



Model: HSSA/RB/RF10-PRO
Mains RF-PRO Relay Base Compatible with Smoke, Heat & CO Alarm



INTRODUCTION

Please carefully read and retain this manual for the entire duration of the device's use, as it contains vital information on the installation and operation of the HSSA/RB/RF10-PRO Relay Base. The manual should be considered an integral part of the product and if you are installing the device, it is mandatory to provide a copy of the manual to the homeowner and any subsequent users.

The HSSA/RB/RF10-PRO is a versatile device that switches a relay upon receiving a wireless or wired alarm signal from a compatible Hispec RF10-PRO smoke/heat/CO alarm.

The electrically isolated contacts of the relay can be used for numerous applications, such as signalling and activating flashing beacons. The HSSA/RB/RF10-PRO is specially designed to operate with Hispec RF-PRO devices.

The HSSA/RB/RF10-PRO Pairing Relay Base is powered by 230V AC mains and features rechargeable backup cells. By default, the relay operates continuously, meaning it switches on when one of the smoke alarms detects fire and switches off when the alarm condition ceases.

SPECIFICATION

Product Life:	10 Years
Supply Voltage:	230V AC
Backup Battery:	3V Rechargeable Lithium Battery (Sealed)
Battery Consumption:	0.8W (Standby)
Contact Rating:	250V AC, 5A / 30V DC, 5A Continuous or Pulse Mode
Visual Indicator:	Green - Bright: Powered Present Red - Flashing: Low Battery Red - Illuminated: RF Pairing Mode
Wireless Interconnection:	Radio Frequency [868MHz] max 20pcs RF devices Indoor max 30m/outdoor max 80m
Hardwire Interconnection:	Max 40pcs devices in 150m
Operating/Storage Temperature:	-10°C to 40°C
Operating/Storage Humidity:	15% to 95% Relative Humidity
Plastic Material:	ABS
Approval:	CE

FIG.1 Product Dimension

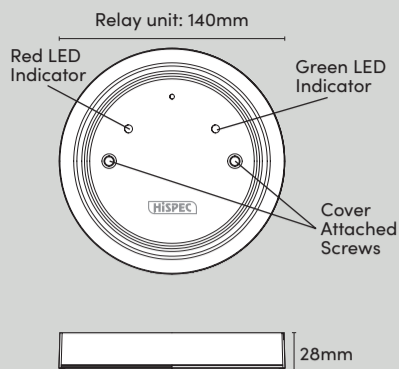
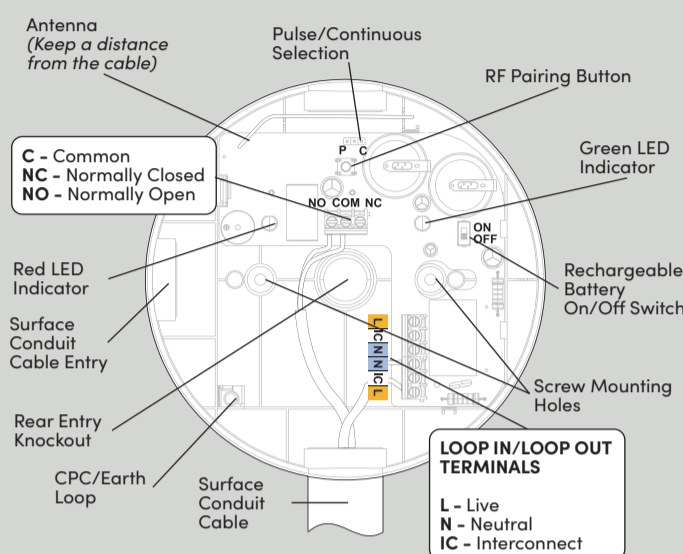


FIG.2 Wiring Details



WARNING!

USE THIS TERMINAL TO LOOP MAINSPOWER AND INTERCONNECT LINE TO ANOTHER ALARM OR DEVICE

- The installation of the mains powered HSSA/RB/RF10-PRO RF pairing relay base should be performed by a qualified electrician in accordance with the relevant local regulations for electrical installations. Incorrect installation may expose the user to shock or fire hazards and damage the product. This unit is not waterproof and must not be exposed to dripping or splashing.
- It is mandatory to incorporate an all-pole mains switch into the electrical installation of the building.
- For connecting the pattress to alternative energy sources (Wind, solar, UPS, etc.). This product is designed to be connected to a pure or true sine wave 230V AC supply. If you plan to connect it to a power source that utilises an inverter such as a PV solar panel, ensure that the Total Harmonic Distortion (THD) is less than 5%. If you are unsure, please consult the inverter manufacturer. The same applies to battery powered UPS (Uninterruptible Power Supply) inverters.
- The relay base must not be powered from a light dimmer circuit.

INSTALLATION INSTRUCTION

Before wiring the RF pattress

NOTE: User is strongly recommended to read the manual and follow the steps in chronological order to complete the setup of the RF relay pattress.

Carefully read and follow these instructions:

- Disengage the mains from the circuit before installing the apparatus to ensure safety.
- Locate a desired mounting position either near the external device you want to control or underneath a Hispec "Fast Fix" alarm base. Avoid mounting near metal framework or large metal objects, as this will reduce RF range capabilities.
- If the incoming wiring is on the surface of the wall/ceiling, use appropriately sized trunking/conduit to cover exposed cable. Remove the plastic knockout with a sharp knife, ensuring that there is no gap when fixed with the trunking/conduit. There is one suitable surface cabling knockout.
NOTE: The other two surface entries are not recommended as the wiring will reduce the antenna signal. There is one rear entry knockout. Refer to (Figure 2) for details.
- The wiring to power the 230v relay Live (L) & Neutral (N) terminals when RF Interlinking the system should consist of a 1 or 1.5mm² twin and earth cable. Otherwise, if the system is being hardwired interlinked, the wiring should be a 1 or 1.5mm² 3-core and earth cable and the Interconnect (IC) terminal should also be connected.
- The wiring to power the relay contacts NO, NC, COM should be carefully selected by the installer, taking into account the voltage rating and current draw of the auxiliary device, i.e. Sounder Beacon.

Wiring Instruction

At this point, the HSSA/RB/RF10-PRO module should have already been screwed to the wall/ceiling and the correct cabling should be in place.

- Connect the 230v Power Supply cables to 1 set of the LOOP IN/LOOP OUT Live (L) and Neutral (N) terminals (additionally connect the Interconnect IC wire from the smoke or CO alarms when hardwiring interlinking ONLY).
- If the Relay Base is the last device in the circuit (End of Line), the 2nd set of LOOP IN/LOOP OUT terminals can remain empty. If an additional alarm is being connected, use the 2nd set to LOOP OUT to the additional alarm.
NOTE: The relay base is supplied with a brass CPC/Earth Loop terminal for the convenience of the installer. Connecting the CPC wire to this terminal has no effect on relay base operation.
- Refer to (Figures 3, 4, 5, 6 and 7) for specific relay contact wiring and their applications.
NOTE: Connecting your auxiliary device to the NC (Normally Closed) terminal will switch off the auxiliary device when the alarm activates. This is a common setup where it is necessary to switch off a boiler in the event of a Carbon Monoxide (CO) leak, see (Figure 4 or 6).
NOTE: Connecting your auxiliary device to the NO (Normally Open) terminal will switch on the auxiliary device when the alarm activates. This is a common setup where it is necessary to switch on an external sounder or beacon in the event of a fire or Carbon Monoxide (CO) leak, see (Figure 3 or 5).

FIG.3 The beacon should only be on in case of an alarm

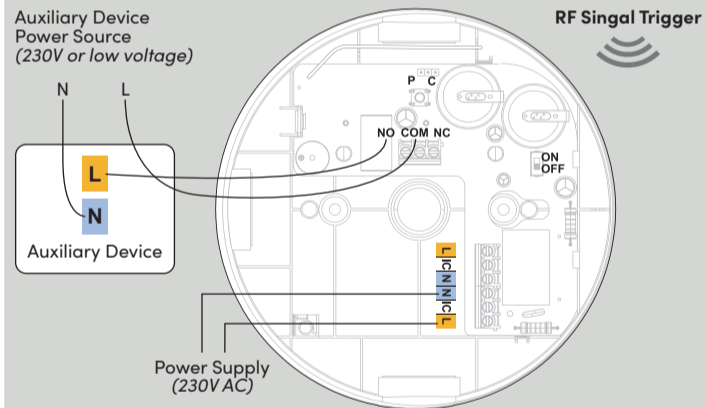


FIG.6 Auxiliary device powered from the same circuit as the relay and switches off in case off alarm

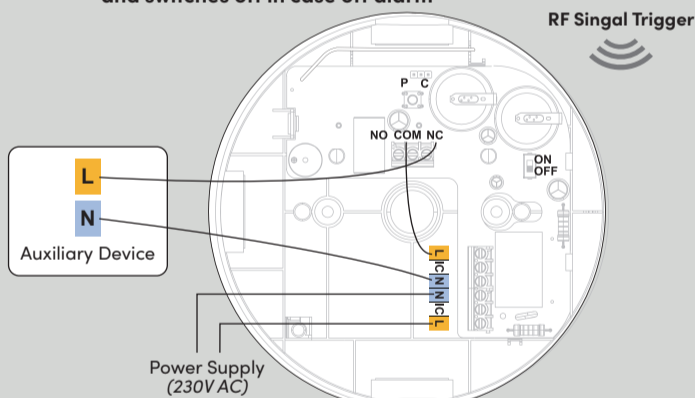


FIG.4 Relay used to cut out the boiler in case of an alarm

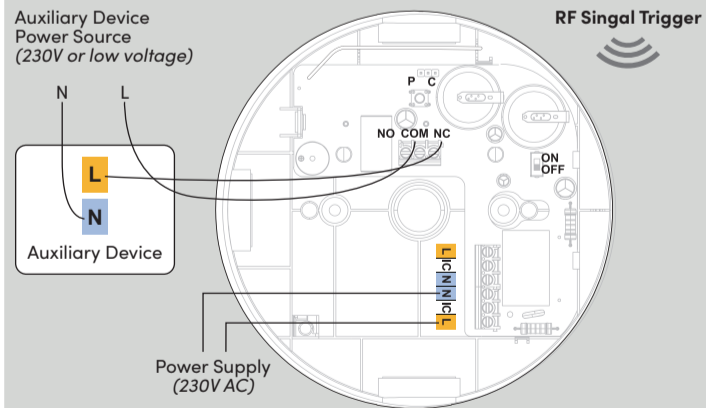


FIG.7 Connecting Relay Base to the warden call or EN54 fire panel

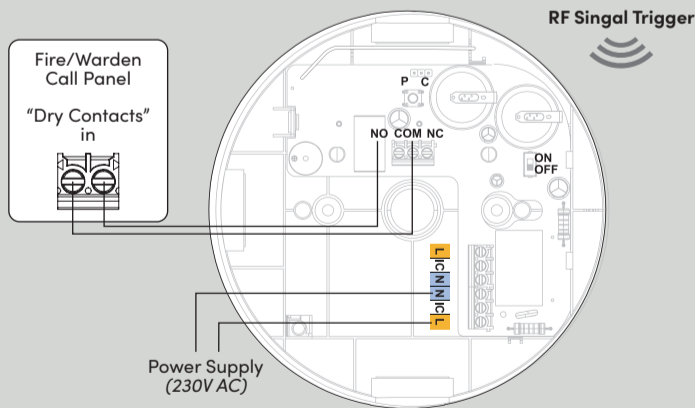
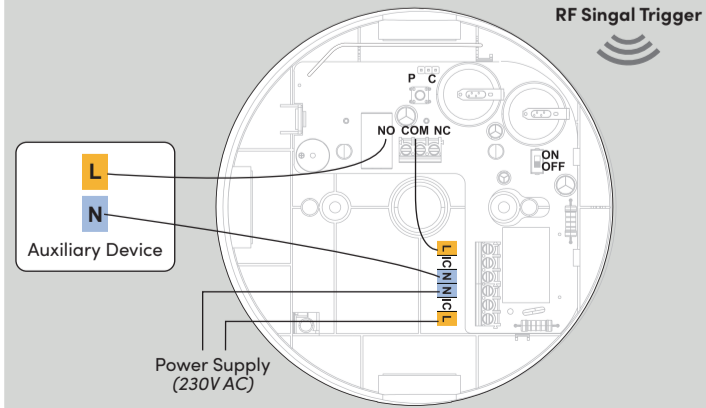


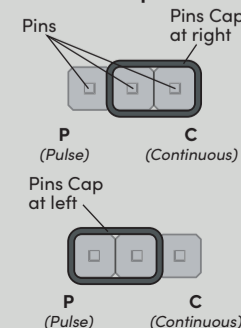
FIG.5 Auxiliary device powered from the same circuit as the relay and switches on in case of alarm



SET UP RELAY OPERATION TO EITHER CONTINUOUS OR PULSE

- To switch between continuous or pulse operation, find the location of the pin cap and the 3 pins labelled on (Figure 2). By default, a black pin cap should be fitted to 2 pins at the right side, which means the relay operates continuously, in which it will switch on when one of the smoke alarms detects fire and switches off when the alarm condition ceases.
- If momentary (pulse) relay operation is required, remove the black pin cap and fit it into the "P" position, see (Figure 8). This is commonly used with warden call systems where only momentary short signalling is required. Do this before connecting the mains power or activating the rechargeable lithium batteries. With the switch in the "C" position, the alarm signal will switch the latching relay until a cancel signal is received.

FIG.8 Default Setting: Continuous Operation



SET UP RECHARGEABLE BATTERY STATUS FROM "OFF" TO "ON"

- Turn on the rechargeable cells by gently sliding the switch into the "ON" position see (Figure 2). This switch must be turned "ON" to ensure the correct position.
- Refer to the RF PAIRING section for Wireless Interlinking.
- Attach the cover to the fixing points and fix it in place using the two screws supplied.

TESTING AND COMMISSIONING

- Switch 230v power on to power the fire alarms and/or relay base
- Ensure a green LED is illuminated on the front of the device. (If any other sequence of flashing LEDs occur refer to the INDICATION AND ACTION section of this manual).
- Press the test button on one of the interconnected fire or CO alarms to activate the system (refer to the instruction manual provided with those devices for particular details).
- Whilst the system is alarming, ensure the auxiliary device connected to the relay contacts performs its intended function. (a 2nd engineer may be required to perform this test if the auxiliary device is not situated in plain sight of the alarm being tested, i.e., flashing beacon/fire panel).
- Release the test button and check that the auxiliary device has returned to its normal state. (If the continuous/pulse switch is in the 'pulse' position, this will automatically happen after 5 seconds of pressing the test button).
- Fill out the 'Date of Installation' label on the side of the relay base.

RF PAIRING SET UP

Program the RF pairing

- Find the RF pairing button on the RF relay pattress.

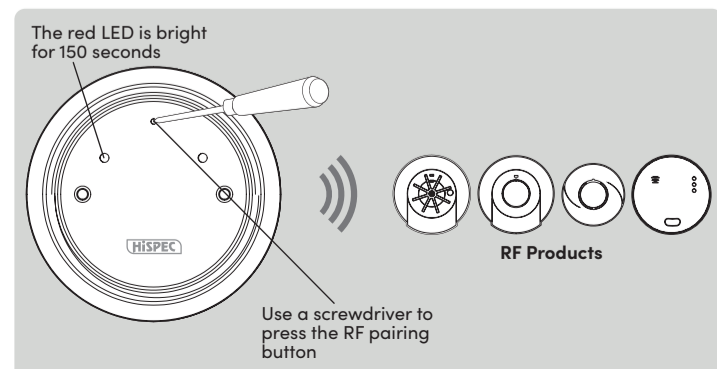
1.1 Press and hold the RF pairing switch through the hole in the cover using the small screwdriver until the red LED is illuminated. The red LED light will stay illuminated for 150 seconds.

1.2 RF pair all other RF alarms and devices in the network. Consult the instruction manuals on how to RF pair the alarms and devices. Ensure that each individual alarm/device is tested in its final location.

1.3 To complete the commissioning, the RF network must exit RF pairing mode.

1.4 The HSSA/RB/RF10-PRO will automatically exit RF pairing mode after 150 seconds. To manually exit RF pairing mode, press the RF pairing button again on the HSSA/RB/RF10-PRO one time. The red LED indicator will turn off and the system will return to standby mode.

NOTE: Once all devices are paired, the system will not communicate with any other RF alarms and RF devices outside of the RF paired group.



NOTE: A maximum of 20 RF devices may be interconnected to one relay. When one alarm sounds, all are interconnected to one relay. When one alarm sounds, all interconnected alarms will sound and the relay will switch.

NOTE: The rechargeable cells enable the HSSA/BP/RF10-PRO to switch during mains failure upon receipt of an alarm signal. They will power the relay for up to 2 months in the event of the mains being off.

INDICATION AND ACTION

Should you need additional help, we suggest contacting our technical support for any inquiries. The contact details can be found in this manual.

STATUS	LED INDICATOR	SOUNDER	ACTION REQUIRED
Standby Mode (Powered by battery only)	None	None	Switch on the mains power.
Standby Mode (Powered by 230v mains)	Solid Green	None	No action required.
Fire / CO detected	Solid Green Solid Red	None	Take caution to fire / CO, leave the building.
Test Mode	Solid Green Solid Red	None	Release test button on alarm to exit test mode.
Loose Neutral	Red LED 3 flashes every second	None	There is a loose neutral connection within this alarm circuit. Ensure all neutral conductors are tightened in their terminals correctly and check for any breaks in the cable run.
Low Battery	Red LED 1 flash every 10 seconds	1 chirp every 10 seconds in sync with red LED	Check the MAINTENANCE, REPAIRS AND SERVICE section.

MAINTENANCE, REPAIRS AND SERVICE

Maintenance:

- To ensure the continued performance of the relay base, we would recommend you perform the following maintenance procedures monthly.
- Test the relay base.
- Ensure the green LED indicator is on to indicate that the alarm is receiving 230v mains power. If the green light is not on, the battery will drain and may emit a 'low battery' fault warning. Reconnect mains power and after 24hrs the 'low battery' warning should go away. If the 'low battery warning does not go away, the device will need to be replaced.
- Ensure the device is free from any dust or contamination and use a vacuum cleaner or a damp cloth on the outside to clean if necessary.
- Ensure the device is within its service life by checking the date on the side of the alarm.

Repairs / Servicing:

The relay base device does not contain any components which can be replaced and does not require special servicing. Instead, if you encounter a rare fault and the wiring/installation has been checked, the full unit should be replaced.

TROUBLESHOOTING THE RF PAIRING

If when testing the HSSA/RB/RF10-PRO does not respond, then -

- Ensure that the alarm test button has been held down until the RF light comes on, which can take up to 20 seconds.
- If the issue persists, reset the RF pairing by pressing the RF pairing button 5 times. The LED will flash red 10 times, indicating that the RF memory has been cleared and the HSSA/RB/RF10-PRO is now reset. To reset other devices in the system, refer to their respective instruction manuals. Once all devices are reset, repeat the RF pairing procedure.
- If resetting the RF pairing does not improve the signal reception try relocating the HSSA/RB/RF10-PRO and/or rotating/relocating the alarms. Signal reception can be improved significantly by changing the position of the alarms. However, this may also result in some devices being out of range of existing devices, even if they were properly paired before. Therefore its important to check that all detectors/relays are communicating in their final installed positions. If units are rotated and/or resited, its recommended to return them to the factory settings before RF pairing all units again in their final positions. Finally, recheck the RF pairing to confirm that the issue has been resolved.

LIMITATIONS OF RF PAIRING

Hispec's RF-PRO pairing system is very reliable and is tested to high standards. However, due to its low transiting power and limited range (required by regulatory bodies), there are some limitations to consider:

- Frequency antennas may be blocked by radio signals occurring on or near their operating frequencies, regulations of the alarms' RF functionalities.
- Hispec RF-PRO systems should be tested regularly at least monthly. This is to determine whether there is any external interference preventing communication weather the radio paths have been disrupted by building work or renovations and if so, to give a warning of these and other faults.

GUARANTEE

This device is guaranteed under normal use and service for a period of 5 years (including battery) from the date of purchase. The company will not be obligated to repair or replace parts which are found to be in need of repair because of misuse, damage or alterations present after the date of purchase. If the device is proven to be faulty, within the warranty period, it must be returned to where it was purchased, carefully packaged, with the fault clearly stated, along with proof of purchase. The liability of the company arising from the sale of this device shall not in any case exceed the cost of replacement of the device, and in no case shall the company be liable for consequential loss or damages resulting from the failure of the device.

HISPEC ELECTRICAL PRODUCTS LTD. SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY OR PROPERTY DAMAGE, OR ANY SPECIAL INCIDENTAL, CONTINGENT OR CONSEQUENTIAL DAMAGE OF ANY KIND RESULTING FROM A FIRE. THE EXCLUSIVE REMEDY FOR BREACH OF THE LIMITED WARRANTY CONTAINED HEREIN IS THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT AT HISPEC ELECTRICAL PRODUCTS LTD. IN NO CIRCUMSTANCES, WITHOUT EXCEPTION, SHALL HISPEC ELECTRICAL PRODUCTS LTD.'S LIABILITY, UNDER ANY OTHER REMEDY PRESCRIBED OR OTHERWISE BY LAW, EXCEEDS THE PURCHASE PRICE OF THE INDIVIDUAL ALARM. YOUR ALARM IS NOT A SUBSTITUTE FOR PROPERTY, DISABILITY, LIFE OR OTHER INSURANCE OF ANY KIND. APPROPRIATE COVERAGE IS YOUR RESPONSIBILITY. CONSULT YOUR INSURANCE AGENT.

This does not affect your statutory rights. This alarm is only suitable for residential dwellings and is not suitable for commercial or industrial use.

Waste electrical products should not be disposed of with normal household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice. New regulations will encourage the recycling of Waste from Electrical and Electronic Equipment (European "WEEE Directive" effective August 2005).



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