Construction sites
Continuously switching off the mains power supply that is connected to emergency light fittings during the construction phase of an installation will cause these fittings to discharge and charge their batteries many times over a short period; this can shorten life of the battery. ABB does not recommend such practices and may not honour the warranty on batteries when they are subjected to such harsh operating conditions. Emergency light fittings are designed to be discharge tested every 6 months as per AS/NZS 2293.2, subjecting the product to repeated discharge or charge cycles is regarded as an abuse of the fittings.

Troubleshooting guide
If you have installed and connected the fitting as per the instructions listed earlier and it does not function correctly, 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.

If the fitting still does not work after checking these possible causes, contact ABB customer service in Australia on 1800 60 20 20.

<table>
<thead>
<tr>
<th>No.</th>
<th>Fitting type</th>
<th>Fault</th>
<th>Possible causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Standard</td>
<td>LEDs do not light up when connected to mains</td>
<td>AC supply not connected or turned off; or switch active turned off; or LEDs damaged</td>
</tr>
<tr>
<td>2</td>
<td>Nexus LX</td>
<td>Indicator LED is flashing green but AC lamp does not come on when connected to mains</td>
<td>Switch active turned off; or lamp damaged; or missing loop from unswitched to switched active</td>
</tr>
<tr>
<td>3</td>
<td>Nexus LX</td>
<td>Indicator LED is flashing green but lamp does not come on when test switch is pressed</td>
<td>Switch active turned off; or LEDs damaged; or battery pack not connected or faulty; or test switch damaged</td>
</tr>
<tr>
<td>4</td>
<td>Nexus LX</td>
<td>Indicator LED does not light up red after the commissioning</td>
<td>Battery pack not connected; or LED wire not properly inserted into the terminal</td>
</tr>
<tr>
<td>5</td>
<td>Standard</td>
<td>LEDs are lit momentarily when test switch is pressed or when mains fail</td>
<td>Battery not fully charged (allow up to 24 hours); or battery pack damaged</td>
</tr>
<tr>
<td>6</td>
<td>Nexus LX</td>
<td>Indicator LED is constant green</td>
<td>Fitting self checks fail - return to manufacturer</td>
</tr>
<tr>
<td>7</td>
<td>Nexus LX</td>
<td>Fitting LED is not flashing yellow/orange under wink node command</td>
<td>Fitting is not receiving communication signal. Check data cable wiring path and cable or RF connections. Refer to Nexus user and technical guide</td>
</tr>
</tbody>
</table>

Thank you for choosing ABB product
Please read this document thoroughly before commencing installation and retain for future reference. Contact ABB customer service in Australia on 1800 60 20 20 if you need any assistance. To reflect changes in technology and Australian standards; ABB reserves the right to amend the instructions without notice. Updated document can be found on the Stanilite website.

Safety warning
In Australia and New Zealand, only licensed electricians are permitted by law to work with 240 volt electrical installations. As the installer, it is your responsibility to ensure compliance with all relevant building and safety codes, (ie: AS/NZS 3000, AS/NZS 2293). Refer to the applicable standards for data and mains cabling installation procedures and requirements.

The LED power pack is based on SELV (safety extra low voltage) 20-40V and is designed to be installed by breaking into the low voltage connection between the mains LED driver and the LEDs. This connection allows the LEDs to operate normally under mains power and, in the case of an emergency, at a reduced light output. The luminaire to be re-engineered for emergency lighting must be based on SELV.

Standard
The standard LED power pack kit is a non-monitor conversion kit suitable for mains AC SELV LED fitting to be converted to standalone emergency fitting.

Nexus LX (data cable system)
The Nexus LX LED power pack kit is a data cable system monitor conversion kit suitable for mains AC SELV LED fitting to be converted to Nexus LX emergency fitting, that are to be connected into a special communication network over a level 4 (or higher) high speed, single twisted pair data cable system.

Nexus RF (wireless system)
The Nexus RF LED power pack kit is a wireless RF system monitor conversion kit suitable for AC SELV LED fitting to be converted to Nexus RF emergency fitting, they communicate via a proprietary RF network system.
Installation instructions

Note: Please read all the following instructions before commencing installation.

- It is recommended that the power pack is installed by a competent person ensuring the installation complies with the necessary Australian standards. ABB accepts no responsibility for injury, damage or loss, which may arise due to result of incorrect installation, operation or maintenance.
- The power pack conversion kit requires an un-switched supply for charging the battery and a switched supply if the luminaire is being used for maintained operation.
- Please ensure to disconnect mains power supply when installing. When converting a luminaire observe the following points:
  1. When placing/installing the control and battery pack into the existing luminaire ensure that they will operate within their temperature ratings.
  2. Locate the control pack as close as possible to the LED driver to keep wiring short, but far enough away to prevent overheating.
  3. Keep battery away from heat source when installing within the luminaire. The high temperature Ni-Cad battery supplied is specified and tested for essential characteristics, the performance cannot be guaranteed with alternative batteries.
  4. The LED charge indicator must be positioned in the luminaire where it will be clearly visible during normal operation. A 6mm hole is required for mounting the LED indicator.
  5. The test switch must be positioned in the luminaire where it will be easily accessible to test emergency operation. A 7mm hole is required for mounting the test switch.
  6. Ensure the layout does not interfere with the essential safety features of the original luminaire.
  7. Do not obstruct cable entries, mounting points, etc.
  8. Installation of a power pack conversion kit will invalidate the original luminaire manufacturer’s compliance and approval. It is the responsibility of the person installing this LED power pack conversion kit to comply with Safety, EMC and AS/NZS 2293 design and compliance requirements.
  9. Figure 1 shows wiring diagram of Nexus LX LED power pack conversion kit. It is recommended to install Nexus LX module in vertical position. The Nexus LX module can be stuck on side of the power pack module using double sided tape. The wiring of the Nexus RF LED power pack conversion kit is same as Nexus LX. For wiring of standard LED power pack conversion kit, please disregard, serial 4 core cable, Nexus LX module and Nexus data cable plug/connection.

Figure 1: Nexus LX/RF LED power pack wiring with current monitoring

10. It is best practice to avoid running the mains cables next to the power pack output to the LED to obtain the best EMC results.
11. Clearly label the un-switched and switched active mains supply in the luminaire.
12. Always use high temperature 105°C insulated wire, or higher grade if originally used in the luminaire.
13. Clearly affix the Nexus LX/RF Neuron ID/MAC address label supplied with the LED power pack showing the LonWorks Neuron ID/RF MAC address on to the fitting in a recognisable position for recording upon installation.

Figure 2: Generic LED power pack wiring without current monitoring

14. Test the complete luminaire after installing the LED power pack conversion kit.
15. Carry out electrical tests to check safety and correct operation, ensure the converted luminaires are safe and that all components are operating within their prescribed temperature limits. The maximum recorded temperature of a component must not exceed the temperature marked on the component.

- Final product based on Nexus LX/RF conversion kit which include this LED power pack will be part of complete monitored emergency lighting system which is required to be commissioned on the systems network. Failure to do so cannot be the responsibility of ABB.
- It is recommended that the batteries be charged for a minimum of 16 hours before a full discharge test is performed. However, checking of the emergency lamp function can be performed after 1 hour by momentarily pressing the test switch on the luminaire.
- Interrupting mains supply will discharge emergency lighting batteries. If supply remains interrupted for a long period, permanent damage to batteries may result due to continued battery discharge.

Inspection and maintenance

- Must be performed in accordance with AS/NZS 2293 for Australian and New Zealand installations and in accordance with relevant local standards in other countries.

Batteries

- The batteries in this emergency lighting luminaire must be replaced when the fitting no longer meets rated operating emergency duration that is required.

Disclaimer

- The information and advice given in this document should be taken as a guide only. Both are given in good faith and are true to the best of our knowledge, though no guarantee of accuracy is given, and thus persons receiving this information should determine its suitability. Wiring diagrams in this document do not imply compliance with Australian standards for the completed fitting. Compliance to the relevant requirements of Australian electrical safety standards AS/NZS 60598, emergency lighting standards AS 2293 and EMC regulations are the responsibility of the manufacturer of the final fitting.

LED Indicator status

<table>
<thead>
<tr>
<th>Fitting type</th>
<th>Indicator LED state - on initial powering - no fitting faults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-monitored</td>
<td>Solid red</td>
</tr>
<tr>
<td>Nexus LX</td>
<td>Flashing green</td>
</tr>
<tr>
<td>Nexus RF</td>
<td>Green flash with 2 red blinks, green flash with 3 red blinks</td>
</tr>
</tbody>
</table>