WORLD-BEAM® QS18
Universal Voltage Sensors

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 brackets 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 Mico-style pigtail quick-disconnect; 600V cable available

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 ouput 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)
- ▶ Sensors are UL listed, CSA certified, and CE marked

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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
Opposed (Effective Beam: 10 mm)		QS18WE	20 m	—			940 nm Infrared	
		QS18ANWR		L0	N-MOSFET (sinking)			
		QS18RNWR		D0	N-MOSFET (sinking)			
		QS18APWR		L0	P-MOSFET (sourcing)			
		QS18RPWR		D0	P-MOSFET (sourcing)			
Polarized Retroreflective		QS18ANWLP	3.5 m	L0	N-MOSFET (sinking)		660 nm Visible Red	
		QS18RNWLP		D0	N-MOSFET (sinking)			
		QS18APWLP		L0	P-MOSFET (sourcing)			
		QS18RPWLP		D0	P-MOSFET (sourcing)			
Retroreflective		QS18ANWLV	6.5 m	L0	N-MOSFET (sinking)		660 nm Visible Red	136003
		QS18RNWLV		D0	N-MOSFET (sinking)			
		QS18APWLV		L0	P-MOSFET (sourcing)			
		QS18RPWLV		D0	P-MOSFET (sourcing)			
Diffuse (Short Range)		QS18ANWDL	450 mm	L0	N-MOSFET (sinking)		624 nm Visible Red	
		QS18RNWDL		D0	N-MOSFET (sinking)			
		QS18APWDL		L0	P-MOSFET (sourcing)			
		QS18RPWDL		D0	P-MOSFET (sourcing)			
Diffuse (Long Range)		QS18ANWDXL	1 m	L0	N-MOSFET (sinking)		850 nm Infrared	
		QS18RNWDXL		D0	N-MOSFET (sinking)			
		QS18APWDXL		L0	P-MOSFET (sourcing)			
		QS18RPWDXL		D0	P-MOSFET (sourcing)			

* Only standard 2 m cable models are listed. For 9 m cable, add suffix **W/30** to the model number (example, **QS18WE W/30**).
  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.

Dimensions

15.0 mm
34.0 mm
80.5 mm

Quick-Disconnect (QD) Cordsets

Style	Model	Length	Dimensions	Pinout
4-pin Threaded Micro-style, straight	MQAC-406	2 m	ø 14 mm, 41 mm max., ø 1/2-20UNF	1 = Red/Black, 2 = Red/White, 3 = Red†, 4 = Green† † Not used for emitters
	MQAC-415	5 m		
	MQAC-430	9 m		

Reflector

Model	Description	Reflectivity Factor
BRT-84	Round acrylic target	1.4

Brackets

Models	Description
SMBQS18WRS	• Retrofit bracket; sensor base threads into bracket, bracket bolts to flat surface • PBT construction • Clearance for M3 or #6-32 hardware
SMB18FM	• Two-piece thermoplastic through-mount bracket • Mounting nut (M22 x 1.5) and outer flange (M22 x 1.5 external, M18 x 1 internal)
SMBM18054Z	• Bracket with 18 mm hole for mounting sensor inside C-rail • 16-ga. cold-rolled steel with zinc finish
SMBM18B66Z	• Protective bracket with 18 mm hole for mounting sensor • Curved mounting slots for versatility and orientation • Clearance for M6 (1/4") hardware • 14-ga. cold-rolled steel with zinc finish
SMBM18F103Z	• Protective bracket for mounting sensor above C-rail • 18 mm base mount bracket • 14-ga. cold-rolled steel with zinc finish
SMB18A	• Right-angle mounting bracket with a curved slot for versatile orientation • Mounting hole for 18 mm sensor • 12-ga. stainless steel • Clearance for M4 (#8) hardware

Opposed-Mode Apertures

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

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