



DS820i and DS835i Series TriTech PIR Detectors



- ▶ Artificial intelligence
- ▶ Flexible mounting height
- ▶ Supervised microwave
- ▶ No adjustment necessary
- ▶ Pet immunity
- ▶ Draft and insect immunity
- ▶ Eight detection layers including look down zones
- ▶ Temperature compensation

The DS820i and DS835i Series Detectors provide immunity to false alarms caused by pets.

Frequency	Model
9.9 GHz	DS820iTB, DS835iTB
10.525 GHz	DS820i, DS835i, DS820iT, DS835iT
10.687 GHz	DS820iTA, DS835iTA

Passive infrared and microwave processing provides excellent catch performance with freedom from false alarms. This small unobtrusive detector is simple to install and does not require field adjustments.

Functions

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.

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 45 kg [100 lb], two dogs up to 27 kg [60 lb], or up to 10 cats). This provides immunity to false alarms while maintaining proper catch performance of human targets.

Draft and Insect Immunity

The sealed optical chamber provides immunity to drafts and insects.

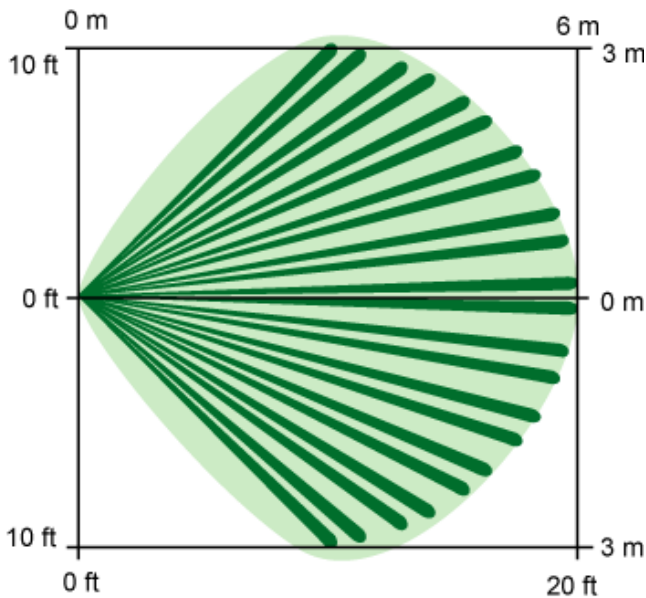
Temperature Compensation

The sensor adjusts its sensitivity to maintain consistent catch performance at critical temperatures.

Certifications and Approvals

All Models UL639, Intrusion Detection Units
 FCC Compliant
 CE
DS820iT and DS835iT Comply with EN50131-1 grade 2

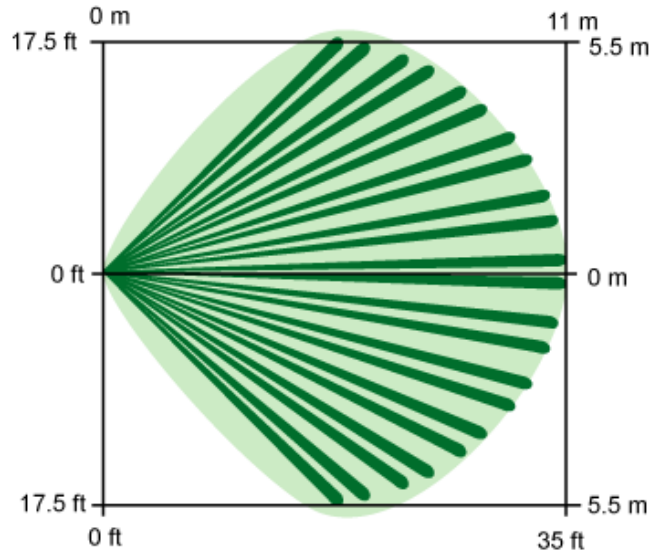
Installation/Configuration Notes



Top View
DS820i Broad Coverage 6 m x 6 m (20 ft x 20 ft)



Side View
DS820i Broad Coverage 6 m x 6 m (20 ft x 20 ft)



Top View
DS835i Broad Coverage 11 m x 11 m. (35 ft x 35 ft)



Side View
DS835i Broad Coverage 11 m x 11 m. (35 ft x 35 ft)

Technical Specifications

Enclosure Design

Dimensions: 9.5 cm x 5.7 cm x 3.8 cm (3.75 in. x 2.25 in. x 1.5 in.)

Material: High impact ABS plastic enclosure

Environmental Considerations

Operating Temperature: -40°C to +49°C (-40°F to +120°F)
For UL Certified installations, 0°C to +49°C (+32°F to +120°F)

Radio Frequency Interference (RFI) immunity: No alarm or setup on critical frequencies in the range from 26 MHz to 950 MHz at 50 V/m.

DS820iT and DS835iT: Comply with Environmental Class II (EN50130-5)

Mounting

Location: Surface or corner mount

Height: 2.25 m to 2.75 m (7.5 ft to 9 ft)

Outputs

Alarm: Normally-closed reed relay rated at 3.0 W, 125 mA at 28 VDC for resistive loads and protected by a 4.7 Ω resistor in the common C leg.

Tamper: Normally-closed tamper switch with contacts rated at 28 VDC, 125 mA maximum

Power Requirements

Current Draw: 16 mA at 12 VDC; 35 mA maximum.

Voltage: 6 VDC to 15 VDC

Ordering Information

DS820i Detector (10.525 GHz) DS820i

Operates at 10.525 GHz. Provides 6 m x 6 m (20 ft x 20 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

DS820iT Detector (10.525 GHz) DS820iT

Operates at 10.525 GHz. Includes tamper switch. Provides 6 m x 6 m (20 ft x 20 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

DS820iT-CHI Detector (10.525 GHz) DS820iT-CHI

Operates at 10.525 GHz. Includes tamper switch. For use in China. Provides 6 m x 6 m (20 ft x 20 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

Ordering Information

DS820iTA Detector (10.687 GHz) DS820iTA

Operates at 10.687 GHz. Includes a tamper switch. Provides 6 m x 6 m (20 ft x 20 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

DS820iTB Detector (9.9 GHz) DS820iTB

Operates at 9.9 GHz. Includes a tamper switch. Provides 6 m x 6 m (20 ft x 20 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

DS835i Detector (10.525 GHz) DS835i

Operates at 10.525 GHz. Provides 11 m x 11 m. (35 ft x 35 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

DS835iT Detector (10.525 GHz) DS835iT

Operates at 10.525 GHz. Includes a tamper switch. Provides 11 m x 11 m. (35 ft x 35 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

DS835iT-CHI Detector (10.525 GHz) DS835iT-CHI

Operates at 10.525 GHz. Includes a tamper switch. For use in China. Provides 11 m x 11 m. (35 ft x 35 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

DS835iTA Detector (10.687 GHz) DS835iTA

Operates at 10.687 GHz. Includes a tamper switch. Provides 11 m x 11 m. (35 ft x 35 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

DS835iTB Detector (9.9 GHz) DS835iTB

Operates at 9.9 GHz. Includes a tamper switch. Provides 11 m x 11 m. (35 ft x 35 ft) coverage, supervised microwave, pet immunity, draft and insect immunity, and eight detection layers.

Hardware Accessories

B335-3 Low-profile Swivel-mount Bracket B335-3

Plastic, swivel, low profile bracket for walls. The vertical pivot range is +10° to -20°; the horizontal pivot range is ±25°. Shipped in packages of three.

B338 Universal Ceiling Bracket B338

Plastic swivel bracket for ceilings. The vertical pivot range is +7° to -16°; the horizontal pivot range is ±45°.

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