



# 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](http://www.iecex.com)

### Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX EPS 25.0040U** Page 1 of 4 [Certificate history:](#)  
Status: **Current** Issue No: 0  
Date of Issue: 2025-09-29  
Applicant: **PULS GmbH**  
Elektrastr. 6, 81925 Muenchen  
**Germany**  
Ex Component: SP960.bbc-dd-eee

*This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).*

Type of Protection: **ec nC**  
Marking: Ex ec nC IIC Gc

Approved for issue on behalf of the IECEX  
Certification Body:

Position:

Signature:  
(for printed version)

Date:  
(for printed version)



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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](http://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 Muenchen  
**Germany**

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

**PULS ELECTRONICS (SUZHOU) CO  
LTD**  
No. 1 Rui-en Lane Xingpu Road  
Suzhou Industrial Park  
Suzhou City Jiang Su Province 21512  
**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 component 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 component listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/EPS/ExTR25.0038/00](#)

Quality Assessment Report:

[DE/EPS/QAR12.0010/24](#)



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## Ex Component(s) covered by this certificate is described below:

The equipment under test is a component level power supply for built-in use.

### SP960.bbc-dd-eee

bb = 24 or 48

c = 1 or 3

dd = S, SB, SC, SR, SRC, or blank (and optional suffix: 70-89)

eee = IOL, DISPLAY or blank

### Family nomenclature

#### SP960.bbc-dd-eee

**SP** Single-phase Input

**960** 960W Output Power Indication

**bb 24** Nominal output voltage 24 V or 24 - 28 V

**48** Nominal output voltage 48 V or 48 - 56 V

**c** Indicates product variant

**1** Focus product

**3** Variant with Remote ON/OFF input

**dd** Can be one, two or three letters or a number between 70 and 89 or be blank.

**blank** Quick-connect spring-clamp terminals (currently no models planned)

**S** Unit with screw terminals

**SB** Unit with DC-Link connection terminal

**SC** Unit with screw terminals and conformally coated pc-board

**SR** Unit with screw terminals and redundancy option

**SRC** Unit with screw terminals, conformally coated pc-board, and redundancy option

**70-89** Consecutive number for slightly modified variants with only minor, non-safety-relevant deviations

**eee** Communication Interface (optional)

**blank** No communication provided

**IOL** IO-Link

**DISPLAY** Power Supply Condition Display on the front of the unit

### SCHEDULE OF LIMITATIONS:

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

The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with IEC 60079-0.

For 48 V models (SP960.48c-dd-eee) there are different output power ratings for regular industrial environments (24 A) and for areas with explosive gas atmospheres (22 A). Reduced output power ratings apply for installation in applications with explosive gas atmospheres for compliance with T4 temperature limitation.

The equipment fulfils the requirements for temperature class T4 when installed and operated according to manufacturer's instructions. The requirements for maximum surface temperature shall be re-evaluated in the end-product. The verification may be done by re-measuring the temperature on component V111 (body); the temperature should be below the highest measured temperature during the type tests (129.5 °C).



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## Additional information:

### **SP960.24c-dd-eee:**

#### AC 100 V Mains

##### Input

AC 100 V $\pm$ 10%, 13.2 A, 50 - 60 Hz

##### Output

DC 24 – 28 V

48.0 - 41.1 A cont. below +40 °C

40.0 - 34.3 A cont. at +55 °C

30.0 - 25.7 A cont. at +70 °C

60.0 - 51.4 A up to 5 s

Derate linearly between +40 °C and +70 °C

#### AC 120 - 240 V Mains

##### Input

AC 120 - 240 V $^{-15\%/+10\%}$ , 10.8 - 5.3 A, 50 - 60 Hz

##### Output

DC 24 – 28 V

48.0 - 41.1 A cont. below +45 °C

40.0 - 34.3 A cont. at +60 °C

30.0 - 25.7 A cont. at +70 °C

60.0 - 51.4 A up to 5 s

Derate linearly between +45 °C and +70 °C

Ambient temp. range: -25 °C to +70 °C

### **SP960.48c-dd-eee:**

#### AC 100 V Mains

##### Input

AC 100 V $\pm$ 10%, 13.2 A, 50 - 60 Hz

##### Output

DC 48 – 56 V

22.0 - 20.6 A cont. below +40 °C

20.0 - 17.1 A cont. at +55 °C

15.0 - 12.9 A cont. at +70 °C

30.0 - 25.7 A up to 5 s

Derate linearly between +40 °C and +70 °C

#### AC 120 - 240 V Mains

##### Input

AC 120 - 240 V $^{-15\%/+10\%}$ , 10.8 - 5.3 A, 50 - 60 Hz

##### Output

DC 48 – 56 V

22.0 - 20.6 A cont. below +45 °C

20.0 - 17.1 A cont. at +60 °C

15.0 - 12.9 A cont. at +70 °C

30.0 - 25.7 A up to 5 s

Derate linearly between +45 °C and +70 °C

Ambient temp. range: -25 °C to +70 °C