



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:  issue No.:  Certificate history:

Status:

Date of Issue: **2011-10-11** Page 1 of 4

Applicant: **Solid Applied Technologies**  
40 Hutzot Hayotzer Street  
Ashkelon  
78170  
Israel

Electrical Apparatus: **Battery enclosure and Programmable Timer Switch**  
Optional accessory: 3 cells or 4 cells

Type of Protection: **Intrinsic safety**

Marking: **Ex ib IIB T3(162°C) Gb**  
Ta = -30°C to +70°C

Approved for issue on behalf of the IECEx Certification Body: D R Stubbings BA MIET

Position: Certification Manager

Signature:  
(for printed version)

Date:

2011-10-11

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
United Kingdom

**sira**  
CERTIFICATION



# IECEx Certificate of Conformity

Certificate No.: IECEx SIR 10.0112X  
Date of Issue: 2011-10-11 Issue No.: 0  
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Manufacturer: **Solid Applied Technologies**  
40 Hutzot Hayotzer Street  
Ashkelon  
78170  
Israel

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

**IEC 60079-0 : 2004** Electrical apparatus for explosive gas atmospheres - Part 0: General requirements  
Edition: 4.0  
**IEC 60079-0 : 2007-10** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition: 5  
**IEC 60079-11 : 2006** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition: 5

*This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

#### Test Report:

[GB/SIR/ExTR11.0261/00](#)

#### Quality Assessment Report:

[GB/SIR/QAR10.0008/00](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The battery enclosure and PTS are designed to power external equipment in locations (such as sewers) where a remote supply is not available. The equipment comprises two parts, interconnected by a cable:

- \* Battery enclosure, containing  $\text{LiSOCl}_2$  cells, either three or four Tadiran TL-5930 cells in series
- \* Programmable Timer Switch (PTS), which connects between the battery enclosure and the equipment in order to save energy and batteries lifetime by disconnecting the equipment at pre-configured intervals.

The battery enclosure connects to the PTS by means of a 3-wire cable. The PTS connects to the external equipment via a 5-wire cable that provides power and an RS485 signal. The battery enclosure can only be connected to other equipment via the PTS, which contains additional current-limiting circuitry.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. The battery enclosure/PTS circuit is not isolated from the screen of the cables. The user shall take this into account during installation.
2. Under certain extreme circumstances, the enclosure may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
3. The equipment is awarded a T3 temperature class on account of the battery pack, whereas the PTS meets the requirements for T4. If the battery pack is located in a non-hazardous area, supplying the PTS in a hazardous area, then the PTS can be assumed to have a T4 temperature class.



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## EQUIPMENT(continued):

The safety description of the output from the PTS is as follows:						
	3-cell battery enclosure and PTS			4-cell battery enclosure and PTS		
	Power	RS485	Combined	Power	RS485	Combined
Uo	11.7 V	5.88 V	11.7 V	15.6 V	5.88 V	15.6 V
Io	0.487 A	0.113 A		0.358 A	0.113 A	0.477 A
Po	1.212 W	0.166 W	1.378 W	1.189 W	0.166 W	1.355 W
Rs	24.07 W	52.25 W	-	43.62 W	52.25 W	-
Co	10.3 $\mu$ F	10.3 $\mu$ F	10.3 $\mu$ F	3.03 $\mu$ F	3.03 $\mu$ F	3.03 $\mu$ F
Lo	392 $\mu$ H	392 $\mu$ H	392 $\mu$ H	602 $\mu$ H	602 $\mu$ H	602 $\mu$ H

Note: the quoted entity parameters of Co and Lo are applicable for the distributed capacitance and inductance in cable. Where there is circuit capacitance or inductance in the connected equipment (represented by Ci and Li respectively), then these values shall not exceed 50% of the quoted Co and Lo.