



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx PTB 10.0021U issue No.:3

Status: Current

Date of Issue: 2014-11-24 Page 1 of 4

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

Electrical Apparatus: Feed-through terminal blocks, type PT 2,5*** and PTTB 2,5***, Protective conductor terminal blocks, type PT 2,5***-PE and PTTB 2,5-PE
Optional accessory:

Type of Protection: Increased Safety "e"

Marking: Ex eb IIC


Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. D. Markus

Position:

Head of ot Working Group Flame Transmission Processes

Signature:
(for printed version)


09.12.14

Date:

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 the [Official IECEx Website](http://www.iecex.com).

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

Additional Manufacturing location
(s):

**PHOENIX CONTACT Asia-
Pacific (Nanjing) Co. Ltd.**
36 Phoenix Road, Jiangning
Development Zone
Nanjing, 211100, Jiangsu
Province
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 electrical apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition: 6.0

IEC 60079-7 : 2006-07 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition: 4

*This Certificate **does not** indicate compliance with electrical 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:
[DE/PTB/ExTR09.0063/03](#)

Quality Assessment Report:

[NL/DEK/QAR11.0011/01](#)

[NL/DEK/QAR11.0009/03](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

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 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, end supports 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 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 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.

Nomenclature, Technical Data and Schedule of Limitations: see Annex.

CONDITIONS OF CERTIFICATION: NO



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

- 1) The shape of the current bars in the clamping units is changed and therefore the insulation moldings are modified (Revision Level (R1)).
- 2) The current ratings are determined by additional tests and adjusted for the PT 2,5 series.
- 3) The service temperature range is expanded from -60 °C to +110 °C.
- 4) The Screwless-Type Terminal Blocks type PTO 2,5*, PTO 2,5*-PE are withdrawn.



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Germany

Electrical Apparatus: Feed-through terminal blocks, type PT 2,5*** and PTTB 2,5***
Protective conductor terminal blocks, type PT 2,5***-PE
and PTTB 2,5-PE

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 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, end supports 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.

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 (marked on the insulation body)

Technical data

Type designation		PT 2,5**	PT 2,5 -QUATTRO**	PT 2,5 -TWIN**	PTTB 2,5**	PTTB 2,5 -PV**
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 skipping jumper type PE	[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 (Temperature rise 45 K, cross section 2.5 mm ²)	[A]	21	21	21	19	19
Rated current (Temperature rise 45 K, cross section 4 mm ²)	[A]	25	25	25	23	23
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
- with jumper FBS... (Temperature rise 45 K, cross section 2.5 mm ²)	[A]	20	20	20	17	17
- with jumper FBS... (Temperature rise 45 K, cross section 4 mm ²)	[A]	24	24	24	21	21

Type designation		PT 2,5**	PT 2,5 -QUATTRO**	PT 2,5 -TWIN**	PTTB 2,5**	PTTB 2,5 -PV**
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]	-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 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]	-60 ... +110			

Schedule of Limitations

The terminals 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 terminals in an enclosure designed to Increased Safety "e" type of protection as specified in IEC 60079-7, the clearances and creepage distances shown in table 1 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.