



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

EX COMPONENT CERTIFICATE

Certificate No.: **IECEx SEV 19.0026U**

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Certificate history:

Issue 0 (2019-09-24)

Status: **Current**

Issue No: 1

Date of Issue: **2019-10-18**

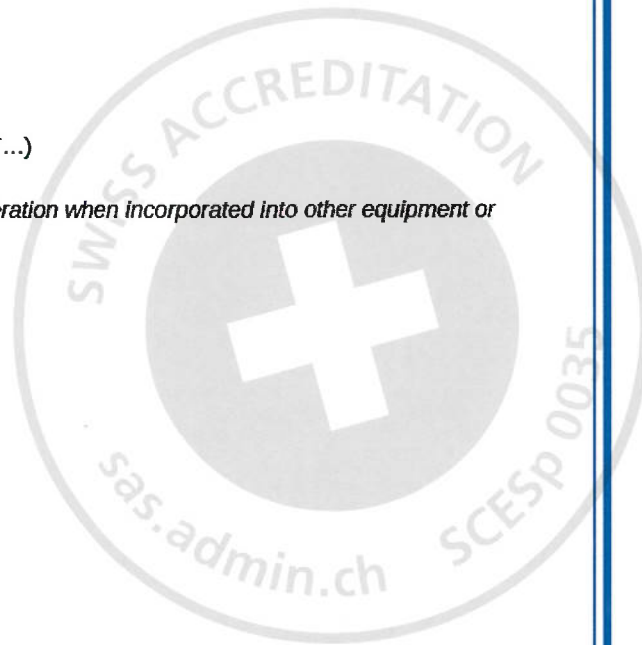
Applicant: **PHOENIX CONTACT GmbH & CO KG**
Flachsmarkstrasse 8
32825 Blomberg
Germany

Ex Component: **Printed Circuit Terminal Blocks, SPTAF 1/...-EX(PROFINET...)**

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: **e**

Marking: **Ex eb IIC T6...T1 Gb**



Approved for issue on behalf of the IECEx
Certification Body:

Martin Plüss

Position:

Manager Product Certification

Signature:
(for printed version)

Date:

2019-10-18

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:

Eurofins Electric & Electronic Product Testing AG
Luppenstrasse 3
CH-8320 FEHRALTORF
Switzerland



E&E



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Manufacturer: **PHOENIX CONTACT GmbH & CO KG**
Flachmarkstrasse 8
32825 Blomberg
Germany

Additional
manufacturing
locations:

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 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

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:

[CH/SEV/EXTR19.0027/01](#)

Quality Assessment Report:

[NL/DEK/QAR11.0009/06](#)



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

The circuit board terminals connect copper lines to electrical assemblies. The terminals are group II components in the categories 2G and are mounted on the circuit board by soldering.

The wiring is to be introduced without a tool into the connectors. A locking pressure mechanism ensures the connection. It can be released by applying a force with a screwdriver to remove the wires.

Components are to be introduced into an enclosure and are therefore marked by "U".

More information see Appendix

SCHEDULE OF LIMITATIONS:

The device marking is denoted by "U" to specified that:

The device is to be inserted into an IP54 enclosure that meet the requirements of the standards IEC/EN 60079-0 and IEC/EN 60079-7.

Conductors with smaller cross-sections than the rated cross-section specified for the terminal block can be chosen. The current is to adapted in consequence.

The terminal blocks are suitable for use into an equipment (in a junction boxes or a connection boxes) of temperature class T6...T1. This applies with the condition that the specified rated current is not exceeded and that the ambient temperature in the immediate vicinity of the terminal blocks is a maximum of +40 °C.

When the terminal blocks is used in an equipment of temperature classes T6 to T1, the highest insulation temperature must not exceed 100 °C (during operation).

The service temperature is: - 60 °C ... 100 °C.

Make sure that the terminal solder connections are not mechanically stressed. Additionally secure the terminals on the printed circuit board or in the housing with following suitable mounting options: - Screwing - Deformation of the solder pins before soldering - Other appropriate measure

By using the terminals in combination with qualified accessories, clearances and creepage distances must comply with IEC 60079-7.

During the conductor connection, make sure that the core insulation of the cables protrude as far as possible into the cable funnels of the terminal.

For flexible cables with ferrules, use only qualified crimping tool. The length of the conductive part of the ferrule must match the specified stripping length.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Correctio of typos

Annex:

IECEX SEV 19.0026U App Issue 1.pdf



Appendix to: IECEx SEV 19.0026U

Issue No.: 1

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Applicant Name: Phoenix Contact GmbH & Co. KG

Electrical Apparatus: Printed Circuit Terminal Blocks SPTAF 1/...-EX(PROFINET...)

Model/type reference: SPTAF 1/...-3,5-IL-EX(PROFINET...)
SPTAF 1/...-3,5-EL-EX(PROFINET...)
SPTAF 1/...-5,0-IL-EX(PROFINET...)
SPTAF 1/...-5,0-EL-EX(PROFINET...)

Rating: SPTAF 1/...-3,5-IL-EX(PROFINET...), and
SPTAF 1/...-3,5-EL-EX(PROFINET...) : $U_n = 44$ VAC
SPTAF 1/...-5,0-IL-EX(PROFINET...), and
SPTAF 1/...-5,0-EL-EX(PROFINET...) : $U_n = 137.5$ VAC

The circuit board terminals connect copper lines to electrical assemblies. The terminals are group II components in the categories 2G and are mounted on the circuit board by soldering. The wiring is to be introduced without a tool into the connectors. A locking pressure mechanism ensures the connection. It can be released by applying a force with a screwdriver to remove the wires. Components are to be introduced into an enclosure and are therefore marked by "U".

Classification of installation and use:

Rated ambient temperature range (°C):

Rated ambient temperature range (°C) for Ex Components:

Stationary

See below

$T_{amb\ min} = -60$ °C

The maximal service temperature is 100 °C and depends on the current rating and on the ambient temperature

Eurofins Electric & Electronic Product Testing AG
Swiss Certification Body



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Ex component technical information:

Type:	SPTAF 1/...- 3,5-IL-EX...	SPTAF 1/...- 3,5-EL-EX...	SPTAF 1/...- 5,0-IL-EX...	SPTAF 1/...- 5,0-EL-EX...
Rated voltage [V]	44 VAC	44 VAC	137.5 VAC	137.5 VAC
- with jumper FBS...	none	none	none	none
- with skipping jumper [V]	none	none	none	none
- with skipping jumper type PE [V]	none	none	none	none
- with cut to length bridge [V]	none	none	none	none
- with cut to length bridge and cover type D [V]	none	none	none	none
- with cut to length bridge and cover type ATP [V]	none	none	none	none
Rated current [A]	16 AAC	16 AAC	16 AAC	16 AAC
with jumper type FBS ... [A]	---	---	---	---
Max. load current [A]	16 AAC	16 AAC	16 AAC	16 AAC
Temperature rise [K]	40	40	40	40
Contact resistance [mΩ]				
- first level	0.8	0.8	0.8	0.8
- second level	---	---	---	---
- third level	---	---	---	---
- lower / upper level	---	---	---	---
Rated cross-section [mm²] (AWG)	1,5	1,5	1,5	1,5
Connectable conductor cross-section				
- rigid [mm²] (AWG)	0.2 ... 1.5	0.2 ... 1.5	0.2 ... 1.5	0.2 ... 1.5
- flexible [mm²] (AWG)	0.2 ... 1.5	0.2 ... 1.5	0.2 ... 1.5	0.2 ... 1.5
- rigid with end ferrule [mm²] (AWG)	0.25 ... 0.75	0.25 ... 0.75	0.25 ... 0.75	0.25 ... 0.75
- flexible with end ferrule [mm²] (AWG)	0.25 ... 0.75	0.25 ... 0.75	0.25 ... 0.75	0.25 ... 0.75
Assembly as stated	Assembly: by hand Disconnection: screwdriver SZF 0-0,4X2,5 - 1204504	Assembly: by hand Disconnection: screwdriver SZF 0-0,4X2,5 - 1204504	Assembly: by hand Disconnection: screwdriver SZF 0-0,4X2,5 - 1204504	Assembly: by hand Disconnection: screwdriver SZF 0-0,4X2,5 - 1204504
Stripping length [mm]	8	8	8	8
Service temperature [°C]	-60 ... +100	-60 ... +100	-60 ... +100	-60 ... +100
Connecting capacity (number of conductors per clamping unit)	1	1	1	1
Torque force	none	none	none	none