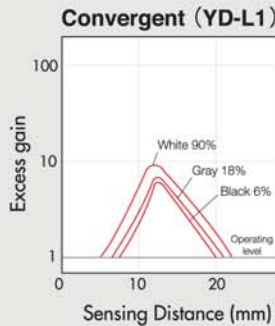
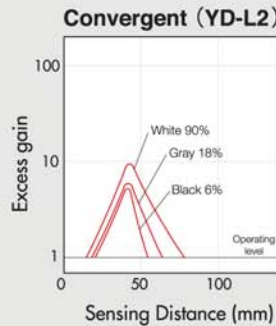
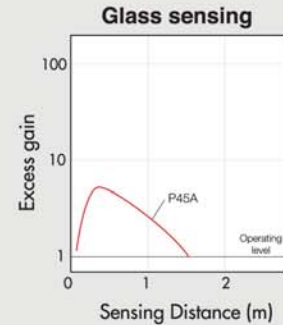
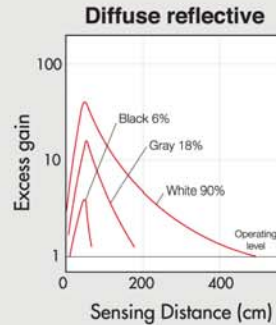
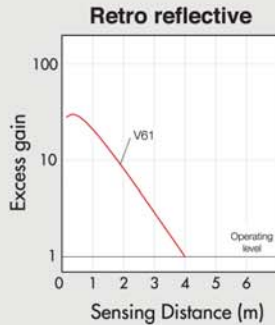
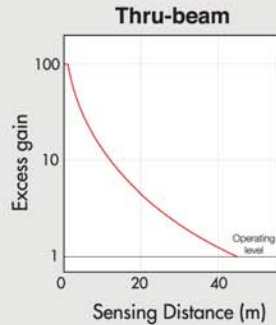
JCN-S : 2 meter
JCN-5S : 5 meter
JCN-10S : 10 meter

JCN-L : M8 L-shape type



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

Reference (typical)



- 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