



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 KEM 06.0051U	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 9	Issue 8 (2021-07-29)
Date of Issue:	2023-08-28		Issue 7 (2020-02-27)
Applicant:	Phoenix Contact GmbH & Co. KG Flachsmarktstraße 8 Blomberg 32825 Germany		Issue 6 (2019-03-01)
Ex Component:	Terminal Blocks: ST 2,5; ST 2,5-TWIN; ST 2,5-QUATTRO and STTB 2,5(-PV) and Protective Conductor Terminal Blocks: ST 2,5-PE; ST 2,5-TWIN-PE; ST 2,5-QUATTRO-PE and STTB 2,5 PE		Issue 5 (2013-12-20)
			Issue 4 (2012-11-30)
			Issue 3 (2009-07-24)
			Issue 2 (2008-04-17)
			Issue 1 (2007-06-01)
			Issue 0 (2007-02-05)

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: **Increased Safety**

Marking: Ex eb IIC Gb

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

2023-08-28

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Meander 1051
6825 MJ Arnhem
Netherlands





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Manufacturer: **Phoenix Contact GmbH & Co. KG**
Flachsmarktstraße 8
Blomberg 32825
Germany

Manufacturing locations: **Phoenix Contact GmbH & Co. KG**
Flachsmarktstraße 8
Blomberg 32825
Germany

**Nanjing PHOENIX CONTACT Ltd.
and PHOENIX CONTACT Asia-
Pacific (Nanjing) Co. Ltd.**
36 Phoenix Road, Jiangning
Development Zone
Nanjing, 211100, Jiangsu Province
China

PHOENIX CONTACT India Pvt. Ltd.
Prithla-Datir Road, Dudhola, Dist.
Palwal, Haryana
India

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 60079-7:2017](#) 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 Reports:

[NL/DEK/ExTR21.0026/00](#)

[NL/KEM/ExTR06.0053/07](#)

Quality Assessment Reports:

[NL/DEK/QAR11.0009/09](#)

[NL/DEK/QAR11.0010/07](#)

[NL/DEK/QAR11.0011/07](#)



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

Terminal Blocks (all colors) ST 2,5; ST 2,5-TWIN; ST 2,5-QUATTRO and STTB 2,5(-PV) as well as Protective Conductor Terminal Blocks ST 2,5-PE; ST 2,5 TWIN-PE; ST 2,5-QUATTRO-PE and STTB 2,5-PE with accessories are intended for the connection of copper conductors in enclosures fulfilling the degree of protection which is required by the applied type of protection for the end-application. The Protective Conductor Terminal Blocks are intended for installation on mounting rails type NS 35 according to IEC 60715 Section TH 35.

Operating temperature range -60 °C to +110 °C.

For electrical data and nomenclature see Annex 1.

SCHEDULE OF LIMITATIONS:

1. The Terminal Blocks and Protective Conductor Terminal Blocks shall be mounted in a certified enclosure that meets the requirements of an approved type of protection as specified in IEC 60079-0 clause 1, with a degree of protection at least as required for Ex e.
2. When assembling with other certified series and sizes and using the associated accessories, the required creepage distances and clearances have to be observed.
3. The installation instruction of the manufacturer shall be followed e.g. for the use of cover, jumpers, end brackets. The data regarding current and associated temperature rise shall be used as guideline for the given conductor cross sections. The cross section has an influence on the temperature rise which shall be assessed in the end application.
4. If the Terminal Blocks and Protective Conductor Terminal Blocks are used in electrical apparatus of temperature classes T1 up to T5, the highest temperature of the insulating material shall not exceed the maximum value of the operating temperature range.
5. If the Terminal Blocks and Protective Conductor Terminal Blocks are used in electrical apparatus of temperature classes T6 the permissible ambient temperature range is $-60\text{ °C} < T_{amb} < +40\text{ °C}$.
6. The electrical data per Annex 1 applies.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

1. Addition of the rated voltage for bridging between non adjacent terminal blocks.
2. Minor editorial changes.

Annex:

[226295800-ExTR06.0053.07-Annex1.pdf](#)

Electrical data

Note 1: in this document [,] is used as decimal separator.

All values are values of terminal blocks without bridges, unless indicated otherwise.

Terminal blocks

Type:	ST 2,5	ST 2,5-TWIN
Rated insulation voltage [V]	500	500
Rated voltage [V]	550	550
Rated voltage with plug-in bridge type FBS		
- at bridging between adjacent terminal blocks [V]	550	550
- at bridging between non-adjacent terminal blocks [V]	352	352
- with plug-in bridge via PE terminal block [V]	352	352
- with cut-to-length bridge and cover D [V]	220	220
- with cut-to-length bridge and partition plate ATP [V]	275	275
Rated current [A]	20,5	21
- with plug-in bridge type FBS... [A]	23	22,5
Maximum load current [A]	26,5	24,5
Temperature rise [K]	40 (22,8 A / 2,5 mm ²)	40 (23,4 A / 2,5 mm ²)
Contact resistance [mΩ]	1,04	1,08
Rated cross section [mm ²] (AWG)	2,5 (14)	2,5 (14)
Connectable conductor cross section		
- rigid [mm ²] (AWG)	0,08 - 4,0 (28-12)	0,08 - 4,0 (28-12)
- flexible [mm ²] (AWG)	0,08 - 2,5 (28-14)	0,08 - 2,5 (28-14)
Type:	ST 2,5-QUATTRO	
Rated insulation voltage [V]	500	
Rated voltage [V]	550	
Rated voltage with plug-in bridge type FBS		
- at bridging between adjacent terminal blocks [V]	550	
- at bridging between non-adjacent terminal blocks [V]	352	
- with plug-in bridge via PE terminal block [V]	352	
- with cut-to-length bridge and cover D [V]	220	
- with cut-to-length bridge and partition plate ATP [V]	275	
Rated current [A]	22	
- with plug-in bridge type FBS... [A]	21,5	
Maximum load current [A]	26	
Temperature rise [K]	40 (24,2 A / 2,5 mm ²)	
Contact resistance [mΩ]	1,17	
Rated cross section [mm ²] (AWG)	2,5 (14)	
Connectable conductor cross section		
- rigid [mm ²] (AWG)	0,08 - 4,0 (28-12)	
- flexible [mm ²] (AWG)	0,08 - 2,5 (28-14)	

Type:	STTB 2,5	STTB 2,5-PV
Rated insulation voltage [V]	400	400
Rated voltage [V]	440	440
Rated voltage with plug-in bridge type FBS		
- at bridging between adjacent terminal blocks [V]	440	440
- at bridging between non-adjacent terminal blocks [V]	352	352
- with plug-in bridge via PE terminal block [V]	352	352
- with cut-to-length bridge and cover D [V]	220	220
- with cut-to-length bridge and partition plate ATP [V]	220	220
Rated current [A]	19,5	19,5
- with plug-in bridge type FBS... [A]	17	17
Maximum load current [A]	23,5	23,5
Temperature rise [K]	40 (21,9 A / 2,5 mm ²)	40 (21,9 A / 2,5 mm ²)
Contact resistance [mΩ]	--	--
- Level 1	1,04	1,04
- Level 2	0,83	0,83
- Level 1./2. (PV-connection)	-	1,04
Rated cross section [mm ²] (AWG)	2,5 (14)	2,5 (14)
Connectable conductor cross section		
- rigid [mm ²] (AWG)	0,08 - 4,0 (28-12)	0,08 - 4,0 (28-12)
- flexible [mm ²] (AWG)	0,08 - 2,5 (28-14)	0,08 - 2,5 (28-14)

Protective conductor terminal blocks

Type:	ST 2,5-PE	ST 2,5-TWIN-PE
Rated cross section [mm ²] (AWG)	2,5 (14)	2,5 (14)
Connectable conductor cross section		
- rigid [mm ²] (AWG)	0,08 - 4,0 (28-12)	0,08 - 4,0 (28-12)
- flexible [mm ²] (AWG)	0,08 - 2,5 (28-14)	0,08 - 2,5 (28-14)

Type:	ST 2,5-QUATTRO-PE	STTB 2,5-PE
Rated cross section [mm ²] (AWG)	2,5 (14)	2,5 (14)
Connectable conductor cross section		
- rigid [mm ²] (AWG)	0,08 - 4,0 (28-12)	0,08 - 4,0 (28-12)
- flexible [mm ²] (AWG)	0,08 - 2,5 (28-14)	0,08 - 2,5 (28-14)

