

## TriTech PIR/Microwave

### DS820i and DS835i TriTech Microwave/PIR

DS820i or DS835i	Does not include a tamper switch.
DS820iT or DS835iT	Includes a tamper switch.



The DS820i and DS835i are microprocessor-based TriTech Passive Infrared/Microwave Intrusion Detectors that provide immunity to false alarms caused by pets (one dog up to 100 lbs. / 45 kg, two dogs up to 60 lbs. / 27 kg, or up to 10 cats). Passive Infrared and Microwave processing provides excellent catch performance with freedom from false alarms. This small unobtrusive detector offers a simple installation and does not require field adjustments.



### ■ Features

- Artificial Intelligence\*
- Flexible Mounting Height  
7.5 to 9 ft. (2.25 m to 2.74 m)

- Supervised Microwave  
Patented fully supervised microwave circuitry provides single technology coverage in the event the microwave subsystem fails.
- Pet Immunity\*  
The detector is able to distinguish between signals caused by humans and signals caused by pets (one dog up to 100 lbs. / 45 kg, two dogs up to 60 lbs. / 27 kg, or up to 10 cats). This provides immunity to false alarms while maintaining proper catch performance of human targets.
- Draft/Insect Immunity  
The sealed optical chamber provides immunity to drafts and insects.
- 8 Detection Layers including “Look Down” Zones
- Temperature Compensation  
The sensor adjusts its sensitivity to maintain consistent catch performance at critical temperatures.
- UL Listed, ULC Listed, FCC Certified, CE

\* patented

### ■ Basic Function

#### Signal Processing

- Uses passive infrared and microwave technologies to provide an alarm condition when both fields of protection are simultaneously activated. Alarm signals must meet the signaling requirements of both technologies to activate an alarm. Microwave range is factory set, but may be field adjustable if desired.

#### First Step Processing

- First Step Processing (FSP) allows for instant response to human targets without sacrificing false alarm immunity to other sources. By adjusting its sensitivity based on signal amplitude, polarity, slope, and timing, FSP eliminates the need for the installer to select the sensitivity levels for the application.

#### Microwave Signal

- Adaptive Processing adjusts to background disturbances. This helps to reduce false alarms while maintaining catch performance.

**Test Features**

- Externally visible, tricolor alarm LED indicates each technology independently.

**Certification**

UL Listing	BP1448
CE-EMC	89/336

**Patents**

4,660,024	5,077,548
4,764,755	5,262,567
5,208,567	5,450,062
5,670,943	

**Optional Accessories**

	B335 Low Profile Mount Bracket Shipped in packages of 3.		B338 Ceiling Mount Bracket
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**Technical Specifications**

<b>Power Requirements</b>	6 to 15 VDC, 16 mA @ 12 VDC; 35 mA maximum.
<b>Alarm Output</b>	Normally Closed reed relay rated at 3.0 watts, 125 mA @ 28 VDC for resistive loads and protected by a 4.7 ohm resistor in the common "C" leg.
<b>Tamper Output</b>	Normally Closed tamper switch. Contacts rated at 28 VDC, 125 mA maximum. (DS820iT and DS835iT only)
<b>Microwave Frequency</b>	DS820i/820iT: 10.525 GHz DS835i/835iT: 10.525 GHz DS820iA/820iTA: 10.687 GHz (Export only) DS835iA/835iTA: 10.687 GHz (Export only) DS820iB/DS820iTB: 9.9 GHz (Export only) DS835iB/835iTB: 9.9 GHz (Export Only)
<b>Radio Frequency Interference (RFI) Immunity</b>	No alarm or setup on critical frequencies in the range from 26 to 950 Megahertz at 50 v/m.

<b>Storage &amp; Operating Temperatures</b>	-40°F to +120°F (-40°C to +49°C). For UL Certificated installations, +32°F to +120° (0°C to +49°C).
<b>Enclosure Design</b>	High impact ABS plastic enclosure. Measures (HxWxD) 3.75 in. x 2.25 in. x 1.5 in. (9.5 cm x 5.7 cm x 3.8 cm).
<b>Standard Mounting</b>	Surface or corner mount. Recommended mounting height is 7.5 - 9 ft. (2.25 - 2.74 m).
<b>Optional Mounting</b>	B335 Low Profile Mount Bracket, B338 Ceiling Mount Bracket

**Coverage**

**Standard Coverage**

DS820i Broad: 20 ft. x 20 ft. (6 m x 6 m)

DS835i Broad: 35 ft. x 35 ft. (11 x 11 m)

