



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 EPS 15.0049X

Issue No: 1

Certificate history:

Status: **Current**

Issue No. 1 (2017-09-26)

Issue No. 0 (2015-10-19)

Date of Issue: **2017-09-26**

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Applicant: **PULS GmbH**
Elektrastr. 6
81925 München
Germany

Equipment: **DC-UPS**
Optional accessory: *Sensor board*

Type of Protection: **"ec" or "ec nC"**

Marking:
Ex ec nC IIC T3 Gc
Ex ec nC IIC T4 Gc
Ex ec IIC T4 Gc

(depends on model, see Attachment)

Approved for issue on behalf of the IECEX
Certification Body:

Holger Schaffer

Position:

Certification Manager

Signature:
(for printed version)

Date:

2017-09-26



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:

Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany





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Manufacturer: **PULS Investicni s.r.o.**
Prazska 5639
43001 Chomutov
Czech Republic

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 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

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:

DE/EPS/ExTR15.0045/01

Quality Assessment Report:

DE/EPS/QAR12.0010/03



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

DC-UPS (for use with external battery module):
UB10.241, UB10.242, UB10.245, UB20.241

DC-UPS (with integrated battery module):
UBC10.241, UBC10.241-N1

DC-UPS (with integrated capacitor module):
UC10.241, UC10.242

Battery modules:
UZK12.071, UZO12.07, UZK12.261, UZO12.26,
UZK24.071, UZO24.071, UZK24.121, UZO24.121,
UZK12.072, UZO12.072

Sensor board (accessory):
UZS24.100

SPECIFIC CONDITIONS OF USE: YES as shown below:

DC-UPS (for use with external battery module); UB10.241, UB10.242, UB10.245, UB20.241:
The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with IEC 60079-0.

DC-UPS (with integrated capacitor module); UC10.241, UC10.242:
The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with IEC 60079-0.

DC-UPS (with integrated battery module); UBC10.241, UBC10.241-N1:
The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with IEC 60079-0. Sufficient ventilation must be ensured in the final installation.

Battery modules; UZK12.071, UZO12.07, UZK12.261, UZO12.26, UZK24.071, UZO24.071, UZK24.121, UZO24.121, UZK12.072, UZO12.072: The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP 23 in accordance with IEC 60079-0. Sufficient ventilation must be ensured in the final installation.

All models:
Battery modules may be operated in any position, except upside down.
DIN-Rail modules shall be operated in standard orientation (terminals on top/bottom) only.



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The battery modules UZKxx.yyy /UZOxx.yyy shall be connected and charged / discharged with the appropriate DC-UPS UBxx.yyy only.

The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

- additional investigation for type of protection "ec" (replaces "nA")
- testing of product modifications and alternate components
- addition of new models: UZK12.072 and UZO12.072

Annex:

Attachment to DEEPSExTR15.004501.pdf

Model	Ratings
UB10.241	<p>Input: DC 24V (-20%/+25%), max. 17A</p> <p>Output in power supply mode: Input voltage - 0.3V, 15.0A (below +60°C) Input voltage - 0.3V, 11.3A (at +70°C)</p> <p>Output in battery mode: 22.3Vdc, 10A (below +60°C) 22.3Vdc, 7.5A (at +70°C) Short-term, up to 5s: 22.3Vdc, 15A (below +70°C) Derate linearly between +60°C and +70°C</p> <p>Battery: Use a 12V VRLA battery between 3.9 and 40Ah</p> <p>Ambient temperature range: -25°C to +70°C</p> <p>Ex-Code: Ex ec nC IIC T3 Gc</p>
UB10.242	<p>Input: DC 24V (-20%/+25%), max. 18A</p> <p>Output in power supply mode: Input voltage - 0.3V, 15.0A (max. +50°C)</p> <p>Output in battery mode: 22.3Vdc, 10A (max. +50°C) Short-term, up to 5s: 22.3Vdc, 15A</p> <p>Battery: Use a 12V VRLA battery between 17 and 40Ah</p> <p>Ambient temperature range: -25°C to +50°C</p> <p>Ex-Code: Ex ec nC IIC T3 Gc</p>
UB10.245	<p>Input: DC 24V (-20%/+25%), max. 17A</p> <p>Outputs in power supply mode: Max. 360W at +50°C or 180W at +70°C for both outputs</p> <p>Output 1: Input - 0.3V, 15A (below +50°C) Input - 0.3V, 10A (at +70°C)</p> <p>Output 2: 12V, 5A (below +50°C) 12V, 4A (at +70°C)</p> <p>Outputs in battery mode: Max. 240W at 50°C or 120W at 70°C for both outputs</p> <p>Output 1: 22.3V, 10A (below +50°C) 22.3V, 7.5A (at +70°C) Short-term, up to 5s: 22.3V, 15A (at +70°C)</p> <p>Output 2: 12V, 5A (below +50°C) 12V, 4A (at +70°C) Short-term, up to 5s: 12V, 5A (at +70°C) Derate linearly between +50°C and +70°C</p> <p>Battery: Use a 12V VRLA battery between 3.9 and 40Ah</p> <p>Ambient temperature range: -25°C to +70°C</p> <p>Ex-Code: Ex ec nC IIC T3 Gc</p>

Model	Ratings
UBC10.241, UBC10.241-N1	Input: DC 24V (-20%/+25%), max. 17A Outputs in power supply mode: Input - 0.3V, 15A (max. +40°C) Outputs in battery mode: 22.3V, 10A (max. +40°C) Short-term, up to 5s: 22.3V, 15A Ambient temperature range: 0°C to +40°C Ex-Code: Ex ec nC IIC T3 Gc
UB20.241	Input: DC 24V ($\pm 25\%$), max. 28A Output in power supply mode: Input voltage - 0.15V, 25.0A (below +60°C) Input voltage - 0.15V, 18.8A (at +70°C) Short-term, up to 5s: 30.0A (at +70°C) Output in battery mode: Selectable: 22.5V, 24.0V, 25.0V or 26.0V Max. 20A or 468W (below +60°C) Max. 15A or 351W (at +70°C) Short-term, up to 4s: 50% current reserves Derate linearly between +60°C and +70°C Battery: Use a 24V VRLA battery module between 3.9 and 150Ah. Ambient temperature range: -40°C to +70°C Ex-Code: Ex ec nC IIC T4 Gc
UC10.241	Input: DC 24V (-20%/+25%), max. 17A Output in power supply mode: Input voltage - 0.3V, 15.0A (max. +60°C) Output in capacitor mode: 22.3Vdc, 15A (max. +60°C) Back-up time: Typ. 16.5s at 10A or 9.0s at 15A Ambient temperature range: -40°C to +60°C Ex-Code: Ex ec nC IIC T4 Gc
UC10.242	Input: DC 24V (-20%/+25%), max. 17A Output in power supply mode: Input voltage - 0.3V, 15.0A (max. +60°C) Output in capacitor mode: 22.3Vdc, 15A (max. +60°C) Back-up time: Typ. 33s at 10A or 18s at 15A Ambient temperature range: -40°C to +60°C Ex-Code: Ex ec nC IIC T4 Gc
UZK12.071, UZO12.07	Nominal battery voltage and capacity: 12Vdc, 7Ah Temperature ranges: For charging: -10°C to +40°C For discharging: -15°C to +50°C Ex-Code: Ex ec IIC T4 Gc

Model	Ratings
UZK12.261, UZO12.26	Nominal battery voltage and capacity: 12Vdc, 26Ah Temperature ranges: For charging: -15°C to +50°C For discharging: -20°C to +60°C Ex-Code: Ex ec IIC T4 Gc
UZK24.071, UZO24.071	Nominal battery voltage and capacity: 24Vdc, 7Ah Temperature ranges: For charging: -10°C to +40°C For discharging: -15°C to +50°C Ex-Code: Ex ec IIC T4 Gc
UZK24.121, UZO24.121	Nominal battery voltage and capacity: 24Vdc, 12Ah Temperature ranges: For charging: -10°C to +40°C For discharging: -15°C to +50°C Ex-Code: Ex ec IIC T4 Gc
UZK12.072, UZO12.072	Nominal battery voltage and capacity: 12Vdc, 7Ah Temperature ranges: For charging: -10°C to +40°C For discharging: -15°C to +50°C Ex-Code: Ex ec IIC T4 Gc
UZS24.100	N/A (<i>accessory</i>)