

DS820 and DS835 Series TriTech Motion Detectors

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Invented for life



- ▶ Artificial intelligence
- ▶ Five detection layers including look down zones
- ▶ Five mounting options
- ▶ Selectable PIR sensitivity
- ▶ Vertical and horizontal pointability

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.

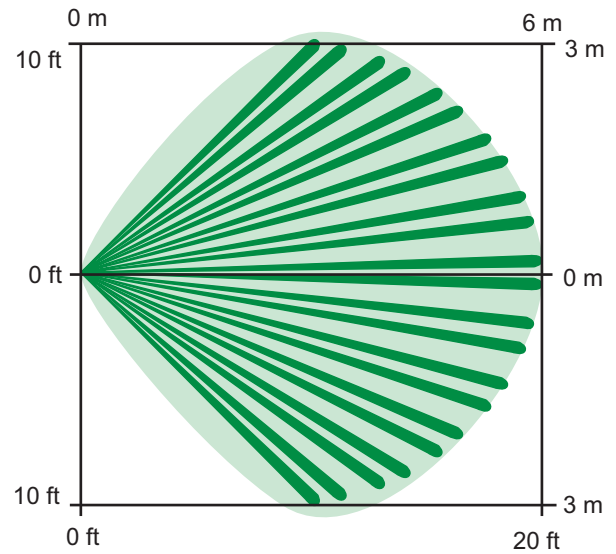
Certifications and approvals

These detectors are designed to comply with the requirements of:

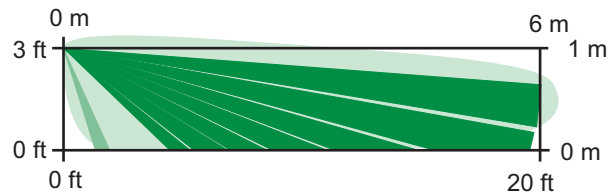
France	AFNOR	DS820-B, DS820B-FRA, DS835-B, DS835B-FRA: NF, A2P
Europe		DS820-A and DS835-A comply with EN50131-1, Grade 2

Region	Certification
Europe	CE DS820 and DS835: 1999/5/EC, ETS 300 440: 1996, ETS 300 683: 1997, EN60950: 1992
Belgium	INCERT DS820 and DS835: B-509-0014/c
USA	UL DS820, DS835, DS835C: ANSR: Intrusion Detection Units (UL639)
	FCC DS820 and DS835: ESVDS730 ESVDS730
Italy	IMQ DS835B-ITA: U0626
Canada	ULC DS820 and DS835: S306-M89
	IC DS820 and DS835: 1249102781
Brazil	ANATEL DS820 and DS835: 0667-03-1855

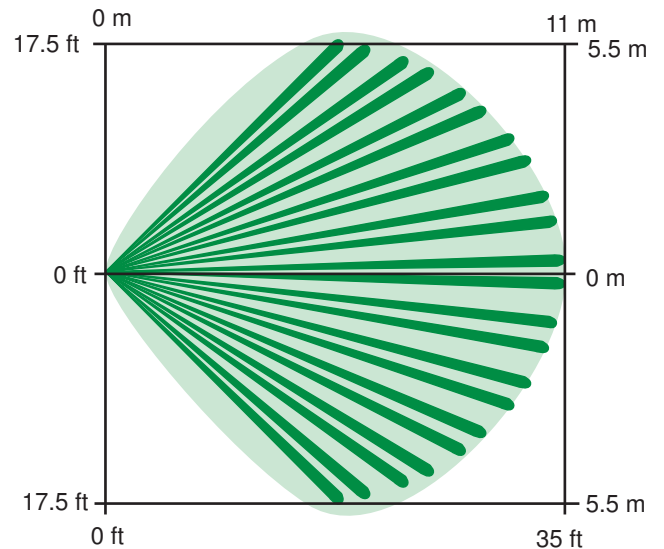
Installation/configuration notes



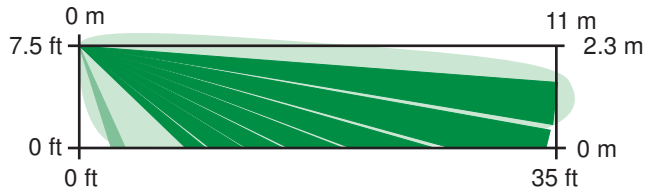
Top View
DS820 Broad Coverage 6 m x 6 m (20 ft x 20 ft)



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)

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.

Order number **DS820**

DS820-A Detector (10.687 GHz)

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.

Order number **DS820-A**

DS820-B Detector (9.9 GHz)

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.

Order number **DS820-B**

DS820-BEL Detector (10.525 GHz)

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.

Order number **DS820-BEL**

DS820-CAN Detector (10.525 GHz)

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.

Order number **DS820-CAN**

DS820-NEL Detector (10.525 GHz)

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.

Order number **DS820-NEL**

DS820B-FRA Detector (9.9 GHz)

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.

Order number **DS820B-FRA**

DS820B-ITA Detector (9.9 GHz)

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.

Order number **DS820B-ITA**

DS820CH-SWI Detector (10.475 GHz)

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.

Order number **DS820CH-SWI**

DS835 Detector (10.525 GHz)

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.

Order number **DS835**

DS835-A Detector (10.687 GHz)

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.

Order number **DS835-A**

DS835-B Detector (9.9 GHz)

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.

Order number **DS835-B**

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.

Order number **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.

Order number **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.

Order number **DS835B-FRA**

DS835B-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.

Order number **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.

Order number **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.

Order number **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.

Order number **DS835C**

Accessories**Swiveling B335-3 low-profile mount**

Swiveling, low-profile, plastic mount for wall mounting. The vertical swivel range is +10° to -20°, while the horizontal swivel range is ±25°. Available in triple packs.

Order number **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.

Order number **B800**

Represented by:

Americas:

Bosch Security Systems, Inc.
130 Perinton Parkway
Fairport, New York, 14450, USA
Phone: +1 800 289 0096
Fax: +1 585 223 9180
security.sales@us.bosch.com
www.boschsecurity.us

Europe, Middle East, Africa:

Bosch Security Systems B.V.
P.O. Box 80002
5617 BA Eindhoven, The Netherlands
Phone: + 31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:

Robert Bosch (SEA) Pte Ltd, Security
Systems
11 Bishan Street 21
Singapore 573943
Phone: +65 6571 2808
Fax: +65 6571 2699
apr.securitysystems@bosch.com
www.boschsecurity.asia

China:

Bosch (Shanghai) Security Systems Ltd.
201 Building, No. 333 Fuquan Road
North IBP
Changning District, Shanghai
200335 China
Phone +86 21 22181111
Fax: +86 21 22182398
www.boschsecurity.com.cn

America Latina:

Robert Bosch Ltda Security Systems Division
Via Anhanguera, Km 98
CEP 13065-900
Campinas, Sao Paulo, Brazil
Phone: +55 19 2103 2860
Fax: +55 19 2103 2862
latam.boschsecurity@bosch.com
www.boschsecurity.com