



BOSCH
Invented for life

DS820 and DS835 Series TriTech PIR Detectors



- ▶ Artificial intelligence
- ▶ Five detection layers including look down zones
- ▶ Five mounting options
- ▶ Selectable PIR sensitivity
- ▶ Vertical and horizontal pointability
- ▶ Motion Analyzer II processing
- ▶ Draft and insect immunity
- ▶ Supervised microwave and PIR
- ▶ Pet immunity
- ▶ Temperature compensation

The DS820 and DS835 Series Detectors provide immunity to false alarms caused by pets. Passive Infrared and microwave processing provides excellent catch performance with freedom from false alarms.

Frequency	Model
9.9 GHz	DS820-B, DS820B-FRA, DS820B-ITA, DS835-B, DS835B-FRA, DS835B-ITA, DS835C
10.475 GHz	DS820CH-SWI, DS835CH-SWI
10.525 GHz	DS820, DS820-BEL, DS820-CAN, DS820-NEL, DS835, DS835-BEL, DS835-CAN, DS820-NEL
10.687 GHz	DS820-A, DS835-A

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. Adjustable PIR and microwave sensitivity.

Microwave Signal Processing

Pattern recognition circuitry identifies and ignores repetitive false alarm sources. Adaptive processing adjusts to background disturbances. This helps to reduce false alarms while maintaining catch performance.

Motion Analyzer II Processing

Motion Analyzer II uses multiple thresholds and timing windows to analyze timing, amplitude, duration, and polarity of signals to make an alarm decision. It will not alarm on extreme levels of thermal and illumination disturbances caused by heaters and air conditioners, hot and cold drafts, sunlight, lightning, and moving headlights. Provides three sensitivity settings.

Test Features

Externally visible alarm LED flashes to indicate a trouble condition.

Draft and Insect Immunity

The sealed optical chamber provides immunity to drafts and insects.

Supervised Microwave and PIR

Patented fully supervised microwave and PIR 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 lbs.), two dogs up to 27 kg (60 lbs.), or up to ten cats].

This provides immunity to false alarms while maintaining proper catch performance of human targets.

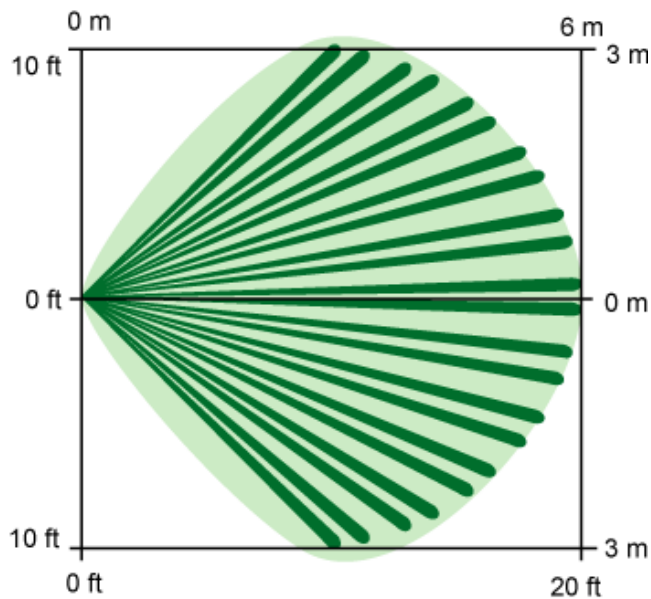
Temperature Compensation

The sensor provides compensation at critical temperatures.

Certifications and Approvals

- All Models CE
- DS820-B Afnor (NF, A2P)
- DS820-FRA
- DS835-B
- DS835-FRA
- DS820 FCC Compliant
- DS820-BEL
- DS820-CAN
- DS835
- DS835-BEL
- DS835-CAN
- DS820 UL639, Intrusion Detection Units
- DS820-CAN
- DS835
- DS835-B
- DS835C
- DS835-CAN
- DS820 ULC Standard S306-M89
- DS820-CAN
- DS835
- DS835-CAN
- DS820-A Comply with EN50131-1 grade 2
- DS835-A

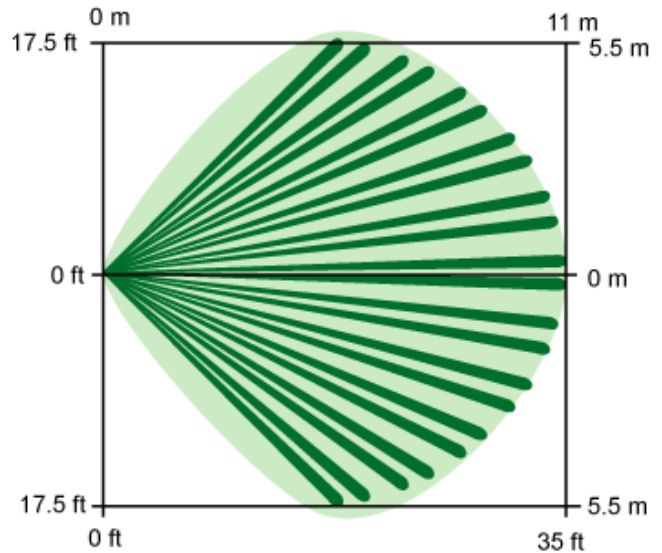
Installation/Configuration Notes



Top View
DS820 Broad Coverage 6 m x 6 m (20 ft x 20 ft)



Side View
DS820 Broad Coverage 6 m x 6 m (20 ft x 20 ft)



Top View
DS835 Broad Coverage 11 m x 11 m (35 ft x 35 ft)



Side View
DS835 Broad Coverage 11 m x 11 m (35 ft x 35 ft)

Technical Specifications

Enclosure Design

Dimensions: 12.7 cm x 7.1 cm x 5.6 cm
(5 in. X 2 in. X 2.2 in.)

Material: High impact ABS plastic enclosure

Environmental Considerations

Temperature (Operating): -40°C to +49°C (-40°F to +120°F)
For UL Certificated 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.

DS820-A and DS835-A: Comply with Environmental Class II (EN50130-5)

Mounting Considerations

Location: Surface or corner mount. Mounts to standard single gang electrical box.

Height: 2 m (6.5 ft)

Internal Pointability: +2° to -10° vertical, ±10° horizontal (unit is shipped with look down lens masked)

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.
835C Form C relay rated at 5 V, 300 Ω.

Tamper: Normally-closed tamper switch. Contacts rated at 28 VDC, 125 mA maximum.

Power Requirements

Current Draw: 16 mA at 12 VDC

Voltage (Input): 9 VDC to 15 VDC

Ordering Information

DS820 Detector (10.525 GHz) DS820

Operates at 10.525 GHz. Provides 6 m x 6 m (20 ft x 20 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS820-A Detector (10.687 GHz) DS820-A

Operates at 10.687 GHz. Provides 6 m x 6 m (20 ft x 20 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS820-B Detector (9.9 GHz) DS820-B

Operates at 9.9 GHz. Provides 6 m x 6 m (20 ft x 20 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

Ordering Information

DS820-BEL Detector (10.525 GHz) DS820-BEL

Operates at 10.525 GHz. For use in Belgium. Provides 6 m x 6 m (20 ft x 20 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS820-CAN Detector (10.525 GHz) DS820-CAN

Operates at 10.525 GHz. For use in Canada. Provides 6 m x 6 m (20 ft x 20 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS820-NEL Detector (10.525 GHz) DS820-NEL

Operates at 10.525 GHz. For use in the Netherlands. Provides 6 m x 6 m (20 ft x 20 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS820B-FRA Detector (9.9 GHz) DS820B-FRA

Operates at 9.9 GHz. For use in France. Provides 6 m x 6 m (20 ft x 20 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS820B-ITA Detector (9.9 GHz) DS820B-ITA

Operates at 9.9 GHz. For use in Italy. Provides 6 m x 6 m (20 ft x 20 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS820CH-SWI Detector (10.475 GHz) DS820CH-SWI

Operates at 10.475 GHz. For use in Switzerland. Provides 6 m x 6 m (20 ft x 20 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS835 Detector (10.525 GHz) DS835

Operates at 10.525 GHz. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS835-A Detector (10.687 GHz) DS835-A

Operates at 10.687 GHz. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

DS835-B Detector (9.9 GHz) DS835-B

Operates at 9.9 GHz. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.

Ordering Information

DS835-BEL Detector (9.9 GHz) Operates at 9.9 GHz. For use in Belgium. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.	DS835-BEL
DS835-CAN Detector (9.9 GHz) Operates at 9.9 GHz. For use in Canada. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.	DS835-CAN
DS835-FRA Detector (9.9 GHz) Operates at 9.9 GHz. For use in France. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.	DS835B-FRA
DS835-ITA Detector (9.9 GHz) Operates at 9.9 GHz. For use in Italy. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.	DS835B-ITA
DS835-NEL Detector (9.9 GHz) Operates at 9.9 GHz. For use in the Netherlands. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.	DS835-NEL
DS835CH-SWI Detector (10.475 GHz) Operates at 10.475 GHz. For use in Switzerland. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.	DS835CH-SWI
DS835C Detector (10.525 GHz) Includes a Form C Relay. Operates at 10.525 GHz. Provides 11 m x 11 m (35 ft x 35 ft) coverage, five detection layers, five mounting options, selectable sensitivity, draft and insect immunity, and pet immunity.	DS835C

Accessories

B335-3 Low-profile Swivel-mount Bracket 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.	B335-3
B800 Ceiling-mount Bracket Surface mounts detectors to the ceiling. The vertical pivot range is +7° to -16°; the horizontal pivot range is ±45°. Do not use for pet applications.	B800

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