SENSOR
PROTECTING YOUR WORLD

Sensor 217E-C001

Installation Guide & User's Manual

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Overview

SENSOR provides an online platform and ecosystem that allows 24/7 line of sight for real estate property managers to monitor the compliance of their properties.

With round-the-clock monitoring without the need to physically visit the property, SENSOR mitigates the risk of the unknown.

Achieve legislative compliance and enhanced tenant safety with SENSOR's range of smoke-detection sensors and alarms.

Introduction to the SENSOR 217E Series

The SENSOR 217E series of independent or interconnected photoelectric smoke alarms, in conjunction with the SENSOR hub

Due to the advanced battery technology and low power consumption, each of the 217E series alarms can be used to satisfy either the 230 V or 10-year lithium requirement - depending on the applicable installation legislation or other local or state requirements.

Each alarm connects to the SENSOR hub independently of each other with a range of up to 200m line of sight.

Both the 217E-02 and the 217E-03 utilise a sealed lithium battery for both the operation of the alarm and the RF interconnect to the hub, ensuring no battery replacements are required over the life of the alarm.

The alarms are fitted with two test functions:

1. The test button on the face of the alarm can be used to test the alarm if required.
2. The alarm is also fitted with a software-based test which can be scheduled for a particular date and time or performed in real time via the portal.

The alarms are also fitted with several additional functions to ensure safety and compliance, including:

- Early low battery detection – designed to pre-empt a low battery alarm so it can be replaced prior to low battery beeping.
- Tamper detection – to ensure the alarms are always closed and operating correctly.

- RF disconnect warning – should an alarm become disconnected from the network a notification will be sent via the portal.
- 230 V power outage – if power is lost to the alarm or hub a notification will be sent via the portal.

Disclaimers

All electrical installations must be carried out by a qualified electrician, in accordance with local regulations and Australian Standards.

It remains the duty of the installer to ensure that:

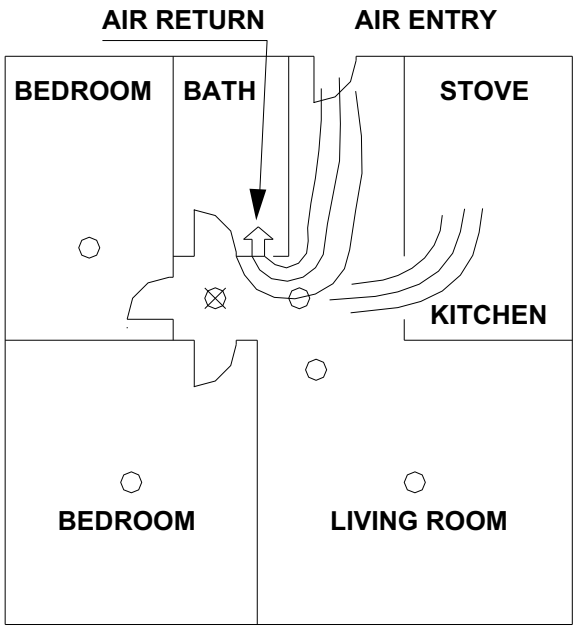
- All hardware is undamaged and in proper operating order,
- The correct number of alarms are being installed in compliant locations as per the local requirements.

This product must only be used for the purpose described in these instructions and must be installed by a licensed electrician in accordance with the Building Code Australia (BCA) and local and state wiring rules and regulations.

Where Not to Install Your SENSOR Alarm(s) (Models 217E-02 & 217E-03)

Nuisance alarms occur when alarms are installed where they will not work properly. To avoid nuisance alarms, do not install alarms in the following situations:

- In or near areas where combustion particles are present, such as kitchens with few windows or poor ventilation, garages where there may be vehicle exhaust, near furnaces, combustion heaters, and space heaters. Combustion particles are the by-products of something that is burning, which the alarm may detect.
- As a guide, aim to avoid installing an alarm within 6 m of kitchens where combustion particles are normally present. If a 6 m distance is not possible (e.g., in a mobile home), try to install the alarm as far away from the combustion particles as possible, preferably on the wall. Ensure the area is well ventilated.
- In dead-air areas, where ventilation systems cause airflow that would not pass through the smoke sensing chamber. Also avoid airflow from areas where normal combustion particles are expected, such as kitchens. Refer to Fig. 3 which indicates the correct and incorrect alarm locations.



○ CORRECT LOCATION

⊗ INCORRECT LOCATION

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Fig. 3 – Dead-air areas

- In damp or very humid areas, or within 3 m of bathrooms with showers. Humid air contains moisture that can enter the sensing chamber, then condense into droplets upon cooling, which can cause nuisance alarms.
- In very cold or very hot areas, including unheated buildings or outdoor rooms. If the temperature rises above or falls below the operating range of alarm, the alarm may not function properly. The temperature range for your alarm is (0 ~ 55) °C.
- In very dusty or dirty areas. Dirt and dust can build up on the smoke sensing chamber, causing it to be overly sensitive. Additionally, dust or dirt can block openings to the sensing chamber and limit the alarm from sensing smoke.
- Near fresh air vents or high draft areas like air conditioners, heaters or fans, fresh air vents and drafts. Such environments can drive smoke away from alarms.
- In dead air spaces, which are often at the top of a peaked roof or in the apex of ceilings and walls. Dead air may prevent smoke from reaching an alarm. See Fig. 4 for the recommended location.

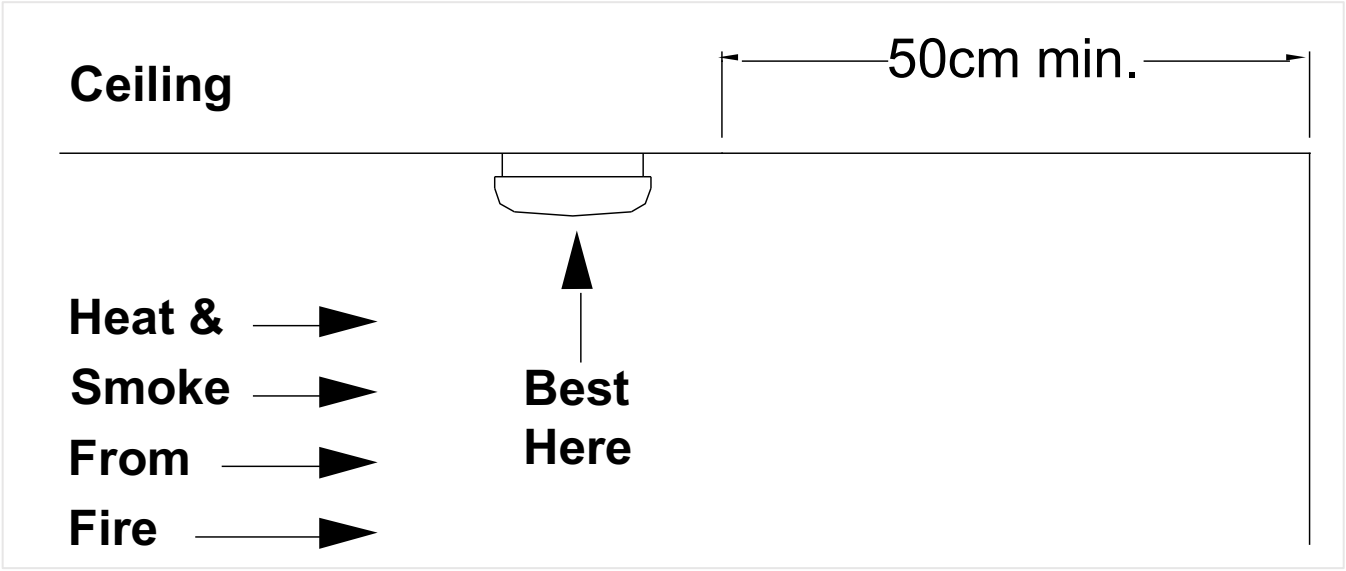

Fig. 4 for the recommended location.

- In insect-infested areas. Insects entering the smoke sensing chamber may cause a nuisance alarm. Where pests are a concern, ensure pest extermination measures are undertaken prior to installing the alarm.
- Near fluorescent lights. Electrical noise from fluorescent lights may cause nuisance alarms. Do not install alarms within 1.5 m of such lights.

Manufacturer Recommendations for the Care and Maintenance of your SENSOR Smoke Alarms

To ensure the optimal performance of your SENSOR smoke alarms, please familiarise yourself with the following care and maintenance instructions.

Cleaning your SENSOR Smoke Alarm

- Cobwebs on or near the alarm can cause nuisance false positive alarm sounds. Ensure your alarm is always free from cobwebs by regularly vacuuming the smoke vent on the face of the alarm.
- Clean the alarm housing by wiping the alarm gently with a damp cloth to remove any dust, then dry the alarm thoroughly.
  The alarm housing must remain closed during cleaning. An open alarm is an electrocution risk.

SENSOR Notifications

SENSOR smoke alarms are connected wirelessly to a SENSOR Hub which is also installed in your property. This connected ecosystem is designed to automatically report the alarm connection status and any alarm faults to the property manager or homeowner.

If debris is detected within the smoke alarm chamber, you may be contacted by phone, email, or SMS with cleaning instructions.

Testing your SENSOR Alarms

SENSOR alarms can be tested in two ways: manually and remotely. To **manually** test your alarms, press the TEST button on one of the alarms for three (3) seconds. Testing can also be organised **remotely** by your property manager. Remote testing does not require a person visiting your home. You will receive an SMS notification when the alarms are due to be tested. You will be asked to nominate a convenient time to schedule the testing.

If more than one SENSOR alarm is installed and connected to the SENSOR network, testing one alarm will cause all alarms to sound. During **remote** testing, testing one alarm will cause all alarms to sound in sequence. When performing a **manual** test, all alarms will sound simultaneously.

The Dos and Don’ts of your SENSOR Smoke Alarm

Dos:

- If a smoke alarm sounds, immediately alert all household members, exit the property, and call emergency services.
- Be prepared – make an escape plan from your home in case of fire. Ensure everyone in your home understands the plan. Discuss and review the escape plan regularly.
- Make sure your alarm remains closed and in good operational order. Immediately arrange for a service or repair if an alarm ceases to work.
- Always ensure you are on stable footing when cleaning or vacuuming the alarm.

Don’ts:

- Don’t place anything over the alarm that may prevent the ingress of smoke.
- Don’t use aerosol products on or near the alarm.
- Don’t attempt to clean the alarm by blowing into it.
- Don’t open the alarm when vacuuming around the smoke vent.
- Don’t strike the alarm with the hose or nozzle of your vacuum cleaner.
- Don’t spray water or any other liquid at the alarm. Only use a damp cloth to clean the alarm.
- Don’t use any liquids or cleaning products other than water when cleaning the alarm.
- Don’t remove an installed smoke alarm for any reason, including cleaning. ***Removing an alarm poses an electrocution risk.***
- Don’t paint the alarm.
- Don’t start a fire to test the alarm.

SENSOR Hub Specifications (217E-C001)

Power Supply	
Operating voltage	AC (100 ~ 260) V / 50/60 Hz
Mains supply current limit	0.18A @ AC 230 V, 0.3 A @ 115 V
Mains supply fuse	1A / AC 250 V
Mains supply fault threshold voltage	≤ AC 60 V
Power supply	2 A @ DC 5 V
Quiescent current (I_{min})	80m A @ DC 5 V
Standby battery maximum capacity (DC 3.7 V)	5.0 Ah
Maximum battery current draw@ maximum operating temperature	3 A
Wireless networking	
Wireless radio interconnection operating frequencies	916MHz
Number of connected devices	24
Maximum distance between connected devices to gateway[a]	200 m
Group mode configuration timeout	2 min
Miscellaneous	
Operating temperature	(-5 ~ +40) °C
Operating humidity	(0 ~ 95) % RH, non-condensing
Storage temperature	(-25 ~ +80) °C
Storage humidity	(0 ~ 98) % RH, non-condensing
Dimensions (h × w × d)	(129 x 99 × 35) mm

Weight (including batteries)	300g
[a]Distance in free air.	

SENSOR Alarm Specifications (217E-02 & 217E-03)

Specifications	
Primary power source	AC (100 ~ 240) V
Secondary power source	DC 3 V
Mains supply current limit	0.06 A @ 230 V, 0.12 A @ 115 V
Number of interconnected devices	24
Operating temperature	(0 ~ +55) °C
Operating humidity	(10 ~ 95) % RH, non-condensing
Storage temperature	(-25 ~ +80) °C
Storage humidity	(0 ~ 98) % RH, non-condensing
Complies with	AS3786:2014

	217E-02	217E-03
Quiescent condition indication	Green LED continuously on, Red LED flashes every 40 s;	
Low battery indication	Short audible signal every 40 s, synchronized with a single flash of the yellow LED for 30 days	
Low battery hush indication	Flashing yellow LED every 40 s	
Low battery hush time	10 hrs	
Alarm Condition		
Alarm condition audible indication output	≥ 85 dB @ 3 mins three long beeps, repeating	Smoke alarm: ≥ 85 dB @ 3 mins, three quick beeps, repeating CO alarm: ≥ 85 dB @ 3 mins, four quick beeps, repeating
Alarm condition visual indication	3 blinks synchronized with audible alarm	Smoke alarm: 3 blinks synchronized with audible alarm CO alarm: 4 blinks synchronized with audible alarm

Alarm condition hush indicator	Device entering the Alarm condition: Flashing red LED every 1 sec	
Alarm condition hush time	Smoke alarm: 8 mins	
Test Condition		
Test condition audible indication output	≥ 85 dB @ 3 m, two sets of three long beeps,	≥ 85 dB @ 3 m, two sets of three long beeps, pause, two sets of 4 quick beeps.
Test condition visual indication	The yellow LED flashes once, then the red LED flashes three times in two cycles.	The yellow LED flashes once, then the red LED flashes three times in two cycles. The yellow LED flashes once, then the red LED flashes four times in two cycles.
Fault Condition		
Smoke chamber fault indication	Short audible signal every 40 sec, synchronized with the yellow LED flashes 3 times.	
Smoke chamber fault hush indication	3 flashes of the yellow LED every 40 sec	
Smoke chamber fault hush time	10 hrs	
Tamper indication	Two short beeps, synchronized with the yellow LED flashing twice.	
Wireless Interconnection		
Group mode connection indication on slave device(s)	Flashing yellow LED every 1 sec followed by a short audible signal	

Quick Start Guide for the SENSOR Hub (217E-C001)

(Also available at www.sensorglobal.com/installguide)

Before installation of any SENSOR Hubs or alarms ensure you have downloaded and installed the SENSOR App on your mobile device.

The SENSOR app is available for Apple (iOS) and Android devices. Please visit www.sensorglobal.com/app to find the right app for your device.

Hub Pairing Process

Step 1. Unpack the SENSOR Hub and ensure that the following are present:

1 X SENSOR Hub
1 X Packet of fixing screws and plugs
1 X Power lead

Step 2. Power on the Hub by turning the power switch on the back of the Hub to the up position (past the middle position). Both the green and blue lights on the Hub will begin to flash.

Step 3. Open the SENSOR app on your mobile device to begin the activation and pairing process. This process *will take a few minutes to initialise. After connection, the Hub will be ready to pair with alarms.*

Step 4. Login to the SENSOR app and select the relevant property.

Step 5. Scan the QR code on the rear of the Hub using the app. The Hub's unique serial number will be automatically populated into the app.

Step 6. The blue light on the far right of the Hub should still be flashing. After approximately three to five minutes after scanning the QR code, the light will turn solid blue.

Step 7. Wait a further 30 seconds for the app to show a green "Connected" against the Hub. If the app does not automatically refresh after 30 seconds, tap the "Refresh" button. The Hub must display as "Connected" on the app before proceeding.

Only after completing Steps 1-7 above, proceed with Step 8 below to setup the required number of SENSOR 217E-02 Photoelectric Smoke Alarms.

Quick Start Guide for the SENSOR Alarms (217E-02 & 217E-03)

Connection

TO PAIR ANY SENSOR ALARM TO THE SENSOR NETWORK YOU MUST HAVE INSTALLED THE SENSOR Hub (217E-C001) first.

Alarm Pairing Process

Step 8. Remove all packaging from the alarm, including the battery isolation tab in the clip of the alarm. Close the alarm.

Step 9. Re-open the alarm to ensure that the tamper alert sounds. Close the alarm again until it clicks.

DO NOT SCAN THE QR CODE ON THE ALARM UNTIL YOU HAVE PUT THE ALARM INTO PAIRING MODE

Step 10. Double-tap the "Test" button on the alarm to put the alarm in pairing mode. Pairing mode is indicated by an orange flashing indicator light which will last for two minutes. Note: This orange light must be flashing when performing step 11. If two minutes elapse and the orange indicator light is no longer flashing, repeat step 10.

Step 11. Open the alarm and scan the QR code on the inside of the alarm using the app. The alarm will beep to indicate that it has been successfully paired. The API will send the "Add" command to the Hub, which will then link the alarm to the Hub. This process takes approximately ten seconds.

Step 12. Repeat the above steps 8 to 11 to set up additional alarm(s) as required.

Now Install the Hub on the wall and Alarms on the ceiling.

Installation of HUB

Step 13. Identify a suitable location for the installation of the Hub according to the following guide:

a. Choose a central location within the property near a low-use power outlet, such as behind the fridge or above a roller door motor.
b. Avoid areas that are frequently used or subject to high traffic.
c. Ensure there is at least 15cm between the Hub installation point and the closest right-hand wall, to allow adequate room to access the release button.

Step 14. Identify the electrical circuit that will power the Hub and turn the circuit off prior to installation.

Step 15. Use the provided fixing screws and plugs to install the mounting plate adjacent to the chosen power outlet as shown in Fig 1. Locate the mounting plate from the back of the Hub. Turn the mounting plate over and identify the arrow indicator. This arrow must point upwards when installing the mounting plate, as shown in Fig 2.

Step 16. Establish a connection between the power lead provided and the chosen circuit using a junction box (not provided) or alternate termination method. Ensure

that the lead is fed through the hole in the mounting plate as shown in Fig 2 and Fig 3,

Step 17. Plug the power lead into the SENSOR hub. Locate the black power switch on the rear of the Hub and push it up to the On position. Note that the Hub has been designed in such a way that, after the initial setup and installation, the power switch will automatically return to the On position when the Hub is attached to the mounting plate.

Step 18. Return the power to the electrical circuit if safe to do so.

Ensure that the Hub has turned on. A steady green indicator light confirms the presence of 230V power.

Step 19. Attach the Hub to the mounting plate, as shown in the Fig 4,

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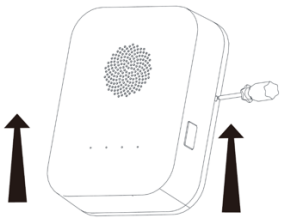

FIG1.

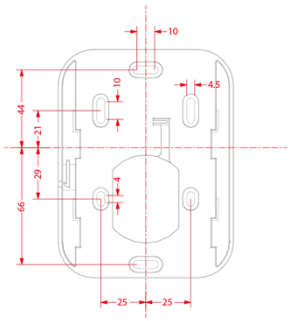

FIG2.

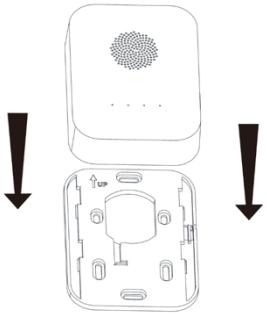

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FIG3.

FIG4.

After all steps above are connected, it is time to setup and install the SENSOR alarms (217E-02 & 217E-03),

FCC Warning

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any inte rference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interferenceto radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Installation of the SENSOR Alarms

All SENSOR Alarms in the 217E series can be used to satisfy the 230 V or 10-year lithium requirement - depending on the applicable installation legislation or other local or state requirements.

At this point you must determine whether the alarm will operate on 230 V power or a 10-year lithium battery. Consult all relevant legislation before deciding on the correct course.

For a 240 V installation, see steps 20-27.

For a 10-year lithium (battery operated) installation, see steps 28–32.

THIS ALARM IS A HINGED DESIGN AND THE ALARM CANNOT BE REMOVED FROM THE BASE PLATE FOR INSTALLATION. TAKE CARE WHEN INSTALLING TO ENSURE THAT EXCESSIVE PRESSURE IS NOT APPLIED TO THE ALARM WHILE IN THE OPEN POSITION.

240 V Installation

Step 20. Identify the installation or replacement location.

Step 21. Ensure that the location selected is compliant to local rules and that the wiring is in place and free from damage or deterioration.

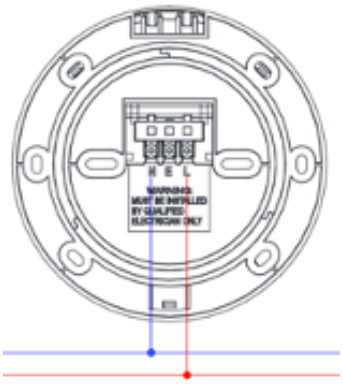
Step 22. Identify the electrical circuit that will power the alarm and turn the circuit off prior to installation.

Step 23. Place the alarm in the open position by gently opening the plastic terminal cover. With the alarm in the open position mark the ceiling and install the plugs provided.

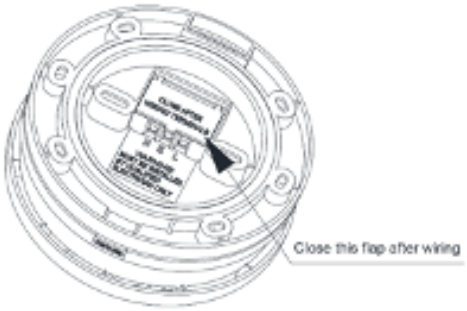
Step 24. Connect the power to the three terminals on the reverse side of the mounting plate as shown in Fig 5. Once the terminals are adequately tightened, gently close the plastic terminal cover until it clicks as shown in Fig 6.

NOTE: The middle terminal is for an earth and not for a wired interconnect.

FIG5.



FIG



Step 25. With the alarm still in the open position, use the screws provided to fasten the alarm to the Installed plugs.

Step 26. Return the power to the electrical circuit if safe to do so.

Step 27. The installation is successful if the green indicator light on the alarm is solid and not flashing.

10 Year Lithium Battery Installation

THIS ALARM IS A HINGED DESIGN AND THE ALARM CANNOT BE REMOVED FROM THE BASE PLATE FOR INSTALLATION. TAKE CARE WHEN INSTALLING TO ENSURE THAT EXSESSIVE PRESSURE IS NOT APPLIED TO THE ALARM WHILE IN THE OPEN POSITION.

Step 28. Identify the installation or replacement location.

Step 29. Ensure that the location selected is compliant to local rules.

Step 30. Place the alarm in the open position by gently opening the plastic terminal cover. Mark the ceiling in the identified installation position. Install the plugs provided, Also ensure that the plastic terminal cover is gently closed until it clicks as shown in Fig 6.

Step 31. With the alarm in the open position, use the screws provided to fasten the alarm to the installed plugs.

Step 32. As there is no mains power, there will not be a green light on the alarm. However, the alarm may beep a few times as it powers up.

FIG5.

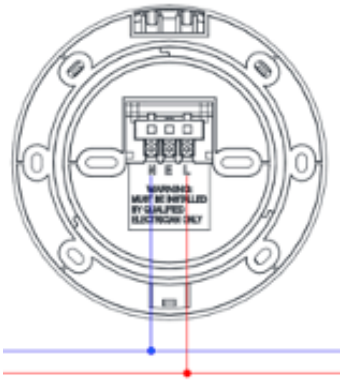
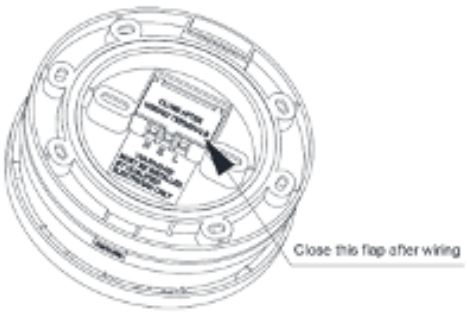


FIG6.



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Testing Alarms (AFTER ALL PRODUCTS INSTALLED)

After installation of the SENSOR Hub and SENSOR Alarms is complete, and the Alarms have been connected to the SENSOR network via the SENSOR app, it is time to test the alarms.

Step 33. Use the "Full Test" button in the App to test the full connection of all alarms to the SENSOR hub.

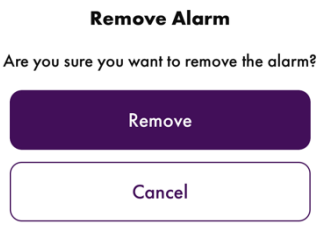
After pressing the test button, it's a great time to start packing up as the testing cycle can take up to five minutes to complete.

Each installed alarm will run through a test cycle in sequence.

If more than one alarm is installed, the alarms (after connection) will be interlinked - when one alarm sounds, all installed alarms will sound.

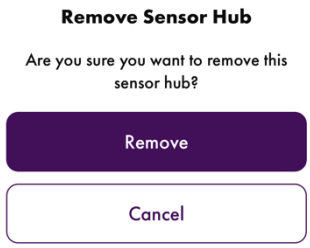
Removing an Alarm

To remove an Alarm, tap the remove alarm icon in the App and confirm. Please remove the Alarm from the premises and dispose appropriately.



Removing a SENSOR Hub

To remove a SENSOR Hub, tap the remove hub icon in the App and confirm. Please remove the SENSOR Hub from the premises and dispose appropriately.



Once Testing is complete

Step 34. Add any necessary job notes.

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Step 35. Add locational photos of the installed hub and alarms in the app.

Step 36. Use the "Complete Job" button on the app to mark the job as complete.

Thankyou

Thank you for installing the SENSOR products.

Your feedback is always welcome.

Please email tradeinstall@sensorglobal.com with any feedback.

To promote SENSOR products to your other Housing Manager clients (Such as Property Managers / Community Housing Providers, Retirement Village operators, Mining Camps etc), please email traderefer@sesnsorgloabl.com and our team will be in touch.

Fig 1

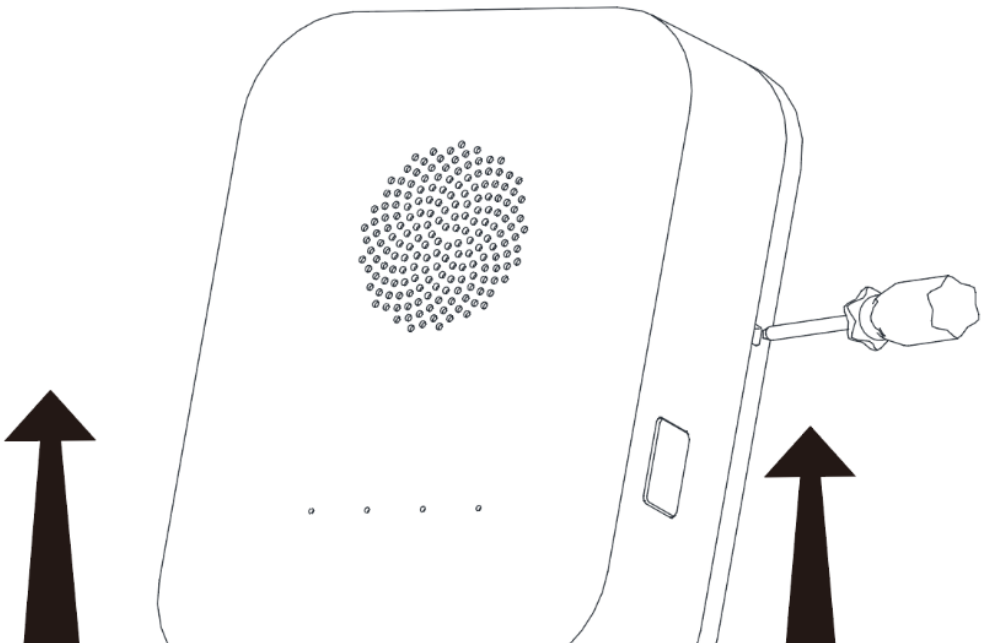

Fig 2

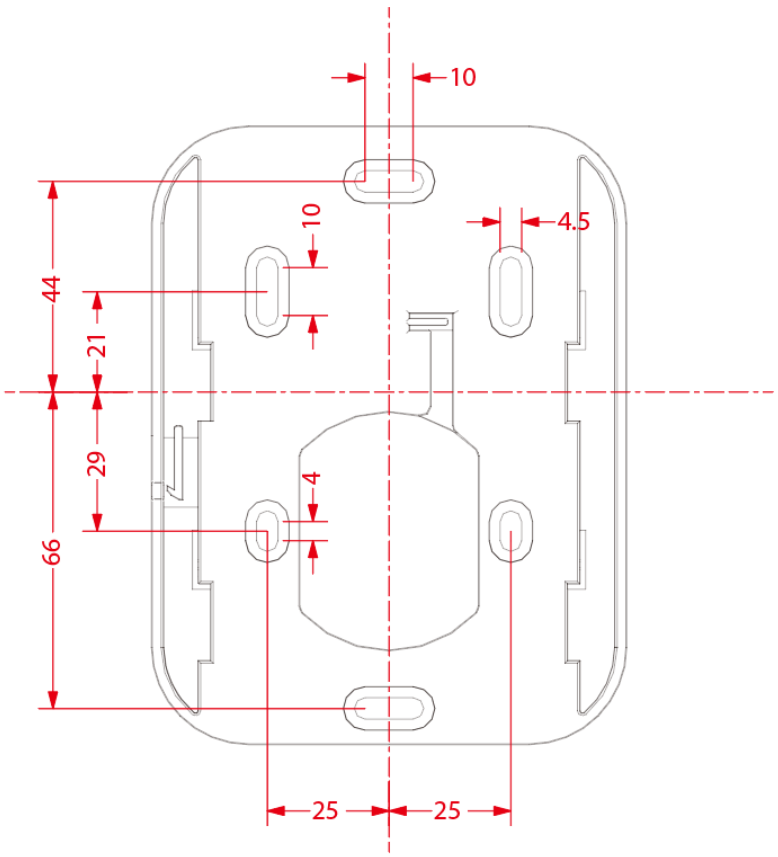

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Fig 3.

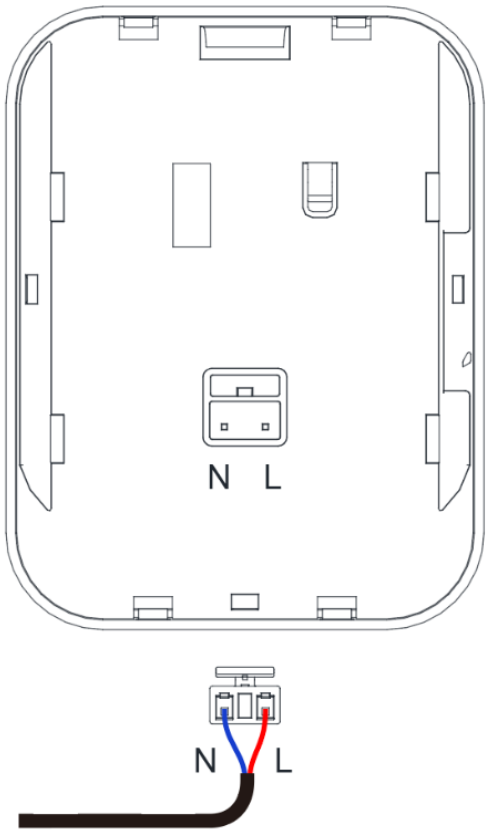

Fig 4.

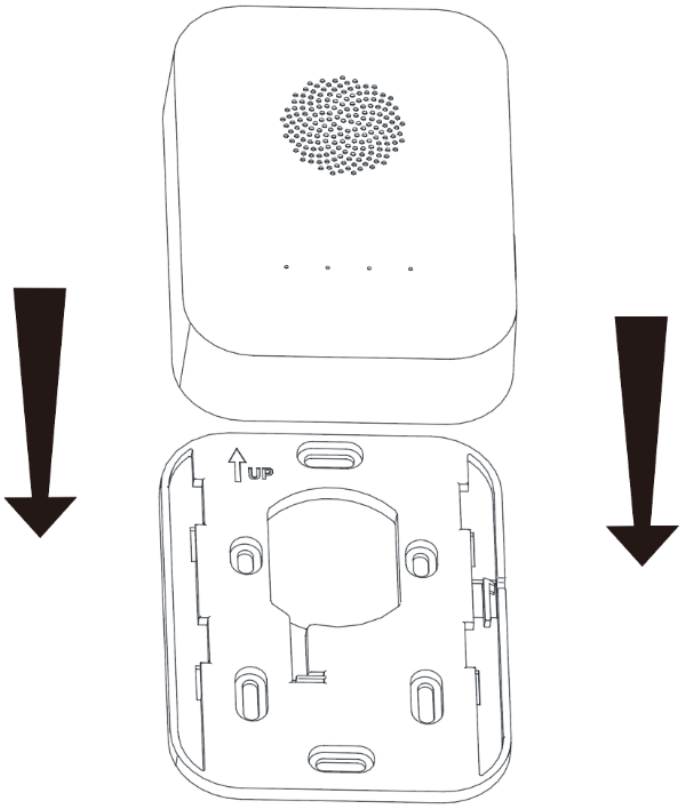

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Fig 5

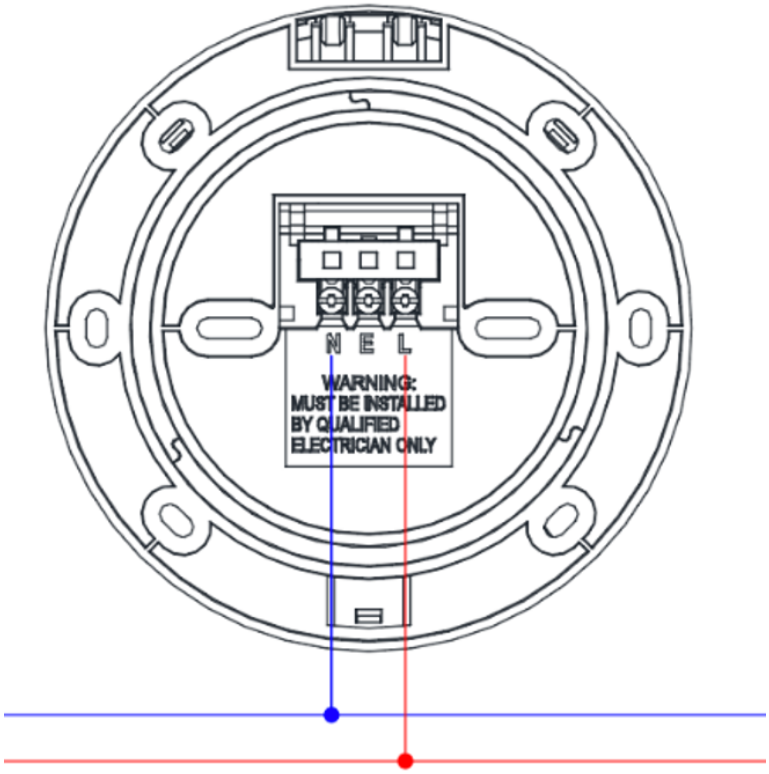
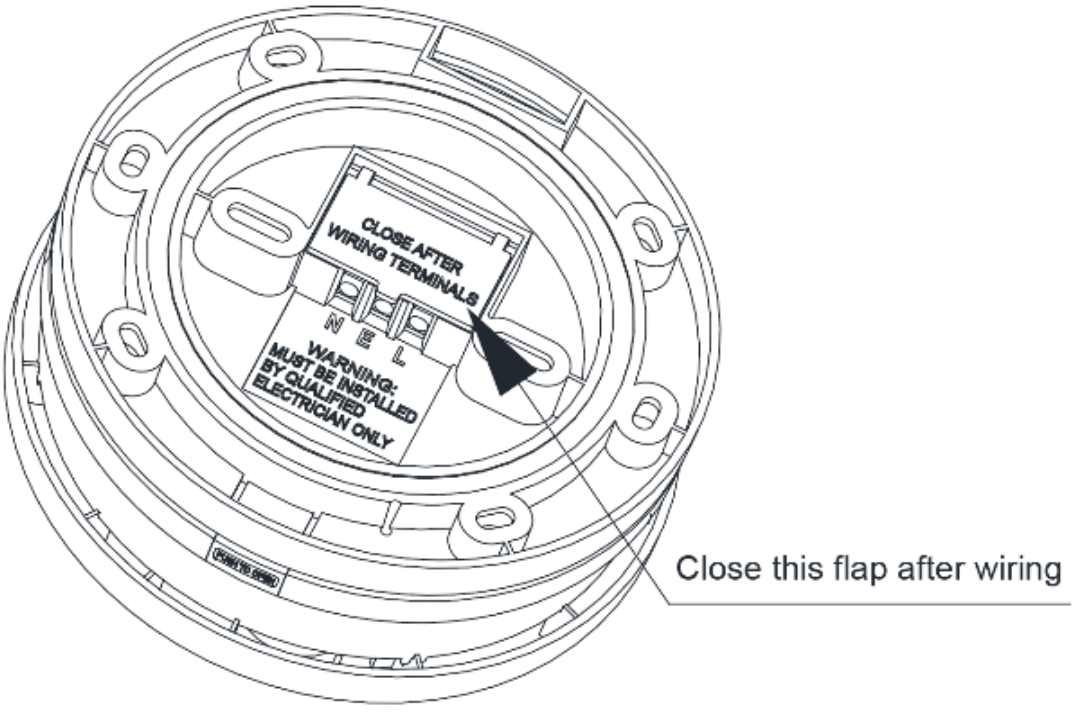

N E L
WARNING:
MUST BE INSTALLED
BY QUALIFIED
ELECTRICIAN ONLY

Fig 6


CLOSE AFTER
WIRING TERMINALS
N E L
WARNING:
MUST BE INSTALLED
BY QUALIFIED
ELECTRICIAN ONLY
Close this flap after wiring

Disposal of product

- This product is designed to work reliably for ten years after the installation date. Smoke alarms and replaceable batteries should not be disposed of as land-fill. Please dispose in an environmentally friendly manner, for example at your local authority recycling centre.

Warning:

- This is an important document. Retain it for the life of the device.

Warranty

In order to protect your rights, please retain the original purchase receipt for the proof of purchase. No warranty can be offered without the original purchase receipt. Sensor Pty Ltd ("Sensor"), warrants the enclosed product to be free from defects in materials and workmanship under normal use and service for a period of five years from date of purchase. This LIMITED WARRANTY is the sole and exclusive warranty, express or implied for Sensor products. No employee, agent, dealer or other person is authorized to alter, modify, expand or reduce the terms of this warranty or to make any other warranty on behalf of Sensor. Sensor's obligation of this Warranty shall be limited to the repair or replacement of any part of the product which is found to be defective in materials or workmanship under normal use and service during the Warranty Period. Products in need of repair should be returned, shipping prepaid, to point of purchase.

Sensor shall not be obligated to repair or replace units which are found to be in need of repair because of damage, unreasonable use, modifications, or alterations occurring after the date of purchase. The duration of any implied Warranty, including that of merchantability or fitness for any particular purpose, shall be limited to the period of five years commencing from the date of purchase. In no case shall Sensor be liable for any consequential or incidental damages for breach of this or any other Warranty expressed or implied whatsoever, even if the loss or damage is caused by Sensor's negligence or fault. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

Due to Sensors continual product development, we reserve the right to alter product details and specifications without prior notice.

Sensor Pty. Ltd.
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