



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 PTB 10.0021U**

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Certificate history:

Status: **Current**

Issue No: 7

Issue 6 (2022-08-30)

Issue 5 (2022-06-08)

Issue 4 (2021-11-17)

Issue 3 (2014-11-24)

Issue 2 (2013-06-27)

Issue 1 (2012-08-23)

Issue 0 (2010-04-12)

Date of Issue: 2025-01-13

Applicant: **PHOENIX CONTACT GmbH & Co. KG**
Flachmarktstrasse 8
32825 Blomberg
Germany

Ex Component: Terminal blocks, Type PT 2,5 (R1)***, PT 2,5 (R1)***-PE, PTTB 2,5 (R1)***, PTTB 2,5-PE (R1)

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 "eb"**

Marking: Ex eb IIC Gb

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. Stefan Essmann

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/ExTR09.0063/07

Quality Assessment Reports:

NL/DEK/QAR11.0009/10
NL/DEK/QAR11.0012/06

NL/DEK/QAR11.0010/07

NL/DEK/QAR11.0011/07



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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)*** and PTTB 2,5 (R1)*** 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 supports, end cover plates type D-ST 2,5***, D-STTB 2,5 and D-PT 2,5-***, separating plates type ATP-ST*** and ATP-STTB 2,5 as well as plug-in bridges type FBS***-5. The terminal blocks are fastened on mounting rails.

Protective conductor terminal blocks, types PT 2,5 (R1)***-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.
- The terminal blocks are intended for use in two separate temperature ranges: service temperature range 1: -60 °C to +85 °C and service temperature range 2: -40 °C to +110 °C. Service temperature range 1 defines the use of the terminal blocks in extreme cold. Service temperature range 2 defines the use of the terminal blocks in extreme heat.
- 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 insulating material added.

3) Two separate service temperature ranges.

4) Converting the **PE** terminal blocks from one to two pushers



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Additional manufacturing locations:

**PHOENIX CONTACT Asia-Pacific (Nanjing)
Co., Ltd. and Nanjing PHOENIX CONTACT
Co., Ltd.**

6 Mozhou East Road, Jiangning District,
Nanjing, Jiangsu Province 211111
China

**PHOENIX CONTACT Development and
Manufacturing, Inc.**

586 Fulling Mill Road

Middletown, PA 17057

United States of America

Annex:

[COCA10.0021-07.pdf](#)

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

Electrical Components: Terminal block
Type PT 2,5 (R1)***, PT 2,5 (R1)***-PE , PTTB 2,5 (R1)***,
PTTB 2,5-PE (R1)

Description

Feed-through terminal blocks, types PT 2,5 (R1)*** and PTTB 2,5 (R1)*** 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 supports, end cover plates type D-ST 2,5***, D-STTB 2,5 and D-PT 2,5-***, separating plates type ATP-ST*** and ATP-STTB 2,5 as well as plug-in bridges type FBS***-5. The terminal blocks are fastened on mounting rails.

Protective conductor terminal blocks, types PT 2,5 (R1)***-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 according to IEC 60715-TH 35.

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 ²)	[A]	19	19	19	18	18
Rated current (Temperature rise 40 K, cross section 4 mm ²)	[A]	23	23	23	22	22
Rated current						
- with jumper FBS... (Temperature rise 40 K, cross section 2,5 mm ²)	[A]	19	19	19	16	16
- with jumper FBS... (Temperature rise 40 K, cross section 4 mm ²)	[A]	22	22	22	19	19
Contact resistance (cross section 2,5 mm ²)	[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 ²)	[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 ²] (AWG)	[mm ²] (AWG)	2.5 (14)	2.5 (14)	2.5 (14)	2.5 (14)	2.5 (14)
Rated connecting capacity						
- rigid [mm ²] (AWG)	[mm ²] (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 ²] (AWG)	[mm ²] (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]	Service temperature range 1: -60 °C to +85 °C Service temperature range 2: -40 °C to +110 °C The terminal blocks are intended for use in two separate temperature ranges. Service temperature range 1 defines the use of the terminal blocks in extreme cold. Service temperature range 2 defines the use of the terminal blocks in extreme heat.				
** 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 ²] (AWG)	4 (14)	4 (14)	4 (14)	4 (14)
Rated connecting capacity					
- rigid [mm ²] (AWG)	[mm ²] (AWG)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)	0.14 - 4 (26 - 12)
- flexible [mm ²] (AWG)	[mm ²] (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]	Service temperature range 1: -60 °C to +85 °C Service temperature range 2: -40 °C to +110 °C The terminal blocks are intended for use in two separate temperature ranges. Service temperature range 1 defines the use of the terminal blocks in extreme cold. Service temperature range 2 defines the use of the terminal blocks in extreme heat.			

Nomenclature

a)	b)	c)	d)	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)