

TROUBLE SHOOTING GUIDE

If you've installed and connected the Power Pack as per the instructions listed earlier and it doesn't work properly, use the following table as a guide to fixing the problem. Look up the type of fault in the left column and check the possible causes from the right column.

#	Fault	Possible Causes
1	Red LED no lit	AC supply not connected; or AC supply turned off; or Battery plug not connected to battery pack; or Test switch damaged
2	Red LED is lit but AC lamp not lit when connected to mains	Switch active supply turned off; or Missing loop from unswitched to switched active; or Lamp damaged; or Lamp not inserted properly
3	LED is lit but lamp doesn't come on when test switch is pressed	Lamp damaged; or Lamp not inserted properly; or Battery pack damaged; or Test switch damaged
4	Lamp is lit momentarily when test switch is pressed; or when mains fail	Battery not fully charged (allow up to 24 hours); or Battery pack damaged

If the unit still doesn't work after checking these possible causes, contact Thomas & Betts Service in Australia on 1300 666 595, Monday to Friday, 8.30am to 4.30pm (AEST) and ask for help. Our trained service personnel will usually be able to take your call immediately and assist you in resolving your difficulty. Thomas & Betts is committed to providing valuable Through-Life Support for its products.

Thomas & Betts

A Member of the ABB Group

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Standard Power Packs Installation Manual

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GREETINGS

Congratulations on choosing to use this Thomas & Betts product covered by our unique Through-Life Support system. This document is designed to assist you during the installation of the product, to ensure the safety of yourself and others.

The Power Packs are designed to be installed quickly and easily however, **Thomas & Betts recommends that you read this document thoroughly before commencing installation.** This device has been manufactured to provide trouble free operation for many years, when treated with due care and maintained through regular and appropriate servicing.

SAFETY WARNING

In Australia and New Zealand, only licensed electricians are permitted by law to work with 240 Volts electrical installations.

Do not attempt to install or connect this product unless you are a licensed electrician.

Turn off and isolate the electrical supply before connecting this fitting to the building wires.

Do not touch the terminals of the terminal block when the light fitting is powered.

The only user serviceable part is the battery pack.

Do not tamper with the fitting or the warranty will be void.

As the installer, it is your responsibility to ensure compliance with all relevant building and safety codes, (ie: AS3000, AS/NZS2293).

Refer to the applicable standards for mains cabling installation procedures and requirements.

EMC WARNING

Power Pack complies with EMC regulations. We advise that if you incorporate this pack into your product (batten / fitting) you must test the complete (product / fitting) for EMC compliance.

INSTALLATION INSTRUCTIONS

To install the Power Packs, follow these steps:

1. Remove the Power Pack from the packing box and inspect it for damage or imperfections. If any damage is found, do not install, replace it carefully into the packing box and notify the Thomas & Betts Product Support Hotline in Australia on 1300 666 595.
2. If all looks okay, proceed with the installation; use a pencil to mark the position of the mounting screw holes for the inverter and battery pack in the gear tray. Figure 1 shows the inverter pack dimensions.

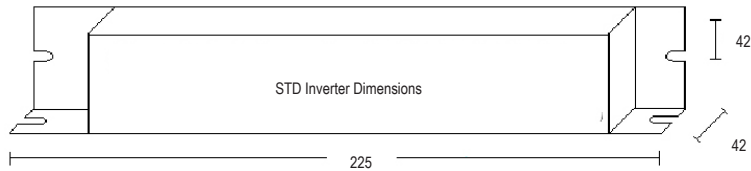


Figure 1: Inverter Pack Dimensions

3. Fit the inverter and battery pack using suitably sized screws and nuts. Make sure that the battery pack is mounted away from the ballast or from any other components that may get hot. Figure 2 shows a block diagram of how a Power Pack works.

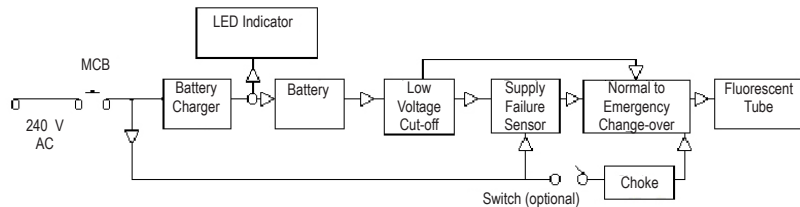


Figure 2: How a Power Pack works

4. Figure 3 shows wiring connections using Power Pack and conventional magnetic ballast.

The **unswitched active** wire connects to the terminal marked **U/S/A**.
 The **switched active** wire connects to the ballast as shown in the figure 3.
 The **neutral** wire connects to the terminal marked **neutral**.
 The **earth** wire connects to the **earth lug** and should be labelled with the earth label.
 The **lamp** and **ballast** wire connections are as shown in the wiring diagram.

Ensure that the stripped wire ends are completely inserted into the terminal block and no bare conductors are exposed to the metal.

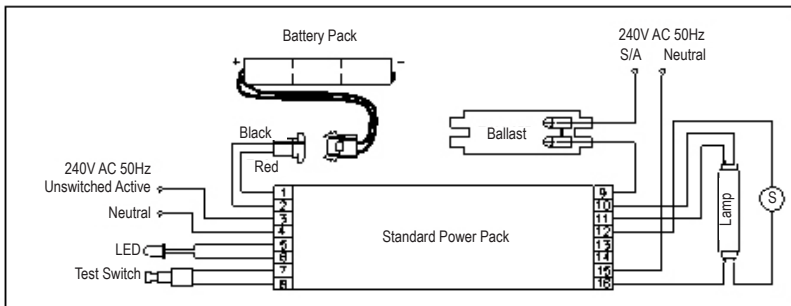


Figure 3: Wiring Diagram Standard Power Pack using conventional magnetic ballast

Note: Wiring connections are different if using electronic or other magnetic ballast. Wiring diagrams are available from Thomas & Betts on request.

5. Lamp operation:

Maintained Fitting: Once powered up, in a maintained fitting the normal AC lamp (if present) should lights up and stays on until the power supply fails. The emergency function of the unit should only operate when the unswitched active power supply fails or when somebody presses the manual test button located on the fitting. Normal status of the fitting when powered indicating LED steady red. This indicates that the power is connected and the battery is charging.

Non-maintained Fitting: Once powered up, in a non-maintained fitting the present lamp stays off. The emergency function of the unit should only operate when the unswitched active power supply fails or when somebody presses the manual test button located on the fitting. Normal status of the fitting when powered indicating LED steady red. This indicates that the power is connected and the battery is charging.

6. Check the operation of the fitting to ensure that the installation was successful. When powered up, allow a few minutes to give the battery a small charge, then press the manual test button located on the fitting. Press and hold the test button for a few seconds and observe that the emergency lamp lights up and stays on until the test switch is released. If the lamp works only momentarily, this ensures that the connections are correct and the battery requires at least 16 hours to fully charge. If the lamp doesn't work at all, check the supply, the connections and the trouble shooting guide at the end of this document.

TO REMOVE THE POWER PACK FROM THE INSTALLATION

Before removing the installed Power Pack, switch off the mains supply to the fitting. Unscrew the unswitched active, switched active, neutral and output (lamp and ballast) wire connections from the terminal block using suitably sized screwdriver. Undo the test switch nut and remove LED from the grommet. Disconnect the battery plug from the battery pack and then unscrew the mounting screws of the Power Pack. When the fitting is reconnected to the supply, it will need time to recharge its battery before it will be capable of a full length discharge again.

Note: When sending Power Packs for repairs make sure that LED and test switch are included with the Power Pack.

TESTING PRECAUTIONS

If the fitting is to be left permanently connected to the mains supply from now on, you will need to allow 24 hours to charge its battery and then you will have to conduct a manual discharge test as per the requirements of AS/NZS2293.2. Presently (at the time of writing), the standard requires that the new light fittings operate in emergency mode for at least 2 hours for their first test. Subsequent tests are required every 6 months; the light fittings are then required to operate for not less than 90 minutes. You will need to keep records of the initial test into the building emergency service logbook.

If the fitting isn't permanently connected to the mains supply at this time, you are responsible for giving it the initial 2 hour test when you do connect it permanently to the mains supply.

CONSTRUCTION SITES

Continuously switching on and off the mains supply to the fittings during the installation process (due to building works or for some other reason), could cause the fittings to discharge and charge their batteries many times over a short period which may shorten the life of the battery. Thomas & Betts does not recommend such practices and may not honour any warranty on the life of the batteries or the lamp when subjected to such harsh operating conditions. The fittings are designed to be regularly discharge tested once every 6 months as per AS/NZS2293.2. In order to prevent damage to the battery, leave the unswitched active circuit turned off at the circuit breaker, until the emergency lighting is required on the site.