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 20.0037U**

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Certificate history:
Issue 2 (2022-04-27)
Issue 1 (2021-07-27)
Issue 0 (2021-03-05)

Status: **Current**

Issue No: 3

Date of Issue: 2022-07-11

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

Ex Component: Feed-through terminal block and protective-conductor terminal block Type PTV 2.5… *(-PE), Type PTV 4… *(-PE) and PTV 6… *(-PE)

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. D. Markus**

Position: **Head of Departament "Explosion Protection in Energy Technology"**

Signature:
(for printed version)

Date:
(for printed version)

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.
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Certificate issued by:

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

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

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

Manufacturing locations:

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 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/ExTR20.0042/03

Quality Assessment Reports:

NL/DEK/QAR11.0009/08 NL/DEK/QAR11.0010/06 NL/DEK/QAR11.0011/06

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

The feed-through terminal blocks type PTV... * and the protective-conductor terminal blocks, type PTV…-PE, consist of an insulating housing (polyamide PA 6.6) in different colours, current bar(s) equipped with springs (screwless-type clamping units) and release lever.

The terminal blocks serve to connect copper conductors in terminal compartments designed to Increased Safety “eb” and protection by enclosure "ta, tb, tc". The fixing is made on mounting rails according to IEC 60715-TH 35. Accessories are jumper type FBS…, cover type D-PTV 2,5/4/6… and partition plates type ATP-ST…

The Technical Data and Nomenclature see Annex.

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, clause 1 or IEC 60079-31.

When installing the terminals in an enclosure designed to Increased Safety “eb” type of protection as specified in IEC 60079-7, the clearance 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.

All technical specifications are contained in the technical data section of this certificate

The use of this component 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) Removal of a manufacturing location

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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

Annex:

COCA200037-03.pdf

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

Electrical Components: Feed-through terminal block and protective-conductor terminal block, Type PTV 2,5… *(-PE), PTV 4… *(-PE) and PTV 6… *(-PE),

Description

The feed-through terminal blocks type PTV... * and the protective-conductor terminal blocks, type PTV…-PE, consist of an insulating housing (polyamide PA 6.6) in different colours, current bar(s) equipped with springs (screwless-type clamping units) and release lever.
The terminal blocks serve to connect copper conductors in terminal compartments designed to Increased Safety “eb” and protection by enclosure "ta, tb, tc". The fixing is made on mounting rails according to IEC 60715-TH 35. Accessories are jumper type FBS…, cover type D-PTV 2,5/4/6… and partition plates type ATP-ST…

Technical data

	PTV 2,5 * PTV 2,5-TWIN * PTV 2,5-QUATTRO *	PTV 4 * PTV 4-TWIN * PTV 4-QUATTRO *	PTV 6 * PTV 6-TWIN * PTV 6-QUATTRO *
Rated insulation voltage	500 V	500 V	500 V
Rated voltage	550 V	550 V	550 V
Rated insulation voltage at			
- Bridging with jumper FBS…	500 V	500 V	500 V
- Bridging between non- adjacent terminal blocks	320 V	320 V	320 V
- At bridging between non-adjacent terminal blocks via PE terminal block	-	-	320 V
- cut-to length bridging	250 V	250 V	200 V
- cut-to length bridging with cover type D-PTV 2,5/4	250 V	250 V	250 V
- cut-to length bridging with partition plate type ATP-ST 4	500 V	-	-
- cut-to length bridging with partition plate type ATP-ST 6	-	500 V	-
Rated voltage at			
- Bridging with jumper FBS…	550 V	550 V	550 V
- Bridging between non- adjacent terminal blocks	352 V	352 V	352 V
- At bridging between non-adjacent terminal blocks via PE terminal block	-	-	352 V
- cut-to length bridging	275 V	275 V	220 V
- cut-to length bridging with cover type D-PTV 2,5/4	275 V	275 V	275 V
- cut-to length bridging with partition plate type ATP-ST 4	550 V	-	-
- cut-to length bridging with partition plate type ATP-ST 6	-	550 V	-
Rated current (Temperature rise 40 K with rated cross-section)	20.5 A (2.5 mm²)	27 A (4 mm²)	35 A (6 mm²)

Max. load current (Temperature rise 40 K with max. connection cross-section)	24.5 A * (4 mm²)	31 A * (6 mm²)	45 A * (10 mm²)
Rated cross-section	2.5 mm²	4 mm²	6 mm²
Max. connection cross-section	4 mm²	6 mm²	10 mm²
Contact resistance	0.8 mΩ (PTV 2,5) 0.8 mΩ (PTV 2,5-TWIN 0.9 mΩ (PTV 2,5-QUATTRO)	0.5 mΩ (PTV 4) 0.6 mΩ (PTV 4-TWIN) 0.7 mΩ (PTV 4-QUATTRO)	0.5 mΩ (PTV 6) 0.6 mΩ (PTV 6-TWIN) 0.7 mΩ (PTV 6-QUATTRO)
Connectable conductor cross-section AWG	0.14 mm² - 4 mm² rigid / flexible AWG 26 – 12	0.2 mm² - 6 mm² rigid / flexible AWG 24 -10	0.5 mm² - 10 mm² rigid / flexible AWG 20 -8
Stripping length	8 mm – 10 mm	9 mm – 11 mm	10 mm – 12 mm
Number of conductors per clamping unit	1 conductor		
Service temperature range	-60 °C to +110°C		
Note *: The max. load current must not be exceeded by the total current of all connected conductors.			

	PTV 2,5…-PE	PTV 4…-PE	PTV 6…-PE *
Rated cross-section	2.5 mm²	4 mm²	6 mm²
Max. connection cross-section	4 mm²	6 mm²	10 mm²
Connectable conductor cross-section AWG	0.14 mm² - 4 mm² rigid / flexible AWG 26 – 12	0.2 mm² - 6 mm² rigid / flexible AWG 24 -10	0.5 mm² - 10 mm² rigid / flexible AWG 20 -8
Stripping length	8 mm – 10 mm	9 mm – 11 mm	10 mm – 12 mm
Number of conductors per clamping unit	1 conductor		
Service temperature range	-60 °C to +110°C		

Nomenclature

a)	b)	c)	d)	e)	f)	g)
P	T	V	*		*	
P	T	V	*	-TWIN	*	
P	T	V	*	-QUATTRO	*	
P	T	V	*			-PE

a)	P	Connection type of Terminal block “Push-In“
b)	T	Terminal
c)	V	Vertical
d)	2,5, 4 or 6	rated cross-section
e)	-TWIN	3 connectors
	-QUATTRO	4 connectors
f)	*	all colours e.g. BK, RD, GN, BU etc. (standard type is grey GY)
g)	-PE	suffix for Protective conductor terminal block

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Accessories

Partition plate	ATP-ST 4 ATP-ST 6
Cover	D-PTV 2,5/4/6 D-PTV 2,5/4/6-TWIN D-PTV 2,5/4/6-QUATTRO
Jumper	FBS…-5 (… = number of poles) FBS…-6 (… = number of poles) FBS…-8 (… = number of poles)

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