



BOSCH
Invented for life

DS950 and DS970 Series High-performance Detectors



The DS950 and DS970 Detectors provide excellent catch performance and freedom from false alarms with five layers of detection (including look-down zone), patented passive infrared, and microwave processing.

Functions

Signal Processing

Uses passive infrared and microwave technologies to provide an alarm condition upon simultaneous activation of both fields of protection. 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. It will not alarm on extreme levels of thermal and illumination disturbances (heaters and air conditioners, hot and cold drafts, sunlight, lightning, and moving headlights). Motion Analyzer II provides two sensitivity settings.
- **Microwave Signal Processing:** Pattern recognition circuitry identifies and ignores repetitive false alarm sources. Adaptive processing adjusts to background disturbances.

Microwave Anti-Masking

Provides supervision trouble signal if microwave reflective material is placed within 30.5 cm (1 ft) of detector.

- ▶ Five layers of detection including look-down zone
- ▶ Supervised microwave and PIR
- ▶ Anti-masking feature
- ▶ Selectable PIR sensitivity
- ▶ Five mounting options
- ▶ Draft and insect immunity
- ▶ Motion Monitor supervision
- ▶ Alarm memory
- ▶ Microwave Inhibit

Test Features

Three-color alarm LED with separate colors for alarm, PIR, and microwave activation. Internal noise voltage test pins provide pattern location and background disturbance evaluation using a standard analog meter. Trouble memory feature recalls trouble conditions.

Supervised Microwave and PIR

Patented fully supervised microwave and PIR circuitry provides single technology coverage in the event the microwave subsystem fails.

Draft and Insect Immunity

The sealed optic chamber provides immunity to drafts and insects.

Alarm memory

Provides indication of stored alarms for use in multiple unit applications by latching the alarm LED. Controlled by a switched voltage from the control panel.

Microwave Inhibit

When using the memory input, the microwave portion of the detector can be turned off during disarm period.

Motion Monitor

Switch-selectable one or 30 day Motion Monitor supervision timers provide the detector with the ability to verify that there is a clear view of the protection area. The memory circuit can also control this feature.

Certifications and Approvals

Region	Certification	
Europe	CE	89/336/EEC and 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 300 440-2 V1.1.1 (2001-09), EN 301 489 Parts -1 and -3 V1.2.1 (2000-08) DS950 and DS970: 1999/5/EC, ETS 300440: 1996, ETS 300683: 1997, EN60950: 1992 DS950B-ITA and DS970B-ITA: 89/336/EEC, EN50130-4: 1995+A1: 1998+A2: 2003
Belgium	INCERT	DS950 and DS970: B-509-0014/c
USA	UL	DS950 and DS970: ANSR: Intrusion Detection Units (UL639) ZX970: ANSR: Intrusion Detection Units (UL639)
	FCC	DS950 and DS970: ESVD5730 ESVD5730
Italy	IMQ	DS950B-ITA: U0628 DS970B-ITA: U0629
Canada	ULC	DS950 and DS970: ANSRC: Intrusion Detection Units (S306-M89)
China	CCC	DS950-CHI and DS970-CHI: 2009031901000563
Brazil	ANATEL	DS950 and DS970: 0667-03-1855
Singapore	iDA	DS950: LPREQ-S0151-2004
		DS970: LPREQ-S0152-2004

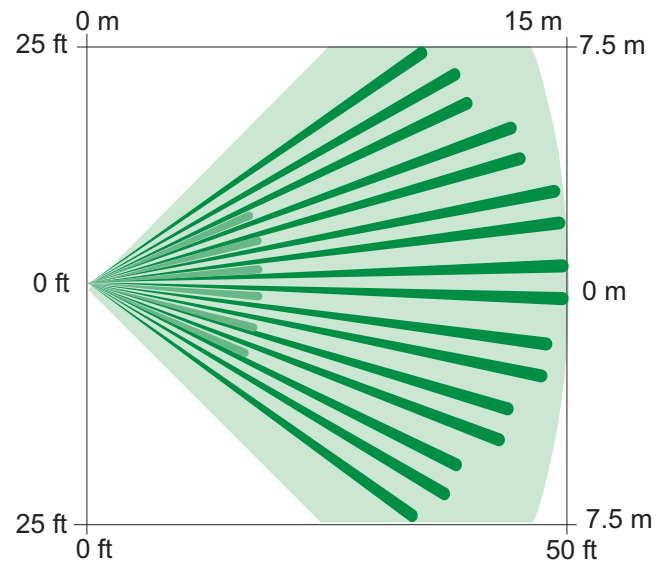
These detectors are designed to also comply with the requirements of:

France	AFNOR	DS950-B, DS950B-FRA, DS970-B, DS970B-FRA: NF, A2P
Europe		DS950-A and DS970 comply with EN50131-1 Grade 3

Installation/Configuration Notes

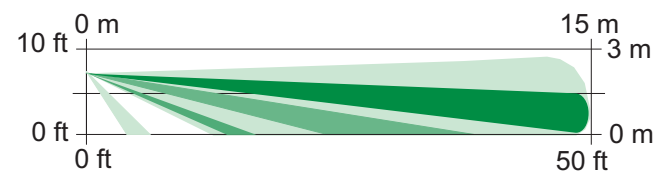
Mounting Considerations

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



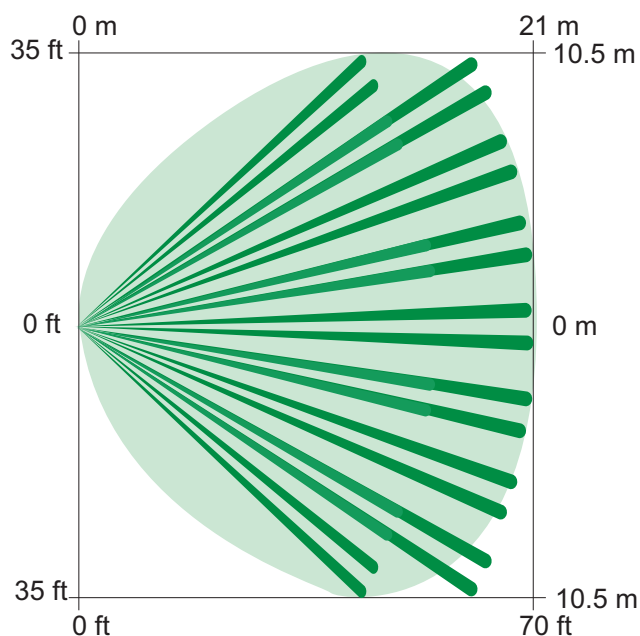
Top View

Standard Broad Coverage (DS950): 15 m x 15 m (50 ft x 50 ft)

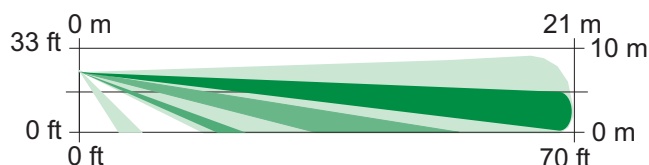


Side View

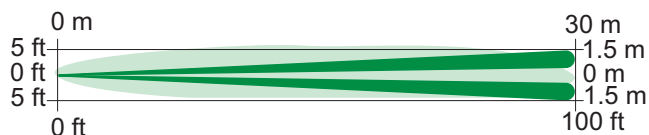
Standard Broad Coverage (DS950): 15 m x 15 m (50 ft x 50 ft)

**Top View**

**Standard Broad Coverage (DS970): 21 m x 21 m
(70 ft x 70 ft)**

**Side View**

**Standard Broad Coverage (DS970): 21 m x 21 m
(70 ft x 70 ft)**

**Top View**

**Optional Long Range Coverage (DS970): 30 m x 3 m
(100 ft x 10 ft)**

**Side View**

**Optional Long Range Coverage (DS970): 30 m x 3 m
(100 ft x 10 ft)**

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.

DS950-A and DS970: Comply with Environmental Class II (EN50130-5)

Mounting

Location: Surface or corner mount

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

Outputs

Alarm: Form C reed relay rated at 3.0 W, 125 mA at 28 VDC for resistive loads.

Tamper: Normally closed (cover in place). Contacts rated at 28 VDC, 125 mA maximum.

Trouble: Solid state output, shorts to ground (-) when the detector is in a supervision trouble condition. Maximum current load is 25 mA, V_{sat} at 10 mA = 0.5 VDC.

Power Requirements

Current Draw: 22 mA nominal at 12 VDC

Voltage (Input): 9 VDC to 15 VDC

Trademarks

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

Ordering Information**DS950 Detector (10.525 GHz)****DS950**

Operates at 10.525 GHz. Provides 15 m x 15 m (50 ft x 50 ft) coverage. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS950-BEL Detector (10.525 GHz)**DS950-BEL**

Operates at 10.525 GHz. Provides 15 m x 15 m (50 ft x 50 ft) coverage. For use in Belgium. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS950-CAN Detector (10.525 GHz)**DS950-CAN**

Operates at 10.525 GHz. Provides 15 m x 15 m (50 ft x 50 ft) coverage. For use in Canada. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS950-NEL Detector (10.525 GHz)**DS950-NEL**

Operates at 10.525 GHz. Provides 15 m x 15 m (50 ft x 50 ft) coverage. For use in the Netherlands. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS950CH-SWI Detector (10.475 GHz)**DS950CH-SWI**

Operates at 10.475 GHz. Provides 15 m x 15 m (50 ft x 50 ft) coverage. For use in Switzerland. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS950-A Detector (10.687 GHz)**DS950-A**

Operates at 10.687 GHz. Provides 15 m x 15 m (50 ft x 50 ft) coverage. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS950-B Detector (9.9 GHz)**DS950-B**

Operates at 9.9 GHz. Provides 15 m x 15 m (50 ft x 50 ft) coverage. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS950B-FRA Detector (9.9 GHz)**DS950B-FRA**

Operates at 9.9 GHz. Provides 15 m x 15 m (50 ft x 50 ft) coverage. For use in France. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

Ordering Information**DS950B-ITA Detector (9.9 GHz)****DS950B-ITA**

Operates at 9.9 GHz. Provides 15 m x 15 m (50 ft x 50 ft) coverage. For use in Italy. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS970 Detector (10.525 GHz)**DS970**

Operates at 10.525 GHz. Provides 21 m x 21 m (70 ft x 70 ft) coverage. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS970-BEL Detector (10.525 GHz)**DS970-BEL**

Operates at 10.525 GHz. Provides 21 m x 21 m (70 ft x 70 ft) coverage. For use in Belgium. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS970-CAN Detector (10.525 GHz)**DS970-CAN**

Operates at 10.525 GHz. Provides 21 m x 21 m (70 ft x 70 ft) coverage. For use in Canada. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS970-NEL Detector (10.525 GHz)**DS970-NEL**

Operates at 10.525 GHz. Provides 21 m x 21 m (70 ft x 70 ft) coverage. For use in the Netherlands. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS970CH-SWI Detector (10.525 GHz)**DS970CH-SWI**

Operates at 10.525 GHz. Provides 21 m x 21 m (70 ft x 70 ft) coverage. For use in Switzerland. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS970-A Detector (10.687 GHz)**DS970-A**

Operates at 10.687 GHz. Provides 21 m x 21 m (70 ft x 70 ft) coverage. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS970-B Detector (9.9 GHz)**DS970-B**

Operates at 9.9 GHz. Provides 21 m x 21 m (70 ft x 70 ft) coverage. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

Ordering Information

DS970B-FRA Detector (9.9 GHz)

Operates at 9.9 GHz. Provides 21 m x 21 m (70 ft x 70 ft) coverage. For use in France. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS970B-FRA

DS970B-ITA Detector (9.9 GHz)

Operates at 9.9 GHz. Provides 21 m x 21 m (70 ft x 70 ft) coverage. For use in Italy. Provides five layers of detection, supervised microwave and PIR, anti-masking feature, selectable sensitivity, five mounting options, and draft and insect immunity.

DS970B-ITA

ZX970 Detector (10.525 GHz)

Operates at 10.525 GHz and provides 21 m x 21 m (70 ft. x 70 ft.) coverage. Includes a POPIT for addressable alarm and trouble signaling. The POPIT makes it easier to install (fewer wires needed) and provides a low current consumption.

ZX970

Accessories

B328 Gimbal-mount Bracket

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

B328

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.

B335-3

TC6000 Test Cord

Test cord for connecting a compatible detector's test pins to a voltmeter. It is 4.6 m (15 ft) long.

TC6000

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
5600 JB 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 6258 5511 Fax: +65 6571 2698 apr.securitysystems@bosch.com www.boschsecurity.com	Represented by
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