



# 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.:	<b>IECEX PTB 10.0021U</b>	Page 1 of 5	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 6	Issue 5 (2022-06-08)
Date of Issue:	2022-08-30		Issue 4 (2021-11-17)
Applicant:	<b>PHOENIX CONTACT GmbH &amp; Co. KG</b> Flachsmarktstrasse 8 32825 Blomberg Germany		Issue 3 (2014-11-24)
Ex Component:	Terminal blocks, Type PT 2,5 (R1)***, PT 2,5 (R1)***-PE , PTTB 2,5 (R1)***, PTTB 2,5-PE (R1)		
<i>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).</i>			
Type of Protection:	<b>Increased Safety "eb"</b>		
Marking:	Ex eb IIC Gb		

Approved for issue on behalf of the IECEx  
Certification Body:

**Dr.-Ing. Detlev Markus**

Position:

**Head of Department "Explosion Protection in Energy Technology"**

Signature:  
(for printed version)

Date:  
(for printed version)

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Certificate issued by:

**Physikalisch-Technische Bundesanstalt (PTB)**  
Bundesallee 100  
38116 Braunschweig  
Germany





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Manufacturer: **PHOENIX CONTACT GmbH & Co. KG**  
Flachsmarktstrasse 8  
32825 Blomberg  
**Germany**

Manufacturing locations: **PHOENIX CONTACT GmbH & Co. KG**  
Flachsmarktstrasse 8  
32825 Blomberg  
**Germany**

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

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

## See following pages for more 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 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 Report:

[DE/PTB/ExTR09.0063/06](#)

Quality Assessment Reports:

[NL/DEK/QAR11.0009/08](#)  
[NL/DEK/QAR11.0012/05](#)

[NL/DEK/QAR11.0010/06](#)

[NL/DEK/QAR11.0011/06](#)



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

## **Description of equipment**

Feed-through terminal blocks, types PT 2,5 (R1)<sup>\*\*\*</sup> and PTTB 2,5 (R1)<sup>\*\*\*</sup> consist of an insulating housing (polyamide PA 6.6) in different colours, current bar(s) equipped with springs (screwless-type clamping units) and orange pigmented release lever. The terminal blocks serve to connect copper conductors in terminal compartments designed to Increased Safety "e" and Protection by Enclosure "tb".

Accessories are end cover plates type D-ST 2,5<sup>\*\*\*</sup>, D-STTB 2,5 and D-PT 2,5-<sup>\*\*\*</sup>, separating plates type ATP-ST<sup>\*\*\*</sup> and ATP-STTB 2,5, end supports as well as plug-in bridges type FBS<sup>\*\*\*</sup>-5. The terminal blocks are fastened on mounting rails.

Protective conductor terminal blocks, types PT 2,5 (R1)<sup>\*\*\*</sup>-PE and PTTB 2,5-PE (R1) consist of a green-yellow pigmented insulating housing (polyamide PA 6.6), current bar(s) equipped with springs (screwless-type clamping units), orange pigmented release lever and a grounding foot part.

The PE terminal blocks serve to connect copper conductors in terminal compartments designed to Increased Safety "e" and Protection by Enclosure "tb".

Accessories are end cover plates, end supports and plug-in bridges. The terminal blocks are fastened on mounting rails.

See Annex: Nomenclature and Technical Data

## **SCHEDULE OF LIMITATIONS:**

The terminal block shall be mounted in an enclosure that meets the requirements of an approved type of protection as specified in IEC 60079-0, section 1 or IEC 60079-31.

When installing the terminal block in an enclosure designed to Increased Safety "eb" type of protection as specified in IEC 60079-7, the clearances and creepage distances shown in table 2 shall be duly considered.

If accessories are used, the instructions for installation provided by the manufacturer shall be observed.

Installation of electrical components requires a further assessment by an ExCB.



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

1) Update to the current standards

2) A new manufacturing location and QAR added



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Additional manufacturing locations:

<b>PHOENIX CONTACT Asia-Pacific (Nanjing) Co., Ltd. and Nanjing PHOENIX CONTACT Co., Ltd.</b> 6 Mozhou East Road, Jiangning District, Nanjing, Jiangsu Province 211111 <b>China</b>	<b>PHOENIX CONTACT Development and Manufacturing, Inc.</b> 586 Fulling Mill Road Middletown, PA 17057 <b>United States of America</b>
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**Annex:**

[COCA10.0021-06.pdf](#)



Applicant: PHOENIX CONTACT GmbH & Co. KG  
Flachmarktstr. 8  
32825 Blomberg

Electrical Components: Terminal block  
Type PT 2,5 (R1)<sup>\*\*\*</sup>, PT 2,5 (R1)<sup>\*\*\*</sup>-PE , PTTB 2,5 (R1)<sup>\*\*\*</sup>,  
PTTB 2,5-PE (R1)

### Description

Feed-through terminal blocks, types PT 2,5 (R1)<sup>\*\*\*</sup> and PTTB 2,5 (R1)<sup>\*\*\*</sup> consist of an insulating housing (polyamide PA 6.6) in different colours, current bar(s) equipped with springs (screwless-type clamping units) and orange pigmented release lever. The terminal blocks serves to connect copper conductors in terminal compartments designed to Increased Safety "eb" and Protection by Enclosure "ta, tb, tc".

Accessories are end cover plates type D-ST 2,5<sup>\*\*\*</sup>, D-STTB 2,5 and D-PT 2,5-<sup>\*\*\*</sup>, separating plates type ATP-ST<sup>\*\*\*</sup> and ATP-STTB 2,5, end supports as well as plug-in bridges type FBS<sup>\*\*\*</sup>-5. The terminal blocks are fastened on mounting rails.

Protective conductor terminal blocks, types PT 2,5 (R1)<sup>\*\*\*</sup>-PE and PTTB 2,5-PE (R1) consists of an green-yellow pigmented insulating housing (polyamide PA 6.6), current bar(s) equipped with springs (screwless-type clamping units), orange pigmented release lever and a grounding foot part. The PE terminal blocks serves to connect copper conductors in terminal compartments designed to Increased Safety "eb" and Protection by Enclosure "ta, tb, tc".

Accessories are end cover plates, end supports and plug-in bridges. The terminal blocks are fastened on mounting rails.



Technical data

Type designation		PT 2,5**	PT 2,5 -QUATTRO**	PT 2,5 -TWIN**	PTTB 2,5**	PTTB 2,5 -PV**
Rated insulation voltage	[V]	500	500	500	400	400
Rated voltage	[V]	550	550	550	440	440
- with jumper FBS...	[V]	550	550	550	440	440
- with skipping jumper	[V]	352	352	352	352	352
- with cut to length bridge	[V]	220	220	220	166	166
- with cut to length bridge and cover type D	[V]	275	275	275	352	352
- with cut to length bridge and cover type ATP	[V]	550	550	550	440	440
Rated current (Temperature rise 40 K, cross section 2,5 mm <sup>2</sup> )	[A]	19	19	19	18	18
Rated current (Temperature rise 40 K, cross section 4 mm <sup>2</sup> )	[A]	23	23	23	22	22
Rated current						
- with jumper FBS... (Temperature rise 40 K, cross section 2,5 mm <sup>2</sup> )	[A]	19	19	19	16	16
- with jumper FBS... (Temperature rise 40 K, cross section 4 mm <sup>2</sup> )	[A]	22	22	22	19	19
Contact resistance (cross section 2,5 mm <sup>2</sup> )	[mΩ]	0.93	1.14	1.03	lower level 1.20 upper level 0.92	lower level 1.20 upper level 0.92
Contact resistance (cross section 4 mm <sup>2</sup> )	[mΩ]	0.86	0.89	0.87	lower level 0.86 upper level 0.63	lower level 0.86 upper level 0.63
Rated cross section [mm <sup>2</sup> ] (AWG)	[mm <sup>2</sup> ] (AWG)	2.5 (14)	2.5 (14)	2.5 (14)	2.5 (14)	2.5 (14)
Rated connecting capacity						
- rigid [mm <sup>2</sup> ] (AWG)	[mm <sup>2</sup> ] (AWG)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)
- flexible [mm <sup>2</sup> ] (AWG)	[mm <sup>2</sup> ] (AWG)	0.14 - 2.5 (26 - 14)	0.14 - 2.5 (26 - 14)	0.14 - 2.5 (26 - 14)	0.14 - 2.5 (26 - 14)	0.14 - 2.5 (26 - 14)
Stripping length	[mm]	10	10	10	10	10
Assembly		on DIN rails NS35 acc. to EN 60715-TH 35				
Service temperature range	[°C]	-60 ... +110				

\*\* valid for colour variants

Type designation		PT 2,5-PE	PT 2,5 -QUATTRO-PE	PT 2,5 -TWIN-PE	PTTB 2,5-PE
Rated cross section	[mm <sup>2</sup> ] (AWG)	4 (14)	4 (14)	4 (14)	4 (14)
Rated connecting capacity					
- rigid [mm <sup>2</sup> ] (AWG)	[mm <sup>2</sup> ] (AWG)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)
- flexible [mm <sup>2</sup> ] (AWG)	[mm <sup>2</sup> ] (AWG)	0.14 - 2.5 (26 - 14)	0.14 - 2.5 (26 - 14)	0.14 - 2.5 (26 - 14)	0.14 - 2.5 (26 - 14)
Stripping length	[mm]	10	10	10	10
Assembly		on DIN rails NS35 acc. to EN 60715-TH 35			
Service temperature range	[°C]	-60 ... +110			



Nomenclature

a)	b)	c)	)	e)	f)	g)	h)
P	T			2,5		*	(R1)
P	T			2,5	-TWIN	*	(R1)
P	T			2,5	-QUATTRO	*	(R1)
P	T			2,5		-PE	(R1)
P	T	T	B	2,5		*	(R1)
P	T	T	B	2,5		-PE	(R1)
P	T	T	B	2,5	-PV	*	(R1)

Legend:

a)	P	Type of clamping unit "Push-In"
b)	T	Terminal
c)	T	Double level
d)	B	both levels bridgeable
e)	2,5	Rated cross-section
f)	-TWIN	3 connections
	-QUATTRO	4 connections
	-PV	with equipotential bonder
g)	-PE	Grounding, with snap-on grounding foot
	*	all colours, e.g. BK, RD, OG, YE, GN, WH, BU (The standard type is grey.)
h)	(R1)	Revision level 1 (marked on the insulation body)