

# RADION receiver OP

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RADION wireless from Bosch provides the range, scalability and exceptional battery life required to ensure reliable performance and superior quality. Advanced diagnostics and multiple device enrollment options make installation and maintenance simple and cost effective. With a complete line of peripherals, RADION provides the flexibility for virtually any application requirement.

## System overview

The RFRC-OPT is a wireless receiver that connects RADION wireless peripherals such as the repeater, as well as detectors and transmitters, to supported Bosch control panels via the terminal block connection.

The receiver supports RF communication information at 433.42 MHz carrier frequency and is equipped with tamper detection, and detects and reports radio frequency interferences. The receiver supports 255 wireless devices that include points, keyfobs, and repeaters (8).



- ▶ Dual internal antennas provide spatial and polar diversity for highly reliable RF signal reception
- ▶ Cover and wall tamper detection
- ▶ Multiple device enrollment options as well as RF diagnostics ensure efficient and effective installation
- ▶ Supports supervision of wireless points and repeaters
- ▶ External status LEDs

The receiver can be easily accessed and configured for a compatible control panel using the address switch on the back of the receiver housing. The receiver address switch provides a single-digit setting for the receiver's address, allowing for ease of installation.

## Functions

The receiver uses the RADION wireless protocol which supports:

- Option bus communication
- Tamper input processing
- RF interference (jamming) detection and reporting
- Signal strength and margin reporting
- Enroll Device Database management

## Address switch addressing

Use the address switch to easily assign a bus address or setup during installation.

## Easy installation

The sliding self-locking enclosure has an integrated bubble level and a custom gap-free, lift gate style terminal block to make installation easier, faster, and more reliable.

**LED display**

The LED provides status and troubleshooting information about the receiver and its connection.

**RF interference (jamming) detection and reporting**

The receiver detects and reports interference jamming when the ambient noise level is above jamming thresholds for a period of 30 out of 60 seconds. The Jamming threshold is determined by comparing the lowest signal strength transmitter enrolled in the system vs. the ambient noise. If the noise level exceeds the signal strength of the transmitter, the jamming threshold is reached.

**Communications**

RF packet information is received through the use of two spatial and polar diversity antennas. The receiver then transfers status change information to the control panel.

**Wall and cover tamper switch**

The receiver transmits a tamper signal when someone removes the device from its base, or pulls it away from the wall.

**Certifications and approvals**

Region	Certificate
Europe	EN50130-5 Environmental Class II EN60950 EN61000-3-2 EN61000-3-3 EN50130-4

\* (pending)

Region	Certification
Australia	RCM 36 068 450 171 [RFRC-OPT, RFRC-STR]
Europe	CE 2014/30/EU EMC Directive (EMC); 2014/35/EU Low-Voltage Directive (LVD); 2011/65/EU Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) [OPT and STR]
	EN50131-1 EN-ST-000157 EN 50131-3: 2009; EN50131-5-3: 2005 + A1:2008, Grade 2; EN 50130-5 Environmental Class II; RADION receivers OP, OPT, and STR
Belgium	INCERT B-509-0068 RADION RFRC-OPT

**Installation/configuration notes****Mounting Considerations**

You can mount the wireless receiver in **residential**, commercial or industrial locations in which a compatible control panel is already installed. The installation of the wireless receiver should be at a distance no greater than 300 m (1000 ft) from the control panel.

**Wiring Considerations**

The wireless receiver connects to a control panel using the terminal block connections (R, G, B, Y). Use 22 AWG (0.6 mm) wires from the receiver to the control panel when connecting the wiring to the terminal block of the receiver.

The receiver provides wireless capabilities to RADION wireless peripherals via the terminal block (R, G, B, Y) connections using the screw terminal strip wiring connection.

**Parts included**

Quantity	Component
1	Wireless receiver
1	Hardware pack
1	Installation guide

**Technical specifications****Properties**

Dimensions:	139.7 mm x 209.6 mm x 31.8 mm 5.5 in x 8.25 in x 1.25 in
Wiring Distance:	300 m (1000 ft)
Wiring Gauge	0.65 mm (22 AWG) to 1.3 mm (16 AWG)
Compatibility	RFRP repeater RFBT bill trap RFDL-11 motion detector TriTech RRDW-RM recessed door/window contact RFDW-SM standard door/window contact RFGB glass break RFKF-FB keyfob RFKF-TB keyfob RFPB-SB panic RFPB-TB panic RFPR-12 motion detector PIR RFPR-C12 motion detector (curtain) PIR RFSM smoke detector RFUN universal transmitter

**Power**

Power/Voltage:	12 VDC
Maximum Current Draw:	100 mA
Frequency:	433.42 MHz

**Environmental Considerations**

Operating Environment:	-10°C to +55°C (+14°F to +131°F)
Relative Humidity:	Up to 93% non-condensing
Use:	Intended for indoor use.

## Ordering information

### **RADION receiver OP (433.42 MHz)**

A wireless receiver that connects RADION wireless peripherals such as the repeater, as well as detectors and transmitters, to supported Bosch control panels.

Order number **RFRC-OPT**

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#### Represented by:

**Europe, Middle East, Africa:**  
Bosch Security Systems B.V.  
P.O. Box 80002  
5600 JB Eindhoven, The Netherlands  
Phone: + 31 40 2577 284  
emea.securitysystems@bosch.com  
emea.boschsecurity.com

**Germany:**  
Bosch Sicherheitssysteme GmbH  
Robert-Bosch-Ring 5  
85630 Grasbrunn  
Germany  
www.boschsecurity.com

**North America:**  
Bosch Security Systems, Inc.  
130 Perinton Parkway  
Fairport, New York, 14450, USA  
Phone: +1 800 289 0096  
Fax: +1 585 223 9180  
onlinehelp@us.bosch.com  
www.boschsecurity.us

**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