

# WORLD-BEAM® QS30ELVC

## Clear Object Sensor



### A Clear Choice for Clear Object Detection



#### High accuracy in a wide range of applications and industries

- ▶ Detect air conveyor bottle jams
- ▶ Count clear bottles or vials on high-speed packaging machinery
- ▶ Detect glass tubes in light manufacturing
- ▶ Sense film web break
- ▶ Detect flat panel LCD screens
- ▶ Distinguish between single or double sheet of clear materials
- ▶ Detect semiconductor wafers



### Popular WORLD-BEAM® QS30 for dependable detection of clear objects

The QS30ELVC Clear Object Sensor is an easy-to-use, high-performance retroreflective sensor optimized for detection of clear, translucent or opaque objects. The QS30 Clear Object Sensor utilizes an advanced optical design to allow the sensor to see translucent materials, ensuring reliable detection of clear targets including PET bottles and glass containers. Additionally, the optical design prevents the sensor from being tricked by specular reflections, allowing the sensor to detect optically engineered surfaces such as mirrors, LCD glass with polarizing films and semiconductor wafers.

- ▶ Reliable detection of clear, translucent or opaque targets—including mirror-like surfaces
- ▶ Auto compensation algorithm for adjustment to dust or contamination on sensor or reflector, and for ambient temperature changes
- ▶ Intuitive sensor setup with 3 selectable thresholds based on type of object being detected
- ▶ Push buttons or remote wire for easy sensor configuration
- ▶ Rugged IP67 (NEMA 6) housing for harsh environments and 1200 psi washdown rated per NEMA PW12
- ▶ Range of 100 mm to 2 m with a fast 0.5 millisecond response time
- ▶ Highly visible bargraph display plus LEDs for easy configuration and status monitoring during operation
- ▶ Two corner-cube reflectors included
- ▶ Extensive line of reflectors, brackets and cordsets for any installation requirement

#### Powerful capabilities with simple setup

- ▶ Compact housing with 30 mm threaded barrel and integrated side mount
- ▶ Single 1 SET programming of sensor
- ▶ Visible red LED sensing beam for simple alignment
- ▶ 10 to 30V dc with bipolar NPN (sinking) and PNP (sourcing) output
- ▶ Operating temperature range of -10° to 55° C
- ▶ Bright LED indicators for power and output status
- ▶ 2 m or 9 m attached cable, or 5-pin Euro-style integral or pigtail quick-disconnect

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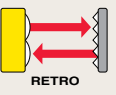
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# WORLD-BEAM® QS30ELVC, 10 to 30V dc

| Models   | Range*  | Cable**          | Output             | Data Sheet |
|--|---|------------------|--------------------|------------|
| <br><b>QS30ELVC</b><br><b>QS30ELVCQ</b> | 100 mm to 2 m<br>Light Set for clear object detection | 2 m              | Bipolar<br>NPN/PNP | 139760     |
|  |   | 5-pin<br>Euro QD |                    |            |

\* Operation at shorter and longer distance possible. Contact factory for application assistance.

\*\* For a 9 m cable, add suffix **W/30** to the 2 m model number (example, **QS30ELVC W/30**).

**QD models:** A model with a QD requires a mating cordset.

For a 5-pin 150 mm Euro-style PVC pigtail QD, add suffix **Q5** (example, **QS30ELVCQ5**).

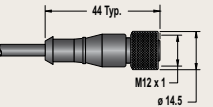
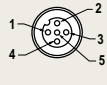
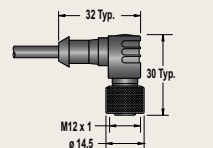
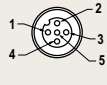
For a 5-pin 150 mm Euro-style PUR pigtail QD, add suffix **QPMA** (example, **QS30ELVCQPMA**).

NOTE: Sensor includes **BRT-2X2LVC** and **BRT-40X19A** corner-cube reflectors (Qty 1 each).



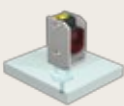

## Dimensions



## Quick-Disconnect (QD) Cordsets

| Style                               | Model              | Length | Dimensions  | Female Pinout   |
|-------------------------------------|--------------------|--------|---|---|
| 5-pin<br>Euro-style,<br>straight    | <b>MQDC1-506</b>   | 2 m    |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Gray  |
|                                     | <b>MQDC1-515</b>   | 5 m    |   |   |
|                                     | <b>MQDC1-530</b>   | 9 m    |   |   |
| 5-pin<br>Euro-style,<br>right-angle | <b>MQDC1-506RA</b> | 2 m    |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Gray  |
|                                     | <b>MQDC1-515RA</b> | 5 m    |   |   |
|                                     | <b>MQDC1-530RA</b> | 9 m    |   |   |

## Brackets

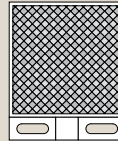
| Models  | Description   |
|---|---|
| <br><b>SMBQS30L</b>  | <ul style="list-style-type: none"> <li>Right-angle bracket for cabled sensors</li> <li>14-ga. stainless steel</li> <li>±12° tilt adjustment</li> <li>Clearance for M4 (#8) hardware</li> </ul>                                |
| <br><b>SMBQS30LT</b> | <ul style="list-style-type: none"> <li>Tall right-angle bracket for QD sensors with straight cordset connectors</li> <li>14-ga. stainless steel</li> <li>± 8° tilt adjustment</li> </ul>                                      |
| <br><b>SMBQS30Y</b>  | <ul style="list-style-type: none"> <li>Heavy-duty die-cast bracket with M18 vertical mounting option</li> <li>± 8° tilt adjustment for cabled sensors</li> <li>Nuts and lockwasher included</li> </ul>                        |
| <br><b>SMB30SC</b>   | <ul style="list-style-type: none"> <li>Swivel bracket with 30 mm mounting hole for sensor</li> <li>Black reinforced thermoplastic polyester</li> <li>Stainless steel mounting and swivel locking hardware included</li> </ul> |

## Reflectors

Sensors require corner cube type, large facet retroreflective targets only. Microprism and flexible tape reflectors are not recommended.

### BRT-2X2LVC (included)

**Reflectivity Factor:** 1.0†



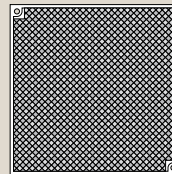
### BRT-40X19A (included)

**Reflectivity Factor:** 1.2†



### BRT-92X92C (optional)

**Reflectivity Factor:** 3.0†



† Reflectivity factor compared with the standard BRT-3 reflector.

## Basic Setup

1. Mount reflector.
2. Align the sensor.
3. Perform Light SET by pressing "+" button for 2 seconds with just a reflector, no target object needed.

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