## Photoelectric Sensors



Bulgin's slim line photoelectric sensor range offers a high degree of mechanical and electrical stability. A cost effective and flexible sensing solution. Designed specifically for manufacturing automation and industrial automation sensing operations.



- Sealed to IP67
- Stainless Steel 316 shell
- Cabled versions with or without connector
- O 2m cable length
- <0.5m/s response time</p>
- NPN & PNP output

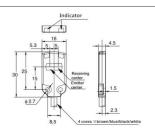
- Sensing Distance 2-40mm / 2-30mm
- Q Light point diameter 5.0mm at 30mm
- O Power supply voltage 12 24 VDC
- Ambient humidity 35 85%
- Operating temperature -10 to 50°C
- Small body, just 4.5mm thick

## Photoelectric Sensors



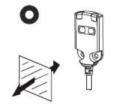


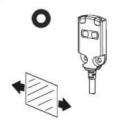
- O Diffuse Reflective IP67 Sensors
- Choice of M5 Connector Termination
- O Stainless Steel 316 Body
- Up to 40mm Sensing Range



Part no.	Operation Mode	Output Configuration	Sensing Distance	Connection Method
SLLP3002M5	Light on	NPN	2 - 30mm	M5
SLDP3002M5	Dark on	NPN	2 - 30mm	M5
SLLN3002M5	Light on	PNP	2 - 30mm	M5
SLDN3002M5	Dark on	PNP	2 - 30mm	M5
SLLP4002M5	Light on	NPN	2 - 40mm	M5
SLDP4002M5	Dark on	NPN	2 - 40mm	M5
SLLN4002M5	Light on	PNP	2 - 40mm	M5
SLDN4002M5	Dark on	PNP	2 - 40mm	M5
SLLP3002CL	Light on	NPN	2 - 30mm	Cable
SLDP3002CL	Dark on	NPN	2 - 30mm	Cable
SLLN3002CL	Light on	PNP	2 - 30mm	Cable
SLDN3002CL	Dark on	PNP	2 - 30mm	Cable
SLLP4002CL	Light on	NPN	2 - 40mm	Cable
SLDP4002CL	Dark on	NPN	2 - 40mm	Cable
SLLN4002CL	Light on	PNP	2 - 40mm	Cable
SLDN4002CL	Dark on	PNP	2 - 40mm	Cable

#### O The way to detect objects correctly

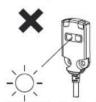




## The wrong way to use the sensor

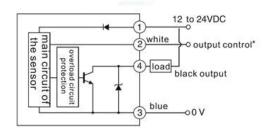
- Use in direct sunlight
  Used in a place of high humidity or dew
  Use in corrosive gas sites
  The use of vibration or shock energy can be directly transmitted to the sensor site.





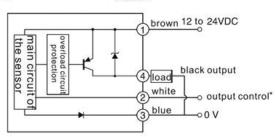
Notice that not to let sunlight or lamp light directly illuminate the sensor's surface when installing.

## ·NPN output



\*DARK-ON mode white ---12 to 24VDC LIGHT-ON mode --- 0V

## ·PNP output



\*DARK-ON mode white ---12 to 24VDC LIGHT-ON mode --- 0V

## Photoelectric Sensors



#### **Electrical:**

**Power Voltage:** 12  $V\sim24$ VDC ( $\pm10\%$ )

Current Consumption: 11 mA

Output Control (normal): NPN output type:

The NPN collector is open below 24VDC, below 50mA Residual voltage: below 10mA, 10~30mA below 1.5V

Below 10mA, when 30~50mA below 2.0V

Leakage current: when load resistance  $3\mbox{K}\Omega$  below 0.3mA

when load resistance 1K $\Omega$  below 0.5mA when load resistance 0.2K $\Omega$  below 1.5mA

Maximum Switching Load Current: 50 mA

## Mechanical:

Operating Temperature: -10 to 50°C

Ambient Humidity: 35-85%

Sealing: IP67

Vibration Resistance: 10-50Hz double amplitudes, X. Y. Z. each direction 2 hours

**Shock Resistance:** 1000m/s², X. Y. Z. each direction 6 times

Cable Length: 02 = 2m

**Termination:** M5 = M5 connector

CL = Blunt cut wire

## **Operation:**

Body:

Indicator: · Out: Red;

· Stable operation: Green

· Transmitters power supply: Green

· Detection: Red & Green

Range: SL

Operation Mode: L = Light On

D = Dark On

Output Configuration: P = NPN

N = PNP

**Sensing Distance:** 30 = up to 30mm

40 = up to 40mm

## Materials: Cable Connectors:

TPU Stainless Steel 316

Sensor:

Coupling Nut: Nickel Plated Brass -

Colour: Blue Blue

Plug Contacts: Brass, Gold plating -

Socket Contacts: Phosphor Bronze, Gold plating O Rings & Gaskets: Viton -

RoHS Compliant Compliant

# Automation Sensors - Part Number System Photoelectric Sensors



SL	X	X	XX	XX	XX
Range	Operation Mode	Output Configuration	Sensing Distance	Cable Length	Termination
SL	L = Light On D = Dark On	P = NPN N = PNP	30 = up to 30mm 40 = up to 40mm	02 = 2m	M5 = M5 connector CL = Blunt cut wire