

# DS939 Series Panoramic Detectors

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- ▶ Up to 6.1 m (20 ft) mounting height
- ▶ Fully adjustable optics for coverage integrity and customization
- ▶ Hinged chassis and base plate for easy installation
- ▶ High efficiency LED and light pipe system for easy walk testing
- ▶ First Step Processing (FSP)

The ceiling mount DS939 PIR Detectors provide up to 16.4 m (54 ft) panoramic coverage pattern and can be mounted on ceilings as high as 6.1 m (20 ft). With three separate PIR sections that are fully adjustable, the DS939 detectors provide coverage integrity at all mounting heights, plus the ability to customize the coverage for specific areas. The DS939 detectors use several patented processing techniques to provide excellent catch performance with freedom from false alarms.

## Functions

### Signal Processing

The DS939 detectors use passive infrared technologies to provide an alarm condition when the field of protection is activated. Alarm signals must meet the signaling requirements to activate an alarm.

### First Step Processing

First Step Processing (FSP) allows virtually instant response to human targets without sacrificing false alarm immunity to other sources. By adjusting its sensitivity based upon signal amplitude, polarity, slope and timing, FSP eliminates the need for the installer to select the sensitivity level for the application. Each sensor is processed individually and both must agree there is an alarm before the alarm relay is activated.

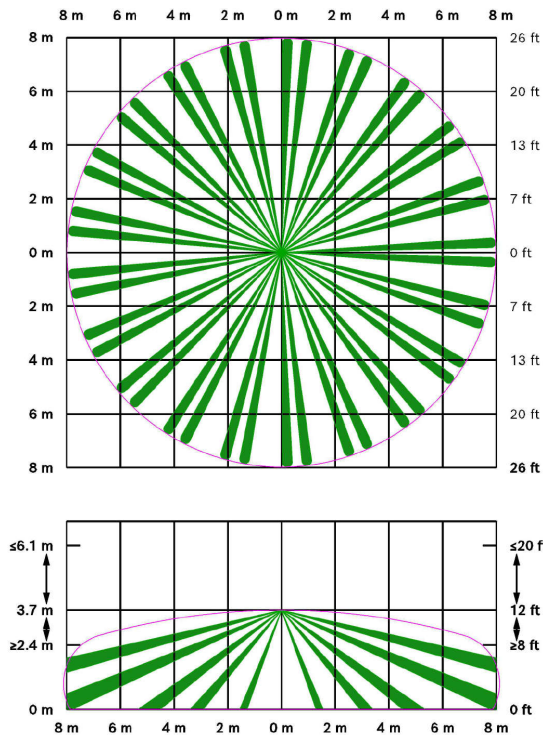
## Test Features

- High efficiency LED and light-pipe system provide walk test indication that is easily viewable from any angle and at any mounting height.
- Alarm memory feature allows detector to latch the alarm LED to aid in response.
- Remote LED walk-test control allows the LED to be enabled or disabled using a switched input without accessing the detector.

## Certifications and approvals

Region	Regulatory compliance/quality marks	
Europe	CE	[DS939]
	EN50131	EN 50131-2-2 [DS939]
USA	UL	20190115; UL639 – Standard for Intrusion-Detection Units
France	AFNOR	2620200007A0 [DS939]
China	CCC	2009031901000548 [DS939-CHI]
Sweden	INTYG	15-476 Alarm Class 1/2, Environmental Class II (Larmklass 1/2 miljöklass II enligt)

## Installation/configuration notes



### Coverage Information

For UL, ULC applications, provides up to 7.0 m (23 ft) radius, 14.0 m (46 ft) diameter 360° coverage when mounted up to 6.1 m (20 ft).

For EN50131 applications, provides up to 7.0 m (23 ft) radius, 14.0 m (46 ft) diameter 360° coverage when mounted up to 5.2 m (17 ft).

For CCC applications, provides up to 8.2 m (27 ft) radius, 16.4 m (54 ft) diameter 360° coverage when mounted up to 4.9 m (16 ft).

Pattern consists of 69 zones in 21 barriers. The barriers are grouped into three groups of seven barriers each. Each group has vertical adjustment for customized coverage.

### Mounting Considerations

The mounting height range is from 2.4 m to 6.1 m (8 ft to 20 ft).

These detectors can be mounted directly on the ceiling or on a standard 9 cm (3.5 in.) rectangular electrical box.

The maximum range of the detector depends on the mounting height and the vertical adjustment of the PIR coverage pattern. In areas where part of the area needs a targeted coverage, the optical modules can be adjusted for the correct coverage.

A masking kit containing two 120° and two 90° masks is included to allow masking unwanted areas. Apply the masks to the outside of the detector. With the supplied masks, you can mask 90°, 120°, 180°, 210°, 240°, or 330°.

## Technical specifications

### Electrical

Current: 12 mA standby; 20 mA in alarm with LEDs enabled

Voltage: 9 VDC to 15 VDC

### Environmental

Operating Temperature: -40 °C to +49 °C (-40 °F to +120 °F)  
 UL: 0 °C to +49 °C (+32 °F to +120 °F)  
 EN/NFA2P: -10 °C to +55 °C (+14 °F to +131 °F)

Sensitivity: Low/High gain settings

Complies with Environmental Class II (EN50130-5)

### Mechanical

Properties: Modular chassis and hinged mounting base design provide easy access to field setup switches and wiring.

Dimensions: 8.9 cm x 17.8 cm (3.5 in. x 7 in.)

### Outputs

Alarm Relay: Silent-operating form C relay. Contacts rated <100 mA, 25 VDC, 2.5 W maximum, < 20 Ohm closed for DC resistive loads.

Tamper: Normally closed (with cover in place) tamper switch. A wall (base) tamper is included. Contacts rated at 28 VDC, 125 mA, 3 W maximum.

## Ordering information

### DS939-CHI Motion detector 360° ceiling mount, CN

Classic Line PIR CM Motion detector 360° ceiling mount. For use in China.

Order number **DS939-CHI**

### DS939 Motion detector 360° ceiling mount

Classic Line PIR CM Motion detector 360° ceiling mount.

Order number **DS939**

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