

# WORLD-BEAM® QS18 Universal Voltage Sensors



## Big sensor performance in rugged, space-saving WORLD-BEAM® housing

The WORLD-BEAM® QS18 Universal Voltage Sensor is a 3-wire photoelectric sensor with a solid-state output for reliable presence/absence detection. The versatile sensors are available in a self-contained WORLD-BEAM housing with multiple mounting options.

- ▶ Features ac or dc voltage operation
- ▶ Includes long-range diffuse models for sensing up to 1.0 m
- ▶ Offers choice of P-MOSFET or N-MOSFET solid-state output for enhanced sensor life, and faster switching and response time than mechanical relays
- ▶ Offers versatile mounting; easily fits or retrofits most configurations
- ▶ Features WORLD-BEAM QS18 right-angle housing
- ▶ Resists harsh environments with rugged IP67 (NEMA 6) housing and encapsulated electronics
- ▶ Rated PW12 (1200 psi washdown)
- ▶ Meets UL, CSA and CE requirements

## Exceptional optical performance in a compact housing



### A superior solution for a wide range of industries and applications

- ▶ Package handling
- ▶ Pallet detection
- ▶ Conveyor lane full detection
- ▶ Merge control
- ▶ Conveyor jam detection
- ▶ Baggage handling
- ▶ Bottle conveying
- ▶ Traffic and gate control
- ▶ Forest and agriculture products



### Robust sensing in a versatile, easy-to-use package

- ▶ Robust housing with 18 mm threaded barrel or basemount, side-mount and retrofit bracket options
- ▶ 20 to 140V ac/dc with P-MOSFET (sourcing) output or 20 to 270V ac/dc with N-MOSFET (sinking) output, depending on model
- ▶ Light operate (LO) or dark operate (DO), depending on model
- ▶ Bright LED status indicators, visible from 360°
- ▶ 300V rated 2 m or 9 m attached cable or 4-pin Micro-style pigtail quick-disconnect; 600V cable available

[www.bannerengineering.com](http://www.bannerengineering.com)

**1.888.373.6767**

[bannerengineering.com](http://bannerengineering.com)

**BANNER®**

more sensors, more solutions

# WORLD-BEAM® QS18

Universal Voltage Models, 20 to 140V ac/dc or 20 to 270V ac/dc

Sensing Mode	Models*	Range†	Output	Sensing Beam	Data Sheet	
<b>Opposed</b> (Effective Beam: 10 mm)	QS18WE	20 m	—	940 nm Infrared	136003	
	QS18ANWR		LO			N-MOSFET (sinking)
	QS18RNWR		DO			
	QS18APWR		LO			P-MOSFET (sourcing)
QS18RPWR	DO					
<b>Polarized Retroreflective</b>	QS18ANWLP	3.5 m	LO	660 nm Visible Red	136003	
	QS18RNWLP		DO			N-MOSFET (sinking)
	QS18APWLP		LO	P-MOSFET (sourcing)		
	QS18RPWLP		DO			
<b>Retroreflective</b>	QS18ANWLV	6.5 m	LO	660 nm Visible Red	136003	
	QS18RNWLV		DO			N-MOSFET (sinking)
	QS18APWLV		LO	P-MOSFET (sourcing)		
	QS18RPWLV		DO			
<b>Diffuse (Short Range)</b>	QS18ANWDL	450 mm	LO	624 nm Visible Red	136003	
	QS18RNWDL		DO			N-MOSFET (sinking)
	QS18APWDL		LO	P-MOSFET (sourcing)		
	QS18RPWDL		DO			
<b>Diffuse (Long Range)</b>	QS18ANWDXL	1 m	LO	850 nm Infrared	136003	
	QS18RNWDXL		DO			N-MOSFET (sinking)
	QS18APWDXL		LO	P-MOSFET (sourcing)		
	QS18RPWDXL		DO			

\* Only standard 2 m cable models are listed. For 9 m cable, add suffix **WJ30** to the model number (example, **QS18WE WJ30**).

**QD Models:** For a 4-pin 150 mm Micro-style pigtail QD, add suffix **Q2** to the model number (example, **QS18WEQ2**). A model with a QD requires a mating cordset.

**600V Cable Models:** Standard models are supplied with 300V cable. For a 600V cable, add suffix **C1** to the model number.

† Retroreflective range is specified using one model BRT-84 retroreflector. Actual sensing range may be more or less than specified, depending upon efficiency and reflective area of the retroreflector(s) used.

Diffuse performance based on use of 90% reflectance white test card.

## Quick-Disconnect (QD) Cordsets

Style	Model	Length	Dimensions	Pinout
4-pin Threaded Micro-style, straight	<b>MQAC-406</b>	2 m		1 = Red/Black 2 = Red/White 3 = Red† 4 = Green† † Not used for emitters
	<b>MQAC-415</b>	5 m		
	<b>MQAC-430</b>	9 m		

## Brackets

Models	Description	Models	Description
 <b>SMBQS18WRS</b>	<ul style="list-style-type: none"> <li>Retrofit bracket; sensor base threads into bracket, bracket bolts to flat surface</li> <li>PBT construction</li> <li>Clearance for M3 or #6-32 hardware</li> </ul>	 <b>SMBM18B66Z</b>	<ul style="list-style-type: none"> <li>Protective bracket with 18 mm hole for mounting sensor</li> <li>Curved mounting slots for versatility and orientation</li> <li>Clearance for M6 (1/4") hardware</li> <li>14-ga. cold-rolled steel with zinc finish</li> </ul>
 <b>SMB18FM</b>	<ul style="list-style-type: none"> <li>Two-piece thermoplastic through-mount bracket</li> <li>Mounting nut (M22 x 1.5) and outer flange (M22 x 1.5 external, M18 x 1 internal)</li> </ul>	 <b>SMBM18F103Z</b>	<ul style="list-style-type: none"> <li>Protective bracket for mounting sensor above C-rail</li> <li>18 mm basemount bracket</li> <li>14-ga. cold-rolled steel with zinc finish</li> </ul>
 <b>SMBM18054Z</b>	<ul style="list-style-type: none"> <li>Bracket with 18 mm hole for mounting sensor inside C-rail</li> <li>16-ga. cold-rolled steel with zinc finish</li> </ul>	 <b>SMB18A</b>	<ul style="list-style-type: none"> <li>Right-angle mounting bracket with a curved slot for versatile orientation</li> <li>Mounting hole for 18 mm sensor</li> <li>12-ga. stainless steel</li> <li>Clearance for M4 (#8) hardware</li> </ul>



[www.bannerengineering.com](http://www.bannerengineering.com)

Banner Engineering Corp.

9714 Tenth Avenue North • Minneapolis, Minnesota 55441 • (763) 544-3164 • Fax: (763) 544-3213

Toll-free: 888-373-6767 • [www.bannerengineering.com](http://www.bannerengineering.com) • Email: [sensors@bannerengineering.com](mailto:sensors@bannerengineering.com)

P/N 141525

## Dimensions



## Reflector

Model	Description	Reflectivity Factor
<b>BRT-84</b>	Round acrylic target	1.4

## Opposed-Mode Apertures

Aperture	Model	Description
Circular hole	<b>APQS18-020</b>	0.5 mm dia. - 6 each
	<b>APQS18-040</b>	1.0 mm dia. - 6 each
	<b>APQS18-100</b>	2.5 mm dia. - 6 each
Horizontal slot	<b>APQS18-020H</b>	0.5 x 6.4 mm - 6 each
	<b>APQS18-040H</b>	1.0 x 6.4 mm - 6 each
	<b>APQS18-100H</b>	2.5 x 6.4 mm - 6 each
Vertical slot	<b>APQS18-020V</b>	0.5 x 12.7 mm - 6 each
	<b>APQS18-040V</b>	1.0 x 12.7 mm - 6 each
	<b>APQS18-100V</b>	2.5 x 12.7 mm - 6 each
Kit	<b>APQS18-DVHX2</b>	2 of each aperture - 18 total



more sensors, more solutions