



Smart Sensing Solutions Since 1954

TB12

Low Profile Through-Beam Sensor



Through-Beam Photoelectric Sensor

TB12

Through-Beam Sensor

The TB12 Through-Beam Sensor has a 12mm housing with a front flange and plastic nut. This design is ultra-rugged and epoxy encapsulated IP67.



Features and Options:

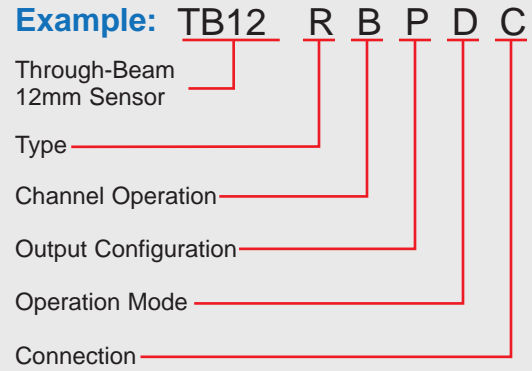
- Ultra-low-power design features a receiver current of 10mA and a transmitter current of 5mA. Ideal for battery powered automated vehicles.
- Small 12mm barrel is a great option in tight spaces.
- Crosstalk rejection between two beam pairs delivers no false triggers.
- Cost effective sensing solution for your needs.

Flush Mount

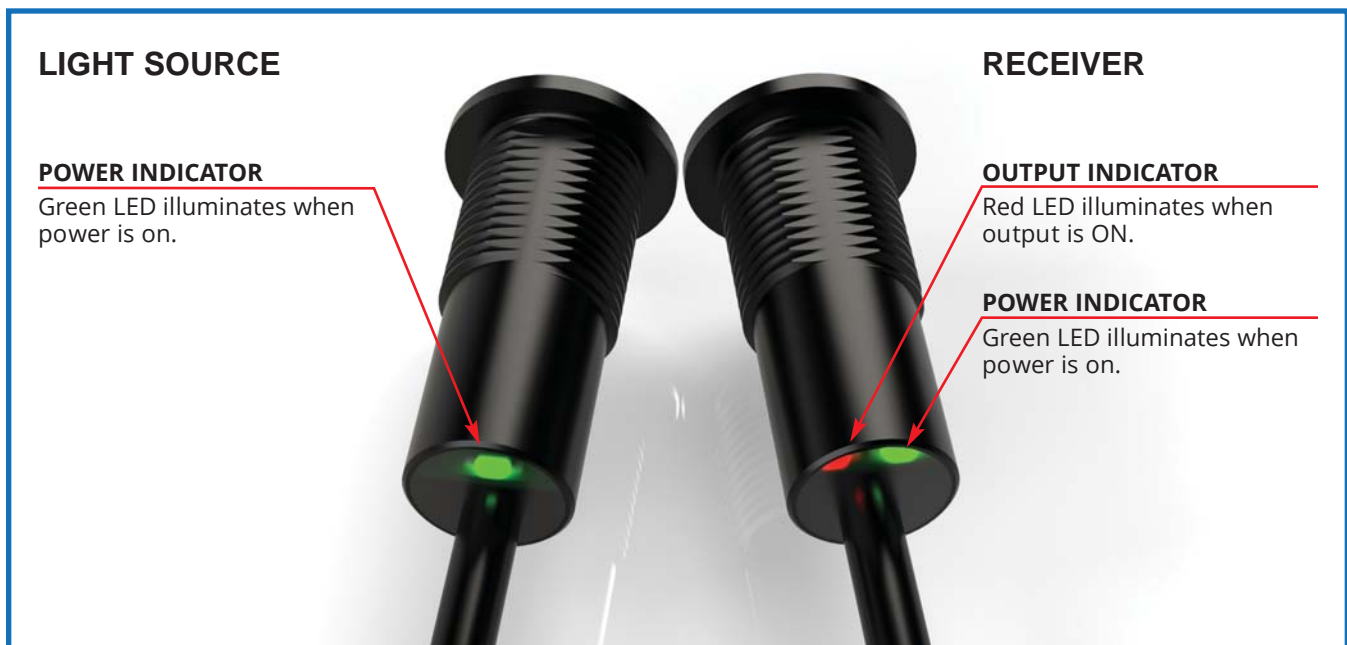


- 1. Select Sensor:**
Through-Beam 12mm Sensor
- 2. Select Type:**
R = Receiver
LS = Light Source (Red Light)
- 3. Select Channel Operation*:**
Blank = Channel A
B = Channel B
- 4. Select Output Configuration**:**
P = PNP
N = NPN
- 5. Select Operation Mode**:**
Blank = Light On
D = Dark On
- 6. Select Connection:**
Blank = 6ft (1.8m) Cable
C = 3-Pin M8 Male Pigtail

Notes: **"Channel Operation" applies to both the light sources and receivers (a B-Ch light source would require a B-Ch receiver).
***"Output Configuration" & "Operation Mode" apply only to receivers.



Features



Accessories



GEC3-6
3-Pin 6ft (1.8m) Cable



MB-12
12mm Bracket



NUT-12
12mm Mounting Nut

Specifications

SUPPLY VOLTAGE & CURRENT

- 8-30 Vdc
- Receiver current 10mA; Transmitter current 5mA
- Reverse polarity protected
- Transient spike protected

OUTPUT

- 150mA output current
- Short circuit & transient spike protected
- Saturation voltage: < 0.3Vdc @ 10mA < 2Vdc @ 150mA
- NPN or PNP based on model.
- Light-On or Dark-On based on model.

POWER-UP DELAY

- 300ms. No output pulse on power-up.

RESPONSE TIME

- A-Channel = 300 μ s on, 600 μ s off typical.
- B-Channel = 342 μ s on, 684 μ s off typical.

REPEATABILITY

- A-Channel = 100 μ s.
- B-Channel = 118 μ s.

RANGE

- Range 2m
- Light spot 100mm @ 2m

LIGHT IMMUNITY

- Responds to model's modulation frequency (A-Ch, B-Ch).
 - High immunity to most ambient light, including high efficiency lighting and high intensity strobes.
- Note: No false trigger between two sensor pairs on different channels.*

LED INDICATORS

- Transmitter: Green power LED.
- Receiver: Green power LED, red output LED. Illuminates when output is ON.

LED LIGHT SOURCE

- LED, Red = 660nm

CONNECTIONS

- M8, 3-pin, 6in (152mm) pigtail
- Attached cable: RX: 3-wire 6ft (1.8m); TX: 2-wire 6ft (1.8m)

OPERATING TEMPERATURE

- -20°C to 70°C (-4°F to 158°F) - Electrical.
- Optional fog-proof lens available. Optional fog-proof lens helps reduce condensation at freezing environments. Consult factory for specific application details.

HOUSING CONSTRUCTION

- 12mm barrel
- Chemical resistant, high-impact polycarbonate
- Lens: polycarbonate
- Encapsulated
- 12mm mounting nut included

RATINGS & CERTIFICATIONS

- IP67
- CE
- UL pending



RoHS Compliant
Product subject to change without notice

Connections and Dimensions

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