BANNER ®
the photoelectric specialist

SL0 Series Slot Sensor

Self-contained opposed-mode sensor pair

SL0 Series Slot Sensor Features

- 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 to 30V 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

Infrared, 890 nm

SL0 Series Slot Sensor Models

Models	Slot Width	Cable*	Supply Voltage	Output Type	Response	Repeatability
SL030VB6	30 mm (1.2")	2 m (6.5') 5-wire cable	10-30V dc	Bipolar NPN (sinking) and PNP (sourcing)	1 millisecond	250 microseconds
SL030VB6Q		5-Pin Euro-style QD				
SL030VB6Y		2 m (6.5') 5-wire cable			300 microseconds	75 microseconds
SL030VB6YQ		5-Pin Euro-style QD				

*NOTES: 1) 9 m (30') cables are available by adding suffix **"W/30"** to the model number of the cabled version (e.g., **SL030VB6 W/30**).
2) A model with a QD connector requires an accessory mating cable. See page 4.

⚠ **WARNING . . . Not To Be Used for Personnel Protection**

Never use these products as sensing devices for personnel protection. Doing so could lead to serious injury or death.

These sensors do NOT include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition. Consult your current Banner Safety Products catalog for safety products which meet OSHA, ANSI and IEC standards for personnel protection.

SL0 Series Slot Sensor

SL0 Series Slot Sensor Overview

The SL0 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.

Using the SL0 Series Slot Sensor

Light/Dark Operate Select

Selecting Light or Dark Operate is a simple procedure: connect the gray wire (see hookups, page 3), to +V (10-30V dc) for Dark Operate, and to dc common (or open) for Light Operate.

LED Indicators

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

Green ON steady: Power ON

Yellow ON steady: Sensor sees light

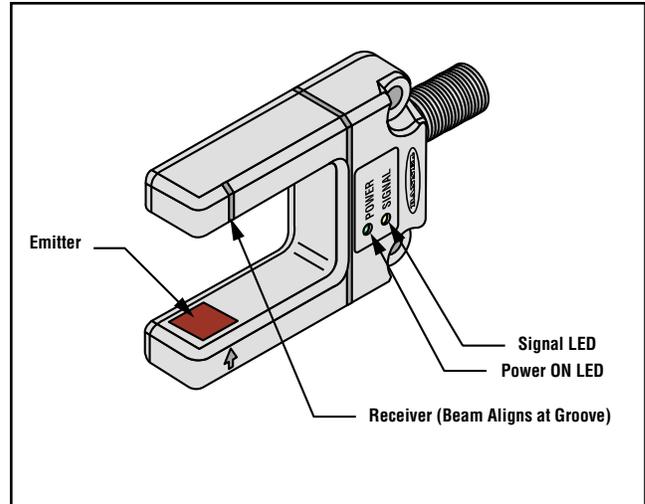**Yellow flashing:** Excess gain is marginal (1 to 1.5x) in light condition

Emitter

Signal LED
Power ON LED

Receiver (Beam Aligns at Groove)

Figure 1. SL0 Series features

Gear Tooth Detection

Edge Detection

Code Reading (Holes in Opaque Materials)
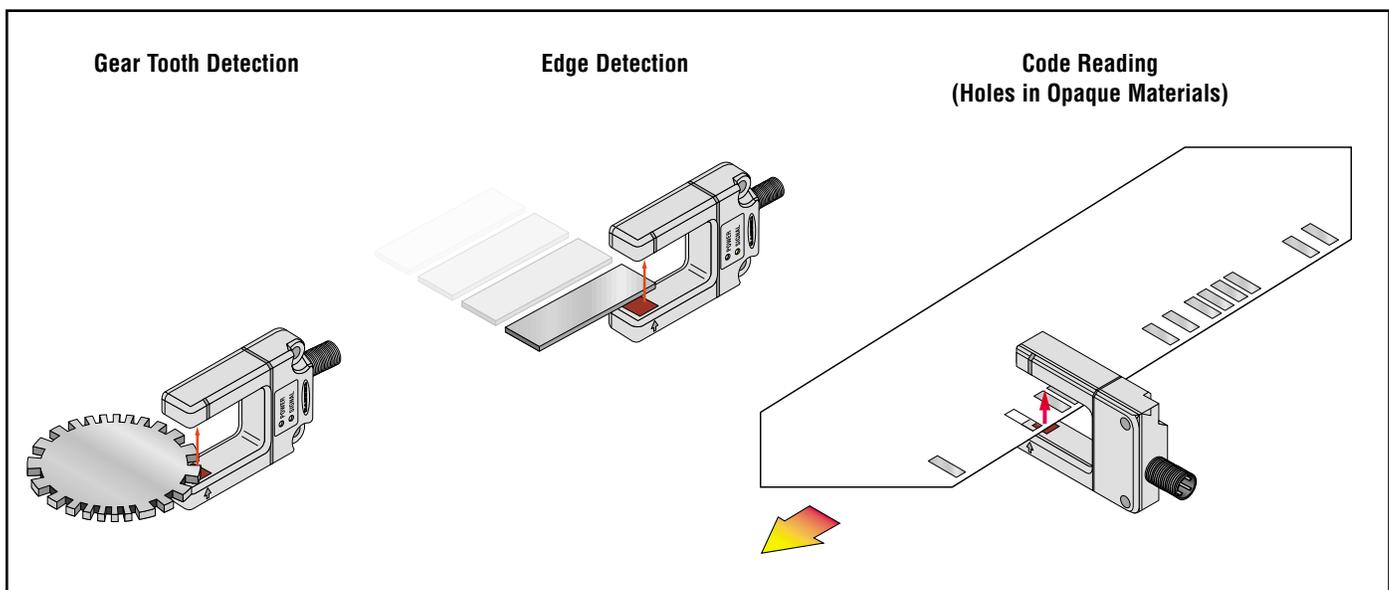
Figure 2. SL0 Series typical applications

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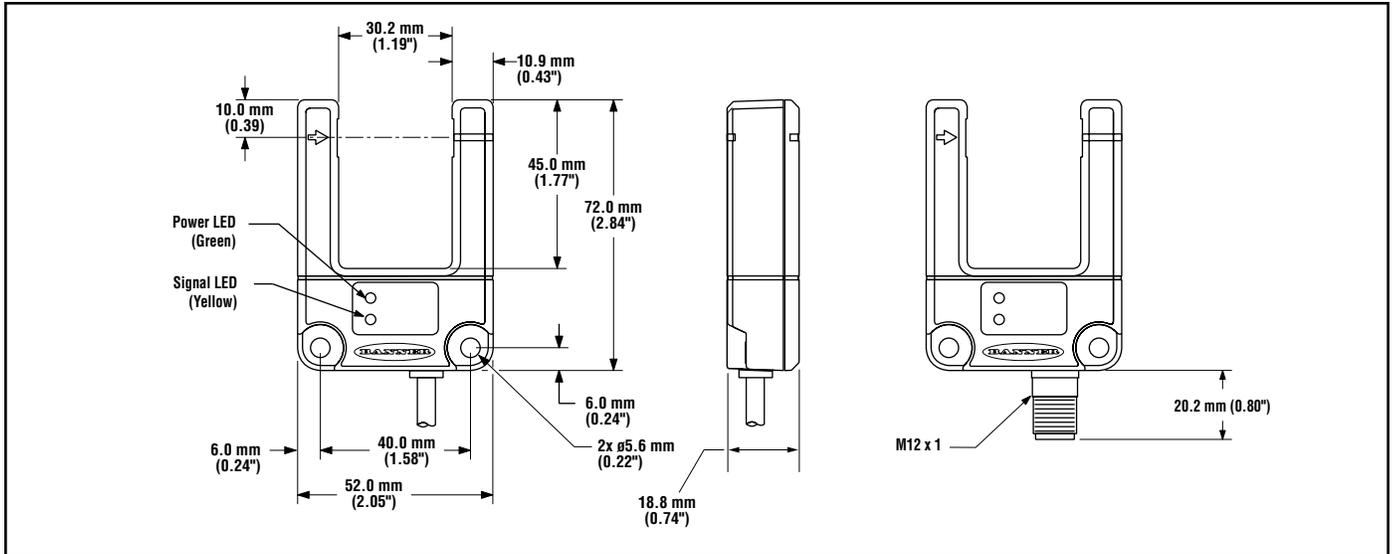
Figure 3. SLO Series Slot Sensor dimensions

SLO Series Slot Sensor Specifications

|	
Slot Opening	30 mm (1.2") wide x 45 mm (1.8") deep overall; beam set in 10 mm (0.4") from outer edge
Supply Voltage and Current	10 to 30V dc, 30 mA
Supply Protection Circuitry	Protected against reverse polarity and transient voltages
Output Configuration	Bipolar: NPN (current sinking) and PNP (current sourcing)
Output Rating	150mA, each output
Output Protection Circuitry	Protected against false pulse on power-up and short-circuit of outputs
Output Response Time	1 millisecond or 300 microseconds, depending on model
Repeatability	250 microseconds or 75 microseconds, depending on model
Adjustments	None
Indicators	**Green:** Power ON/OFF indicator **Yellow:** Signal Condition indicator
Construction	**Housing:** ABS/polycarbonate **Lenses:** Acrylic
Environmental Rating	IP67, NEMA 6
Connections	2 m (6.5') or 9 m (30') 5-conductor PVC-jacketed attached cable or 5-pin Euro-style quick-disconnect (QD) connector. QD cables are ordered separately; see page 4.
Operating Conditions	**Operating Temperature:** -40° to +70°C (-40° to +158°F) **Maximum relative humidity:** 90% @ 50°C (non-condensing)

SLO Series Slot Sensor Hookups

Cabled models
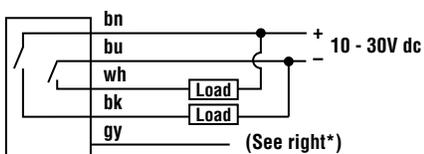
*For Dark Operate, connect gray wire to + (brown).
For Light Operate, connect gray wire to – (blue) or leave circuit open.
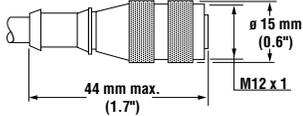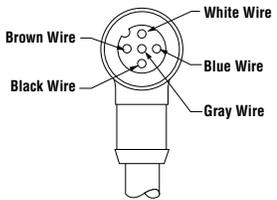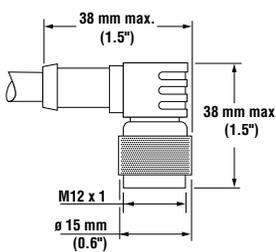
Quick-Disconnect models
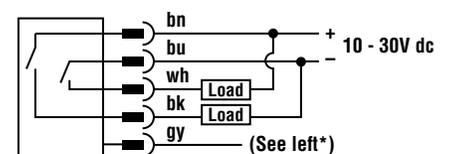
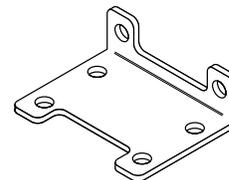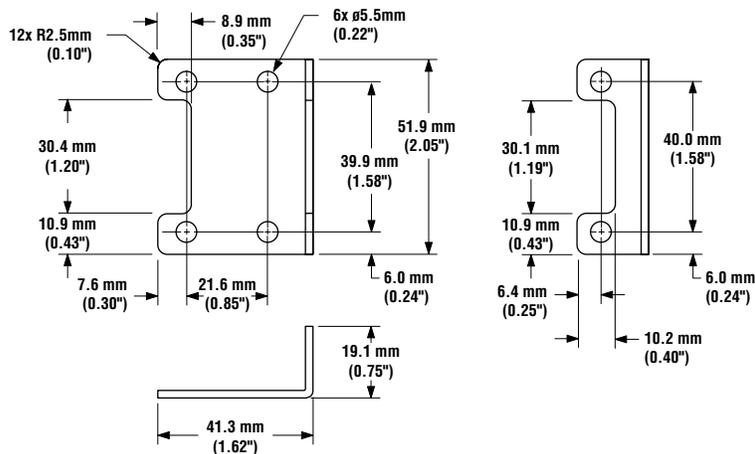# SL0 Series Slot Sensor

Accessories

Quick-Disconnect Cables

The following cables are available for SL0 Series Slot Sensor QD models

Style	Model	Length	Dimensions	Pin-out
5-pin Euro-style straight	MQDC1-506 MQDC1-515 MQDC1-530	2 m (6.5') 5 m (15') 9 m (30')	ø 15 mm (0.6") 44 mm max. (1.7") M12 x 1	Brown Wire, White Wire, Black Wire, Blue Wire, Gray Wire
5-pin Euro-style right-angle	MQDC1-506RA MQDC1-515RA MQDC1-530RA	2 m (6.5') 5 m (15') 9 m (30')	38 mm max. (1.5") 38 mm max. (1.5") M12 x 1 ø 15 mm (0.6")	

Mounting Brackets

SMBSL	• Angled bracket • 304 stainless steel

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WARRANTY: Banner Engineering Corp. warrants its products to be free from defects for one year. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.