

# 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.

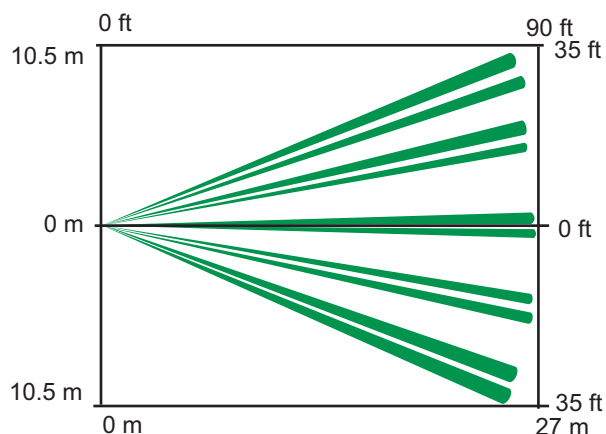
### Certifications and approvals

| Region    | Certification |   |
|-----------|---------------|---|
| Poland    | CNBOP         |   |
| USA       | UL            | ANSR: Intrusion Detection Units (UL639) |
|           | FCC           | ESVDS720I                               |
| China     | CCC           | 2004031901000037                        |
| Brazil    | ANATEL        | 0844-03-1855                            |
| Singapore | iDA           | LPREQ-S0156-2004                        |

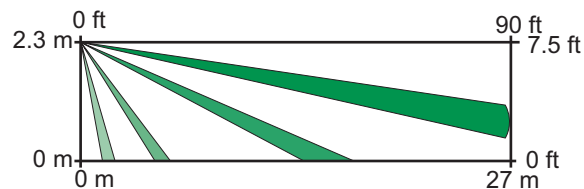
### Installation/configuration notes

#### Standard Broad Coverage

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



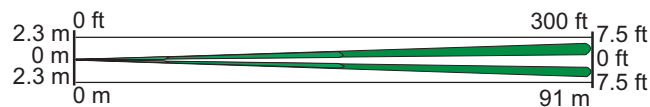
Top View



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.



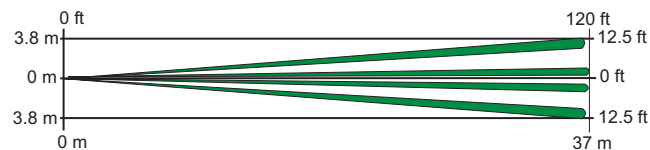
Top View



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<br>(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)<br><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:   | 4.6 m (15 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**

**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