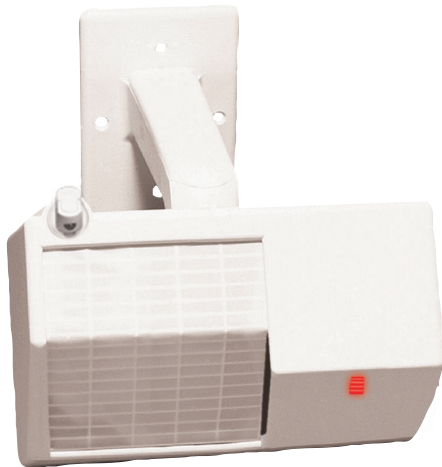


# DS720i Long Range TriTech PIR Detector (10.525 GHz)

www.boschsecurity.com



**BOSCH**  
Invented for life



- ▶ Supervised microwave and PIR
- ▶ Anti-masking with spray detect
- ▶ Motion monitor
- ▶ Motion Analyzer II
- ▶ Field-changeable mirrored optics

The wall or ceiling mount DS720i TriTech® PIR and Microwave Detector covers up to 91 m (300 ft). Motion Monitor and Anti-masking protection provides coverage integrity. Field replaceable mirrored optics and three different coverage patterns provide installation flexibility.

## Functions

### Alarm Memory

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

### 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

Uses Motion Analyzer II 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.

### Microwave Signal

Uses pattern recognition circuitry to identify and ignore repetitive false alarm sources. Adaptive processing adjusts to background disturbances to reduce false alarms while maintaining catch performance.

### Test Features

High-efficiency walk test LED is visible throughout the coverage pattern (reducing installation time). LED flashes to indicate a trouble condition. Internal noise voltage test pins use standard analog meter to provide precise pattern location and background disturbance evaluation. Separate test LEDs for PIR and microwave activation. Alarm LED can be controlled remotely.

**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.

**Anti-masking With Spray Detect**

Selectable to provide a microwave supervision trouble signal if microwave reflective material (metal, wood, plastics) is placed within 30.5 cm (1 ft) of the detector. IR Anti-masking feature detects objects placed to cover the detector or sprayed on the lens area. Anti-mask sensitivity is selectable, and Anti-mask activation can be delayed to reduce false alarms.

**Motion Monitor**

Switch-selectable four or thirty day Motion Monitor supervision timers provide the detector with the ability to verify that there is a clear view of the protection area and that it has not been blocked.

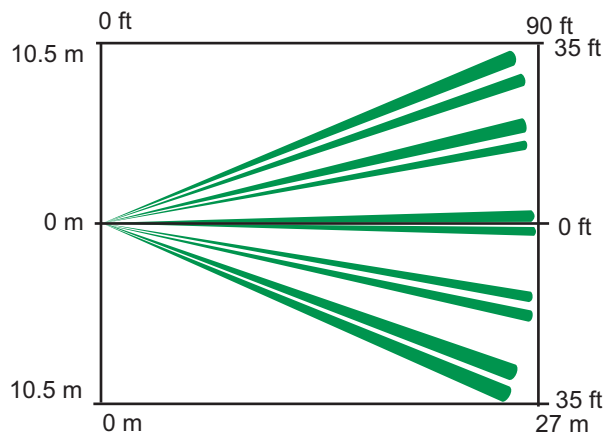
**Certifications and approvals**

Region	Certification
Poland	CNBOP DS720i
USA	UL ANSR: Intrusion Detection Units (UL639) DS720i
	FCC DS720i
China	CCC 2004031901000037
Brazil	ANATEL DS720i
Singapore	iDA DS720i

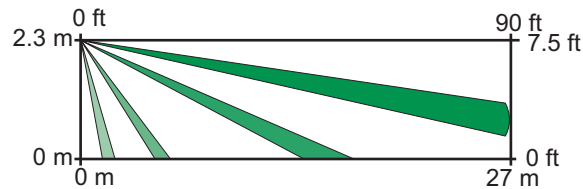
**Installation/configuration notes**

**Standard Broad Coverage**

27 m x 21 m (90 ft x 70 ft); the standard broad coverage mirror (OA90) is included.



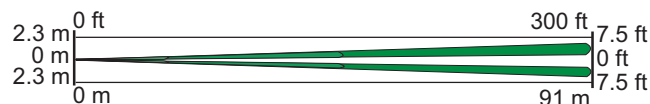
Top View



Side View

**Standard Long Range Coverage**

91 m x 4.6 m (300 ft x 15 ft); the long range coverage mirror (OA300) is installed.



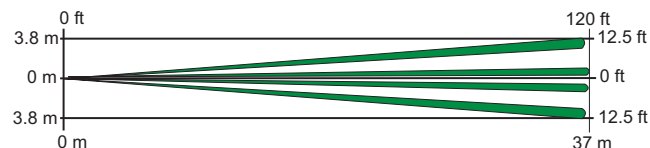
Top View



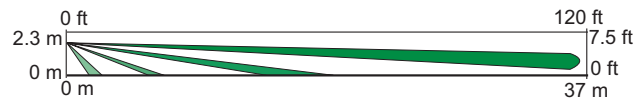
Side View

**Optional Long Range Coverage**

37 m x 7.6 m (120 ft x 25 ft); the long range coverage mirror (OA120) is installed.



Top View



Side View

**Parts included**

Quantity	Component
1	B334 Swivel Mount Bracket
1	Standard Broad Coverage Mirror, labeled OA90
1	Long Range Coverage Mirror, labeled OA300



**Notice**

The Long Range Coverage Mirror is installed.

## Technical specifications

### Enclosure Design

Dimensions:	20.8 cm x 19.5 cm x 13 cm (8 in. x 7.5 in. x 5 in.)
Material:	High impact ABS plastic enclosure
Properties:	With steel grid over optics area houses a removable circuit board and minor holder assembly.

### Environmental Considerations

Operating Temperature:	-29°C to +49°C (-20°F to +120°F) <i>For UL Certificated installations, 0°C to +49°C (+32°F to +120°F)</i>
Radio Frequency Interference (RFI) Immunity:	No alarm or setup on frequencies in the range from 26 MHz to 950 MHz at 50 V/m.

### Mounting

Height:	3.0 m (10 ft) maximum
Location:	Mounts directly to ceiling or to standard 10.2 cm (4 in.) octagonal electrical box.

### Outputs

Alarm:	Form C reed relay rated at 3.0 W, 125 mA at 28 VDC for resistive loads and protected by a 4.7 Ω, 0.5 W resistor in the common C leg.
Tamper:	Normally-closed tamper switch. Contacts rated at 28 VDC, 125 mA maximum.
Trouble:	Normally-closed dry contacts rated at 28 VDC, 125 mA maximum. Open during trouble.

### Power Requirements

Current Draw:	32 mA nominal at 12 VDC; up to 60 mA during walk test, stored alarm, or trouble conditions.
Voltage:	9 VDC to 15 VDC

### Trademarks

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

## Ordering information

### DS720i Long Range TriTech PIR Detector (10.525 GHz)

Operates at 10.525 GHz. Provides 27 m x 21 m (90 ft x 70 ft) standard broad coverage and 91 m x 4.6 m (300 ft x 15 ft) long range coverage. Provides anti-masking with spray detect, motion monitor, and Motion Analyzer II signal processing.  
Order number **DS720i**

### Accessories

#### OA120-2 Mirror

A 36.5 m (120 ft) optical array module. Shipped in packages of two.  
Order number **OA120-2**

#### 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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