

## Operating Manual & Safety Instructions



iBATT5xx



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# Contents

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1	Introduction.....	4
2	Safety Information and Notes .....	5
2.1	Storage of this Manual.....	5
2.2	Certification Requirements .....	5
2.3	Special Conditions for Safe Use.....	5
2.4	List of Notes .....	5
3	Installation .....	7
3.1	Mounting.....	7
3.2	Opening and Closing the Enclosure .....	7
3.3	Cable Entries.....	7
3.4	Battery Charging.....	7
4	Intended Purpose Usage.....	8
4.1	Transportation and Storage.....	8
4.2	Authorized Persons .....	8
4.3	Cleaning and Maintenance.....	8
4.4	Cleaning and Maintenance Intervals .....	8
4.5	Aggressive substances and environments .....	9
4.6	Exposure to external stresses .....	9
4.7	Prevention of electrostatic charging.....	9
5	Technical Data .....	10
5.1	Specification .....	10
5.2	Battery Installation & Operating Instructions.....	11
6	Certification .....	12
6.1	ATEX/IECEX Label .....	12
6.2	EU Declaration of Conformity .....	13
7	Type Codes.....	14

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# 1 Introduction

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The iBATT5xx is an ATEX/IECEX approved floor mount stainless steel battery enclosure for use in Zone1 and Zone 2 hazardous areas. It is designed to be used in conjunction with the iUPS101 UPS & other products to provide an uninterruptible power supply. The iBATT5xx can also be used independently providing the special conditions for safe use are applied as detailed on the ATEX/IECEX certificates.

When used in conjunction with the Ex 'e' certified charge protection circuit contained within the iUPS101 system or other Extronics supplied product, users are permitted to charge the internal batteries within a hazardous area.

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## 2 Safety Information and Notes

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### 2.1 Storage of this Manual

Keep this user manual safe and in the vicinity of the device. All persons who have to work on or with the device should be advised on where the manual is stored.

### 2.2 Certification Requirements

The battery box main explosion protection concept is increased safety Ex 'e'.

Certified II 2 G Ex e IIC T6 Gb

### 2.3 Special Conditions for Safe Use

1. The battery box shall not be exposed to mechanical shock.
2. If the battery is to be disconnected from its associated equipment in the hazardous area then a suitably ATEX/IECEx approved disconnection device shall be used
3. In the event of battery charger failure, the maximum charge voltage and current specified in the battery manufacturer's instructions shall not be exceeded.
4. The battery box may build up electrostatic charge, so it is essential the precautionary measures advised in section 4.7 are adhered to.

### 2.4 List of Notes

The notes supplied in this chapter provide information on the following.

- Warning!
  - Possible hazard to life or health.
- Caution
  - Possible damage to property.
- Important
  - Possible damage to enclosure, device or associated equipment.
- Information
  - Notes on the optimum use of the device

<b>Warning</b>	<b>Installation to be by skilled electricians and instructed personnel in accordance with national legislation, including the relevant standards and, where applicable, in accordance with IEC 79.17 on electrical apparatus for explosive atmospheres.</b>
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<b>Warning!</b>	<b>The iBATT5xx must only be operated in Zone 1 and Zone 2 hazardous area. Refer to the ATEX/IECEx certificates for further information.</b>
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<b>Warning!</b>	<b>If charging takes place in a hazardous area the charging circuits must meet the requirements of EN60079-0 and EN60079-7.</b>
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**Warning!** Any load connected to the iBATT5xx must include a suitably rated fuse or protection device in the supply line. If the fuse or protection device is located in a hazardous area it must be suitably certified.

**Warning!** If the batteries are to be disconnected in a hazardous area, then an appropriately certified means of isolation must be provided.

**Important** The batteries must not be subjected to mechanical shock.

**Important** The technical data indicated on the iBATT5xx ATEX/IECEX rating plate, in this manual and the ATEX/IECEX certificates must be observed at all times.

**Important** The ATEX/IECEX rating label must be fitted at all times, if damaged it must be replaced immediately or the iBATT5xx must be removed from service and the hazardous area.

**Important** Changes in the design and modifications to the equipment are not permitted.

**Important** The iBATT5xx shall be operated as intended and only in an undamaged condition.

**Important** Only suitably rated loads may be connected to the iBATT5xx.

**Caution** This assembly is extremely heavy, therefore ensure the assembly is mounted using suitable fixtures.

**Caution** Never operate the iBATT5xx unit outside its rated voltage, current & power as indicated in the specification or the safety of the unit may be impaired.

**Caution** Never exceed the maximum loading of the iBATT5xx as stated in the specifications. Adequate protection such as a fuse / protection device must be fitted to connecting equipment to prevent exceeding maximum load.

**Important** For the installation, maintenance and cleaning of the units, it is absolutely necessary to observe the applicable regulations and provisions concerned with explosion protection (EN60079-0:2018, EN 60079-14:2014) as well as the Accident Prevention Regulations.

**Important** The iBATT5xx must not be stored or operated outside of its rated temperature range as stated on the ATEX/IECEX certificates.

**Important!** Only replacement batteries supplied by Extronics may be fitted as there are safety related tests that need to be performed on each battery.

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## 3 Installation

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### 3.1 Mounting

The battery enclosure should be securely mounted to the floor with suitable fixings to ensure no movement or vibration.

### 3.2 Opening and Closing the Enclosure

Enclosure can either be supplied with hinged lids or on larger enclosures the lid is removable. Care should be taken when lids are removable due to excessive weights.

### 3.3 Cable Entries

The cable entry to the battery box is via ATEX/IECEX approved Ex e cable gland/s. Customers fitting their own cable glands should install them in accordance with the requirements EN 60079-14 'Electrical Installations in Hazardous Areas (other than mines)'.  
The cable entry to the battery box is via ATEX/IECEX approved Ex e cable gland/s. Customers fitting their own cable glands should install them in accordance with the requirements EN 60079-14 'Electrical Installations in Hazardous Areas (other than mines)'.

### 3.4 Battery Charging

The battery shall be charged according to battery manufacturer's instructions, see separate battery product information sheet.

<b>Important!</b>	<b>In the event of battery charger failure, the maximum charge voltage and current specified in the battery manufacturer's instructions shall not be exceeded.</b>
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## 4 Intended Purpose Usage

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<b>Warning!</b>	<b>Maintenance and inspection of the iBATT5xx must be performed in accordance with IEC 60079-17 'Electrical Installations Inspection and Maintenance'</b>
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<b>Important</b>	<b>Before setting the units to work, read the technical documentation carefully.</b>
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<b>Important</b>	<b>The latest version of the technical documentation or the corresponding technical supplements is valid in each case.</b>
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The iBATT5xx is built using modern components and is extremely reliable in operation; however it must only be used for its intended purpose. Please note that the intended purpose also includes compliance with the instructions issued by the manufacturer for installation, setting up and service.

Any other use is regarded as conflicting with the intended purpose. The manufacturer is not liable for any subsequent damage resulting from such inadmissible use. The user bears the sole risk in such cases.

### 4.1 Transportation and Storage

All iBATT5xx enclosures must be so transported and stored that they are not subjected to any excessive mechanical stresses.

### 4.2 Authorized Persons

Only persons trained for the purpose are authorized to handle the iBATT5xx; they must be familiar with the unit and must be aware of the regulation and provisions required for explosion protection as well as the relevant accident prevention regulations.

### 4.3 Cleaning and Maintenance

The cells shall be maintained in accordance with the cell manufacture's maintenance documents. Refer to battery manufacturer's instructions, enclosed together with this manual

### 4.4 Cleaning and Maintenance Intervals

The cleaning and maintenance intervals depend on the environment where the system is installed.



## 4.5 Aggressive substances and environments

The iBATT5xx is not designed to come into contact with aggressive substances or environments, please be aware that additional protection may be required.

## 4.6 Exposure to external stresses

The iBATT5xx is not designed to be subjected to excessive stresses e.g. vibration, heat, impact. Additional protection is required to protect against these external stresses.

The iBATT5xx will require additional protection if it is installed in a location where it may be subjected to damage.

## 4.7 Prevention of electrostatic charging

The iBATT5xx enclosure can build up electrostatic charge on its surfaces, so the following steps are to be followed:

Static charge build up should be reduced by:

- Connecting the enclosure to a suitable earth point
- Cleaning off surface dust using a damp cloth
- Not installing into areas where high airflow can occur

## 5 Technical Data

### 5.1 Specification




<b>Maximum Voltage</b>	Unlimited
<b>Maximum Cells per Battery</b>	36
<b>Maximum Capacity</b>	2500Ah
<b>Maximum Enclosure Size</b>	1610 x 1810 x 700
<b>Enclosure Material</b>	316 Stainless Steel
<b>Finish</b>	Natural or Painted
<b>Enclosure Ingress Protection</b>	IP43/IP56
<b>Environmental</b>	-40°C to +55°C
<b>Certification</b>	ATEX/IECEX Ex II 2 G Ex e IIC T6 Gb
<b>Temperature Sensor</b>	Optional RTD, Ex'd' Certified, Can Be Fitted

## **5.2 Battery Installation & Operating Instructions**

See separate battery product information sheet supplied by Extronics.

## 6 Certification

### 6.1 ATEX/IECEX Label

		<b>Part# iBATT5HHH</b> <b>Date:xx/xx/xxxx</b> <b>Serial#</b> <b>IP43</b>	
			
		<b>II 2G Ex e IIC T6 Gb</b> <b>-40°C ≤ Tamb ≤ 55°C</b> <b>ExVeritas 15ATEX0001X</b> <b>IECEX EXV 15.0007X</b>	
Number of Cells	Cell Capacity (Ah)	Cell Type	Max. Voltage
AAA	BBB	CCC	DDD
Cell Manufacturer / Part		Operational Ambient Temperature	
EEE		FFF	

**WARNING!**

**REFER TO THE SAFETY INSTRUCTIONS  
FOR BATTERY CHARGING INSTRUCTIONS**

Extronics Ltd, 1 Dalton Way, Midpoint 18, Middlewich, Cheshire, CW10 0HU

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 E-Mail [Info@extronics.com](mailto:Info@extronics.com)      Web: [www.extronics.com](http://www.extronics.com)

## 6.2 EU Declaration of Conformity



### EU Declaration of Conformity

**Extronics Ltd, 1 Dalton Way, Midpoint 18, Middlewich, Cheshire CW10 0HU, UK**

Equipment Type:

**iBATT5xx**

**Directive 2014/34/EU** Equipment and protective systems intended for use in potentially explosive atmospheres (ATEX)

Provisions of the directive fulfilled by the equipment:

**II 2 G Ex e IIC T6 Gb (-40°C ≤ T<sub>amb</sub> ≤ 55°C)**

Notified Body for EC-Type Examination:

**ExVeritas, No. 2585, Wrexham, UK**

EC-Type Examination Certificate:

**ExVeritas 15ATEX0001X, 19<sup>th</sup> June 2015, issue 3 variation 10<sup>th</sup> October 2017.**

Notified Body for Production:

**ExVeritas, No. 2804**

Harmonised Standards used:

<b>EN 60079-0:2012 + A11: 2013</b>	Explosive atmospheres - Part 0: Equipment - General requirements (A review against EN60079-0:2018 shows no significant changes relevant to this equipment, so EN60079-0:2012 +A11: 2013 continues to represent 'state of the art').
<b>EN 60079-7:2007</b>	Electrical apparatus for explosive gas atmospheres - Increased safety 'e' (A review against EN60079-7:2015 shows no significant changes relevant to this equipment, so EN60079-7:2007 continues to represent 'state of the art').

Other Standards and Specifications used:

None:

On behalf of Extronics Ltd, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives. This declaration of conformity issued under the sole responsibility of the manufacturer.

Signed

**Nick Saunders**  
Operations Director  
Date: 08/07/2021  
413137(5)



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## 7 Type Codes

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See separate battery product information sheet supplied by Extronics.