

# T30 Sensors - AC-Voltage Series

## Self-Contained, AC-Operated Sensors

For complete technical information about this product, including dimensions, accessories, and specifications, see [www.bannerengineering.com](http://www.bannerengineering.com) and search 121523



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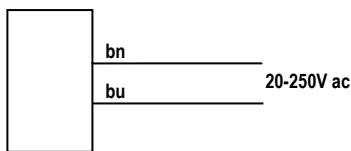
**WARNING: Not To Be Used for Personnel Protection**  
 Never use this device as a sensing device for personnel protection. Doing so could lead to serious injury or death. This device does NOT include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition.

### Models

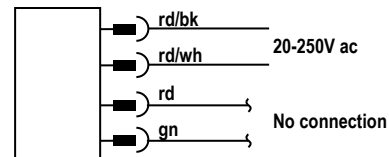
Sensing Mode	Model <sup>1</sup>	Output	Range	LED
 OPPOSED	T303E	-	60 m (200 ft)	Infrared, 950 nm
	T30AW3R	LO		
	T30RW3R	DO		
 POLAR RETRO	T30AW3LP	LO	6 m (20 ft)	Visible Red, 680 nm
	T30RW3LP	DO		
 FIXED-FIELD	T30AW3FF200	LO	200 mm (8 in) cutoff	Infrared, 880 nm
	T30RW3FF200	DO		
	T30AW3FF400	LO	400 mm (16 in) cutoff	
	T30RW3FF400	DO		
	T30AW3FF600	LO	600 mm (24 in) cutoff	
	T30RW3FF600	DO		

### Hookups

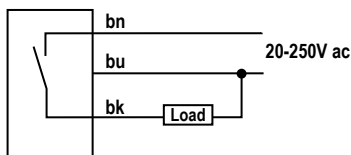
#### Cabled Emitters



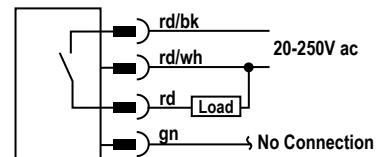
#### QD Emitters (4-pin Micro-Style)



#### All Other Cabled Models



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



<sup>1</sup> Standard 2 m (6.5 ft) cable models are listed. For 9 m (30 ft) cable: add suffix "W/30" (for example, T303E W/30). For 4-pin Micro-style integral QD: add suffix "Q1" (for example, T303EQ1). A model with a QD connector requires a mating cable.



## 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; light operate or dark operate, depending on model

**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 ms, non-repetitive

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

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

### Output Protection Circuitry

Protected against false pulse on power-up

### Output Response

**Time Opposed mode:** 16 ms ON, 8 ms OFF

**Other models:** 16 ms ON and OFF



**NOTE:** 100 ms delay on power-up; outputs do not conduct during this time.

### Repeatability

**Opposed mode:** 2 ms

**Other models:** 4 ms

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 ft) attached cable, or 4-pin Micro-style quick-disconnect fitting

### Operating Conditions

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

**Humidity:** 90% at +50° C maximum relative humidity (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 in acceleration 10G). Method 213B conditions H&I (Shock: 75G with unit operating; 100G for non-operation)

### Certifications



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