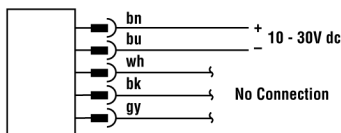




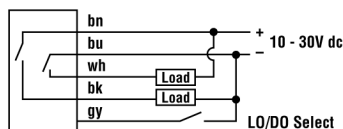
Cabled Emitters



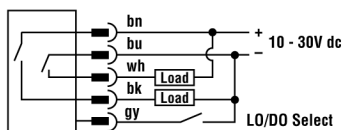
**QD Emitters
(5-pin Euro-Style)**



All Other Cabled Models



**All Other QD Models
(5-pin Euro-Style)**



| Sensing Mode | | Range | Output | Model* |
|-------------------------------------|----------------------------|--------------|--------------------|-----------|
| 875 nm Infrared | Opposed | 60 m (200') | Bipolar NPN/PNP | QS30E |
| Effective Beam: 18 mm (0.7") | | | | QS30R |
| 630 nm Visible Red | Retroreflective | 10 m (40')† | | QS30LV |
| 630 nm Visible Red | Polarized Retro-reflective | 8 m (20')† | | QS30LP |
| 940 nm Infrared | Diffuse | 1 m (3.3') | | QS30D |
| 680 nm Visible Red | Fixed-Field | 200 mm (8") | | QS30FF200 |
| | | 400 mm (16") | QS30FF400 | |
| | | 600 mm (24") | QS30FF600 | |

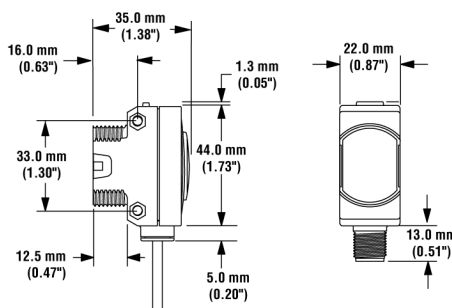
*Only standard 2 m (6.5') cable models are listed. For 9 m (30') integral cable, add suffix "W/30" to the model number (e.g., **QS30E W/30**).

QD models: For 5-pin integral Euro-style QD, add suffix "Q" (e.g., **QS30EQ**).

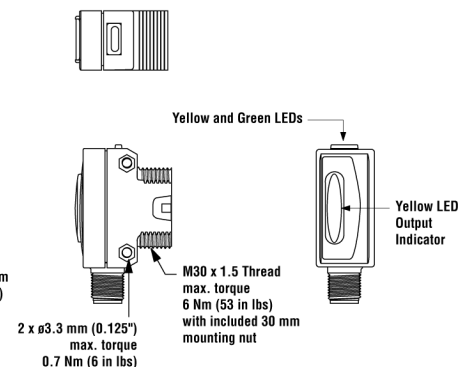
† Range is specified using a model **BRT-84** retroreflector.

Dimensions

Cabled Models



QD Models



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.

WORLD BEAM® QS30 – DC Voltage

Specifications

Supply Voltage and Current

10 to 30V dc (10% maximum ripple) at less than 38 mA, exclusive of load

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Output Configuration

Bipolar: One current sourcing and one current sinking

Rating: 100 mA maximum each output at 25°C

Off-state leakage current: NPN: less than 200 µA

PNP: less than 10 µA

ON-state saturation voltage: NPN: less than 1.6V @ 100 mA

PNP: less than 2.0V @ 100 mA

Protected against false pulse on power-up and continuous overload or short circuit of outputs

Output Response Time

Opposed Mode: 5 milliseconds ON and OFF

All others: 2 milliseconds

NOTE: 100 millisecond delay on power-up; outputs do not conduct during this time

Repeatability

Opposed Mode: not applicable

All others: 500 microseconds

Cutoff Point Tolerance

Fixed-Field only: ±5% of nominal cutoff distance

Indicators

2 LED indicators on sensor top:

Green ON steady: Power ON **Yellow ON steady:** Light sensed

Green flashing: Output overloaded (except receivers) **Yellow flashing:** Marginal excess gain (1.0 to 1.5x excess gain)

Large oval LED indicator on sensor back (except emitters):

Yellow ON steady: Output conducting

Adjustments

Diffuse, Retroreflective, and Polarized Retroreflective mode models:

Single-turn Sensitivity (Gain) adjustment potentiometer

All models: Selectable Light/Dark Operate is achieved via the gray wire, as described below.

Opposed, Retroreflective, and Polarized Retroreflective models:

Light Operate - Low (0 to 3V)*

Dark Operate - High (open or 5 to 30V)*

Diffuse and Fixed-Field models:

Light Operate - High (open or 5 to 30V)*

Dark Operate - Low (0 to 3V)*

* Input impedance 10 kΩ

Construction

ABS housing, rated IEC IP67; NEMA 6; Acrylic lens cover

3 mm mounting hardware included

Connections

2 m (6.5') or 9 m (30') 5-wire PVC cable, or 5-pin Euro-style integral QD connector

Operating Conditions

Temperature: -20° to +70° C (-4° to +158° F)

Relative Humidity: 90% @ 50° C (non-condensing)

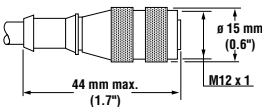
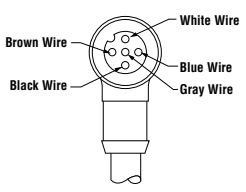
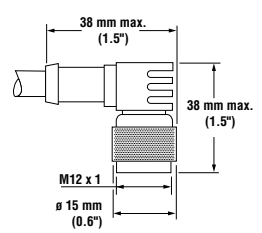
Vibration and Mechanical Shock

All models meet Mil. Std. 202F requirements method 201A (vibration: 10 to 60 Hz max., double amplitude 0.06", maximum acceleration 10G). Also meets IEC 947-5-2; 30G 11 ms duration, half sine wave.

Certifications

Approvals in process

Quick-Disconnect (QD) Cables

| 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') |  |  |
| 5-pin Euro-style right-angle | MQDC1-506RA MQDC1-515RA MQDC1-530RA | 2 m (6.5') 5 m (15') 9 m (30') |  | |



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.