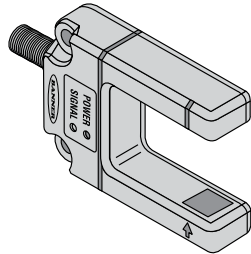


SLO Series Slot Sensor



Datasheet

Self-Contained Opposed-Mode Sensor Pair



- An easy-to-use self-contained opposed-mode sensor pair in a rugged U-shaped housing
- Easy and economical to mount
- Molded-in beam guides simplify mounting and beam placement
- 30 mm slot width for a wide variety of sensing applications
- Applications include hole detection, gear tooth detection, edge guiding and counting of opaque materials
- 10 V dc to 30 V dc operation
- Bipolar PNP/NPN outputs
- Choose 1 millisecond or 300 microsecond response
- 2 mm effective beam
- Dark or light operate
- Choose integral, unterminated cable or QD models



WARNING: Not To Be Used for Personnel Protection

Never use this device as a sensing device for personnel protection. Doing so could lead to serious injury or death. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition.

Models

| Models | Sensing Beam | Slot Width | Cable ¹ | Output | Response | Repeatability |
|------------|------------------|----------------|--------------------------|--------------------|-------------|---------------|
| SLO30VB6 | Infrared, 890 nm | 30 mm (1.2 in) | 2 m (6.5ft) 5-wire cable | Bipolar NPN/PNP | 1 ms | 250 μ s |
| SLO30VB6Q | | | 5-Pin Euro-style QD | | | |
| SLO30VB6Y | | | 2 m (6.5ft) 5-wire cable | | 300 μ s | 75 μ s |
| SLO30VB6YQ | | | 5-Pin Euro-style QD | | | |

Overview

The SLO Series Slot Sensor (sometimes called a "Fork Sensor") comprises an opposed-mode emitter and its receiver inside a single convenient housing.

Opposed-mode sensing is very reliable, and the single self-contained housing provides easy installation, with no sensor alignment required. In addition, the molded-in arrow on the emitter portion of the housing and the slotted design on the receiver portion of the housing show at a glance the position of the beam, simplifying installation placement.

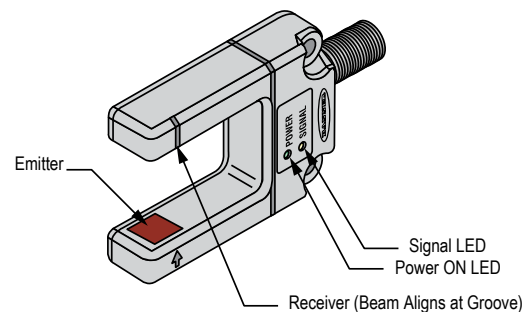


Figure 1. Features

¹ To order the 9 m (30 ft) PVC cable model, add the suffix "W/30" to the cabled model number. For example, SLO30VB6 W/30. Models with a quick disconnect require a mating cordset.



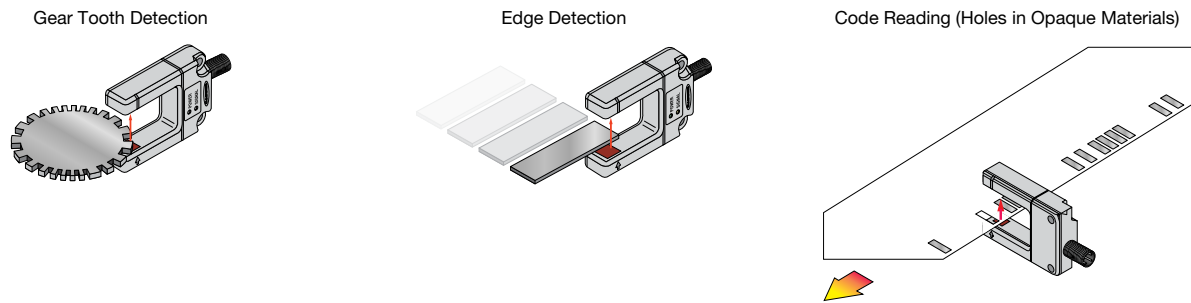


Figure 2. Typical Applications

LED Indicators

The Slot Sensor features two LED Indicators: Power (green) and Signal (amber). They indicate the following:

Green ON: Power ON

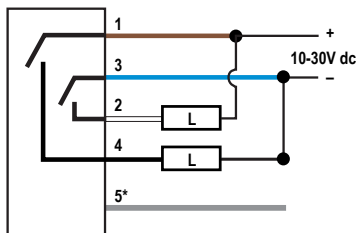
Amber ON: Sensor sees light

Amber flashing: Excess gain is marginal (1 to 1.5x) in light condition

Select Light Operate/Dark Operate

Connect the gray wire to +V (10 V dc to 30 V dc) for Dark Operate; and to dc common (or open) for Light Operate. See wiring diagrams.

Wiring Diagrams



Wiring Key

1. Brown
2. White
3. Blue
4. Black
5. Gray*

*For Dark operate, connect gray wire to + (brown). For Light operate, connect gray wire to - (blue).



Note: Quick disconnect (QD) wiring diagrams are functionally identical.

Specifications

Supply Voltage and Current

10 to 30V dc, 30 mA

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Output Configuration

Bipolar: PNP and NPN

Output Rating

150 mA each output

Output Protection Circuitry

Protected against output short-circuit and false pulse on power up

Output Response Time

1 millisecond or 300 microseconds, depending on model

Repeatability

250 microseconds or 75 microseconds, depending on model

Operating Conditions

Operating Temperature: -40 °C to +70 °C (-40 °F to +158 °F)
90% at +50 °C maximum relative humidity (non-condensing)

Slot Opening

30 mm (1.18 in) wide × 45 mm (1.8 in) deep; beam is 10 mm (0.4 in) from outer edge

Adjustments

None

Indicators

Green: Power on/off indicator
Amber: Signal condition indicator

Construction

Housing: ABS and polycarbonate
Lenses: acrylic

Connections

2 m (6.5 ft) or 9 m (30 ft) 5-conductor PVC-jacketed attached cable or 5-pin Euro-style quick-disconnect

Environmental Rating

IEC IP67; NEMA 6

Required Overcurrent Protection



WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

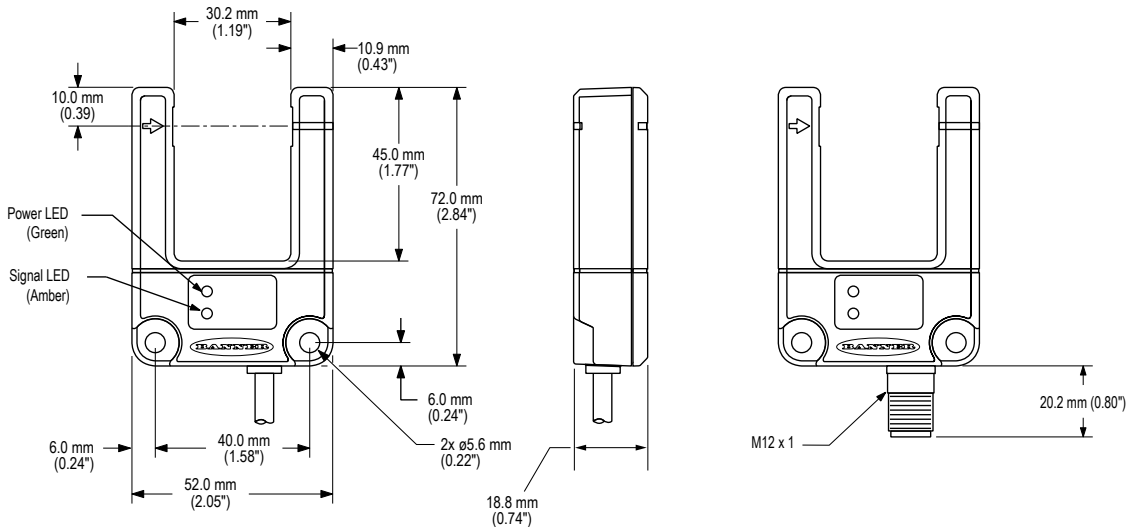
Overcurrent protection is required to be provided by end product application per the supplied table.
Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.
Supply wiring leads < 24 AWG shall not be spliced.
For additional product support, go to www.bannerengineering.com.

| Supply Wiring (AWG) | Required Overcurrent Protection (Amps) |
|---------------------|--|
| 20 | 5.0 |
| 22 | 3.0 |
| 24 | 2.0 |
| 26 | 1.0 |
| 28 | 0.8 |
| 30 | 0.5 |

Certifications



Dimensions



All measurements are listed in millimeters [inches], unless noted otherwise.