OD850 Series Outdoor TriTech® Detectors

Security Systems

- Motion Analyzer II PIR signal processing
- Linear Travel Distance microwave signal processing
- Two user-selectable sensitivity levels
- Timed relay output adjustable from 2 sec to 10 min
- User-selectable AND/OR and Day/Night Modes
- Draft and insect immunity

The OD850 Series TriTech detectors are for use outdoors and in other harsh environments. They use a combination of passive- infrared (PIR) and microwave detection with advanced signal processing.
The detectors process PIR signals with Motion Analyzer II signal processing and microwave signals with Linear Travel Distance (LTD) signal processing.
The detectors can distinguish between small, repetitive motions such as tree limbs moving in the wind and the more purposeful motions of intruders. These advanced processing techniques and the detectors' mechanical design combine to provide superior performance in a wide range of weather conditions.

Functions

Motion Analyzer II PIR signal processing
This PIR signal processor uses multiple thresholds and timing windows to analyze timing, amplitude, duration, and polarity of signals to make an alarm decision. Extreme levels of thermal and illumination disturbances caused by hot and cold drafts, sunlight, or lightning do not cause an alarm.

LTD microwave signal processing
This microwave signal processor measures the linear travel distance of a target to make an alarm decision. It eliminates alarms for objects that move but do not travel, such as tree limbs and hanging signs.

User-selectable sensitivity levels
The detectors have two user-selectable PIR sensitivity settings:
Standard sensitivity is the recommended setting for a minimum of false alarms. The detector tolerates environment extremes on this setting.
Intermediate sensitivity is the recommended setting for any location where an intruder is expected to cover only a small portion of the protected area. The detector tolerates normal environments on this setting. This setting identifies intruders more quickly, but may produce more false alarms.

Adjustable timed relay output
In addition to an alarm relay, there is a Form C, unsupervised, timed relay contact that alternates state 1 sec after an alarm and follows a user-selectable timer. The time expires at the set time after the last alarm (it resets on each new alarm).

AND/OR mode
This DIP-switch setting specifies whether the detector reports alarm situations in the AND mode (when both technologies simultaneously sense an alarm condition) or in the OR mode (when either the PIR or microwave technology senses an alarm state). OR mode provides faster detection in some conditions as the detector activates the alarm relay based on a single technology input.

Day/night mode
A DIP switch allows the user to specify whether or not the unit reports alarm situations only during the night. Setting the switch to ON suppresses the alarm and timed relays during daylight. If the LEDs are enabled, then LED indications continue.

LEDs
The high-efficiency LEDs (one red and one green) use the same technology as traffic lights to make them visible in sunlight. A DIP-switch setting allows the user to disable these LEDs during standard operation to save power.

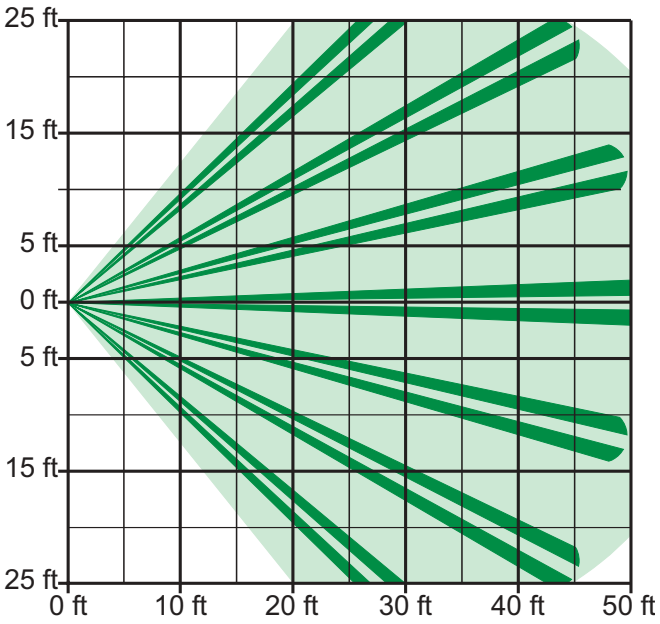
Draft and insect immunity
The sealed optical chamber prevents drafts and insects from affecting the detector.

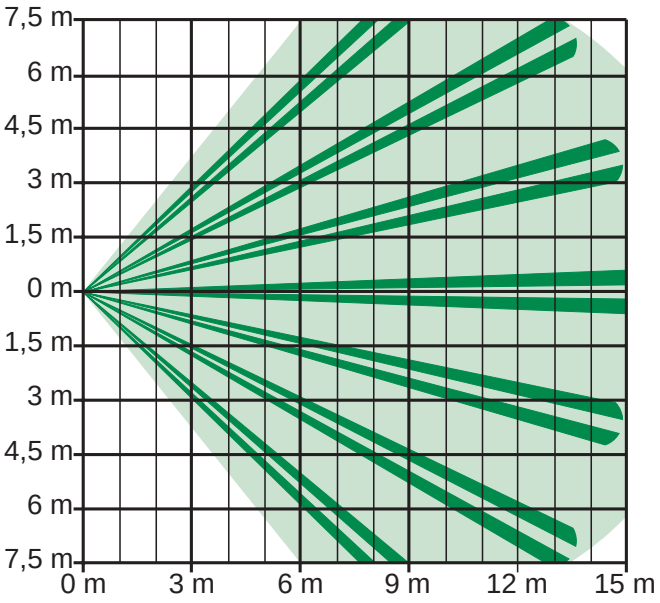
Certifications and Approvals

Country	Certificate/Listing Number
Australia	AUS C-tick
Canada	ANSR7: Intrusion Detection Units for Canada (ULC-S306)
	IC (CAN 1249A 12072)
Europe	CE
	IP=54
USA	ANSR: Intrusion Detection Units (UL639)
	FCC (ESVOD850)

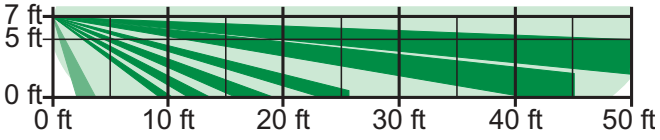
Installation/Configuration Notes

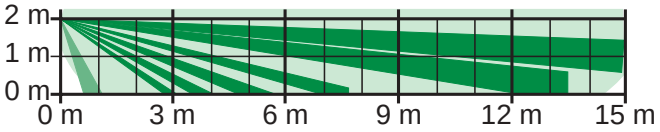
Coverage Patterns
OD850 Broad: 50 ft x 50 ft (15 m x 15 m)
Top View





Side View





Coverage Pattern Legend

PIR pattern

Microwave pattern

Look-down zone

Mounting Considerations

Wall Mounting:

The OD850 detectors can be mounted directly on a wall or on the supplied B335 Swivel Mount Bracket. Alternatively, they can be mounted directly on a standard rectangular electrical box.

Ceiling Mounting:

The detectors can be mounted on a ceiling using the optional B338 Ceiling-Mount Bracket.

Power Considerations

Power Limits

Input power must be provided by an Approved Limited Power Source. All outputs must be connected to SELV (safety extra-low voltage) circuits only.

Standby Power

This detector has no internal standby battery. For UL Listed product installations, 4 hr (248 mAh) of standby power must be supplied by the control unit or by a UL Listed burglary power supply.

OD850-F1 Outdoor TriTech® Detector

Order Number OD850-F1

The OD850-F1 Outdoor TriTech Detector emits a microwave frequency of 10.525 GHz and is intended for use in all countries within the Americas (North, Central, and South), all countries in the Asia/Pacific region, and in the following countries:

Belgium	Czech Republic	Denmark
Greece	Hungary	Italy
Netherlands	Norway	Poland
Romania	Spain	Sweden
Ukraine		

OD850-F2 Outdoor TriTech® Detector

Order Number OD850-F2

The OD850-F2 Outdoor TriTech Detector emits a microwave frequency of 10.588 GHz and is intended for use in the following countries:

France	United Kingdom

Technical Specifications

OD850 Series Outdoor TriTech® Detectors	
Enclosure Design	
Material:	Polycarbonate
Dimensions (HxWxD):	16.5 cm x 8.25 cm x 6.35 cm/ 6.5 in. x 3.25 in. x 2.5 in.
Weight:	1.4 oz (40 g)
Properties:	Weather and vandal resistant
Environmental Considerations	
IP Rating:	54
Relative Humidity:	0% to 95% non-condensing
Temperature (Operating):	-40°C to +54°C/-40°F to +130°F
Outputs	
Alarm:	Do not use with capacitive or inductive loads. **Form A:** Normally-closed contact opens on alarm. **Form C:** Timed relay contact alternates state on alarm and follows an installer programmable timer. **Contact Rating:** 3 W, 125 mA maximum, 25 VDC maximum for DC resistive loads; and protected by a 4.7 W, ½ W resistor in the common C leg of the relay.
Tamper:	Normally-closed (with cover on) contacts rated 125 mA maximum, 25 VDC maximum
Power Requirements	
Current:	62 mA maximum
Input Power:	10 VDC to 15 VDC at 22 mA standby.
Trademarks	
TriTech® is a registered trademark of Bosch Security Systems in the United States.	

Ordering Information	
OD850-F1 Outdoor TriTech® Detector	OD850-F1
OD850-F2 Outdoor TriTech® Detector	OD850-F2
Hardware Accessories	
B328-3 Gimbal-mount Bracket	B328-3
B338-3 Ceiling-mount Bracket	B338-3

For more information please visit

www.boschsecuritysystems.com

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