

# DS950 and DS970 Series High-performance Detectors

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**BOSCH**  
Invented for life



- ▶ Five layers of detection including look-down zone
- ▶ Supervised microwave and PIR
- ▶ Anti-masking feature
- ▶ Selectable PIR sensitivity
- ▶ Five mounting options

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.

### 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**

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

France AFNOR DS950-B, DS950B-FRA, DS970-B, DS970B-FRA: NF, A2P

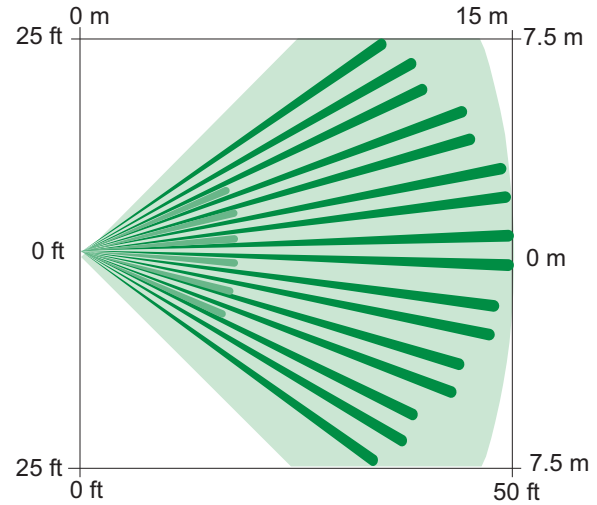
Europe DS950-A and DS970 comply with EN50131-1 Grade 3

Region	Certification
Belgium	INCERT DS950 and DS970: B-509-0014/c
USA	UL DS950 and DS970: ANSR: Intrusion Detection Units (UL639)
	UL ZX970: ANSR: Intrusion Detection Units (UL639)
	FCC DS950 and DS970: ESVDS730 ESVDS730
Italy	IMQ DS950B-ITA: U0628
	IMQ 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
	iDA DS970: LPREQ-S0152-2004

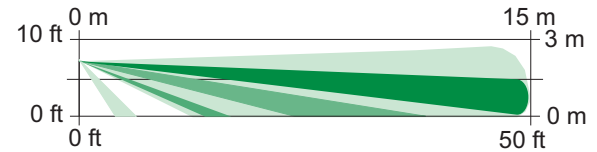
**Installation/configuration notes**

**Mounting Considerations**

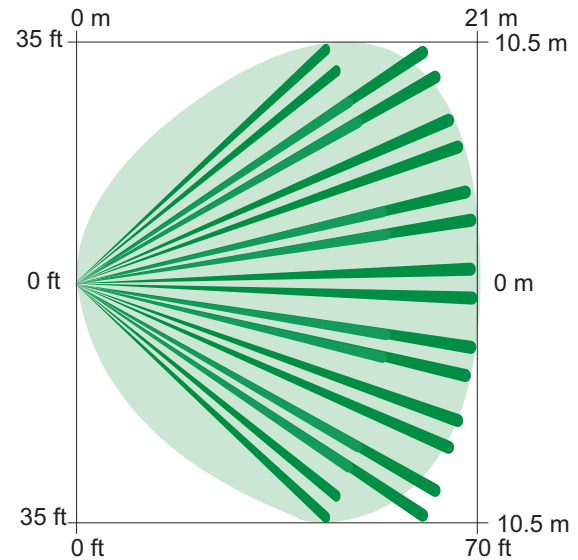
Recommended mounting height is 2.3 m (7.5 ft). Mounts to a standard single gang electrical box.



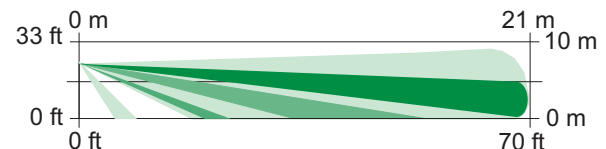
**Top View**  
Standard Broad Coverage (DS950): 15 m x 15 m (50 ft x 50 ft)



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

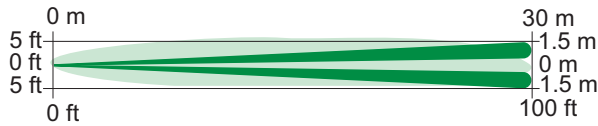


**Top View**  
Standard Broad Coverage (DS970): 21 m x 21 m (70 ft x 70 ft)



**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 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.

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, Vsat 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)**

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.

Order number **DS950**

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

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.

Order number **DS950-BEL**

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

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.

Order number **DS950-CAN**

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

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.

Order number **DS950-NEL**

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

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.

Order number **DS950CH-SWI**

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

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.

Order number **DS950-A**

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

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.

Order number **DS950-B**

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

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.

Order number **DS950B-FRA**

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

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.

Order number **DS950B-ITA**

**DS970 Detector (10.525 GHz)**

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.

Order number **DS970**

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

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.

Order number **DS970-BEL**

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

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.

Order number **DS970-CAN**

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

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.

Order number **DS970-NEL**

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

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.

Order number **DS970CH-SWI**

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

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.

Order number **DS970-A**

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

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.

Order number **DS970-B**

**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.

Order number **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.

Order number **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.

Order number **ZX970**

**Accessories****B328 Gimbal-mount Bracket**

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

Order number **B328**

**B335-3 Swiveling 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**

**TC6000 Test Cord**

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

Order number **TC6000**

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