



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 CML 16.0055U Issue No: 0 Certificate history:
Status: **Current** Page 1 of 3 Issue No. 0 (2016-07-11)

Date of Issue: **2016-07-11**

Applicant: **CZ Explosion-proof Electric Appliances Co. Ltd.**
No.1 Qixing Road
Nanhu District
Jiaxing
Zhejiang
China

Equipment: **CZ0516 Increased safety Control Transformer module**
Optional accessory:

Type of Protection: **Increased Safety**

Marking:
Ex eb IIC Gb
-55°C≤Ta≤+55/70°C

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

H M Amos MIET

Position:

Technical Manager

*Signature:
(for printed version)*

Date:

July 11, 2016

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:

Certification Management Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port
CH65 4LZ
United Kingdom





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Manufacturer: **CZ Explosion-proof Electric Appliances Co. Ltd.**
No.1 Qixing Road
Nanhu District
Jiaxing
Zhejiang
China

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/CML/ExTR16.0069/00](#)

Quality Assessment Report:

[CN/CQM/QAR08.0001/04](#)



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Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The CZ0516 Increased safety control transformer module is a range of component certified transformers suitable for incorporation into equipment for use in Zones 1 and Zone 2.

See Annex for full description, Conditions of Manufacture and Schedule of Limitations

CONDITIONS OF CERTIFICATION: NO

Annex:

[Certificate Annex IECEx 16.0055U Iss0.pdf](#)

Annexe to: IECEx CML 16.0055U Issue 0

Applicant: CZ Explosion-proof Electric Appliances Co., Ltd.

Apparatus: CZ0516 Increased safety control transformer module



Description of Equipment

The CZ0516 Increased safety control transformer module is a range of component certified transformers suitable for incorporation into equipment for use in Zones 1 and Zone 2.

The primary and secondary windings are wound onto a non-metallic core former. A terminal rail is attached to the top of the transformer body and this is used to mount component certified terminal blocks.

The transformer is required to be used with an appropriately rated current limiting device and is suitable for use at 50 or 60Hz.

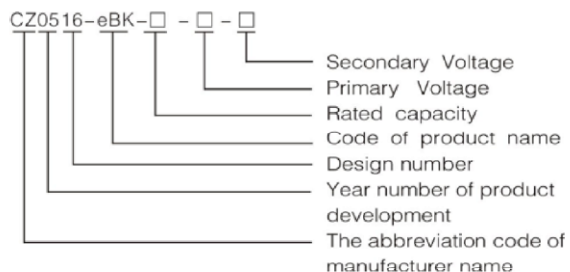
A range of power, primary voltage, and secondary voltages are available:

Power ratings: 100VA, 200VA, 400VA, 550VA, 750VA, 1200VA, 1600VA

Primary voltage (AC): 110V, 115V, 118V, 120V, 127V, 220V, 230V, 240V, 250V, 254V, 280V, 380V, 400V, 415V, 440V, 460V, 480V, 500V, 525V, 600V, 660V, 690V

Secondary voltage (AC) : 12V, 20V, 24V, 25V, 27V, 28V, 30V, 32V, 34V, 36V, 42V, 48V, 50V, 55V, 60V, 110V, 115V, 120V, 220V, 230V, 240V, 250V, 400V.

The product part number is defined as follows:





Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate. A copy of this and any other component certificates shall be supplied with the equipment.
- ii. The transformer shall be subjected to electric strength tests as follows:
 - Primary – secondary at a test voltage of $(1000 + 2U)\text{Vac}$ or 1500Vac (whichever is the greater) where U is the highest of primary and secondary voltages
 - All windings – earth at a test voltage of 500Vac for winding voltages up to 90Vac and for voltages over 90Vac , at a test voltage of $(1000 + 2U)\text{Vac}$ or 1500Vac (whichever is the greater) where U is the highest of primary and secondary voltages.

The test voltage to be applied for 60 s. Alternatively, a voltage of 20% higher may be applied for 1 s. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

Schedule of Limitations

The following conditions relate to safe installation and/or use of the component.

- i. When installed, the transformer shall be subjected to electric strength tests as follows:
 - Primary – secondary at a test voltage of $(1000 + 2U)\text{Vac}$ or 1500Vac (whichever is the greater) where U is the highest of primary and secondary voltages
 - All windings – earth at a test voltage of 500Vac for winding voltages up to 90Vac and for voltages over 90Vac , at a test voltage of $(1000 + 2U)\text{Vac}$ or 1500Vac (whichever is the greater) where U is the highest of primary and secondary voltages.

The test voltage to be applied for 60 s. Alternatively, a voltage of 20% higher may be applied for 1 s. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.
- ii. When installed, with equipment, a temperature test shall be carried out under full load conditions as defined by the current limiting device, in accordance with IEC 60079-7:2015, clause 6.5. The following limits apply:
 - If measured by thermometer, the winding temperature shall not exceed 135°C in the maximum equipment ambient temperature.
 - If measured by the resistance method, the winding temperature shall not exceed 155°C in the maximum equipment ambient temperature



- When installed in equipment and marked with temperature classes T3 to T6, no part of the component shall reach a temperature in excess of the temperature class less 5K. Additionally, the non-metallic winding frame shall not exceed a maximum 250°C and the terminals 110°C, in the maximum equipment ambient temperature.
 - When installed in equipment and marked with temperature classes T1 or T2, no part of the component shall reach a temperature in excess of the temperature class less 10K. Additionally, the non-metallic winding frame shall not exceed 250°C and the terminals 110°C, in the maximum equipment ambient temperature.
- iii. The transformer is required to be used with an appropriately rated current limiting device.
- iv. The transformer when installed into equipment shall be installed in an enclosure meeting IEC 60079-0, section 1.
- v. At ambient temperatures above 55°C, the transformer must not be operated at more than 90% of the rated power.