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Invented for life

DS860 Series TriTech PIR/Microwave Detector



The DS860 Series TriTech® Detectors with their passive infrared and microwave processing provide excellent catch performance with freedom from false alarms. These surface or corner mount detectors are available with three different microwave frequencies:

Model	Microwave Frequency
DS860	10.525 GHz
DS860-A	10.687 GHz
DS860-B	9.9 GHz

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

- **PIR Signal Processing:** Motion Analyzer II uses multiple thresholds and timing windows to analyze timing, amplitude, duration and polarity of signals to make an alarm decision. 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. Two sensitivity settings are provided.

- ▶ **Artificial Intelligence**
- ▶ **Five layers of detection including look-down zone**
- ▶ **Supervised microwave and PIR**
- ▶ **Selectable PIR sensitivity**
- ▶ **Draft/insect immunity**
- ▶ **Five mounting options**
- ▶ **Two coverage patterns**
- ▶ **Vertical and horizontal pointability**

- **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.

Test Features

Externally visible alarm LED flashes to indicate a trouble condition.

Supervised Microwave and PIR

Patented fully supervised microwave and PIR circuitry provides single technology coverage in the event the microwave subsystem fails. Use the memory circuit to force a self-test at anytime.

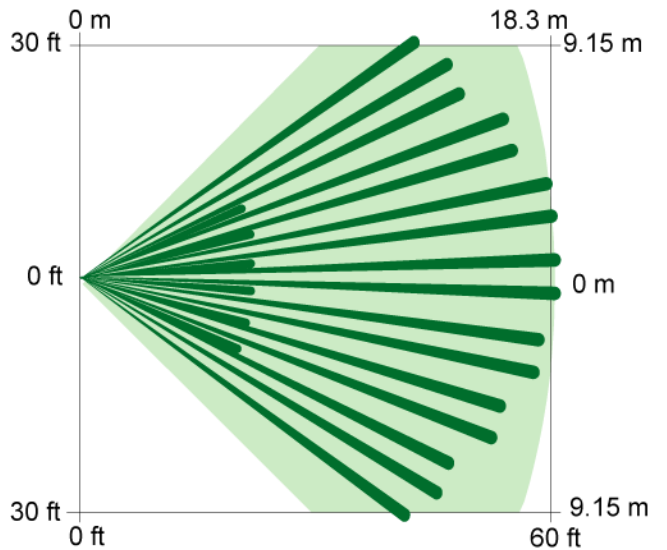
Draft and Insect Immunity

The sealed optical chamber provides immunity to drafts and insects.

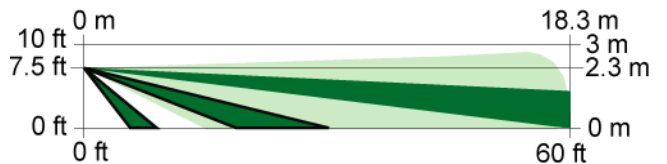
Certifications and Approvals

Region	Certification	
Europe	CE	All models: 89/336/EEC, 1999/5/EC, EN55022:1998 +A1:2000 +A2:2003, EN50130-4:1996 +A1:1998 +A2:2003, EN61000-4-2: 1995 +A1:1998 +A2:2001, EN61000-4-3: 2002 +A1:2003, EN61000-4-4: 1995 +A1:2000 +A2:2001, EN61000-4-5: 1995 +A1:2001, EN61000-4-6: 1996 +A1:2001 +A2:2001, EN61000-4-11: 1994 +A1:2001, EN60950-1: 2001 +A11:2004, EN 300 400-2 V1.1.1 (2001-09), EN 301 489 Parts -1 and -3 V1.2.2 (2000-08) DS860 only: 1999/5/EC, ETS 300 400 April 1996, ETS 300 683 April 1997, EN60950 Dec. 1992
Belgium	INCERT	DS860 only: B-509-0014/c
Poland	CNBOP	DS860 only: PN-EN50130-5, PN-93/E-8390-22
USA	UL	DS860 only: ANSR: Intrusion Detection Units (UL639)
	FCC	DS860 only: ESVDS730 ESVDS730
Italy	IMQ	DS860-ITA only: U0627
Canada	ULC	DS860 only: ANSRC: Intrusion Detection Units
	IC	DS860 only: 12499102781
China	CCC	DS860-CHI only: 20040319001000037
Brazil	ANATEL	DS860 only: 0667-03-1855
Singapore	iDA	DS860 only: LPREQ-S0150-2004
Europe		DS860-A complies with EN50131-1 Grade 2

Installation/Configuration Notes



Top View
Standard Broad Coverage: 18.3 m x 18.3 m (60 ft x 60 ft)



Side View
Standard Broad Coverage: 18.3 m x 18.3 m (60 ft x 60 ft)



Top View
Optional Long Range Coverage: 30.5 m x 3 m (100 ft x 10 ft)
Requires optional ORL92-3 lens.



Side View
Optional Long Range Coverage: 30.5 m x 3 m (100 ft x 10 ft)
Requires optional ORL92-3 lens.

Mounting

The recommended mounting height is 2.3 m (7.5 ft). Mounts to a standard single gang electrical box.

Technical Specifications

Enclosure Design

Dimensions: 12.7 cm x 7.1 cm x 5.6 cm
(5 in. X 2.8 in. X 2.2 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.

DS860-A: Complies with Environmental Class II (EN50130-5)

Mounting

Height Range: 1.8 m to 2.4 m (6 ft to 8 ft)

Location: Surface or corner mount

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. Contacts rated at 28 VDC, 125 mA maximum.

Power Requirements

Current Draw: 16 mA at 12 VDC

Voltage: 9 VDC to 15 VDC

Trademarks

TriTech® is a registered trademark of Bosch Security Systems in the United States.

Ordering Information

DS860 Detector (10.525 GHz)

DS860

Operates at 10.525 GHz. Provides five layers of detection, supervised microwave and PIR. selectable sensitivity, draft and insect immunity, five mounting options, and two coverage patterns.

DS860-CHI Detector (10.525 GHz)

DS860-CHI

Operates at 10.525 GHz. For use in China. Provides five layers of detection, supervised microwave and PIR. selectable sensitivity, draft and insect immunity, five mounting options, and two coverage patterns.

DS860-A Detector (10.687 GHz)

DS860-A

Operates at 10.687 GHz. Provides five layers of detection, supervised microwave and PIR. selectable sensitivity, draft and insect immunity, five mounting options, and two coverage patterns.

DS860-B Detector (9.9 GHz)

DS860-B

Operates at 9.9 GHz. Provides five layers of detection, supervised microwave and PIR. selectable sensitivity, draft and insect immunity, five mounting options, and two coverage patterns.

DS860B-FRA Detector (9.9 GHz)

DS860B-FRA

Operates at 9.9 GHz. For use in France. Provides five layers of detection, supervised microwave and PIR. selectable sensitivity, draft and insect immunity, five mounting options, and two coverage patterns.

DS860B-ITA Detector (9.9 GHz)

DS860B-ITA

Operates at 9.9 GHz. For use in Italy. Provides five layers of detection, supervised microwave and PIR. selectable sensitivity, draft and insect immunity, five mounting options, and two coverage patterns.

Accessories

B328 Gimbal-mount Bracket

B328

Mounts on a single-gang box and allows rotation of a detector. Wires are hidden inside.

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 $\pm 25^\circ$. Shipped in packages of three.

B800 Ceiling-mount Bracket

B800

Surface mounts detectors to the ceiling. The vertical pivot range is +7° to -16°; the horizontal pivot range is $\pm 45^\circ$. Do not use for pet applications.

OLR92-3 Long-range Lens

OLR92-3

Provides long-range coverage with a 30.5 m x 3 m (100 ft x 10 ft) pattern. Shipped in packages of three.

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