

WORLD-BEAM QS30 LLP and LLPC



Polarized Retroreflective Laser Sensors



Features

- Visible class 1 laser with small, effective beam size
- Excellent optical performance throughout sensing range, even close up
- Easy push-button SET options: Maximum Excess Gain or Low-Contrast SET, depending on model, plus Manual Adjust
- Easy-to-read operating status indicators, with 8-segment bargraph display
- Bipolar discrete outputs, PNP and NPN
- Selectable 30 millisecond OFF-delay
- Models available with 2 m or 9 m (6.5' or 30') cable or integral quick-disconnect
- Tough ABS housing rated IEC IP67; NEMA 6
- Compact housing, mounting versatility – popular 30 mm threaded nose or side-mount

Excellent for applications where high sensing power and small beam size are important. Operates over sensing ranges typically accomplished only by conventional opposed-mode photoelectrics; uses a special filter to polarize the emitted light, filtering out unwanted reflections from shiny objects.

Models

Model	Range and Use	Spot Size at Focus	Cable*	Supply	Output Type
QS30LLP	0.2 to 18 m (0.67 ft to 60 ft) Maximum Excess Gain SET for Long-Range Applications	Approx. 4 mm at 10 m (0.16 in at 33 ft)	2 m (6.5 ft) 5-wire Cable	10 to 30V dc	Bipolar NPN / PNP
QS30LLPQ			Integral 5-pin Euro-style QD		
QS30LLPC	0.2 to 18 m (0.67 ft to 60 ft) Low-Contrast SET for Small Object Detection		2 m (6.5 ft) 5-wire Cable		
QS30LLPCQ			Integral 5-pin Euro-style QD		

* 9 m (30 ft) cables are available by adding suffix "W30" to the model number of any cabled sensor (e.g., QS30LLP W30). A model with a QD connector requires a mating cable (see [Quick-Disconnect Cables](#) on page 10).



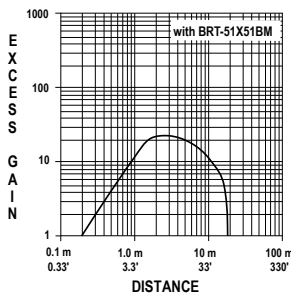
WARNING: Not To Be Used for Personnel Protection

Never use this product as a sensing device for personnel protection. Doing so could lead to serious injury or death. This product 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.

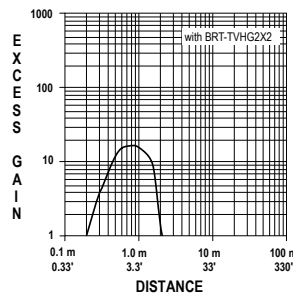


Excess Gain

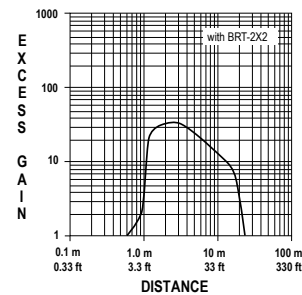
With Supplied Target BRT-51X51BM



With Supplied Target BRT-TVHG-2X2



With Target BRT-2X2 (Optional)



Overview

QS30LLP and QS30LLPC Series sensors are easy-to-use, high-performance laser sensors whose many configuration options make them suitable for demanding applications. Each sensor features two identically configured outputs, one each NPN and PNP.

The compact housing has a large, easy-to-see bargraph display plus bright LEDs for easy configuration and status monitoring during operation. The sensor can be side-mounted, using integral mounting holes, or front-mounted, via the 30 mm threaded barrel.

MODEL QS30LLP(Q) is configured using the Maximum Excess Gain SET procedure. It is useful for long-range applications and high variations in contrast, such as beam-break applications where the target objects are larger than the beam. See [Maximum Excess Gain SET - Model QS30LLP](#) on page 3 for more information.

MODEL QS30LLPC(Q) is configured using the Low-Contrast SET procedure. It is useful for small object detection and other applications with small variations in contrast, such as yarn- or thread-break applications. See [Low-Contrast SET - Model QS30LLPC](#) on page 5 for more information.

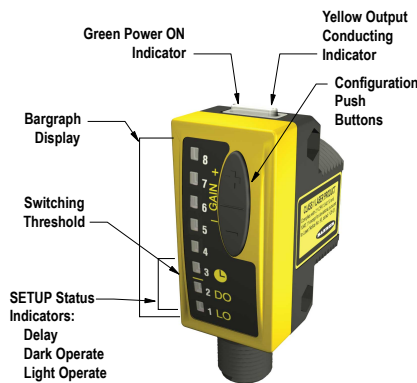


Figure 1. Model QS30LLP Features

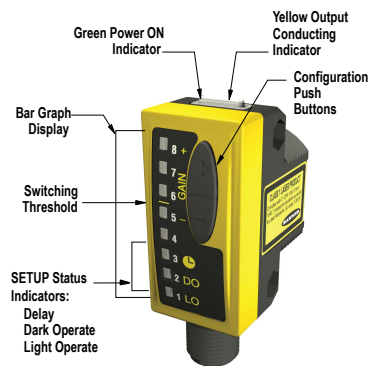


Figure 2. Model QS30LLPC Features

Sensor Configuration

Sensor configuration is accomplished using the SET and SETUP modes. After SET mode has defined the sensing parameters, SETUP mode may be used to add an OFF-delay or change the light/dark operate status. Manual Adjust may be used to fine-tune the thresholds. Two push buttons, “+” and “-”, may be used to access and set sensing parameters. In addition, the remote wire also may be used for some procedures (see below).