

# RELAY BASES

## for Smoke, Heat & Carbon Monoxide Alarms

### Instruction Manual

Read and retain carefully for as long as the product is being used. It contains vital information on the operation and installation of your product. This instruction manual should be regarded as part of the product.

If you are just installing this product, this manual must be given to the householder. The manual is to be given to any subsequent user.

#### 1. Introduction

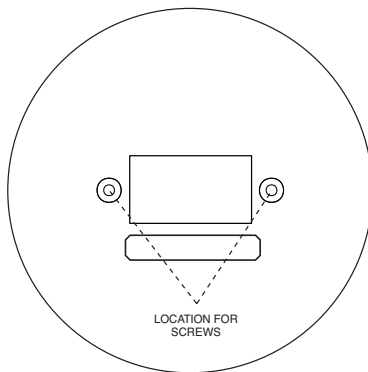
The Ei128R & Ei128RBU Relay Bases switch a relay upon receipt of an alarm signal from a hardwire interconnection with a mains powered Ei Alarm. The electrically isolated relay contacts can be used for many applications such as shutting off the mains supply to boilers, triggering panels, etc. The Relay Bases are powered by 230VAC mains - with the Ei128RBU model having rechargeable back-up cells.

The Relay Bases are normally installed directly underneath an Easi-fit Alarm base but can also be sited separately.

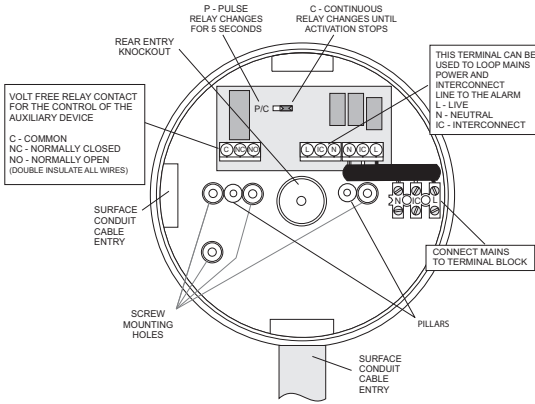
As supplied the relay operates continuously (e.g. it switches when one of the Alarms sounds and switches back when it receives the alarm cancel signal). When the slide switch is moved to the pulse 'P' position (see figures 1a & 1b) the relay will switch when the Alarm sounds but will automatically switch back after 5 seconds. This is commonly used with warden call systems where only momentary short circuit signalling is required.

Both the Ei128R and Ei128RBU can be used in 230VAC and low voltage applications with the Ei128RBU being best suited for low voltage applications.

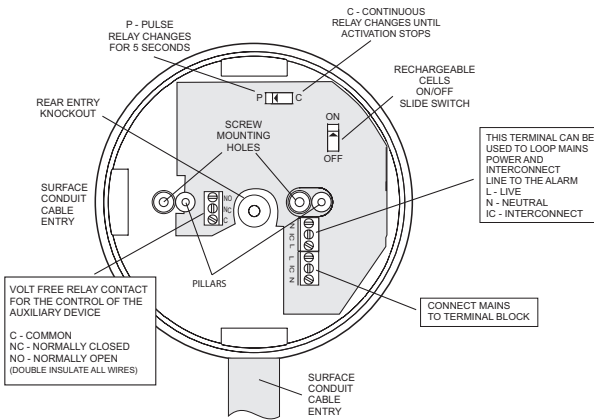
#### 2. Overview



Cover



**Figure 1a - Ei128R**



**Figure 1b - Ei128RBU**

### 3. Technical Specifications

Power Supply	230V AC
Battery back up (Ei128RBU only)	6V rechargeable Lithium cells
Contact Rating	250V AC, 5A resistive Continuous or Pulse mode
Output	One volt free contact (NO/NC)
Power consumption (Standby)	Ei128R: 0.5W Ei128RBU: 0.8W
Interconnection	Hardwire
System size	Up to 12 devices
Fixings	Supplied with screws, wall plugs and cover.
Operational life	10 years
Operating Temperature	-10°C to +40°C
Humidity Range	15% to 95% RH (non-condensing)

Dimensions	Product: 141mm x 21mm without cover or 26mm with cover Package: 145mm x 145mm x 30mm
Weight	182g (Pack +30g)
Warranty	5 years

## 4. Important Safety Instructions

**WARNING:** Mains powered Relay Bases must be installed and interconnected by a qualified electrician in accordance with the relevant local regulations for Electrical installations. Failure to install this device correctly 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.

The Relay Bases must only be interconnected with Ei Electronics mains powered devices - otherwise they will not comply with the mandatory safety regulations.

**WARNING:** An all-pole mains switch shall be incorporated in the electrical installation of the building.

**Attention:** 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 connecting to a power source that utilises an inverter, e.g. PV solar panel, the Total Harmonic Distortion (THD) must be less than 5%. If in doubt please check with the manufacturer of the inverter. This also applies to battery powered UPS (Uninterruptible Power Supply) inverters.

The Relay Bases must not be powered from a light dimmer circuit.

## 5. Installation

**WARNING:** First disconnect the mains from the circuit to be used.

**WARNING:** To prevent injury, this apparatus must be securely attached to the ceiling or wall in accordance with the installation instructions.

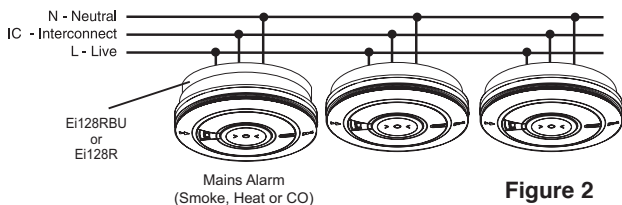

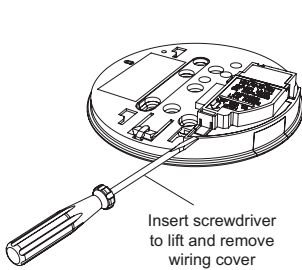


Figure 2

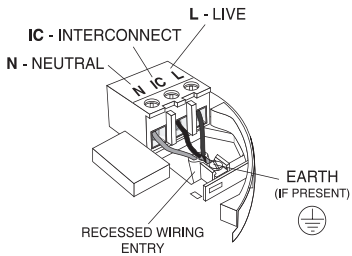
### 5.1 Installation under an Easifit Alarm

1. Choose a mounting position following the siting instructions in the Alarm manual.
2. Where the incoming wiring is surface mounted, the appropriately sized ducting/conduit must be chosen to mate with the unit. Use a sharp knife to remove material from the selected knockout, making sure that there is no gap when mated with ducting / conduit. There are three knockouts – two on the sidewall and one on the rear. **DO NOT USE** the knockout closest to the P/C switch.

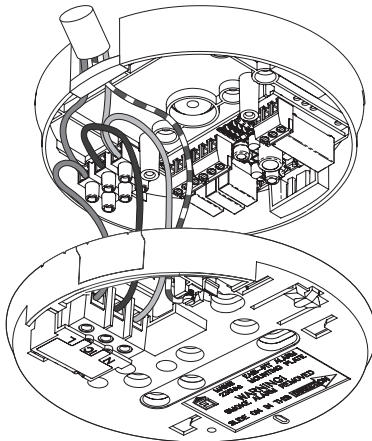
3. Remove the required knockout.
4. Bring the power supply through the knockout.
5. Connect the power supply wires (Live & Neutral) to the mains terminal block of the relay base. If the earth wire is present, connect it directly to the terminal marked  on the Alarm mounting plate (see relevant Alarm instructions). (Screw tightening torque: max 0.5Nm (5.1kgf.cm))
6. Screw the Relay Base in place.
7. If the central knockout is being used, seal around the wires with silicone or similar to prevent air draughts that could affect the performance of the Alarm to be sited on top.
8. Remove the wiring cover on the Alarm mounting plate to view the terminal (see fig 3a).
9. Connect the three wires (**L**=Live, **N**=Neutral and **IC**=Interconnect) from the Relay Base to the terminal on the Alarm's mounting plate. The "IC" wire must be connected even if it is a single Alarm installation.
9. Replace the wiring cover over the terminal wires on the Alarm's mounting plate.
10. Follow the instructions starting at 5.3 Wiring the relay section.



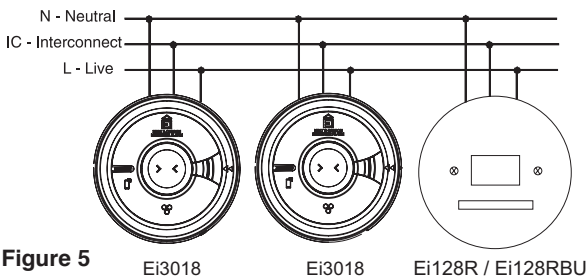
**Figure 3a**  
**Alarm Mounting Plate**



**Figure 3b**  
**Alarm Terminal Block**



**Figure 4 - Relay to Alarm Wiring**



**Figure 5** Ei3018 Ei3018 Ei128R / Ei128RBU

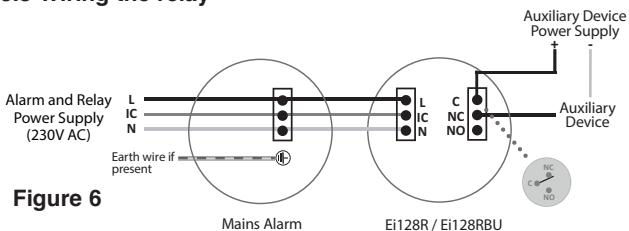
The above shows the connection for Carbon Monoxide Alarms.  
 Connect the Smoke/Heat Alarm similarly but on a separate circuit to the Carbon Monoxide Alarm (unless an Ei1529RC Control Switch is used on the system)

## 5.2 Installation away from the Alarm

**WARNING:** When the relay is not installed underneath an Alarm, the cover supplied must be fitted to ensure the user is not exposed to fire or shock hazards.

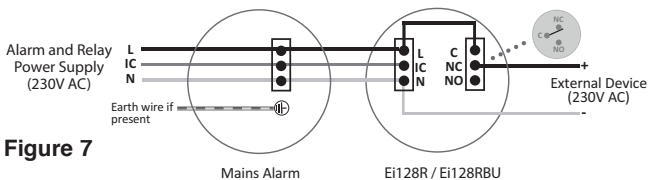
1. Install the Alarm(s) as described in their manuals.
2. Install the Relay Base near the auxiliary device or in some other location convenient for wiring. Where the incoming wiring is surface mounted, the appropriately sized ducting/conduit must be chosen to mate with the unit. Use a sharp knife to remove material from the selected knockout, making sure that there is no gap when mated with ducting / conduit. There are three knockouts – two on the sidewall and one on the rear. **DO NOT USE** the knockout closest to the P/C switch.
3. Remove the required knockout, bringing the wiring from one of the Alarms through it and connecting the three wires (**L=Live**, **N=Neutral** and **IC=Interconnect**) to the Relay Base mains terminal block. (Screw tightening torque: max 0.5Nm (5.1kgf.cm)).
4. Screw the Relay Base in place.

## 5.3 Wiring the relay



**Figure 6**

1. Connect the L (Live) wire from the power supply of the auxiliary device to the C (Common) terminal.
2. Then connect either the NC or NO contact of the relay (depending on what is required for controlling the auxiliary device) to the auxiliary device. For example, if the relay is used to cut out a boiler in case of alarm, then NC should be used but for a Beacon that should only be on in case of alarm, then the NO should be used.



**Figure 7**

Alternatively, if the auxiliary device is powered from the same circuit as the Alarms and Relay Base ie 230VAC, a link wire can be inserted between the L (Live) terminal and the C (Common) terminal of the Relay Base. Then, connect either the NC or NO contact of the relay (depending on what is required) to the auxiliary device. Connect the N (Neutral) terminal from the Relay Base to the auxiliary device (see fig.7).

3. If momentary (pulse) relay operation is required, carefully and gently slide the yellow switch to the left (P) position. This is commonly used with warden call systems where only momentary short circuit signalling is required. This must be done before the mains power is connected or the rechargeable cells (Ei128RBU only) are activated.

With the switch in the C position, the alarm signal will switch the relay until it receives a cancel signal.

4. For the Ei128RBU only, connect the rechargeable cells by carefully and gently sliding the yellow switch to the ON position. This switch must be in the ON position to ensure correct operation.
5. If installed underneath the Alarm, screw the Alarm mounting plate on top of the Relay Base. Line up the Alarm on the mounting plate and slide on.
6. If installed away from the Alarm, fit and screw the cover to the pillars using the two screws supplied.
7. Re-connect the mains power.
8. The green LED on the Alarm(s) should be on. When the test button is pressed, the horn should sound, and the relay will switch within 10 seconds.

**Note:** A maximum of 12 Alarms may be interconnected to one Relay Base. When one Alarm sounds, all interconnected Alarms will sound and the relay will switch.

**Attention:** Do not interconnect Carbon Monoxide Alarms with Smoke/Heat Alarms unless an Ei1529RC control switch is used in that system. The Ei1529RC control switch will allow the user to identify quickly the source of the alarm (e.g. fire or CO gas) and take appropriate action. This is important as the occupant will need to open all windows and doors if it is a CO incident but do the opposite to slow down a fire.

**Note:** The rechargeable cells of the Ei128RBU enable it to switch during mains failure upon receipt of an alarm signal from a mains powered Alarm with battery back up. The rechargeable cells can power the relay for up to 2 months in the event of the mains being off. The Ei128R does not have any battery back up and as such will not switch during mains failure.

**Note:** Auxiliary devices connected to the relay contacts do not give a warning until the contacts have switched for at least 200mSec.

## 6. Checking your Smoke Alarm System

We recommend a monthly check of your Alarm system.

When checking the system also check the Relay Base as follows:

1. Check that the green LED power indicator is lit on the Alarm that is electrically connected to the Relay Base. If it is off, check the circuit breaker fuse, wiring, etc.. when the mains power is restored, the green LED will come on solid.
2. Press the Alarm Test Button and check that:
  - a. The relay switches and
  - b. The auxiliary device behaves as expected

### End of Life

After 10 years (see date label on the side of the Relay Base) the Relay Base must be replaced.

## 7. Checking the Relay Back Up Cells (Ei128RBU)

It is important to check that the rechargeable cells in the Ei128RBU are switched on, charged and capable of switching the relay contacts. This should be done after installation and then at least annually.

1. Disconnect the mains supply.
2. Check the relay as described in section 6.
3. If everything is satisfactory, re-connect the mains.

If the relay fails to operate, then the unit is defective and must be replaced (see section 8).

## 8. Getting your Relay Base Serviced

If, within the guarantee period, your Relay Base fails to work after you have carefully read all the instructions, checked that the unit has been installed correctly, and is receiving AC power, then contact us at the nearest address given at the end of this manual.

If you are advised to return your Relay Base, please ensure that it is placed in a padded box, that the slide switch for the rechargeable cells is on the OFF position (Ei128RBU only) and include the proof of purchase and a note stating the nature of the fault.

## 9. Guarantee

Ei Electronics, guarantees the Relay Bases for five years from date of purchase against any defects that are due to faulty materials or workmanship. If this Relay Base should become defective within the guarantee period, we shall at our discretion repair or replace the faulty unit.

This guarantee only applies to normal conditions of use and service, and does not include damage resulting from accident, neglect, misuse, unauthorised dismantling, or contamination howsoever caused. This guarantee excludes incidental and consequential damage.

This guarantee does not apply to any product that has been modified in any way by a third party or has been fitted with a third-party element.

Do not interfere with the Relay Base or attempt to tamper with it. This will invalidate the guarantee, but more importantly may expose the user to shock or fire hazards.

This guarantee is in addition to your statutory rights as a consumer.



The Declaration of Conformity may be consulted at:  
[www.eielectronics.com/compliance](http://www.eielectronics.com/compliance)

The crossed out wheellie bin symbol that is on your product indicates that this product should not be disposed of via the normal household waste stream. Proper disposal will prevent possible harm to the environment or to human health. When disposing of this product please separate it from other waste streams to ensure that it can be recycled in an environmentally sound manner. For more details on collection and proper disposal, please contact your local government office or the retailer where you purchased this product.



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**Aico Ltd**

Maesbury Road  
Oswestry  
Shropshire SY10 8NR  
Telephone: 01691 664100  
[www.aico.co.uk](http://www.aico.co.uk)

**Ei Electronics**

Shannon Industrial Estate,  
Shannon, V14 H020, Co. Clare, Ireland.  
Telephone: +353 (0)61 471277  
[www.eielectronics.com](http://www.eielectronics.com)