IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx SIR 07.0061U**

Certificate history:
Issue 1 (2010-03-04)
Issue 0 (2008-02-15)

Status: **Current**

Issue No: 2

Date of Issue: 2018-10-11

Applicant: **Enersys S.A.R.L.**
ZI Est
Rue Alexander Fleming
62033 Arras
France

Ex Component: ACID MOTIVE POWER CELLS TYPE B

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Increased safety and Dust**

Marking: Ex e I
Ex e II
Ex tD A21 T80 °C IP65.

Approved for issue on behalf of the IECEx Certification Body: **R A Craig**

Position: **Certification Support Officer**

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.

Certificate issued by:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

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Manufacturer: **Enersys S.A.R.L.**
ZI Est
Rue Alexander Fleming
62033 Arras
France

Manufacturing locations:

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 component 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 60079-7:2006-07 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:4

IEC 61241-0:2004 Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
Edition:1

IEC 61241-1:2004 Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"
Edition:1

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

TEST & ASSESSMENT REPORTS:
A sample(s) of the component listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/SIR/ExTR07.0109/00 GB/SIR/ExTR10.0026/00

Quality Assessment Report:

GB/SIR/QAR08.0004/02

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Ex Component(s) covered by this certificate is described below:

Type B Lead Acid Motive Power Cells

The Type B range of lead acid traction cells are designated by the manufacturer as IEC 254-2 Series E cells.

Each cell is 158 mm wide and has 2 to 12 positive plates terminated on two or four terminal posts. Connection to the terminal posts may be by the use one of the following methods:

1 Sealed post terminals, welded, with insulating covers.

2 Induction welded terminals with encapsulated caps.

3 Female threaded inserts with insulated bolt heads.

4 Female threaded inserts incorporating insulated caps.

5 Male threaded inserts with insulated anti-vibration locknuts.

6 An alternative solid link cell connector for those batteries where no movement of the cell is possible after installation.

7 An alternative cell connector where the end of the connecting cable is welded to a copper strip to form a termination, which is then fastened to the cell terminal post by a threaded fastener.

See Annexe for additional design options, cell type designation and correlation of cell types and conditions of manufacture and installation.

SCHEDULE OF LIMITATIONS:

1. These components comply with IEC 60079-7:2006 clauses 5.7.2.3 (acceptable electrochemical systems), 5.7.2.2 (classification), 5.7.1.3 (cells), 5.7.1.4 (connections) and 6.6.3 (shock test). When they are assembled into a battery, the remaining clauses of IEC 60079-7:2006 need to be addressed with particular reference to clauses 5.7.2.1 (general requirements), 5.7.2.4 (charging in hazardous areas), 5.7.2.5 (discharge of cells), 5.7.2.6 (incorporation of other protection concepts), 5.7.2.7 (disconnection and transportation), 5.7.1.2 (battery containers), 6.6 (secondary batteries) and 6.6.4 (ventilation).

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
This issue recognises the following change; refer to the certificate annex to view a comprehensive history:

1. QAR GB/SIR/QAR08.0003/00 was removed and replaced with GB/SIR/QAR08.0004/02. Note: this is a retrospective change to correct a typographical error and, because it is of an administrative nature, it is not associated with an ExTR.

Annex:

IECEx 07.0061U Annexe Iss 2.pdf

Vent plugs are fitted to the top of the cell casing and may be a flip-top type or a type having an indicator/float arrangement. The cell is topped up in a non-hazardous area. An air mixing tube is also provided for use during charging of the cell, which is also an operation carried out in a non-hazardous area.

Typical European cell type designation: SPzB42
S = (S)ingle or (D)ouble posted cells
PzB42 = Type

Typical Hawker Traction cell type designation: SOTHE5
S = (S)ingle or (D)ouble posted cells
OTHE = Type
5 = Number of positive plates

Correlation of cell types	
European	**Hawker Traction**
PzB23	Not applicable
PzB32	CBH
PzB42	OTHE
PzB55	EXHE
PzB65	XHE
PzB75	BRHE
PzB85	PEG
PzB100	ETE
PzB105	TEHE

Conditions of manufacture

1 The manufacturer shall include the full cell marking details in the instruction leaflet.

Full Certificate Change History

Issue 1 – this Issue introduced the following changes:

1. To allow the introduction of an alternative polypropylene copolymer housing material.
2. The recognition of minor drawing modifications; these amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.
3. To recognise a rise in the maximum discharge current from 270 A to 310 A.
4. Drawings SIRAATEX1, SIRAATEX4 P25127 and P25128 are amended to remove reference to the minimum contact area.
5. Drawings SIRAATEX1, SIRAATEX4 P25127, P25128, P24807 and P24808 have been modified to include a wider range of cable cross sections.

Issue 2 – this Issue introduced the following change:

1. QAR GB/SIR/QAR08.0003/00 was removed and replaced with GB/SIR/QAR08.0004/02. Note: this is a retrospective change to correct a typographical error and, because it is of an administrative nature, it is not associated with an ExTR.

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