

# WORLD-BEAM® QS30 Adjustable-Field Sensors



with Background Suppression

Midsize sensors featuring extended range and background suppression mode

## Features



- Bipolar discrete outputs, PNP and NPN
- 128 element photo receiver for superior performance on varying colors and textures
- 600 mm sensing range (90% White Card) in midsize QS30 housing
- Background suppression models for reliable detection of objects when the background condition is not controlled or fixed
- Linear multi-turn screw adjustment of cutoff distance
- Enhanced immunity to fluorescent lights
- Improved temperature compensation to minimize cutoff distance variation due to ambient temperature changes
- Powerful, highly collimated visible red sensing beam allows two sensors to be used in close proximity
- Models available with 2 m or 9 m (6.5' or 30') cable or integral metal quick-disconnect; or 150 mm (6") pigtail
- Tough ABS housing is rated IEC IP67; NEMA 6
- Mounting versatility via popular 30 mm threaded barrel or side-mount

## Models - Background Suppression

Models	Supply Voltage	Sensing Range	Output Type
QS30AF600	10 to 30V dc	<b>Adjustable Cutoff Range:</b> 50 to 600 mm  <b>Maximum Sensing Range:</b> 400mm - 6% Black Card 500mm - 18% Gray Card 600mm - 90% White Card  <b>Minimum Sensing Range (Dead Zone):</b> 30mm - 6% Black Card	Bipolar (1 NPN & 1 PNP)

\*Only standard 2 m (6.5') cable models are listed.

- For 9 m (30') cables: add suffix "W/30" to the model number (e.g., **QS30AF600 W/30**).
- For 5-Pin Integral QD, add suffix "Q" to the model number (e.g., **QS30AF600Q**)
- For 150 mm (6") PVC cable with a 5-pin Euro-style connector, add suffix "Q5" to the model number (e.g., **QS30AF600Q5**)



### 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.



## Specifications

### Sensing Range

**Adjustable Cutoff Range:** 50 to 600 mm

**Maximum Sensing Range:** 400 mm - 6% Black Card, 500mm - 18% Gray Card, 600mm - 90% White Card

**Minimum Sensing Range (Dead Zone):** 30 mm - 6% Black Card

### Supply Voltage and Current

10 to 30V dc (10% maximum ripple within specified limits);

Current consumption: < 80 mA at 10V dc; < 40 mA at 30V dc

### Supply Protection

Protected against reverse polarity and transient voltages

### Sensing Beam

Visible red LED, 660 nm

### Output Configuration

**Solid-state bipolar (SPDT):** both sinking and sourcing

**Rating:** 100 mA total output current (derate 1 mA per °C above 30° C)

**Off-state leakage current:** < 5 µA at 30V dc

**ON-state saturation voltage:**

- **NPN:** less than 1.5V @ 100 mA
- **PNP:** less than 2.0V @ 100 mA

### Output Protection Circuitry

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

### Output Response

5 millisecond ON/OFF;

200 ms delay on power-up; outputs do not conduct during this time

### Repeatability

750 µs

### Adjustments

Four-turn adjustment screw sets cutoff distance between min. and max. positions, clutched at both ends of travel

### Indicators

#### 2 Indicator LEDs on sensor top:

- **Green ON steady:** Power ON
- **Yellow ON steady:** Light sensed (excess gain > 1.5x)
- **Yellow flashing:** Marginal sensing condition (excess gain < 1.5x)

#### 2 Indicator LEDs on sensor back:

- Small Blue/Red End-of-travel (EOT) LED
- Large Yellow Output LED

### Construction

ABS housing, acrylic lens cover; 2.5 mm and 3 mm mounting hardware included

**QD models:** nickel-plated brass

### Environmental Rating

IEC IP67; NEMA 6

### Connections

2 m (6.5') 5-wire PVC cable, 9 m (30') PVC cable, or 5-pin Integral QD or Euro-style 150 mm (6") pigtail QD, depending on model

### Operating Conditions

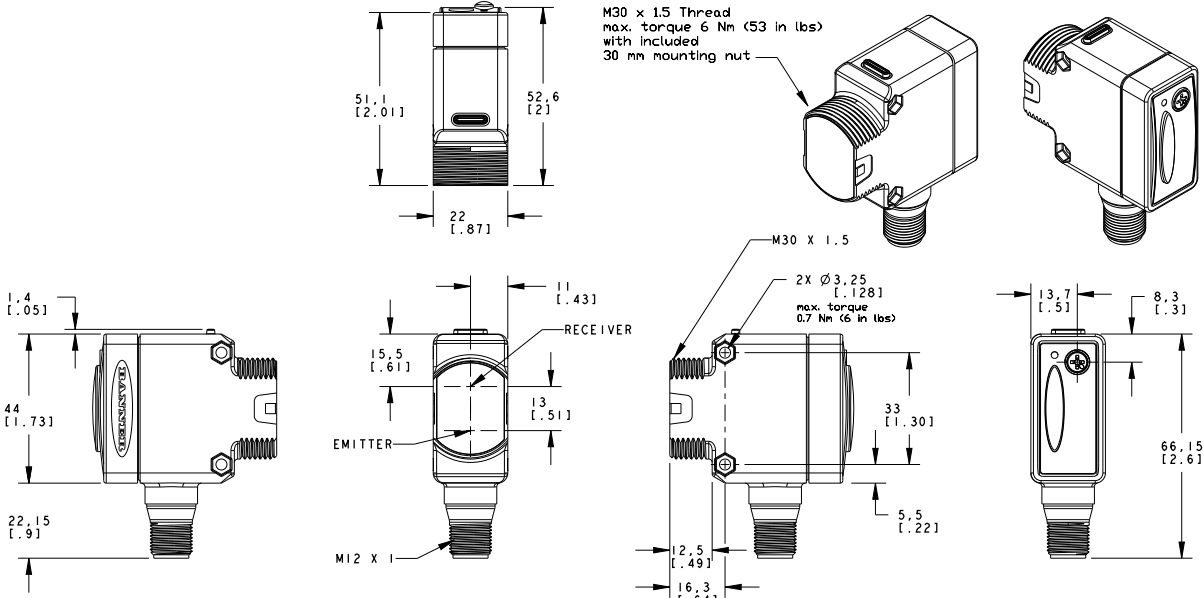
**Temp:** -20° to +60° C (-4° to 140° F)

**Relative Humidity:** 95% @ 50° C (non-condensing)

### Certifications



### Dimensions (QD Models)



### Dimensions (Cable Models)

