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

Certificate No.: **IECEx EPS 14.0001X**

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Certificate history:
Issue 4 (2021-04-29)
Issue 3 (2020-11-11)
Issue 2 (2018-04-20)
Issue 1 (2015-12-08)
Issue 0 (2014-01-22)

Status: **Current**

Issue No: 5

Date of Issue: 2023-12-20

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

Equipment: **Power Supply (built-in): CD5.241; CD5.241-S1; CD5.241-L1; CD5.121; CD5.242; CD5.243; CD5.051 (optinal with suffix: "-C1" or "C2")**

Optional accessory: N/A

Type of Protection: **ec nC**

Marking: Ex ec nC IIC T4 Gc

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

Position: **Head of Certification**

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:

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

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

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

PULS Electronics (Suzhou C) Co., Ltd
No. 1 Rui-en Lane Xingpu Road
Suzhou Industrial Park, 21512 Suzhou
City Jiang Su Province
China

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-15:2017 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/EPS/ExTR14.0001/05

Quality Assessment Report:

DE/EPS/QAR12.0010/20

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The product is a DC/DC power supply intended for built-in use. The DC/DC converter is supplied with 12 / 24 / 48 Vdc and provides an isolated output with 24 Vdc.

The equipment is type of protection "ec"; type of protection "nC" was applied for the relays only.

All devices are designed for installation in an enclosure providing protection against electrical, mechanical and fire hazards and are intended for general use such as in industrial control, power distribution and instrumentation equipment.

Optional suffix “-C1” stands for coating of the printed circuit board; no safety relevance.

Optional suffix “-C2” stands for partial coating of the printed circuit board; no safety relevance.

CD5.241–S1: This model is identical to CD5.241, but is provided with quick-connect spring clamp terminals.

CD5.241-L1: This model is identical to CD5.241, but is provided with limited power for special purposes (NEC Class 2 power limitation).

For electrical specifications / ratings refer to Annex of this document.

SPECIFIC CONDITIONS OF USE: YES as shown below:
- The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with IEC 60079-0.

- The equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.

- Reduced output current conditions must be considered for high ambient temperatures and non-standard mounting orientations.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Addition of CD5.051; update of IEC 60079-15:2017 (ed.5.1)

Annex:

IECEx EPS 14.0001X - Annex_rev. 5_1.pdf

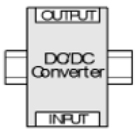
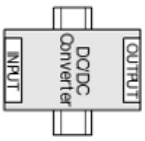
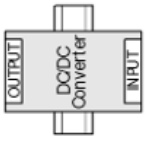
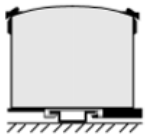
Annex to Certificate
IECEx EPS 14.0001X (Rev.5)

Electrical Data:

CD5.121: Input: DC 24 V(-25%/ +35%) | 5.6 A Output: DC 12-15 V | 9.6-7.7 A (below +45 °C) DC 12-15 V | 8.0-6.4 A (at +60 °C) DC 12-15 V | 6.0-4.8 A (at +70 °C) Derate linearly between +45 °C and +70 °C	**CD5.241:** Input: DC 24 V(-25%/ +35%) | 7.0 A Output: DC 24-28 V | 6.0-5.1 A (below +45 °C) DC 24-28 V | 5.0-4.3 A (at +60 °C) DC 24-28 V | 3.8-3.2 A (at +70 °C) Derate linearly between +45 °C and +70 °C
CD5.241-L1: Input: DC 24 V(-40%/ +35%) | 5.5 A Output: DC 24 V | 3.8 A (max. +70 °C)	**CD5.241-S1:** Input: DC 24 V(-25%/ +35%) | 7.0 A Output: DC 24-28 V | 6.0-5.1 A (below +45 °C) DC 24-28 V | 5.0-4.3 A (at +60 °C) DC 24-28 V | 3.8-3.2 A (at +70 °C) Derate linearly between + 45 °C and +70 °C
CD5.242: Input: DC 48 V(±25%) | 3.5 A Output: DC 24-28 V | 6.0-5.1 A (below +45 °C) DC 24-28 V | 5.0-4.3 A (at +60 °C) DC 24-28 V | 3.8-3.2 A (at +70 °C) Derate linearly between +45 °C and +70 °C	**CD5.243:** Input: DC 12 V(-10% / +35%), 12 A Output: DC 24-28 V | 4.8-4.1 A (below +45 °C) DC 24-28 V | 4.0-3.4 A (at +60 °C) DC 24-28 V | 3.0-2.6 A (at +70 °C) Input: DC 12 V(-30%) | 12 A Output: DC 24-28 V | 4.0-3.4 A (below +45 °C) DC 24-28 V | 3.2-2.7 A (at +60 °C) DC 24-28 V | 2.4-2.1 A (at +70 °C) Derate linearly between +45 °C and +70 °C

CD5.051 Input: DC 24V, 3,2A Output: DC 5-5,5V, 12A (below +45°C) DC 5-5,5V, 10A (at +60°C) DC 5-5,5V, 7,5A (at +70°C) Derate linearly between +60°C and +70°C	

Derating conditions due to mounting position

	Standard	90° clockwise (cw) rotated	90° counter clockwise (ccw) rotated	Upside down	Table top
					
CD5.121	96W at +60°C	86.4W at +60°C	86.4W at +60°C	86.4W at +60°C	86.4W at +60°C
CD5.241 CD5.241-S1	120W at +60°C	108W at +60°C	108W at +60°C	108W at +60°C	108W at +60°C
CD5.241-L1	91.2W at +60°C	91.2W at +60°C	91.2W at +60°C	91.2W at +60°C	91.2W at +60°C
CD5.242	120W at +60°C	108W at +60°C	108W at +60°C	108W at +60°C	108W at +60°C
CD5.242	96W at +60°C	76.8W at +60°C	76.8W at +60°C	76.4W at +60°C	76.8W at +60°C
CD5.051	55W at + 60°C	49.5W at + 60°C	49.5W at + 60°C	49.5W at + 60°C	49.5W at + 60°C