

Specifications

Supply Voltage and Current

10 to 30 V dc (10% maximum ripple) at 20 mA maximum current

Sensing Beam

Visible red, 645 nm

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Output Protection Circuitry

Protected against false pulse on power-up, short-circuit protected

Output Response Time

Opposed Mode: 1.3 ms ON; 900 μ s OFF
 All Other Modes: 850 μ s ON/OFF
 120 ms delay on power-up; outputs do not conduct during this time

Construction

Polarized Retro Models: Polyamide housing with glass lens
 All Other Models: Polyamide housing with polycarbonate lens

Output Configuration

Bipolar (1 NPN and 1 PNP) solid-state output or single output (PNP or NPN), light operate (LO) or dark operate (DO), depending on model

Repeatability

125 microseconds

Switching Frequency

Opposed Mode: 385 Hz
 All Other Modes: 590 Hz

Output Ratings

OFF-state leakage current:
 NPN: 10 μ A
 PNP: 10 μ A
 ON-state saturation voltage:
 NPN: 2 V at 50 mA
 PNP: 2 V at 50 mA

Vibration and Mechanical Shock

All models meet MIL-STD-202F, Method 201A (Vibration: 10 Hz to 60 Hz maximum, 0.06 inch (1.52 mm) double amplitude, 10G maximum acceleration) requirements. Also meets IEC 60947-5-2 (Shock: 30G 11 ms duration, half sine wave) requirements.

Connections

Standard Models: 2 m (6.5 ft) or 9 m (30 ft) attached PVC cable, or 150 mm (6 in) cable with M8 or M12 threaded connection, depending on the model ordered

Environmental Rating

Standard Models: IEC IP67

Conditions

Operating Temperature: -20 °C to +55 °C (-4 °F to +131°F)
 Storage Temperature: -30 °C to +75 °C (-22 °F to +167 °F)
 95% at +50 °C maximum relative humidity (non-condensing)

Certifications



Required Overcurrent Protection

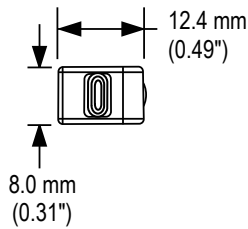


WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

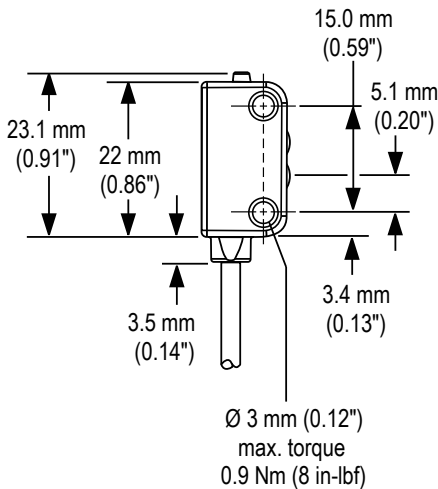
Overcurrent protection is required to be provided by end product application per the supplied table.
 Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.
 Supply wiring leads < 24 AWG shall not be spliced.
 For additional product support, go to www.bannerengineering.com.

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

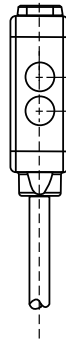
Dimensions



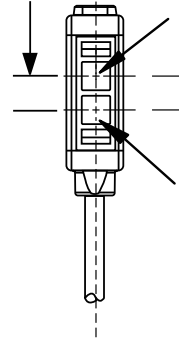
M3 mounting screws included



Polarized Retro Models



4.7 mm (0.19 inch)



Emitter (opposed mode models)

Emitter (all other models)