

COMPLETE SMOKE ALARM TEST

- All smoke alarms should be tested on a monthly basis.
- To accurately test the integrity of the smoke sensing chamber use a suitable aerosol tester.
- Before testing make sure that the smoke alarm is connected to the AC power supply and the Green LED is ON.

ALARM TESTING				
Unit	Test Method	Sound Pattern	LED Colour	LED Sequence
Single Alarm Unit Test (RF & Wired Units)	Push the Hush / Test button for 2-3 Seconds	3 beeps in 4 seconds (1 Cycle) and repeats until button is released	RED LED	3 flashes every 4 sec (1 Cycle) and repeats until button is released
ALARM AND NETWORK TEST				
Unit	Test Method	Sound Pattern	LED Colour	LED Sequence
RF or Wired Unit	Push the HUSH/TEST button for 10 seconds	3 beeps in 4 seconds (1 cycle) and repeats until unit button is released	RED LED BLUE LED	3 flashes every 4 sec (1 Cycle) and repeats until button is released
Other Interconnected RF Units	N/A	3 beeps in 2 seconds (1 cycle) and repeats until unit button is released	BLUE LED	Flashes once every 4 seconds and stays continuously ON for 3 min
Other Wired Interconnected RF Units	N/A	3 beeps in 2 seconds (1 cycle) and repeats until unit button is released	N/A	N/A

TABLE 7

NOTE

- After the above test with the "HUSH/TEST" button is completed the alarm will be desensitized for about 20 minutes.
- Wait for 20 minutes before doing the SMOKE AEROSOL TEST.

WARNING

- Do not apply excessive force on the "HUSH/TEST" button this may damage the smoke alarm and may void the warranty.
- Never use an open flame of any kind to test your alarm. You may damage the alarm or set fire to your home. The built-in test switch enables the testing of all electronic components and the horn.

FACTORY RESET

This section will explain how to perform a general reset of a smoke alarm, which starts the unit over as if it were powered up for the first time. This reset will also remove a unit from an existing network.

- Follow the steps in the table below if one of these conditions occurs:
- If you have problems or become confused during initial RF Interconnect enrolment.
 - If a unit does not perform as stated in this document.
 - If you decide to remove a unit from your RF Interconnect network and enrol it in another RF Interconnect Network (at a friend or family's location for example).

Note: If a unit has reached its end of life or has a low battery as stated on Table 5, a Reset will not be required. Simply remove the unit from the mounting bracket which will disconnect the battery.

Steps	User Input	Visual Indication
Step 1	Ensure the cap is removed and alarm unit is clipped to the mounting base (Fig. 4 & 5).	N/A
Step 2	Attach all units to the mounting base, which will turn activate the battery (Fig.4)	RED LED flashes (3 times in 3 Seconds).
Step 3	Hold down the Network button for 20 flashes of BLUE LED and release.	BLUE light will Flash 3 more times and go OFF.

The unit has now been reset to Factory Settings and is ready to be paired again.

TABLE 8

TROUBLESHOOTING

ELECTROMAGNETIC INTERFERENCE (EMI)

Smoke alarms are designed to filter external EMI signals. But some forms of EMI can still affect the performance.

- Avoid installing a smoke alarm too close to an electrical noise source (< 1m).
- Install the smoke alarm on a separate circuit to all other electrical circuits.
- Common sources of EMI which may cause the smoke alarm to malfunction include: Fluorescent luminaires, LED Downlights, CFL lamps, Security Lights, Solar Inverters, A/C Compressors (Spikes during ON/OFF).
- Heat lamps, air conditioners, ceiling fans (Electrical noise & Spike due to heavy inductive loads at ON/OFF).

Note: Some installations may require an inline EMI filter if the EMI source cannot be identified (Legrand EMI Filter Cat. No: 643093 is available).

GOOD SAFETY HABITS

- Develop and practice a plan of escape.
- Install and maintain fire extinguishers on every level of the home and in the kitchen, basement, and garage. Know how to use a fire extinguisher prior to an emergency.
- Make a floor plan indicating all doors and windows and at least two escape routes from each room. Second story windows may need a rope or chain ladder.
- Have a family meeting and discuss your escape plan, showing everyone what to do in case of fire.
- Determine a place outside your home where you all can meet if a fire occurs.
- Familiarize everyone with the sound of the smoke alarm and train them to leave your home when they hear it.
- Practice a fire drill at least every six months, including fire drills at night. Ensure that small children hear the alarm and wake when it sounds. They must wake up in order to execute the escape plan. Practice allows all occupants to test your plan before an emergency. You may not be able to reach your children. It is important that they know what to do.

LIMITATIONS OF SMOKE ALARMS

- Smoke alarms cannot provide an alarm if smoke does not reach the alarm. Therefore, smoke alarms may not sense fires starting in chimneys, walls, on roofs, on the other side of a closed door or on a different floor.
- If the alarm is located outside the bedrooms or on a different floor, it may not wake up sound sleepers. A smoke alarm in the bedroom is therefore recommended as additional protection.
- Smoke alarms have been significant in saving lives in many parts of the world. However, U.S. Government research indicates that they may not give early enough warning in up to 35% of fires. Hence, the use of this product does not act as a substitute for basic prevention.
- Although smoke alarms can help save lives by providing early warnings of a fire, they are not a substitute for an insurance policy.
- This smoke alarm alone will not alert the hearing impaired. Use special-purpose smoke alarm with lights or vibrating devices, for those hard of hearing.

MAINTENANCE

The smoke alarm is virtually maintenance free. However, if there is any dust or lint build-up around the smoke alarm a vacuum cleaner may be used to clean the exterior of the unit (including slots on the cover). We recommend using a vacuum cleaner to clean the exterior of the unit every six months. DO NOT IMMERSER IN OR SPRAY WITH HOUSEHOLD CLEANERS. If the unit gives a chirping sound once every minute, it indicates that the battery is flat and the unit needs to be replaced.

FALSE ALARMING

- This smoke alarm is designed to minimise false alarms.
- If the alarm does sound, check for a fire before silencing the alarm. If a fire is discovered, escape quickly and call the Fire Brigade.
- Dust generated on building construction sites can cause false alarms. The plastic bag is intended to protect the sensor module during the building construction phase.
- Cigarette smoking will not normally set off the alarm unless smoke is blown directly into the alarm.
- This Smoke alarm has a HUSH button that can be used if combustion particles from cooking sets off the alarm.
- False alarm can be prevented by pressing the HUSH button on triggered alarm to desensitize it for 20 minutes.

PRODUCT NOTES

1. This product must be installed by a licensed electrician. 2. For indoor use only. 3. This product should not be installed in areas exposed to constant vibration, temperature fluctuations, or areas of high humidity. 4. This product contains no serviceable parts and no attempt should be made to repair this product. If the product is faulty it should be discarded. 5. Severe electromagnetic interference from other products may cause malfunction of this product. 6. This product is intended for domestic or similar uses. It is not suitable for use in an environment heavily laden with dust. 7. This product has a nominal 10 year design life from the date of installation. If not powered by mains the lifetime will be reduced. 8. The date of commissioning must be recorded on the product label when each unit is installed. The alarm should be replaced every 10 years from the commissioning date. If commissioning date is not recorded on the unit, the 10 years will commence from the date of manufacture. The date of manufacture is marked on every unit in the form yyWww (Eg. 22W15 means 15th week of year 2022). 9. This product has been designed to operate in ambient temperatures: 0°C to 40°C. 10. This product is not suitable for marine environments such as areas subject to salt spray and/or mist. 11. This product is not suitable for installation in hazardous and/or corrosive areas. 12. This product has been designed for domestic or similar uses and is not suitable for commercial installation. 13. The material in this product may vary in colour from batch to batch. Colour matching from one batch to another cannot be guaranteed. 14. Electrical installations periodically receive transient over-voltages. This product has been designed to minimize the effect of such voltages on the connected equipment. It may not give full protection for extreme over voltage transients such as those resulting from a close lightning strike. 15. This product has been designed to operate on a nominal supply voltage of 230V - 240V a.c. 50 Hz. 16. This product must be installed and used as per these instructions. 17. After installation, this product must be tested as required by the appropriate government and/or statutory regulations. 18. This product utilises intellectual property in the form of registered designs, trademarks, and/or patents. Such intellectual property remains the property of Legrand in all cases. 19. Legrand reserves the right to modify the specification of this product at anytime.

Warranty

- Legrand ("we or us") has given each purchaser who is a consumer ("you") a warranty against defects in its products.
- As a consumer, you are entitled to the benefit of the Warranty and should read and understand its terms. In addition, for the purposes of the Australian and New Zealand Consumer Laws, we note the following:
- Our contact details for the purpose of any claims made under the Warranty are below.
- Any claim under the Warranty must be sent in writing to the following address:

AUSTRALIA ONLY
Legrand Australia Pty Ltd
Nexus Industry Park
Bldg 4, 43-47 Lyn Parade
PRESTONS, NSW 2170
1300 369 777
sales.orders@legrand.com.au

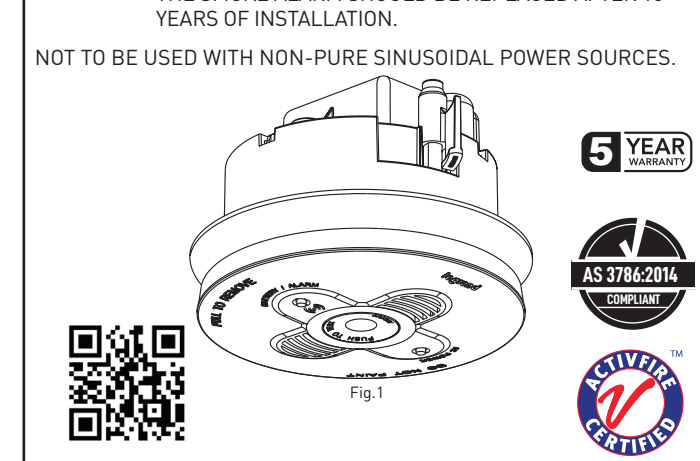
NEW ZEALAND ONLY
Legrand New Zealand Ltd
106-124 Target Rd
GLENFIELD, AUCKLAND 0627
0800 476 009
nz.sales@legrand.co.nz



- If we accept your claim under the Warranty we will reimburse all your reasonable expenses in making and pursuing the claim, including the cost of reimbursement of any defective products returned in the ordinary course to us at the address above by post or other agreed means. Any such claim must be made within 14 days of your receiving notice of our acceptance of your claim and include any necessary supporting documentation or invoices.
- As a consumer, you have rights under the Australian and New Zealand Consumer Laws and may have rights under other applicable laws which cannot be excluded, restricted or modified. Those rights are in addition to any rights you have under the Warranty.
- Legrand warrants this product for a period of 5 years from the date of purchase. Our goods (which we refer to in the Warranty as the Products) come with guarantees that cannot be excluded under the Australian and New Zealand Consumer Laws. You are entitled to a replacement or a refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

IMPORTANT: READ ALL INSTRUCTIONS BEFORE INSTALLATION. NO USER SERVICEABLE PARTS INSIDE THIS SMOKE ALARM. THE SMOKE ALARM SHOULD BE REPLACED AFTER 10 YEARS OF INSTALLATION.

NOT TO BE USED WITH NON-PURE SINUSOIDAL POWER SOURCES.



LEARN MORE ABOUT THIS PRODUCT

Cat. No.	643089
Description	Flush Mount Photoelectric Smoke Alarm Wired or Wireless Interconnect
Nominal Input Voltage	230 - 240 V - 50 Hz
Battery Voltage	DC 3 V
Battery Type	Non-replaceable Li-ion (Built-in)
RF Frequency	434.2 MHz
RF Range (Free air & Line of Sight - Indoor)	30 m
Temperature Range	0° C to +40° C
Humidity Range	10-95 % at 20° C (Non-condensing)
Aural Signal Pattern	ISO 8201 340-350 Hz
Siren Sound Level	> 85 dB at 3 metres*
Unit Size:	Ø110 x 25 mm
Recommended Lifespan	10 Years
Quality Systems	ISO 9001

* Tested under laboratory conditions.

FEATURES

- Designed for fast response to smouldering fires and to minimize false alarms.
- Built-in 10 year life lithium battery (Non-replaceable)
- Ceiling Mounting option.
- LED indicators for AC power, Battery status, Alarm and Network status.
- Test and Hush button, easy to use and silence unwanted alarms.
- Up to 20 units can be paired on a single network.
- Wide smoke entry vents for early smoke detection.
- Sealed mesh protector over sensor chamber to prevent insect and dust contamination.
- UV resistance to prevent discolouring.
- Electronics coated to prevent build up of heat and condensation caused by humidity and high temperatures.
- RF wireless interconnect for flexibility and cost effective installation which can be moved anywhere as required.
- Smoke Alarm Interface (Cat. No: 643086) also available.
- Houses a radio transmitter which triggers all interconnected smoke alarms wirelessly.
- Compliance with AS 3786:2014, ActivFire Certified.

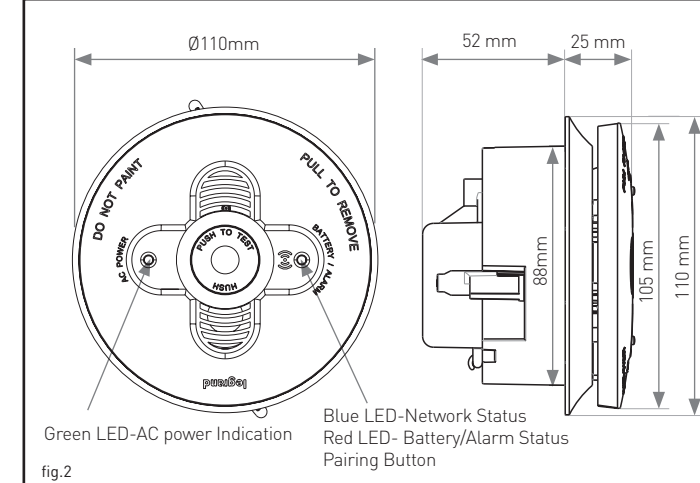
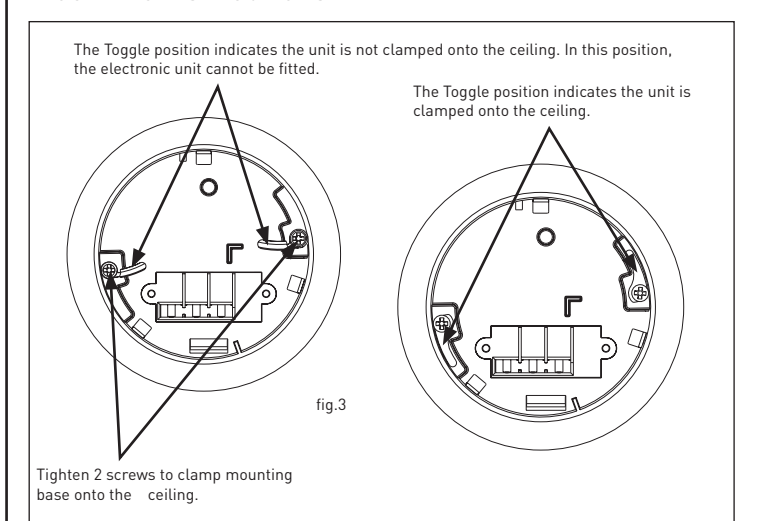


fig.2

MOUNTING INSTRUCTIONS



- Make a cut-out at the ceiling.
- Wire and fix the mounting base into the ceiling.
- Align the groove of the electronic unit to the rib of the mounting base.

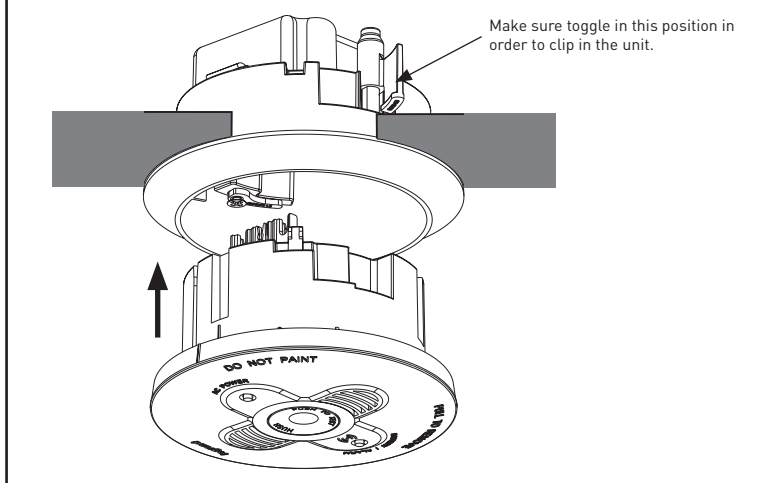
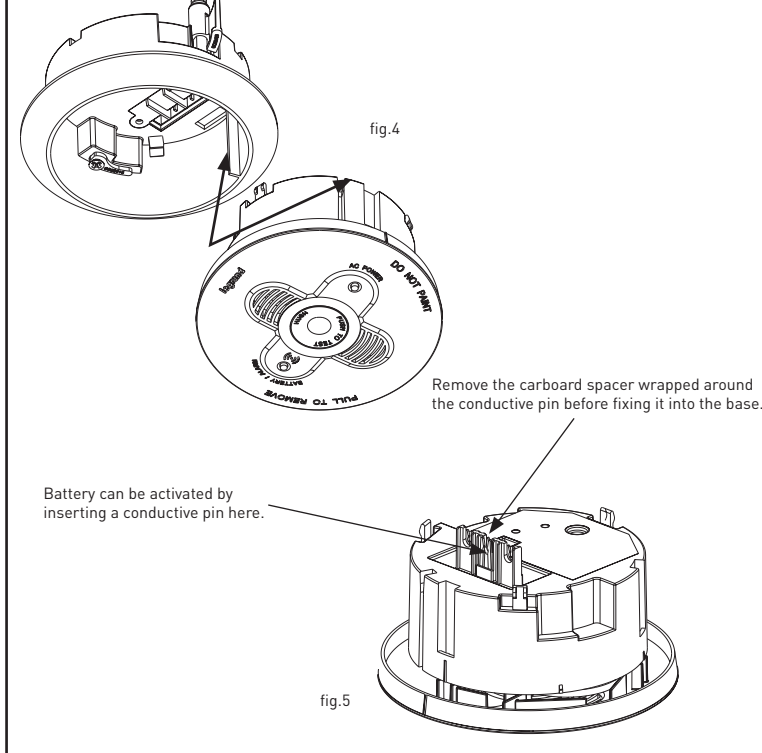


fig.5

OTHER COMPATIBLE LEGRAND SMOKE ALARMS

Legrand Reference	Mounting Type	Interconnect Type	Interconnect Compatibility with 643089
643088	Surface Mount	Wired & Wireless	Wired / Wireless
643090 / 643085	Surface Mount	Wired	Wired only
643091	Surface Mount	Wireless	Wireless only
643092 / 643087	Flush Mount (Ø 90 mm Cut-out)	Wired	Wired only

TABLE 1

INSTALLATION DESIGN

Legrand RF smoke alarm can be added to the existing wired Interconnect network. You must replace one of the existing wired smoke alarms with an RF unit that is also wired to do this.

- Understand your requirements and decide how and where you need the smoke alarm installed [See location section Fig. 6 for guidance]
- Determine which alarms are appropriate from our range [See Legrand smoke Alarms list Table 1]
- Run cabling if required.
- Mount base in the required position [See recommended location, Fig. 6].
Note: The RF units need to be paired before the base is mounted on ceiling.
- Commission and install [See commissioning and wiring sections for guidance]
- Test the installation.

REFER TO THE TABLE BELOW TO UNDERSTAND COMBINATIONS TO INTERCONNECT

Understand Installation Types		
Upgrade existing installation with wireless units	New installation with a mix of wired and wireless	New installation with only wired installation
<ul style="list-style-type: none"> You can have a mixture of wired and RF units on the one installation [See wiring section below] Existing installation with 2 or more wired interconnect units to extend the network with RF units. At least one existing unit must be replaced with a wired RF unit [Either 643088 or 643089] All new smoke alarms must be RF units [643088, 643089, 643091] 	<p>Install the RF versions where required [643088, 643089, 643091]</p>	<p>Install the wired interconnect versions where required [643090, 643092, 643085]</p>
<p>Note: A maximum of 20 smoke alarms can be interconnected on one circuit.</p>		

TABLE 2

STEPS TO INSTALL

Installation Type		
Upgrade existing installation with wireless units	New installation with a mix of wired and wireless	New installation with only wired installation
<ul style="list-style-type: none"> Pair all additional RF units to the network. After RF network setup is completed, clip units to mounted base and test. Remove existing smoke alarm and replace with a RF unit [either 643088 or 643089] If adding 240V RF versions - hard wire A & N to the new base. 	<ul style="list-style-type: none"> Gather all RF alarms to be installed and complete pairing to network. After RF network setup is completed, clip units to mounted base and test. On 240V RF units, hard wire A & N to new base. Connect interconnect wire to 'I' on the new bases. Note: RF only units [643091] need unit clipped into base to perform pairing. 	<ul style="list-style-type: none"> Hard wire 240V to A & N Connect interconnect wire to 'I' on the new bases. Clip units to mounted base and test
<p>Note: A maximum of 20 smoke alarms can be interconnected on one circuit.</p>		

TABLE 3

INTERNAL RF NETWORK SETUP

For easiest first-time setup, we recommend unpacking all units together on a desk, table or counter and using the steps in the following Table 4 below. If you prefer to install the alarms on the ceiling before connecting the units, attach all mounting brackets to the ceiling first and then start with step 2 in TABLE 4.

- Ensure all units are powered by clipping the base to head of the smoke alarm [battery activation]
- Pair all RF units on the bench.
- Validate RF network on the bench.
- Install base to ceiling if required and install smoke alarm.
- Validate installation.

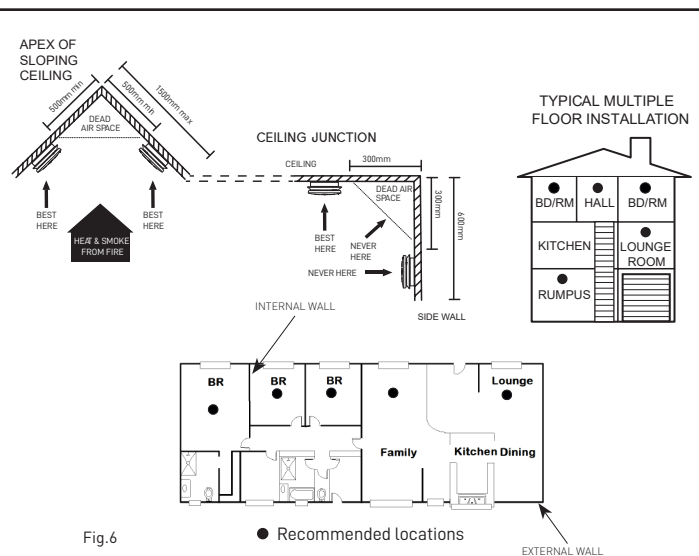
Definition of key terminology

MASTER: This is the network master unit that is the key communicator with the other wireless units.
SLAVE: The other wireless units that are to be paired to the MASTER unit.

	User Input	Visual Indication	Time Limit
Step 1	Attach all units to mounting base, which will activate the battery [fig.4]	RED Light flashes once, then 3 fast flashes	N/A
Step 2	<ol style="list-style-type: none"> Choose one of the smoke alarm to be the MASTER. Hold down the Network button and count 6 to 8 flashes of the BLUE light then release. Place the MASTER unit away from the others as the MASTER will need to be identified later in the process. 	Solid BLUE light	Master mode will timeout in 9 min.
Step 3	SLAVE joining Network: Hold the Network button and count 3 to 4 flashes of the BLUE light then release to connect to other MASTER unit.	Fast BLUE flashes indicates scanning for network. Slow BLUE flashes when connected to network.	Timeout in 9 min. If timeout occurs go back to step 2 and either use the same MASTER unit previously selected or select any unit which is already part of the network to be the new MASTER unit.
Step 4	Exit Pairing Mode: Go to the MASTER smoke alarm (the one in step 2) and hold down the Network button and count 2 to 3 flashes of the BLUE light then release.	Fast BLUE flashes on MASTER indicating network close. BLUE flashes on SLAVE will turn OFF. NOTE: Do not operate smoke alarm until the master stops flashing.	Pairing Mode can take up to 90 seconds to close.

TABLE 4

- Clip the body of the smoke alarm to the base and turn ON 240V circuit, Green LED will be ON indicating AC powered.
- ADDING A SMOKE ALARM TO AN EXISTING RF NETWORK**
- At some point, you might want to add another smoke alarm unit to your existing RF network for additional protection or to replace an old unit. To do so follow the steps from Table 4.
- NOTE:** AFTER THIS SMOKE ALARM HAS REACHED THE END OF ITS LIFE, IT CAN BE RECYCLED AS E-WASTE.



INSTALLATION LOCATIONS

- These recommendations are for information only. Check specific state legislation in your area to ensure smoke alarms are correctly located according to local laws. Each state or territory may differ in building codes and regulations.
- Install at least one alarm for each separate sleeping area. Try to cover the exit path as the bedrooms are usually farthest from an exit. If there is more than one sleeping area, install additional alarms in each sleeping area in the immediate vicinity of bedrooms.
- Locate additional alarms to monitor any stairway because stairways act like chimneys for smoke and heat.
- Locate at least one alarm on every floor level.
- Locate an alarm in every room where electrical appliances are operated (i.e portable heaters or humidifiers)
- Smoke, heat, and other combustion products rise to the ceiling and spread horizontally. Mounting the alarm on the ceiling in the centre of the room places it closest to all points in the room. Ceiling mounting is preferred in ordinary residential construction.
- When mounting alarms on the ceiling locate it at least 300 mm away from the sidewall and 300 mm away from any corner.

Terminals at back the of mounting base are marked as follows:

A - Active I - Interconnect N - Neutral E / Loop - Earth or Loop

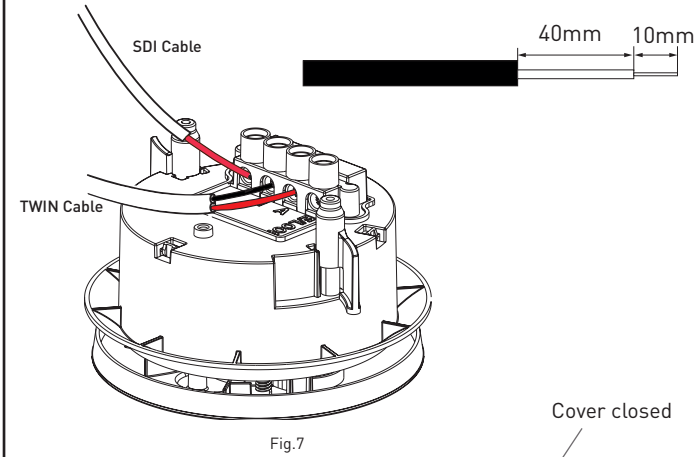


Fig.7

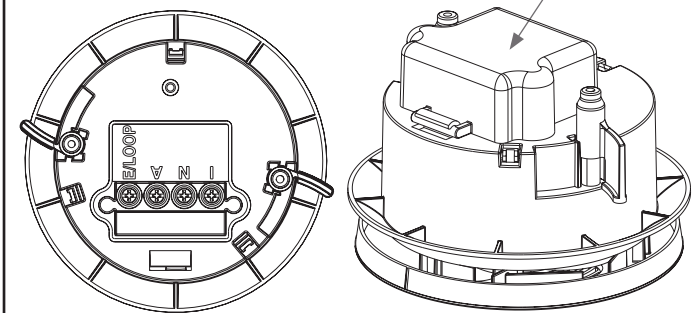


Fig.8

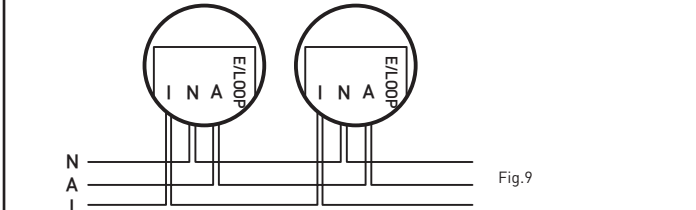


Fig.9

- There are four terminals in the supply terminal block marked A, I, N, and E/Loop. It is important that the alarm be wired correctly to ensure correct operation. Incorrect wiring to the smoke alarm will damage the unit and invalidate the warranty. See wiring diagram.
- If connecting by RF mode the interconnect wire is not required.
- If the unit is being installed in a new build, fully cover the unit with the plastic bag supplied to protect the unit from dust during the building construction stage. The plastic bag should only be removed at the end of the building construction phase, when the smoke alarm is to be commissioned. The building construction phase includes sanding, painting preparation, painting, flooring, etc. Once removed keep the plastic bag away from babies and children to avoid the danger of suffocation and must be disposed safely.
- A maximum length of 300 meters of wire can be used to interconnect smoke alarms. Spacing between interconnected smoke alarms must not exceed 30 meters. Minimum wire cross-section of 1.00mm² to be used.
- Wired interconnected smoke alarm must be connected to the same final sub-circuit. This is not required if connecting via RF.
- Do not use any wire that could later be confused with the normal house wires for the interconnect wire. For example Green/ Yellow, Earth wire.
- Do not connect AC power wired to the terminal marked 'I' (Interconnect). This will damage the smoke alarm.
- Interconnect feature is only compatible with other Legrand smoke alarms. Refer to Table 1. This unit will be damaged if interconnected with another brand of smoke alarm.
- Smoke alarm should be interconnected only within the confines of a single-family living unit. If smoke alarms are interconnected between different units, there may be excessive nuisance alarms and residents may not be aware that smoke alarms are being tested or that it is a nuisance alarm caused by cooking, etc.

Note: The smoke alarm should be installed on a separate circuit to minimize false triggering.

WARNING

- Connecting the interconnect terminal to any supply conductor will result in danger to the alarm and fail to operate and /or introduce a shock hazard and will void the warranty of the alarm.
- Under no circumstances must an insulation resistance test be carried out on a circuit to which a smoke alarm is connected. The test could cause irreparable damage to the internal circuitry of the smoke alarm and make it inoperative. The warranty would be void under such circumstances.
- If no alarm sounds, check wiring, fuses, or circuit breaker and make sure that the alarm is connected to a continuous final sub-circuit.

OPERATING MODES

- The smoke alarm is operational once:
- All wires are properly connected.
 - The smoke alarm is correctly installed on the mounting base.
 - The alarm has been tested.

Legrand RF smoke alarms are capable of linking together to make a unique network. When one RF or hard-wired Interconnected unit senses smoke, it sounds an alarm and triggers all other units on the same network to sound an alarm. Only the originating smoke alarm will have a flashing RED LED.

VISUAL AND AUDIBLE INDICATIONS

GREEN	VISUAL INDICATION		SOUND PATTERN	MEANING
	RED	BLUE		
Solid ON	N/A	N/A	N/A	Unit is connected to 240V a.c.
OFF	N/A	N/A	N/A	Unit is not connected to 240V a.c
N/A	N/A	N/A	3 beeps in 4 sec (1 cycle)	Wired unit being tested
N/A	N/A	1 Flash in 4 sec	3 beeps in 4 sec (1 cycle)	RF unit being tested
N/A	N/A	N/A	3 beeps in 2 sec (1 cycle)	Other wired units on the network being tested
N/A	N/A	1 Flash in 4 sec	3 beeps in 2 sec (1 cycle)	Other RF units on the network being tested.
N/A	N/A	Solid ON	N/A	This is the Master smoke alarm
N/A	N/A	2 Flashes every sec	N/A	Slave is searching for Network
N/A	N/A	1 Flash every sec	N/A	Slave connected to Network
N/A	N/A	Fast flashing for 90 sec	N/A	Master smoke alarm exiting pairing mode
N/A	N/A	Single flash, followed by 3 flashes	N/A	Smoke alarm is battery activated
N/A	N/A	1 Flash every 300 sec	N/A	Normal operation (Standby mode)
N/A	N/A	1 Flash every minute	Single beep every minute	Low battery indication [End of life]
N/A	N/A	3 flashes every 4 sec (1 cycle) and repeats	3 beeps every 4 sec (1 cycle) and repeats	Smoke detected (Wired Unit)
N/A	N/A	3 flashes every 4 sec (1 cycle) and repeats	Flashes once every 4 sec	Smoke detected (Wireless Unit)
N/A	N/A	Flashes once every 4 sec	3 beeps every 2 sec (1 cycle) and repeats	Smoke alarm interconnect (Triggered by wireless unit)
N/A	N/A	N/A	3 beeps every 2 sec (1 cycle) and repeats	Smoke alarm interconnect (Triggered by wired unit)

TABLE 5

TESTING (NETWORK TEST ONLY)

This test is performed to check if:

- All the smoke alarm units on one network are all interconnected and working as it should be.
- To check if all smoke alarm units on a network are within the working range.
- Before testing, make sure that the smoke alarm is connected to the AC power supply and the Green LED is ON.

	User Input	Detector Response	Timeout
Step 1	Select one of the RF Smoke Alarm in the network: Hold the network button for 10-12 seconds.	Solid BLUE light	Master mode will timeout in 9 min
Step 2	After 30 seconds visually check all other RF units.	Slow BLUE flashes	Timeout in 9 min.
Step 3	Exit Network Test Mode: Go to the MASTER smoke alarm (the one in step 1) and hold down the Network button and count 2 to 3 flashes of the BLUE light then release.	BLUE light on the MASTER will flash fast followed by the BLUE lights on all SLAVES turning OFF. This may take up to 90 seconds.	Network is closed

TABLE 6