

WORLD-BEAM® QS18 Universal Voltage Sensors



Datasheet



- Easily fits or retrofits almost any mounting configuration
- Exceptional optical performance in a compact right-angle housing
- 20 V ac/dc to 140 V ac/dc or 20 V ac/dc to 270 V ac/dc operation with P-MOSFET or N-MOSFET output, depending on model (see Specifications)
- Bright LED operating status indicators, visible from 360°
- Rugged, sealed housing, protected circuitry, 1200 PSI washdown
- Versatile mounting: front- and base-mount (M18), side-mount, and retrofit brackets



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 / LED		Sensing Range	Output Type ¹	
QS18WE	940 nm Infrared Effective Beam: 10 mm (0.4 in)	 OPPOSED	20 m (66 ft)	N/A (Emitter)	
QS18ANWR				L.O.	N-MOSFET (Sinking)
QS18RNWR				D.O.	
QS18APWR				L.O.	P-MOSFET (Sourcing)
QS18RPWR				D.O.	
QS18ANWLP	660 nm Visible Red	 POLAR RETRO	3.5 m (12 ft)	L.O.	N-MOSFET (Sinking)
QS18RNWLP				D.O.	
QS18APWLP				L.O.	P-MOSFET (Sourcing)
QS18RPWLP				D.O.	
QS18ANWLV	660 nm Visible Red	 RETRO	6.5 m (21 ft)	L.O.	N-MOSFET (Sinking)
QS18RNWLV				D.O.	
QS18APWLV				L.O.	P-MOSFET (Sourcing)
QS18RPWLV				D.O.	
QS18ANWDL	624 nm Visible Red	 DIFFUSE	450 mm (18 in)	L.O.	N-MOSFET (Sinking)
QS18RNWDL				D.O.	
QS18APWDL				L.O.	P-MOSFET (Sourcing)
QS18RPWDL				D.O.	
QS18ANWDXL	850 nm Infrared	 DIFFUSE	1 m (39 in)	L.O.	N-MOSFET (Sinking)
QS18RNWDXL				D.O.	
QS18APWDXL				L.O.	P-MOSFET (Sourcing)
QS18RPWDXL				D.O.	

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, QS18WE W/30) QD models: To order models with a 150 mm (6 in) pigtail cable with 4-pin AC Micro-style QD, add suffix "Q2" to the model number (for example, QS18WEQ2). A model with a QD connector requires an accessory mating cordset. 600 V cable models: Standard models are supplied with 300 V cable. For 600 V cable, add suffix "C1" to the model number (for example, QS18WEC1).

¹ MOSFET: Metal oxide semiconductor field-effect transistor.



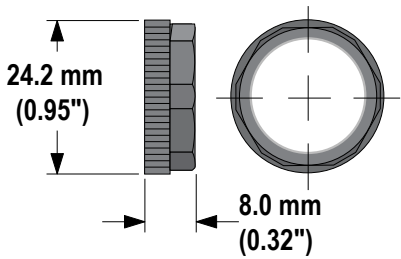
Indicators



- 1. Green: Power Indicator
- 2. Amber: Output Indicator
- 3. Sensitivity (Gain) Potentiometer

Wiring Diagrams

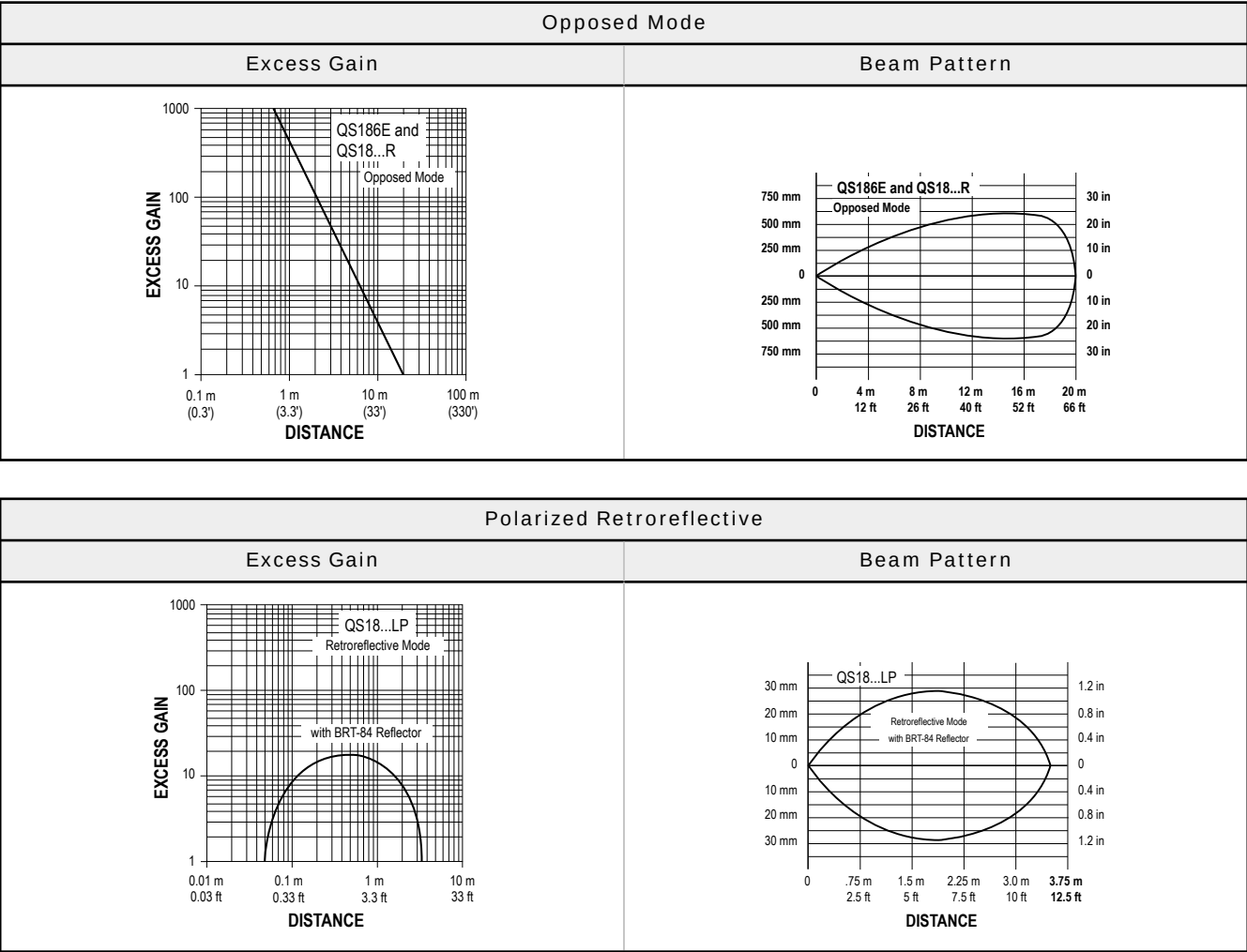
Cabled Models	Quick Disconnect (QD) Models
1 = Brown 3 = Blue 4 = Black (no connection for emitters)	1 = Red/Black 2 = Red/White 3 = Red (no connection for emitters) 4 = Green (no connection for emitters)
Emitter	Emitter
P-MOSFET	P-MOSFET
N-MOSFET	N-MOSFET

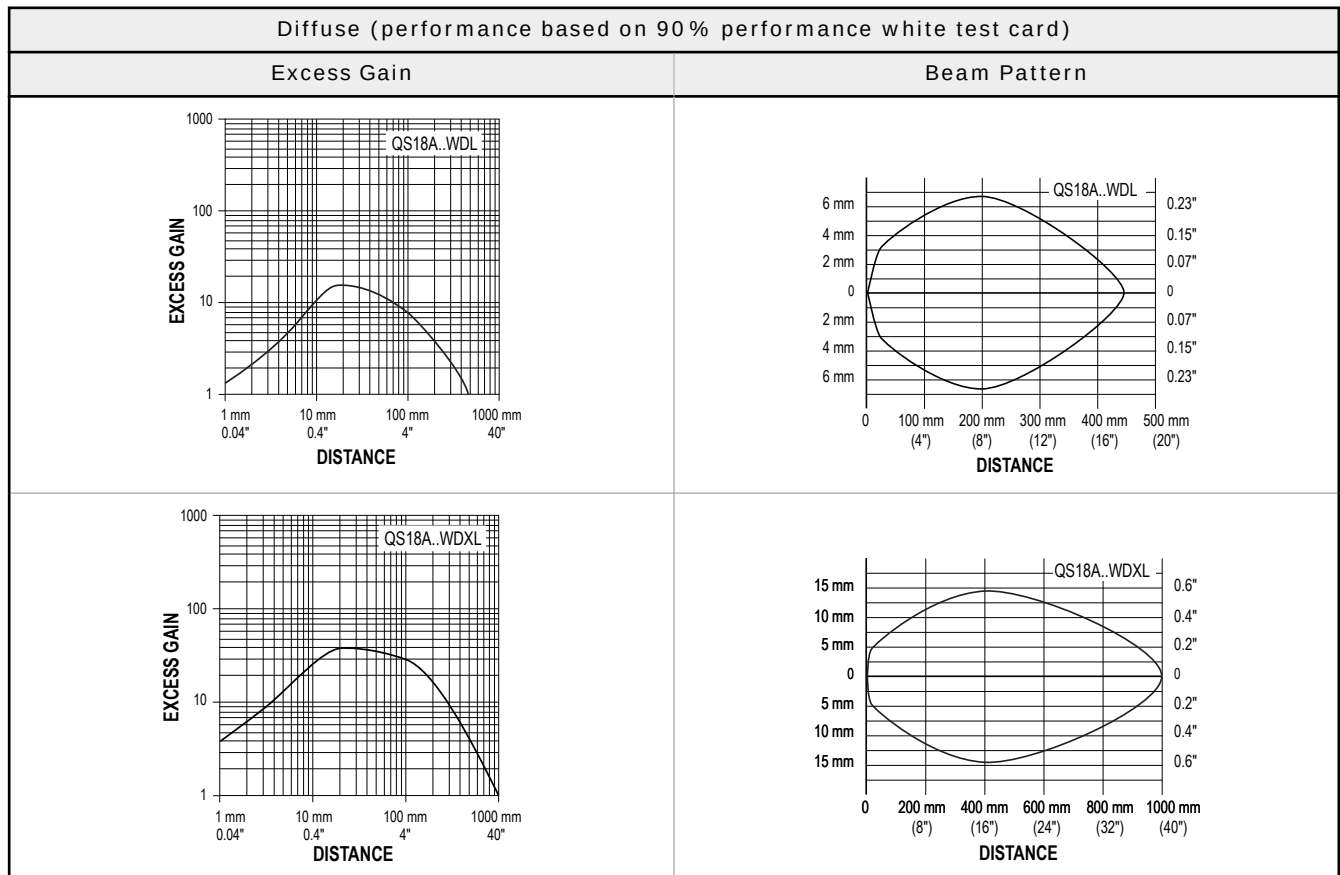
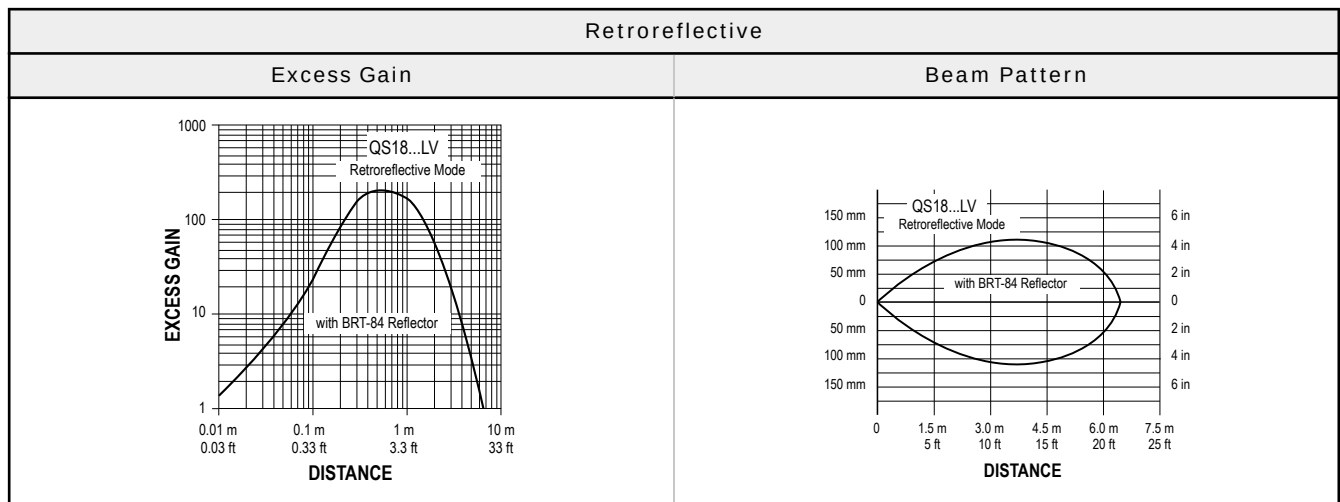


Packing List
Sensor
M18 × 1 jam nut
M3 hardware packet
Datasheet

M3 Hardware Packet Contents
2 – M3 × 0.5 × 20 mm SS Screw
2 – M3 × 0.5 SS Hex Nut
2 – M3 SS Washer

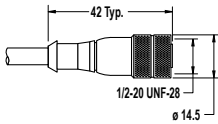
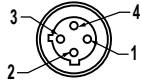
Performance Curves



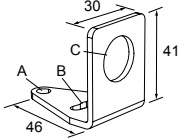


Accessories

Cordsets

4-Pin Micro-Style Cordsets				
Model	Length	Style	Dimensions	Pinout (Female)
MQAC-406	1.83 m (6 ft)	Straight		 1 = Red/Black 2 = Red/White 3 = Red 4 = Green
MQAC-415	4.57 m (15 ft)			
MQAC-430	9.14 m (30 ft)			

Mounting Brackets

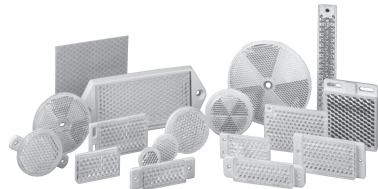
SMB18A - Right-angle mounting bracket with a curved slot for versatile orientation 12-ga. stainless steel 18 mm sensor mounting hole - Clearance for M4 (#8) hardware Hole center spacing: A to B = 24.2 Hole size: A = $\varnothing$ 4.6, B = 17.0 $\times$ 4.6, C = $\varnothing$ 18.5 	SMBQS18WRS - Retrofit bracket for Universal voltage models; sensor base threads into bracket, bracket bolts to flat surface - PBT construction - Clearance for M3 or #6-32 hardware 
Other sensor model shown with bracket above. Refer to your current Banner catalog for more mounting bracket options, including: SMB312S, SMB18SF, SMB3018SC, SMB18FA.	

Retroreflective Targets

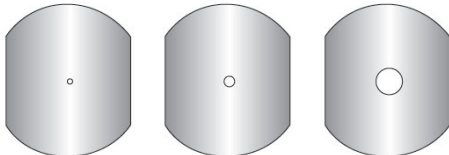
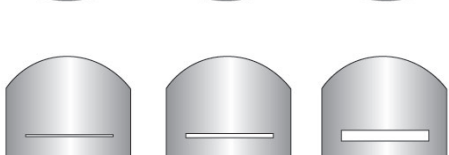
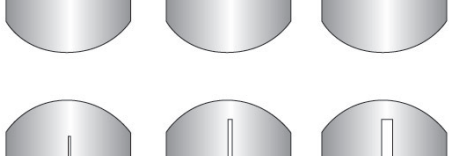
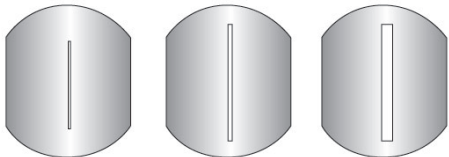
Banner offers a wide selection of high-quality retroreflective targets. See www.bannerengineering.com for complete information.



NOTE: Polarized sensors require corner cube type retroreflective targets. Non-polarized sensors may use any retroreflective target.



Apertures

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

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