WORLD-BEAM® QS18E Series

BANNER®
more sensors, more solutions

Datasheet

- Easy-to-use Expert-style Static and Dynamic TEACH options, plus Window, Light, and Dark SET, via push button or remote input
- Smart power-control algorithm to maximize performance in low-contrast applications
- Easy push-button or remote sensor setup options:
  ◦ Dark-Operate/Light-Operate select
  ◦ Selectable 30 ms output OFF-delay
- Less than 1 millisecond output response for excellent sensing repeatability
- Tough ABS housing is rated IEC IP67; NEMA 6
- Bright LED operating status indicators are visible from 360°
- Discrete PNP or NPN output, depending on model
- Multiple connection options available (see Models)
- Compact housing, easy barrel-mount (some models) or side-mount installation

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

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

Model	Sensing Mode	Range	Output	Model	Sensing Mode	Range	Output
QS18EN6LP	660 nm Visible Red **POLAR RETRO**	3.5 m (12 ft) [1]	NPN	QS18EN6CV15	660 nm Visible Red **CONVERGENT**	16 mm (0.65 in)	NPN
QS18EP6LP			PNP	QS18EP6CV15			PNP
QS18EN6D	940 nm Infrared **DIFFUSE**	800 mm (31.5 in)	NPN	QS18EN6CV45		43 mm (1.7 in)	NPN
QS18EP6D			PNP	QS18EP6CV45			PNP
QS18EN6DB		500 mm (19.7 in)	NPN	QS18EN6FP	660 nm Visible Red **PLASTIC FIBER**	Varies by mode and fiber optics used	NPN
QS18EP6DB			PNP	QS18EP6FP			PNP
QS18EN6W		300 mm (11.8 in)	NPN	QS18EN6DV	660 nm Visible Red **DIFFUSE**	600 mm (23.6 in)	NPN
QS18EP6W			PNP	QS18EP6DV			PNP

The standard 2 m (6.5 ft) cable models are listed. To order the 9 m (30 ft) cable models, add the suffix "W/30" to the cabled model number. For example, QS18EN6FP W/30. Models with a quick disconnect (QD) connector require a mating cable.

> To order a model with a 4-pin QD 150 mm (6 in) Euro-style pigtail, add suffix "Q5" (for example, QS18EN6FPQ5).
> To order a model with a 4-pin 150 mm (6 in) Pico-style pigtail, add suffix "Q" (for example, QS18EN6FPQ).
> To order a model with a 4-pin Integral Euro-style QD, add suffix "Q8" (for example, QS18EN6FPQ8).
> To order a model with a 4-pin Integral Pico-style QD, add suffix "Q7" (for example, QS18EN6FPQ7).

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[1] Specified using BRT-84 reflector (sold separately)

Overview of QS18E Expert Series Sensors
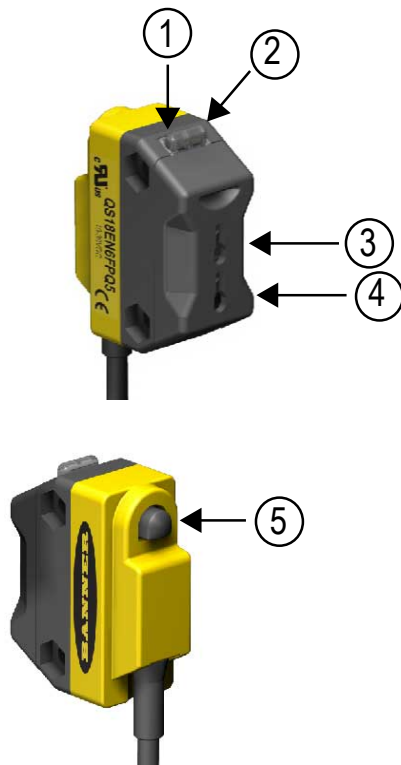

The QS18E Expert Sensors family of sensors provides high-performance sensing in a compact package. The sensors feature a discrete output (NPN or PNP, depending on model), two bright LEDs for easy status monitoring during configuration and operation, multiple configuration options, remote configuration, and security lockout options.

1. Amber output LED
2. Green power indicator LED
3. Receiver port
4. Emitter port
5. Configuration button

Indicators (Two LEDs: One Green, One Amber)		
Sensor Condition (Run Mode)	Green LED	Amber LED
Output OFF	ON	OFF
Output ON	ON	ON
Output ON, marginal signal	ON	Flashing
Output Short Circuit	Flashing	OFF

Figure 1. Sensor features

Sensor Configuration

Configure the sensor using any of five TEACH or Set options (by push button or the remote wire) to define the sensing limits. Use a Setup procedure to enable a 30 ms OFF-delay or to change the Light-/Dark-Operate setting (see *Sensor Setup* on page 3). Sensing limit configuration options include:

- Static TEACH: one switching threshold, determined by two taught conditions
- Dynamic (on-the-fly) TEACH: one switching threshold, determined by multiple sampled conditions
- Light Set and Dark Set: one switching threshold, offset from a single sensing condition (the "dark" condition or the "light" condition; see Figure)
- Window Set: a sensing window, centered around a single sensing condition

The sensor's output is disabled during all TEACH and Set procedures, and is enabled upon return to Run mode.

Following any TEACH or Set procedure other than Static TEACH, the Output ON condition (Light- or Dark-Operate setting) remains as it was last configured. To change that setting or the OFF-delay setting, see *Sensor Setup* on page 3.
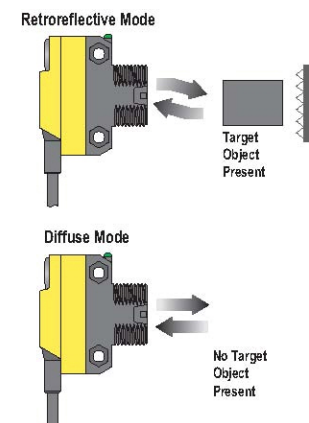

Figure 2. Dark Sensing Condition