

RF835/RF835E Wireless TriTech Detectors



The RF835/RF835E Wireless TriTech PIR/Microwave Detectors use artificial intelligence to detect motion and to provide immunity to false alarms caused by pets or animals [a dog up to 100 lbs. (45 kg) or two dogs at 60 lbs. (27 kg) or up to 10 cats]. An integral RF transmitter reports low battery and tamper status, as well as regularly sending a supervisory signal to the control panel.

The detectors in this series are differentiated by microwave and RF transmission frequencies as follows:

Detector	Frequencies	
	Microwave	RF Transmission
RF835	10.525 GHz	304.00 MHz
RF835E	10.525 GHz	433.42 MHz
RF835E-C	10.588 GHz	433.42 MHz

■ Series Features

- Wireless transmission
- Battery powered
- Artificial intelligence
- Flexible mounting height
- Motion Analyzer II PIR signal processing
- Microwave and PIR supervision
- Pet immunity
- Draft/insect immunity
- 8 detection layers including look down zones
- Temperature compensation

■ Series Basic Functions

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. Microwave range is factory set, but may be field adjustable if desired.

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. 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. Provides three sensitivity settings.

Microwave signal processing

Adaptive processing adjusts to background disturbances. This helps to reduce false alarms while maintaining catch performance.

Test features

Externally visible, tricolor alarm LED indicates each technology independently.

Supervised microwave

Patented fully supervised microwave circuitry provides single technology coverage in the event the microwave subsystem fails.

Pet immunity

The detector is able to distinguish between signals caused by humans and signals caused by pets (a dog up to 100 lbs. (45 kg) or two dogs at 60 lbs. (27 kg) or up to 10 cats). This provides immunity to false alarms while maintaining proper catch performance of human targets.

Draft/insect immunity

The sealed optical chamber provides immunity to drafts and insects.

Temperature compensation

The sensor adjusts its sensitivity to maintain consistent catch performance at critical temperatures.

■ Series Planning

Mounting Considerations

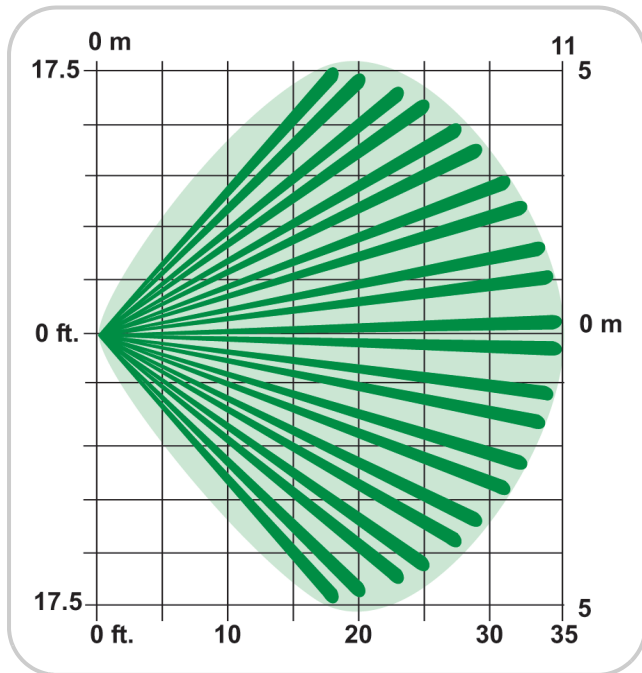
- Mounting height for the detector is between 6.5 ft. (2 m) and 8.0 ft. (2.4 m).
- The wall tamper cannot be used in corner mount installations or when using the optional swivel bracket.
- The integral RF transmitter is capable of transmitting 500 ft. (150 m) in open air; however, in normal operation, it is recommended that the RF835/RF835E be within 100 ft. (30 m) of the receiver.

Note: Actual acceptable transmitter range should be verified for each installation.

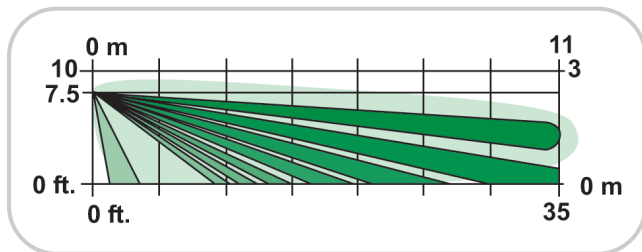
Coverage

Broad: 35 ft. x 35 ft. (11 m x 11 m)

Top View



Side View



Planning

The mounting height range is from 6.5 ft. to 8.0 ft. (2 m to 2.4 m)

■ Series Technical Specifications

Enclosure Design

Dimensions (H x W x D):	5 in. x 2.8 in. x 2.5 in. (12.7 cm x 7.2 cm x 6.2 cm)
-------------------------	--

Environmental Considerations

Operating Temperature:	+32°F to +120°F (0°C to +49°C)
------------------------	--------------------------------

Relative Humidity:	0% to 95% (non-condensing)
--------------------	----------------------------

Internal Coverage Pointability	-4° to -10° Vertical; ±10° Horizontal.
--------------------------------	--

Power Requirements

Batteries:	Four 1.5 V AA alkaline batteries
------------	----------------------------------

Battery Life:	2 to 3 years under normal operating conditions with recommended battery types
---------------	---

Battery Types (recommended):	Duracell® MN1500 or PC1500, Energizer® E91, or Panasonic® AM-3
------------------------------	--

Current Draw:	0.1 mA with LED disabled
---------------	--------------------------

Sensitivity Selection	Field selectable for Standard or Intermediate sensitivity.
-----------------------	--

■ Series Hardware Options

B335 Low Profile Mount Bracket



Provides mounting flexibility but may decrease range and increase dead zone areas. Not recommended for pet immune applications. Is shipped in packages of three.

RF835 Wireless TriTech Detector

Prod. ID	RF835
----------	-------

■ Approvals

UL Standard	UL639 Intrusion Detection Units
Approvals	FCC Compliant
	Industry Canada
	Australian EMC Acceptance

■ Technical Specifications

Frequencies	
Microwave:	10.525 GHz
RF Transmission:	304.00 MHz

RF835E Wireless TriTech Detector

Prod. ID	RF835E
----------	--------

The DS835E is intended for use in the following countries within the European Union and in other countries outside of the European Union:

- Austria
- Belgium
- Denmark
- Finland
- Greece
- Luxembourg
- Netherlands
- Norway
- Spain
- Sweden

■ Technical Specifications

Frequencies	
Microwave:	10.525 GHz
RF Transmission:	433.42 MHz

RF835E-C Wireless TriTech Detector

Prod. ID	DS835E-C
----------	----------

The DS835E is intended for use in the following countries within the European Union and in other countries outside of the European Union:

- France
- Ireland
- United Kingdom

■ Technical Specifications

Frequencies	
Microwave:	10.588 GHz
RF Transmission:	433.42 MHz