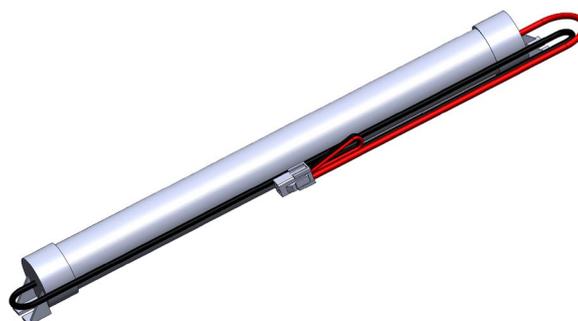


# Technical Data

## Ex NiCD

### Ex zone 1



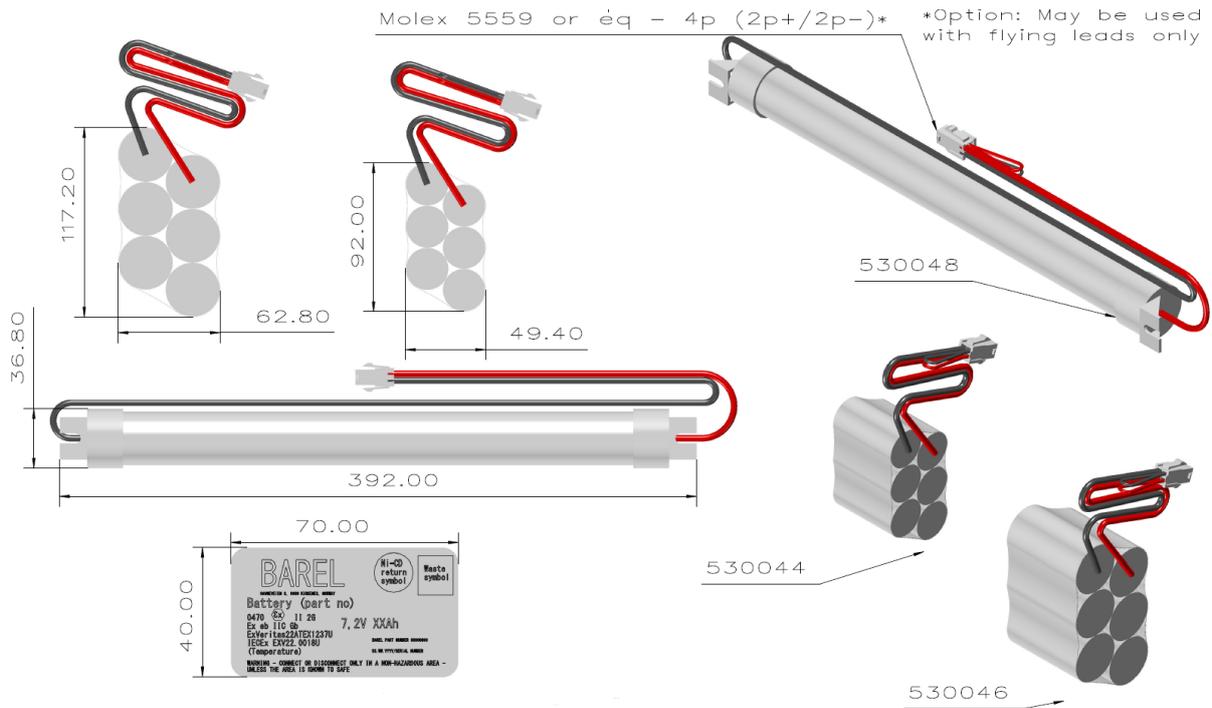
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### 3.3 Expected lifetime:

Expected lifetime 5 years to 90% survival at temperature  $T_a +10$  to  $+40^\circ\text{C}$ , when used together with HFXE BG2 in normal applications with a short monthly test and annual full test.

## 4 Use of component

This equipment does not cause harm or injury when used as specified in these instructions. If this equipment is not utilised in a manner specified by the manufacturer, the protection by the equipment may be impaired.

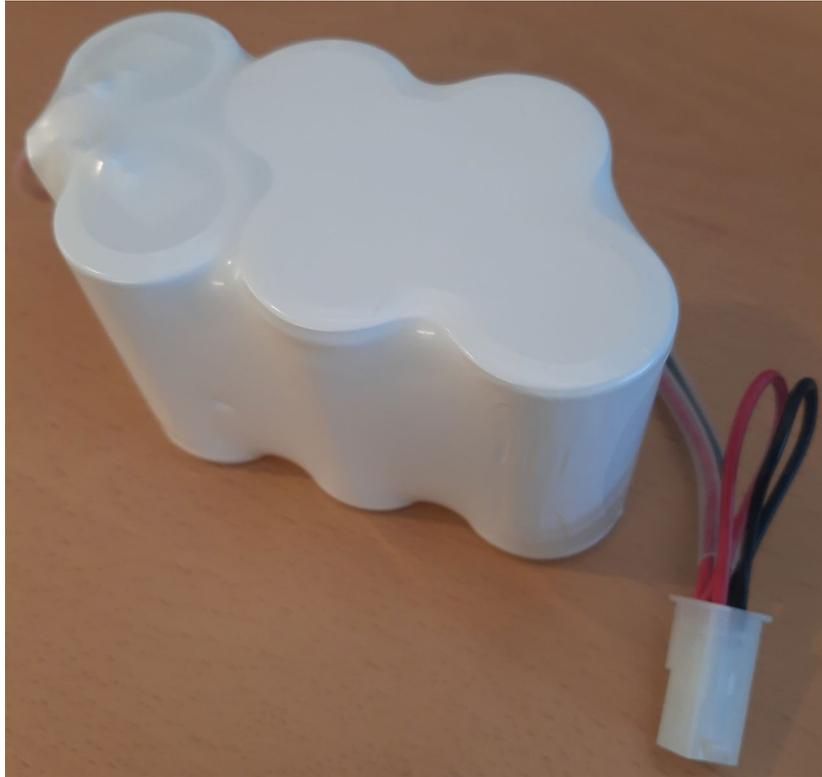
These components are designed to be used together with Barel HFXE BG2.

### 4.1 Temperature

$T_a$  is the ambient temperature around the component. Charging at low ambient temperature may reduce capacity, and require longer period to fully charge.

### 4.2 Electrical connection

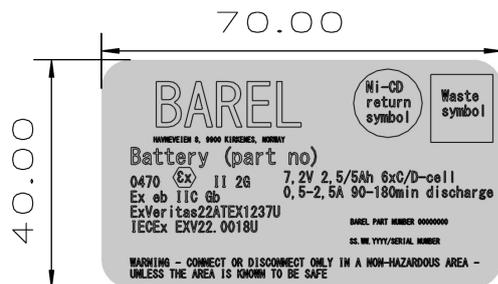
Custom wire length and connector on request.  
Mating plug and wires on request.



### 4.3 Installation

- Connect all components.
- Check that all connections are made to the correct port, and that no wires are loose or damaged.
- The LED-module must be installed before the unit is energized. Do not energize the HFXE without LED-module connected.
- Connect battery.
- Energize the unit from mains supply.
- The LED-module will light up in normal mode.
- Disconnect mains supply and battery before LED-module.

### 4.4 Marking



## **5 Special conditions for safe use**

1. For Gas atmospheres the equipment must be housed within a suitably approved Ex eb Gb enclosure in end use equipment. For Dust atmospheres the equipment must be housed within a suitably approved Ex tb Db enclosure.
2. The following Service Temperatures must not be exceeded when incorporated into end use equipment:
  - HFX and HFXE Encapsulant: -40°C to +110°C\*
  - HFX and HFXE Terminals: -40°C to +105°C
  - Battery Packs: -20°C to +70°C (C cells) & -40°C to +45°C (D cells)

\*Note that the hottest internal component has a 37 K temperature rise under full load conditions.

3. Thermal fuses (TCO's) are employed in the driver which limit the surface temperature of the encapsulant under fault conditions to a maximum of 112°C
4. The maximum temperature rise on the D cell type battery packs when supplying (discharge) a max potential fault current of 6.8A is 19.3K. Under a max nominal load of 2.5A the temperature rise is 6.3K. Under maximum charge conditions, constant current of 240mA, the battery pack has a temperature rise of 5.9K. The D cells type battery packs must not be subjected to ambient conditions in end use equipment of more than +39.1°C for compliance with the rated service temperature range of the batteries.
5. The maximum temperature rise on the C cell type battery packs when supplying(discharge) a max potential fault current of 6.8A is 2.9 K. Under a max nominal load of 2.5A the temperature rise is 13.8 K. Under maximum charge conditions, constant current of 240 mA, the battery pack has a temperature rise of 5.5K. The D cells type battery packs must not be subjected to ambient conditions in end use equipment of more than +64.5°C for compliance with the rated service temperature range of the batteries.
6. When incorporated into end use equipment the bare live parts of the terminals must have a  $\geq 6$ mm clearance distance. The insulation must be stripped to within 1 mm of the terminal throat.
7. The equipment shall only be employed with a power supply which has a prospective short circuit current not exceeding 1500A.
8. The battery pack must not be replaced in hazardous areas (unless the area is shown to be free from a hazardous atmosphere).
9. The maximum discharge current from the battery under fault conditions is limited to 6.8 A, (by a 4A fuse internal in HFXE)
10. When stranded conductors are employed for mains connection they must be terminated with a ferrule.
11. HFXE may be used with different batteries covered by other/ luminaire certificate.
12. The HFX and HFXE are suitable for use with Barel ARC BG5, or similar LED lamp.
13. The output current to indicator LED is limited to 19,7mA, suitable to be used with Barel VSI.

## **6 What to do if...**

- Low capacity
  - Make sure all connections and supply are correct.
  - Allow minimum 24hours charging period
  - Replace battery-pack
  - Do not attempt to open or repair. Contact distributor for assistance.