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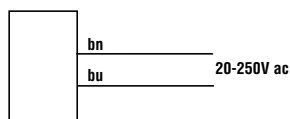


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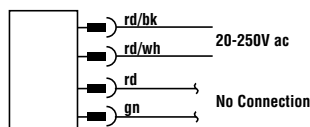
For further assistance, contact a Banner Engineering Applications Engineer at (763) 544-3164 or (888) 373-6767.



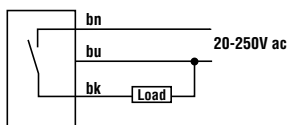
### Cabled Emitters



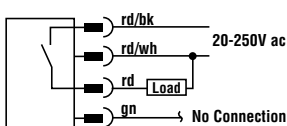
### QD Emitters (4-pin Micro-Style)








### All Other Cabled Models



### All Other QD Models (4-pin Micro-Style)



Sensing Mode		Range	LED	Output	Model*
	Opposed	20 m (66')	Infrared 950 nm	–	<b>S183E</b>
				LO	<b>S18AW3R</b>
				DO	<b>S18RW3R</b>
	2 m (79")	LO		<b>S18AW3L</b>	
				DO	<b>S18RW3L</b>
			Visible Red 680 nm	LO	<b>S18AW3LP</b>
DO				<b>S18RW3LP</b>	
		Diffuse	100 mm (4")	Infrared 880 nm	LO
	DO		<b>S18RW3D</b>		
	300 mm (12")	LO	<b>S18AW3DL</b>		
		DO	<b>S18RW3DL</b>		
	Fixed Field	25 mm (1") cutoff	LO		<b>S18AW3FF25</b>
		50 mm (2") cutoff	DO		<b>S18RW3FF25</b>
			100 mm (4") cutoff		LO
		DO			<b>S18RW3FF50</b>
		100 mm (4") cutoff	LO	<b>S18AW3FF100</b>	
			DO	<b>S18RW3FF100</b>	

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

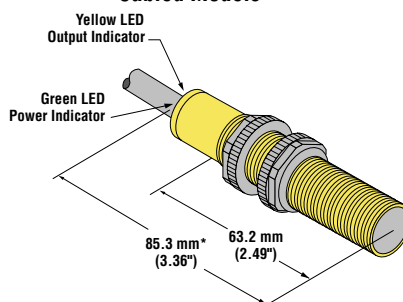
• **9 m (30') cable:** add suffix "W/30" (e.g., **S183E W/30**).

• **4-pin Micro-style QD models:** add suffix "Q1" (e.g., **S183EQ1**). A model with a QD connector requires a mating cable.

† Use polarized models when shiny objects will be sensed.

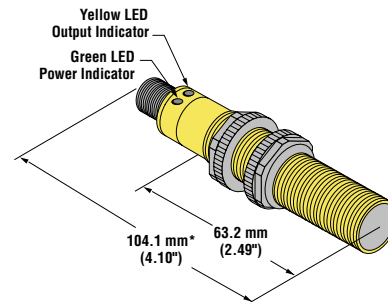
### Dimensions

#### Cabled Models



\*Polarized retro and fixed-field models = 86.3 mm (3.40")

#### QD Models



\*Polarized retro and fixed-field models = 105.1 mm (4.14")



### WARNING . . . Not To Be Used for Personnel Protection

**Never use these products as sensing devices for personnel protection. Doing so could lead to serious injury or death.**

These sensors do NOT include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition. Consult your current Banner Safety Products catalog for safety products which meet OSHA, ANSI and IEC standards for personnel protection.



# S18 Sensors – ac-Voltage Series

## Specifications

### Supply Voltage and Current

20 to 250V ac (50/60 Hz). Average current: 20 mA  
Peak current: 200 mA at 20V ac, 500 mA at 120V ac, 750 mA at 250V ac

### Supply Protection Circuitry

Protected against transient voltages

### Output Configuration

SPST solid-state ac switch; Three-wire hookup; Choose light operate or dark operate models

**Light Operate:** Output conducts when sensor sees its own (or the emitter's) modulated light

**Dark Operate:** Output conducts when the sensor sees dark

### Output Rating

300 mA maximum (continuous);

**Fixed-Field Models:** derate 5 mA/°C above +50°C (+122°F)

**Inrush Capability** 1 amp for 20 milliseconds, non-repetitive

**OFF-state leakage current:** < 100 microamps

**ON-state saturation voltage:** 3V at 300 mA ac; 2V at 15 mA ac

### Output Protection Circuitry

Protected against false pulse on power-up

### Output Response Time

**Opposed Mode:** 16 milliseconds ON, 8 milliseconds OFF

**Other Models:** 16 milliseconds ON and OFF

NOTE: 100 millisecond delay on power-up

### Repeatability

**Opposed Mode:** 2 milliseconds

**Other Models:** 4 milliseconds

Repeatability and response are independent of signal strength.

### Indicators

Two LEDs (Green and Yellow)

**Green ON steady:** power to sensor is ON

**Yellow ON steady:** sensor sees light

**Yellow flashing:** excess gain marginal (1 to 1.5x) in light condition

### Construction

PBT polyester housing; polycarbonate (opposed mode) or acrylic lens

### Environmental Rating

Leakproof design rated NEMA 6P, DIN 40050 (IP69K)

### Connections

2 m (6.5') attached cable, or 4-pin Micro-style quick-disconnect fitting

### Operating Conditions

**Temperature:** -40° to +70°C (-40° to +158°F);

**Maximum relative humidity:** 90% at 50°C (non-condensing)

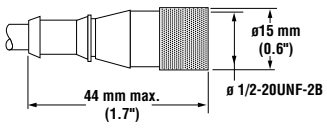
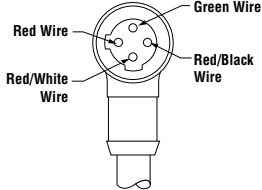
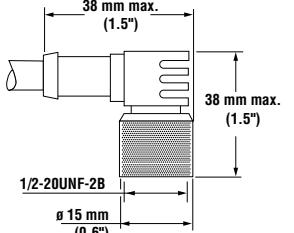
### Vibration and Mechanical Shock

All models meet Mil. Std. 202F requirements. Method 201A (Vibration; frequency 10 to 60 Hz, max., double amplitude 0.06" acceleration 10G). Method 213B conditions H&I (Shock: 75G with unit operating; 100G for non-operation)

### Certifications



## Quick-Disconnect (QD) Cables

Style	Model	Length	Dimensions	Pin-Out
4-pin Micro-style Straight	<b>MQAC-406</b> <b>MQAC-415</b> <b>MQAC-430</b>	2 m (6.5') 5 m (15') 9 m (30')		
4-pin Micro-style Right-angle	<b>MQAC-406RA</b> <b>MQAC-415RA</b> <b>MQAC-430RA</b>	2 m (6.5') 5 m (15') 9 m (30')		

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Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

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Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp.

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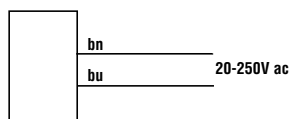


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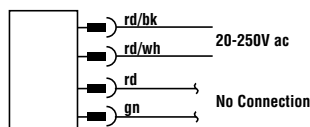
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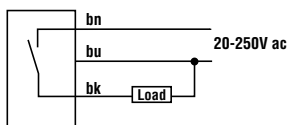
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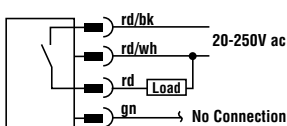
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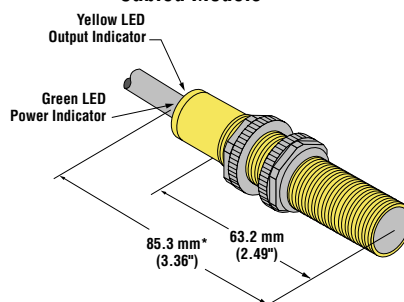
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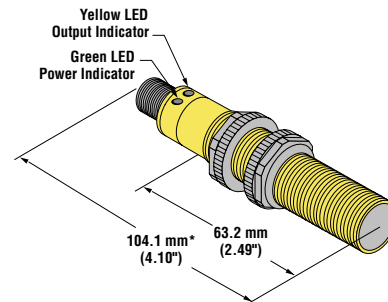
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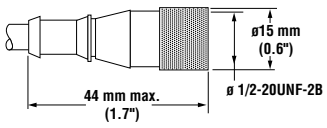
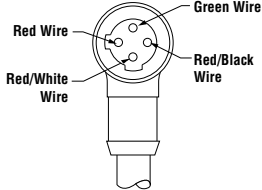
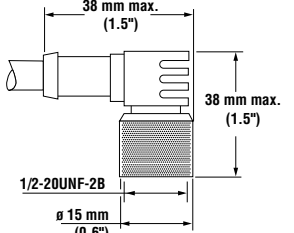
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