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 12.0032X**

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Certificate history:

Status: **Current**

Issue No: 7

Issue 6 (2021-04-29)
Issue 5 (2020-09-21)
Issue 4 (2017-06-22)
Issue 3 (2016-09-12)
Issue 2 (2016-01-21)
Issue 1 (2014-01-14)
Issue 0 (2012-11-12)

Date of Issue: 2022-07-25

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

Equipment: **MLY02.100, MLY10.241, YR80.241, YR40.241, YR2.DIODE, YRM2.DIODE, YR40.242, YR40.245, YR40.482, YR80.242, YR20.242, YR20.246, PIRD20.241**

Optional accessory: (All models optional with suffix "-C1" or "-C2")

Type of Protection: **ec / ec nC**

Marking: Ex ec IIC T4 Gc
Ex ec nC IIC T4 Gc (YRM2.DIODE and YR20.246 only)

Approved for issue on behalf of the IECEx Certification Body:

Position:

Signature:
(for printed version)

Date:
(for printed version)

Ulrich Felke

Head of Certification

2022-07-25

ZERTIFIZIERUNGSSTELLE BUREAU VERITAS Bureau Veritas CPS Germany GmbH 1828

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2. This certificate is not transferable and remains the property of the issuing body.
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Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany

BUREAU VERITAS

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Date of issue: 2022-07-25

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Manufacturer:
PULS GmbH
Elektrastr. 6
81925 München
Germany

Manufacturing locations:

PULS GmbH
Elektrastr. 6
81925 München
Germany

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 Edition:7.0 — Explosive atmospheres - Part 0: Equipment - General requirements

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

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

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/ExTR12.0005/07

Quality Assessment Report:

DE/EPS/QAR12.0010/16

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

MLY02.100, MLY10.241, YR2.DIODE, YRM2.DIODE, YR40.241, YR80.241, YR40.242, YR40.245, YR40.482, YR80.242, YR20.242, YR20.246, PIRD20.241 (all models optional with suffix "-C1")

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.

The devices are redundancy modules for parallel connection and isolation of the outputs of two power supplies. If one power supply fails, the second power supply provides the required power to the system.

Refer to "Equipment (continued)" for electrical data.

SPECIFIC CONDITIONS OF USE: YES as shown below:
- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with IEC 60079-7.

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

- Output power de-rating conditions at high ambient temperatures must be considered according to manufacturer's instructions.

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Equipment (continued):

MLY02.100 **Input 1+2:** DC 12-48V (±25%), 5A continuous, 7.5A up to 5s **Output:** 10A cont., 15A up to 5s (below 60°C) 7.5A cont., 15A up to 5s (at 70°C) Derate linearly between +60°C and +70°C Input to output voltage loss: typ. 0.9V	**MLY10.241** **Input 1+2:** DC 12-48V (±25%), 5A continuous, 7.5A up to 5s **Output:** 10A cont., 15A up to 5s (below 60°C) 7.5A cont., 15A up to 5s (at 70°C) Derate linearly between +60°C and +70°C Input to output voltage loss: typ. 0.9V	**YR2.DIODE** **Input 1+2:** 1: DC 12-48V (±25%), 10A continuous, 15A up to 5s 2: DC 12-48V (±25%), 10A continuous, 15A up to 5s **Output:** 20A continuous, 30A up to 5s (below 60°C) 15A continuous, 30A up to 5s (at 70°C) Derate linearly between +60°C and +70°C Input to output voltage loss: typ. 0.78V
YRM2.DIODE **Input 1+2:** 1: DC 24-48V (±25%), 10A continuous, 15A up to 5s 2: DC 24-48V (±25%), 10A continuous, 15A up to 5s **Output:** 20A continuous, 30A up to 5s (below 60°C) 15A continuous, 30A up to 5s (at 70°C) Derate linearly between +60°C and +70°C Input to output voltage loss: typ. 0.78V	**YR40.241** **Input 1+2:** 1: DC 12-28V (±30%), 20A continuous, 32.5A up to 5s 2: DC 12-28V (±30%), 20A continuous, 32.5A up to 5s **Output:** 40A continuous, 65A up to 5s (below 70°C) Input to output voltage loss: typ. 0.072V	**YR40.242** **Input 1+2:** 1: DC 12-28V (±30%), 20A continuous, 32.5A up to 5s 2: DC 12-28V (±30%), 20A continuous, 32.5A up to 5s **Output:** 40A continuous, 65A up to 5s (below 60°C) 30A continuous, 65A up to 5s (at 70°C) Derate linearly between +60°C and +70°C Input to output voltage loss: typ. 0.072V
YR80.241 **Input 1+2:** 1: DC 12-28V (±30%), 40A continuous, 65A up to 5s 2: DC 12-28V (±30%), 40A continuous, 65A up to 5s **Output:** 80A continuous, 130A up to 5s (below 70°C) Input to output voltage loss: typ. 0.049V	**YR80.242** **Input 1+2:** 1: DC 12-28V (±30%), 40A continuous, 65A up to 5s 2: DC 12-28V (±30%), 40A continuous, 65A up to 5s **Output:** 80A continuous, 130A up to 5s (below 60°C) 60A continuous, 130A up to 5s (at 70°C) Derate linearly between +60°C and +70°C Input to output voltage loss: typ. 0.065V	**YR40.245** **Input:** DC 12-28V (±30%), 40A continuous, 65A up to 5s **Output:** 40A continuous, 65A up to 5s (below 60°C) 30A continuous, 65A up to 5s (at 70°C) Derate linearly between +60°C and +70°C Input to output voltage loss: typ. 0.15V
YR40.482 **Input 1+2:** 1: DC 24-56V (±15%), 20A continuous, 32.5A up to 5s 2: DC 24-56V (±15%), 20A continuous, 32.5A up to 5s **Output:** 40A continuous, 65A up to 5s (below 60°C) 30A continuous, 65A up to 5s (at 70°C) Derate linearly between +60°C and +70°C Input to output voltage loss: typ. 0.06V	**YR20.242** **Input 1+2** 1: DC 12-28V (±30%), 20A continuous, 32,5A up to 5s 2: DC 12-28V (±30%), 20A continuous, 32,5A up to 5s **Output:** 24A continuous, 32,5A up to 5s (below 45°C) 20A continuous, 32,5A up to 5s (below 70°C) Derate linearly between +45°C and +70°C Input to output voltage loss: typ. 0,06V	**YR20.246** **Input 1+2** 1: DC 24-28V (±25%), 12A continuous, 17A up to 5s 2: DC 24-28V (±25%), 12A continuous, 17A up to 5s **Output:** 24A continuous, 32,5A up to 5s (below 45°C) 20A continuous, 32,5A up to 5s (below 70°C) Derate linearly between +45°C and +70°C Input to output voltage loss: typ. 0,06V
PIRD20.241 **Input 1+2** 1: DC 12-28V (±25%), 10A continuous, 16A up to 5s 2: DC 12-28V (±25%), 10A continuous, 16A up to 5s **Output:** 20A continuous, 32A up to 5s (below 55°C) 12,5A continuous, 32A up to 5s (below 70°C) Derate linearly between +55°C and +70°C Input to output voltage loss: typ. 0,56V		

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Evaluation of minor technical product changes.