



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

Certificate No.: IECEx EMT 16.0022X Issue No: 0 Certificate history:
Issue No. 0 (2016-11-15)

Status: **Current** Page 1 of 3

Date of Issue: **2016-11-15**

Applicant: **JCE Group (UK) Ltd.**
Blackburn Business Park,
Aberdeen, AB21 0PS
United Kingdom

Equipment: **Ex ec 1400 Ah, 24 V, VRLA Battery Enclosure**
Optional accessory:

Type of Protection: **Increased Safety**

Marking:
Ex ec IIC T6/T5 Gc
-20 °C ≤ Ta ≤ +50 °C T6
-20 °C ≤ Ta ≤ +55 °C T5

Approved for issue on behalf of the IECEx
Certification Body:

Stephen Winsor

Position:

Certification Manager

Signature:
(for printed version)

Date:

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:

Element Materials Technology
Unit 1 Pendle Place
Skelmersdale
West Lancashire
United Kingdom





IECEX Certificate of Conformity

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Date of Issue: 2016-11-15 Page 2 of 3
Manufacturer: **JCE**
Blackburn Business Park,
Aberdeen, AB21 0PS
United Kingdom

Additional 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0
IEC 60079-7 : 2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

*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/EMT/ExTR16.0021/00](#)

Quality Assessment Report:

[GB/ITS/QAR11.0014/02](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The 5116-EXBE Battery enclosure consists of a battery housing unit. The housing unit comprises of a body manufactured from 4 mm 316 Stainless Steel and lid manufactured from 3 mm 316 Stainless Steel. The lid is secured via 14 x M6 stainless steel bolt, washer and spring washer arrangement. The enclosure is provided with a 40 mm \varnothing earth boss and M10 stainless steel earth stud welded to the enclosure body. Earthing connection is made via double insulated ring crimp earth conductor retained via a M10 nut and spring washer arrangement.

Internally 12 x 2V 1400 Ah Sonnenschein A612/1415 VRLA cells are housed and connected in series via 70 mm² insulated intercell connections. Battery terminals are connected by the manufacturer via ring lugs crimped onto the conductor. The lugs are attached to the battery terminals via an M8 bolt provided by the battery manufacturer. A torque of 20 Nm is applied to the connection arrangement, the terminal and conductors are then fitted with an insulating cover. This cover is bonded to the termination with silicone sealant. The enclosure internals are lined with 2 mm Tufnol or PVC fixed to the internal walls with silicone sealant.

The equipment is provided with two +ve and two -ve 35mm² cable tails which are fed into the enclosure through suitably approved Ex cable glands provided by the manufacturer. The intercell cable connectors are considered short non-rigid connections and batteries are retained in position via 15 mm PVC spacers.

The battery enclosure shall be connected to equipment via a suitably rated Ex approved battery isolator. The end user must also ensure that the associated equipment limits the output to 200 A via means of a suitably rated fuse or circuit breaker.

Charging the batteries in the hazardous area is permitted only when the equipment is connected to compliant battery charger located in a safe area, type 5166-SBCP, incorporating current limited charge regulator, in combination with a MCCB.

Where the external charger is not supplied by manufacturer, the equipment is marked with a warning label, the battery shall not be charged in a hazardous area.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. Only suitably rated IECEx certified Cable glands, blanking elements and thread adapters are to be used in conjunction with the equipment.
2. Equipment must not be installed in locations where it may be susceptible to impacts or excessive vibration.
3. Field wiring external to the battery enclosure shall be terminated by means of a type protection listed in IEC 60079-0 or in a safe area.
4. The 5116-EXBE Battery Enclosure shall be connected to interconnected equipment via suitably rated Ex type battery isolator.
5. Interconnected equipment shall limit discharge current to maximum 200 A via a suitably rated safety device.

Annex:

[Annex to IECEx Certificate of Conformity.pdf](#)



Element Materials Technology,
Unit 1, Pendle Place,
Skelmersdale,
West Lancashire, WN8 9PN,
United Kingdom

Annex to IECEx Certificate of Conformity

IECEx TRC 16.0022X issue No.:0

Routine Tests

1. The battery shall be subjected to the test of insulation resistance and is considered satisfactory if the resistance is at least 1 MΩ when tested in accordance with Clause 6.6.2 IEC 60079-7. The resistance shall be measured firstly between the +ve battery cable and the battery enclosure (earth) and secondly between the +ve battery terminal and the battery casing.

Manufacturer's Documents

Title:	Drawing No.:	Rev. Level:	Date:
5116-EXBE 1408Ah 24VDC Ex ec Battery Certification Drawing (Sheets 1 to 3)	5116-101	2	2016-11-08
EXBE-5116 Battery Enclosure Installation and Maintenance Information (2 sheets)	5116-IM	2	2016-11-07