

LASER SENSOR

BL-20 Series

Convergent, Diffuse and Retro-reflective Laser Sensor



Retroreflective and Diffuse models

The BL-20 series is offered in both retroreflective and diffuse models. Sensing distance for the diffuse model is 12 inches, convergent models 4, 6, and 8 inches, retroreflective model up to 160 ft.

Potentiometer adjustment

A single turn potentiometer (General Purpose - Slim Body and Background Suppression) or an eight turn potentiometer (General Purpose - M18) is built-in to make adjustments to the sensitivity.

Quick connect standard

An 8mm connector is standard with the sensor, there is also an optional 12mm connector (pigtail) offered.



Small object detection

A small object can reliably be detected at long range due to the narrow projected beam size.

NPN and PNP outputs

Both NPN and PNP outputs are standard on the unit.

Selectable output operation

The output operation of the sensor can be selected to operate as either Light-On or Dark-On via a switch.

Class II laser product

The BL-20 series uses a Class II laser as the light source.



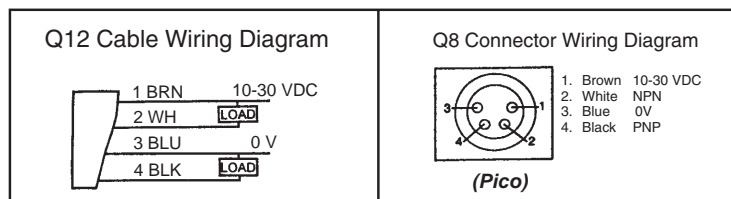
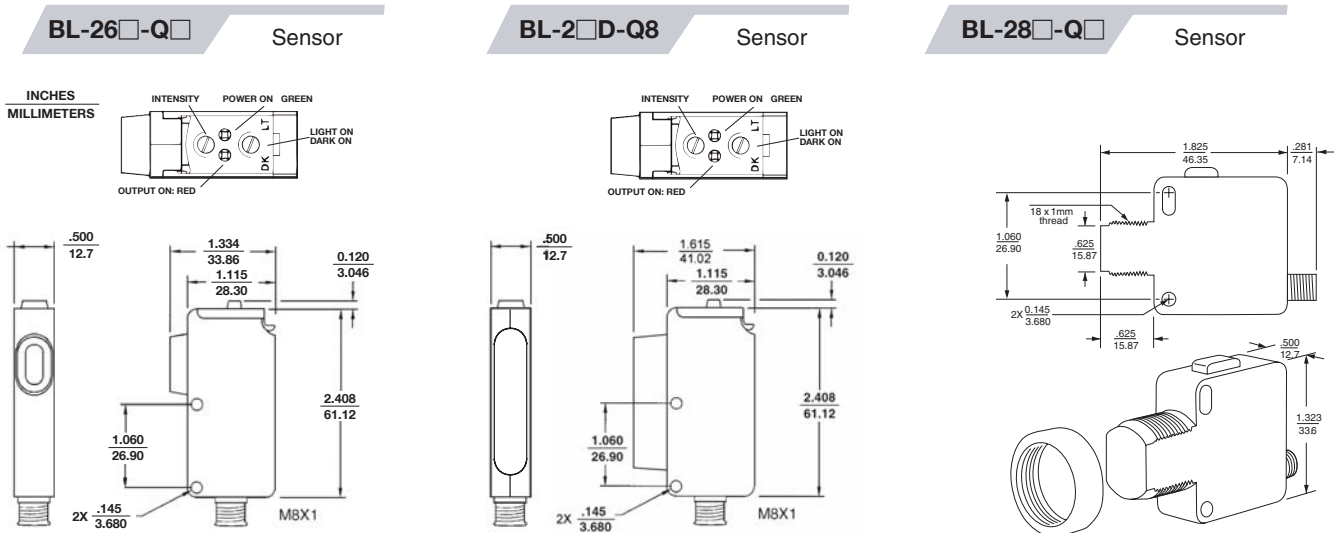
Specifications

Type		General Purpose - Slim Body		General Purpose - M18 Body		Background Suppression		
		Diffuse/Retro	Polarized Retro	Diffuse/Retro	Polarized Retro	Convergent Beam		
Model Number	M8 - QD	BL-26D-Q8	BL-26R-Q8	BL-28D-Q8	BL-28R-Q8	BL-22D-Q8	BL-23D-Q8	BL-24D-Q8
	M12 - Pigtail	BL-26D-Q12	BL-26R-Q12	BL-28D-Q12	BL-28R-Q12	---	---	---
Sensing Range	Diffuse	305mm (12")	---	305mm (12")	---	60 ~ 100mm (2.4 ~ 4.0")	86 ~ 150mm (3.4 ~ 6.0")	107 ~ 203mm (4.2 ~ 8.0")
	Retro	48.8M (160')	7.3M (24')	48.8M (160')	7.3M (24')	---	---	---
Supply Voltage	10 ~ 30 VDC							
Current Consumption	30 mA							
Sensing Output	NPN and PNP - Open Collector Transistor							
Output Rating	200 mA max.							
Output Operation	Selectable Light-On / Dark-On operation by switch							
Short Circuit Protection	Incorporated							
Response Time	Less than 2 msec.							
Operation Indicator	Power (Green) and Output (Red)							
Sensitivity Adjuster	Single turn intensity control	Eight turn intensity control		Single turn intensity control				
Environmental Protection	NEMA 6							
Ambient Temperature	0 to 40°C							
Emitting Element	Class II laser product							
Emitted Beam	670 nm visible red laser diode							
Housing	ABS housing, acrylic lens, polycarbonate cover							
Ratings	CE							
Accessories Included	Sensor mounting bracket and reflector				Sensor mounting bracket			

Note: The connecting cable is not included with the sensor, please order separately.

Type	Cable Part Number	Length	Connector
Q8	M8-FS4-PUR-2M	2 Meter	M8 - 4 wire
	M8-FS4-PUR-5M	5 Meter	
Q12	M12-FS4-PUR-2M	2 Meter	M12 - 4 wire
	M12-FS4-PUR-5M	5 Meter	

DIMENSIONS (Unit: mm)





Photoelectric Sensor

- Narrow Beam for Small Object Detection
- Input 10-30 VDC, Dual Output (PNP & NPN)
- Separate Power and Signal LED's
- Retroreflective and Diffuse
- PICO Style Quick Disconnect or 6" Pig Tail Available
- Designed for NEMA 6 / IP67

MODEL NUMBER >>>>>>	770	04	N	3	B
Type					
Retro Reflective	3AR				
Polarized Retro Reflective	3BR				
Operation					
On/Off	04				
Power Requirements					
	10-30 VDC	N			
Beam Type					
	Laser	3			
Output					
	Bi-Polar (NPN & PNP)			B	
Features					
Quick Disconnect Standard (PICO M8 4 PIN)				QP	
				Special	K
Pig Tail 6 in. Standard (micro 4 pin)					PT

NOTE: 2" Reflector and mounting bracket shipped with unit.

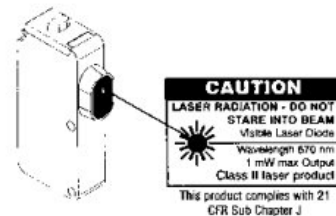
ACCESSORIES

7700-025-01-00:	Connector/Cable, 4 Pin m8x1 pico/2 meters
7700-025-01-05:	5 meter cable
7700-025-01-10:	10 meter cable
0000-181-61-01:	1 ft. length, 1" reflective tape, high efficiency, exposed lens not protected by plastic film, adhesive backed.
0000-181-62-01:	1 ft. length, 1" reflective tape, medium efficiency, protected with clear plastic film, adhesive backed.
0000-181-63-01:	1 ft. length, 1" reflective tape, low efficiency, exposed lens, high temp., adhesive backed.
7002-210-04-00:	5/8" diameter Retro-reflector
0000-181-64-01:	1 ft. length reflective tape, used with the polarized retroreflective model.

The **7700 Series Laser** provides a method for photoelectric detection of a small object over long distances. The laser-diode sensing device maintains a tiny spot size, with little divergence over distances up to 100 feet using a 2" X 2" retroreflector. This allows for long range detection of small objects. The unit provides precise leading and trailing edge detection of products on conveyors and packaging machinery. Sensing of very tightly spaced small objects is also possible for purposes of counting and batching.

SPECIFICATIONS

SUPPLY VOLTAGE	10 to 30 VDC	
SUPPLY CURRENT	30 mA maximum	
OUTPUT CONFIGURATION	One current sourcing (PNP) and one current sinking (NPN) open collector transistor	
OUTPUT MODE	Set by "Light ON" / "Dark ON" switch	
OUTPUT RATING	200 mA maximum each output. Output saturation less than 0.2 volts @ 10mA and less than 0.6 volts at 200 mA	
OUTPUT PROTECTION	Protected against current overload, inductive transients, no false pulse on power-up	
RESPONSE TIME	less than 2 ms, >500 Hz	
SENSING RANGE	Retroreflective	100 ft. with 2" X 2" reflector, ATC p/n 0000-181-52-00, Minimum target object size 2" X 2" (At maximum intensity, the unit may prox out to 36")
	Diffuse (proxing)	12 in. with .25" X .25" Kodak 90% white card
INDICATORS	Power	Red
	Output on	Green
ADJUSTMENTS	Single turn intensity control, two position Light operate or Dark operate	
SENSING BEAM	670 nm visible red	
AVERAGE OUTPUT POWER	150 μW	
HOUSING	NEMA 6	
CONNECTOR	4 pin, M8x1, pico style. Pin 1 - power, Pin 2 - NPN output, Pin 3 - common, Pin 4 - PNP output	
PIG TAIL	6" cable PVC .175 dia. micro connector 4 pin	
OPERATING TEMPERATURE	32° to 104°F (0 to 40°C)	
WEIGHT	<2 oz.	



CAUTION
LASER RADIATION - DO NOT STARE INTO BEAM
 Visible Laser Diode
 Wavelength 670 nm
 1 mW max Output
 Class II laser product
 This product complies with 21 CFR Sub Chapter J