Product description
- Lithium Iron Phosphate replacement battery pack for use with EM ready2apply emergency lighting units
- 8-year design life (at up to 30 °C ambient temperature)
- 3 years guarantee from delivery date (conditions at www.tridonic.com)

Properties
- Certified quality manufacturer
- Casing material made of polycarbonate
- Charge efficiency > 90%
- Low self discharge
- Compact connector providing polarity safe battery connection
- Protection and monitoring circuit built into battery enclosure
- Battery protected against operation at excessive temperatures
- Deep discharge protection
- Suitable for emergency lighting equipment as per IEC 60598-2-22

Standards, page 3
LiFePO4 Battery pack 1.5 – 3.0 Ah  
Lithium Iron Phosphate cells (LiFePO4)

Technical data

<table>
<thead>
<tr>
<th>Battery voltage per cell</th>
<th>3.2 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery capacity per cell</td>
<td>1.5 Ah</td>
</tr>
<tr>
<td>Ambient temperature range (design life of 8 years)</td>
<td>+5 ... +35 °C</td>
</tr>
</tbody>
</table>

Ordering data

<table>
<thead>
<tr>
<th>Type</th>
<th>Article number</th>
<th>Packaging, carton</th>
<th>Weight per pc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery pack 1.5 Ah</td>
<td>89800555</td>
<td>75 pc(s)</td>
<td>0.064 kg</td>
</tr>
<tr>
<td>Battery pack 3.0 Ah</td>
<td>89800556</td>
<td>75 pc(s)</td>
<td>0.104 kg</td>
</tr>
</tbody>
</table>

Specific technical data

<table>
<thead>
<tr>
<th>Type</th>
<th>Article number</th>
<th>Number of cells</th>
<th>Capacity</th>
<th>Dimensions L x W x H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery pack 1.5 Ah</td>
<td>89800555</td>
<td>1</td>
<td>1.5 Ah</td>
<td>77.5 x 39 x 31.5 mm</td>
</tr>
<tr>
<td>Battery pack 3.0 Ah</td>
<td>89800556</td>
<td>2</td>
<td>3.0 Ah</td>
<td>77.5 x 39 x 31.5 mm</td>
</tr>
</tbody>
</table>
1. Standards

The battery cells are designed to comply with the IEC international standard and tested according to the normative permanent charge endurance test described in the IEC 60065 standard. This performance is mandatory for use in Emergency Lighting Units to comply with the IEC 60598 2.22.

1.1 Glow-wire test

According to EN60959-1 with increased temperature of 850 °C passed (valid for housing).

2. Thermal data

2.1 Storage conditions

- Store batteries within the specified temperature range in low humidity conditions. Optimal storage conditions are:
  - Temperature: -20 ... +25 °C up to 12 months after printed date of manufacture
  - Temperature: -20 ... +35 °C up to 6 months after printed date of manufacture
  - Relative humidity: 60 ± 5 %
- Avoid atmosphere with corrosive gas
- Disconnect batteries before store or delivery
- Avoid storage of discharged batteries

2.2 Avoidance of excessive cycling

During building installations, in many cases, mains supply is not available on a permanent 24-hour basis which then leads to unwanted, uncontrolled excessive battery cycles. This has a very strong effect on the design life time of the batteries. In order to activate new batteries, 2-3 full charging-discharging are needed to make sure batteries achieve their rated capacity. This activating process is defined by running 2-3 full charging (24 hrs) and discharging (1/2/3 hrs) cycles of the batteries. If the first duration test fails, please repeat the test once again after a 24 hour charging period.

2.3 Avoidance of deep-discharge conditions

It is very important that LiFePO4 batteries are not left connected for long periods in a discharged state. Following options may lead to a deep discharge situation and must be avoided:
- Storage periods of rechargeable batteries of over 12 month without recharging the battery packs.
- Shipment, storage of assembled emergency luminaires with battery pack connected to the emergency driver.
- Long periods of mains-interruptions of more than two weeks, once, the emergency system is installed and the battery pack is connected to the emergency driver.

2.4 Avoidance of deep-discharge conditions

When using rechargeable LiFePO4 batteries for emergency lighting following point are essential in order to achieve the specified design life time of the batteries.

In order to activate new batteries, 2-3 full charging-discharging are needed to make sure batteries achieve their rated capacity. This activating process is defined by running 2-3 full charging (24 hrs) and discharging (1/2/3 hrs) cycles of the batteries. If the first duration test fails, please repeat the test once again after a 24 hour charging period.

2.5 Short-circuit protection

In case of a short circuit the battery protection opens the connection to the driver and the output is therefore free of voltage. The output will be reactivated again when the short circuit is removed.

5. Safety

- Do not short-circuit the battery pack – when installing the luminaire make sure sharp edges do not come into contact with cables.
- Do not open or damage the battery pack or throw it into a fire.
- Protect the battery against moisture and keep away from water.
- Do not expose the battery to direct sunlight or excessive heat (see storage conditions).
- Transport and store the battery only in its original packaging.
- Comply with the transport conditions of the transport company.
- Follow the instructions on the safety data sheets.
- Do not connect device other than to the EM ready2apply

5.1 Deep discharge protection

When the battery remains connected without charging for a long period of time after the battery cut off of the driver the battery voltage can still drop. To make sure the cells are not damaged by this voltage drop, the battery protection prevents the battery from further discharge below 2.0 V.

5.2 Overcharge protection

If in case of an error or the use of a wrong driver the battery gets overcharged the battery protection will disconnect the battery from the driver at a voltage of 39 V. A discharge of the battery is still possible after the protection circuit was triggered to guarantee emergency operation.

5.3 Short-circuit protection

In case of a short circuit the battery protection opens the connection to the driver and the output is therefore free of voltage. The output will be reactivated again when the short circuit is removed.

5.4 Overtemperature protection

The battery is protected against temporary thermal overheating. If the temperature limit is exceeded the further charging of the battery is no longer possible. The temperature protection is activated below approx. 0 °C and above approx. +60 °C. The discharging of the battery is still possible to guarantee emergency operation.

6. Disposal

- Do not dispose of batteries with normal waste.
- Comply with local regulations when disposing of batteries.
7. Miscellaneous

7.1 Additional information

Additional technical information at www.tridonic.com → Technical Data

Lifetime declarations are informative and represent no warranty claim. No warranty if battery pack was opened.