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M200F-RF Radio System Repeater

SYSTEM SENSOR M200F-RF Radio System Repeater Instruction Manual

Contents

SYSTEM SENSOR M200F-RF Radio System Repeater

Product Specifications

- **Supply Voltage:** 3.3 V Direct Current max.
- **Standby Current:** Red LED Current Max: 4mA
- **Re-Sync Time:** 35s (max time to normal RF communication from device power on)
- **Batteries:** 4 X Duracell Ultra123 or Panasonic Industrial 123
- **Battery Life:** 4 years @ 25°C
- **Radio Frequency:** 865-870 MHz
- **RF Output Power:** 14dBm (max)
- **Range:** 500m (typ. in free air)
- **Relative Humidity:** 10% to 93% (non-condensing)

Product Description

- The M200F-RF radio repeater is a battery-operated RF device designed for use with the M200G-RF radio gateway, running on an addressable fire system (using a compatible proprietary communication protocol).
- The repeater contains a wireless transceiver and plugs into the B501RF wireless sensor base. It is used to extend the RF range of the radio fire detection system.
- This device conforms to EN54-25 and EN54-18. It complies with the requirements of 2014/53/EU for conformance with the RED directive.

Product Installation

This equipment and any associated work must be installed in accordance with all relevant codes and regulations.

- **Mounting the B501RF Base:** Spacing between radio system devices must be a minimum of 1m. Refer to Figure 1 for details.
- **Attaching the Repeater to the Base:** Follow the instructions in Figure 2.
- **Anti-Tamper Features:** Refer to Figures 3a and 3b for details on activating and deactivating the tamper resist feature.

Product Setting the Address

- **Step 1:** Set the loop address by turning the two rotary decade switches on the underside of the repeater using a screwdriver. Select a number between 01 and 159.
- **Step 2:** Insert the repeater into the base and rotate it clockwise until it locks into place.

FAQ

- **What batteries should I use with the repeater?**
  Use either Duracell Ultra123 or Panasonic Industrial 123 batteries as recommended in the manual. Do not mix batteries from different manufacturers.
- **How do I know if the tamper resist feature is activated?**
  When activated, removal of the repeater from the base will require a tool. Refer to Figures 3a and 3b for details on activating and deactivating this feature.

DESCRIPTION

- The M200F-RF radio repeater is a battery-operated RF device designed for use with the M200G-RF radio gateway, running on an addressable fire system (using a compatible proprietary communication protocol).
- The repeater contains a wireless transceiver and plugs into the B501RF wireless sensor base. It is used to extend the RF range of the radio fire detection system.
- This device conforms to EN54-25 and EN54-18. It complies with the requirements of 2014/53/EU for conformance with the RED directive.

SPECIFICATIONS

- **Supply Voltage:** 3.3 V Direct Current max.
- **Standby Current:** 120 µA@ 3V (typical in normal operating mode)
- **Red LED Current Max:** 4mA
- **Re-Sync** Time: 35s (max time to normal RF communication from device power on)
- **Batteries:** 4 X Duracell Ultra123 or Panasonic Industrial 123
- **Battery Life:** 4 years @ 25oC
- **Radio Frequency:** 865-870 MHz;
- **RF Output Power**: 14dBm (max)
- **Range:** 500m (typ. in free air)
- **Relative Humidity:** 10% to 93% (non-condensing)

INSTALLATION

- This equipment and any associated work must be installed in accordance with all relevant codes and regulations.
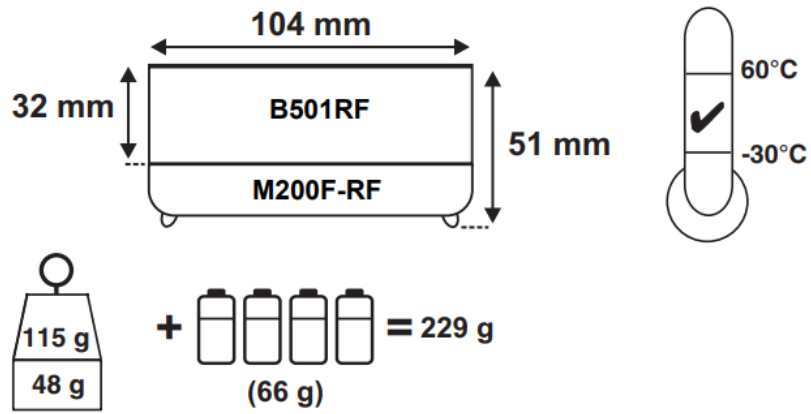 Figure 1 details the mounting of the B501RF base.

Figure 1: B501RF Mounting

- **Spacing between radio system devices must be a minimum of 1m**

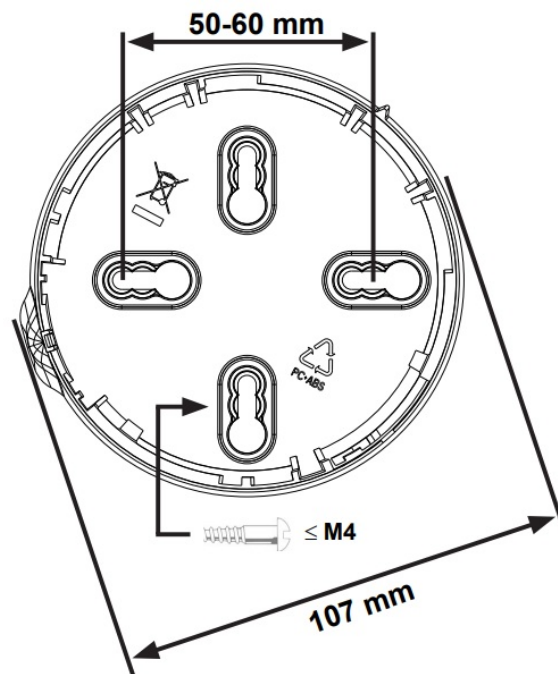 Figure 2 details attaching the repeater to the base

Figure 2: Attaching the Repeater to the Base

- **Anti-Tamper Features**

  The base includes a feature that, when activated, prevents removal of the repeater from the base without the use of a tool. See Figures 3a and 3b for details on this.

LINE UP REPEATER LED WITH BULGE AND TWIST CLOCKWISE (ONLY ONE LED WILL OPERATE AS KEY)
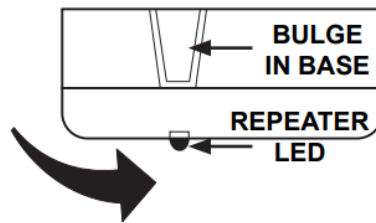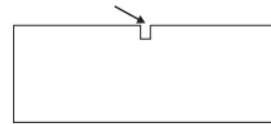
BULGE IN BASE

REPEATER LED

Figure 3a: Activation of Tamper Resist Feature

PLASTIC LEVER

BREAK TAB AT DOTTED LINE BY TWISTING TOWARDS CENTRE OF BASE

**Figure 3b: Removing Repeater From Base if Tamper Resist is Activated**

USE A SMALL-BLADED SCREWDRIVER TO PUSH PLASTIC IN THE DIRECTION OF THE ARROW
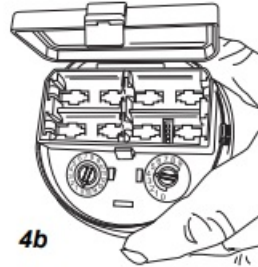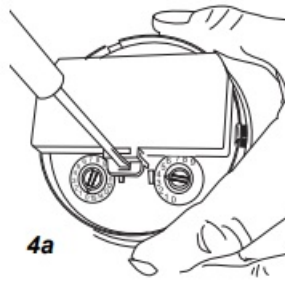
- **Head Removal Warning –** An alert message is signalled to the CIE via the Gateway when a repeater is removed from its base.

Figure 4 details the battery installation and the location of the rotary address switches.

Figure 4: Battery Installation and Rotary Address Switches

NOTE POLARITY

ROTARY ADDRESS SWITCHES

4a

4b

4c

4d
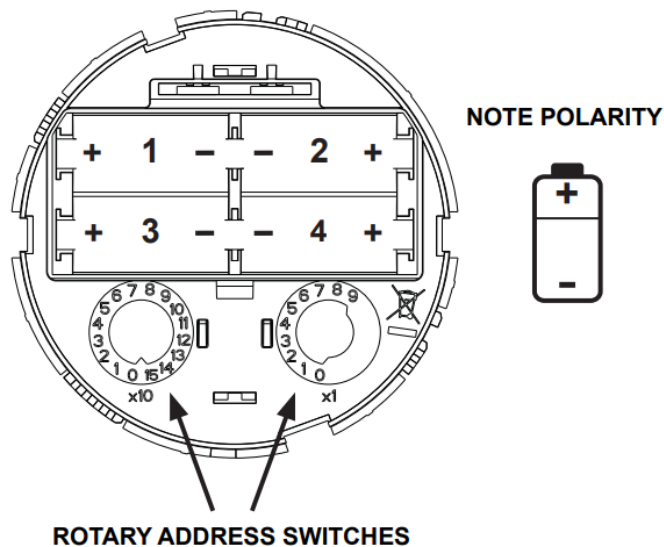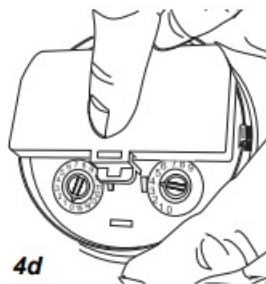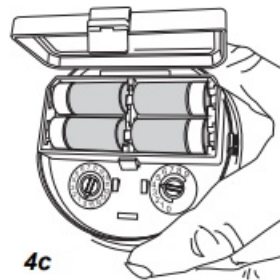
Important

Batteries should only be installed at the time of commissioning

Warning

- Using these battery products for long periods at temperatures below -20°C can reduce the battery life considerably (by up to 30% or more)
- Observe the battery manufacturer's precautions for use and requirements for disposal
- Only use the batteries recommended in this manual and do not mix batteries from different manufacturers

SETTING THE ADDRESS

- Set the loop address by turning the two rotary decade switches on the underside of the repeater (see figure 4), using a screwdriver to rotate the wheels to the desired address. The repeater will take one module address on the loop. Select a number between 01 and 159 (Note: The number of addresses available will be dependent on panel capability, check the panel documentation for information on this).
- Insert the repeater into the base and rotate it clockwise until it locks into place.

PROGRAMMING

- To load network parameters into the RF repeater, it is necessary to link the RF gateway and the RF repeater in a configuration operation. At commissioning time, with the RF network devices powered on, the RF gateway will connect and program them with network information as necessary. The radio repeater then synchronizes with its other associated devices as the RF mesh network is created by the gateway. (For further information, see the
- Radio Programming and Commissioning Manual – ref. D200- 306-00.)

  NOTE: Do not run more than one interface at a time to commission devices in an area.

LED INDICATORS AND FAULT DESCRIPTION

The radio gateway has two LED indicators that show the status of the device (see table below).

Repeater Status LEDs

Repeater Status	LED State	Meaning
Power-on initialisation (no fault)	Long Green pulse	Device is un-commissioned (factory default)
	3 Green blinks	Device is commissioned
Fault	Blink Amber every 1s.	Device has an internal trouble
Un-commissioned	Red/Green double-blink every 14s (or just Green when communicating).	Device is powered and is waiting to be programmed.
Sync	Green/Amber double-blink every 14s (or just Green when communicating).	Device is powered, programmed and trying to find/join the RF network.
Normal	Controlled by panel; can be set to Red ON, periodic blink Green or OFF.	RF communications is established; device is working properly.
Idle (low power mode)	Amber/Green double-blink every 14s	The commissioned RF network is in standby; used when the gateway is powered off.

EU Declaration of Conformity

- Hereby, Life Safety Distribution GmbH declares that the radio equipment type M200F-RF complies with directive 2014/53/EU
- The full text of the EU DoC can be requested from: **HSFREDDoC@honeywell.com**

Documents / Resources
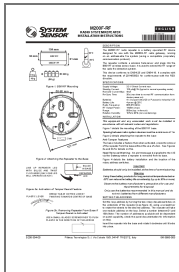
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M200F-RF Radio System Repeater, M200F-RF, Radio System Repeater, System Repeater, Repeater

References

- **User Manual**