



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 KEM 07.0015U issue No.:2

Status: **Current**

Date of Issue: **2012-11-30** Page 1 of 5

Certificate history:
Issue No. 2 (2012-11-30)
Issue No. 1 (2009-7-10)
Issue No. 0 (2007-9-3)

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

Electrical Apparatus: **Terminal Blocks and Protective Conductor Terminal Blocks Series QTC 1,5
TWIN/QUATTRO and QTTCB 1,5**
Optional accessory:

Type of Protection: **Increased safety**

Marking: Ex eb IIC

Approved for issue on behalf of the IECEx Certification Body: R. Schuller

Position: Certification Manager

Signature:
(for printed version)



2012-11-30

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:

DEKRA Certification B.V.
Utrechtseweg 310
6812 AR Arnhem
The Netherlands

All testing, inspection, auditing and certification activities of the former KEMA Quality are an integral part of the DEKRA Certification Group.





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Page 2 of 5

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

Manufacturing location(s):

**PHOENIX CONTACT
GmbH & Co. KG**
Flachmarktstrasse 8
32825 Blomberg
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.**
Unit I : A-58/2, Okhla
Industrial Area, Phase – II
New Delhi – 110020
Unit III : Prithla-Dhatir Road
Village Dudhola
Palwal – 121102 (Haryana)
India

**PHOENIX CONTACT Ind.
Com. Ltda.**
Rua Gino Cesaro, 169
Água Branca 05038-140
São Paulo/SP
Brazil

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:

NL/KEM/ExTR07.0014/00

NL/KEM/ExTR07.0014/01

NL/KEM/ExTR07.0014/02

Quality Assessment Report:

NL/DEK/QAR11.0009/00
NL/DEK/QAR11.0013/00

NL/DEK/QAR11.0010/00

NL/DEK/QAR11.0011/00



IECEX Certificate of Conformity

Certificate No.: IECEx KEM 07.0015U

Date of Issue: 2012-11-30

Issue No.: 2

Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Terminal Blocks (all colors) QTC 1,5; QTC 1,5-QUATTRO; QTC 1,5-TWIN; QTTCB 1,5 (-PV) and Protective Conductor Terminal Blocks QTC 1,5-PE; QTC 1,5-QUATTRO-PE; QTC 1,5-TWIN-PE; QTTCB 1,5-PE with accessories are intended for the connection of copper conductors in enclosures in type of protection Ex e for fixing on mounting rails type NS 35 according to IEC 60715-TH 35.
Operating temperature range -45 °C ... +90 °C.

Refer to Annex 1 for the electrical data.

CONDITIONS OF CERTIFICATION: NO



IECEx Certificate of Conformity

Certificate No.: IECEx KEM 07.0015U

Date of Issue: **2012-11-30**

Issue No.: **2**

Page 4 of 5

EQUIPMENT(continued):

Schedule of limitations:

The Terminal Blocks and the Protective Conductor Terminal Blocks are suitable for use in enclosures in atmospheres with flammable gases. For flammable gases these enclosures must satisfy the requirements according to IEC 60079-0 and IEC 60079-7.

When assembling with other certified series and sizes and using the associated accessories, the required creepage distances and clearances have to be observed.

Regarding the use of covers, jumpers and end brackets the instructions of the manufacturer must be followed. If smaller cross sections as the rated cross section are used, the associated lower current has to be laid down in the Certificate of Conformity of the complete equipment.

The Terminal Blocks may be used, based on the self-heating when used at the above mentioned rated current and at ambient temperatures of -45 °C to +40 °C at the mounting position in apparatus, e.g. connection and junction boxes, for temperature class T6. If the 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.



IECEX Certificate of Conformity

Certificate No.: IECEx KEM 07.0015U

Date of Issue: **2012-11-30**

Issue No.: **2**

Page 5 of 5

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

Issue 1:

- the use of cut-to-length plug-in bridges
- manufacturing location in India changed

Issue 2:

- Certification according to edition 6 of IEC 60079-0
- ExQAR numbers updated.

Annexe: 215216600-Annex 1 to ExTR07.0014.02-KEM07.0015U iss2-03ATEX2557U iss4.pdf

Annex 1 to IECEx Test Report NL/KEM/ExTR07.0014/02
Annex 1 to Certificate of Conformity IECEx KEM 07.0015U, issue 2
Annex 1 to EC Type Examination Certificate KEMA 03ATEX2557 U, issue 4
Anhang 1 zu EG Baumusterprüfbescheinigung KEMA 03ATEX2557 U, Ausgabe 4

Electrical data

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

Terminal blocks

Type:	QTC 1,5	QTC 1,5-QUATTRO
Rated insulation voltage [V]	500	500
Rated voltage [V]	550	550
- with skipping jumper [V]	275	275
- with cut to length bridge and cover type D [V]	220	220
- with cut to length bridge and partition plate type ATP [V]	275	275
Rated current [A]	16,5	17,5
- with jumper type FBS ...-5 [A]	19	17,5
Max. load current [A]	16,5	17,5
Temperature rise [K]	37 (16,9 A; 1,5 mm ²)	37 (17,7 A; 1,5 mm ²)
Contact resistance [mΩ]	1,3	1,6
Rated cross-section [mm ²] (AWG)	1,5 (16)	1,5 (16)
Connectable conductor cross-section :		
Spring cage connection		
- rigid [mm ²] (AWG)	0,08 - 4 (28-12)	0,08 - 4 (28-12)
- flexible [mm ²] (AWG)	0,08 - 2,5 (28-14)	0,08 - 2,5 (28-14)
Quick connection		
rigid and flexible [mm ²] (AWG)	0,25 - 1,5 (24-16)	0,25 - 1,5 (24-16)
Type:	QTC 1,5-TWIN	QTTCB 1,5
Rated insulation voltage [V]	500	500
Rated voltage [V]	550	550
- with skipping jumper [V]	275	275
- with cut to length bridge and cover type D [V]	220	220
- with cut to length bridge and partition plate type ATP [V]	275	275
Rated current [A]	17	16
- with jumper type FBS ...-5 [A]	17	15
Max. load current [A]	17	16
Temperature rise [K]	38 (17 A; 1,5 mm ²)	38 (16,3 A; 1,5 mm ²)
Contact resistance [mΩ]	1,4	--
- Level 1	--	1,6
- Level 2	--	1,3
Rated cross-section [mm ²] (AWG)	1,5 (16)	1,5 (16)
Connectable conductor cross-section :		
rigid and flexible [mm ²] (AWG)	0,25 - 1,5 (24-16)	0,25 - 1,5 (24-16)

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Type:	QTTCB 1,5-PV
Rated insulation voltage [V]	500
Rated voltage [V]	550
- with skipping jumper [V]	275
- with cut to length bridge and cover type D [V]	220
- with cut to length bridge and partition plate type ATP [V]	275
Rated current [A]	18
- with jumper type FBS ...-5 [A]	17
Max. load current [A]	18
Temperature rise [K]	38 (18,2 A; 1,5 mm ²)
Contact resistance [mΩ]	--
- Level 1	1,6
- Level 2	1,3
Rated cross-section [mm ²] (AWG)	1,5 (16)
Connectable conductor cross-section : rigid and flexible [mm ²] (AWG)	0,25 - 1,5 (24-16)

Protective Conductor Terminal Block

Type:	QTC 1,5-PE	QTC 1,5-QUATTRO-PE
Rated cross-section [mm ²] (AWG):	1,5 (16)	1,5 (16)
Connectable conductor cross-section : rigid and flexible [mm ²] (AWG)	0,25 - 1,5 (24-16)	0,25 - 1,5 (24-16)

Type:	QTC 1,5-TWIN-PE	QTTCB 1,5-PE
Rated cross-section [mm ²] (AWG):	1,5 (16)	1,5 (16)
Connectable conductor cross-section : rigid and flexible [mm ²] (AWG)	0,25 - 1,5 (24-16)	0,25 - 1,5 (24-16)

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Elektrische Daten

Durchgangs-Reihenklemmen

Typ:	QTC 1,5	QTC 1,5-QUATTRO
Bemessungsisolationsspannung [V]	500	500
Bemessungsspannung [V]	550	550
- bei überspringender Brückung [V]	352	352
- bei abgelängter Brücke mit Trennplatte Typ D [V]	220	220
- bei abgelängter Brücke mit Trennplatte Typ ATP [V]	275	275
Nennstrom [A]	16,5	17,5
- bei Brückung Typ FBS ...-5 [A]	19	17,5
Max. Belastungsstrom [A]	16,5	17,5
Temperaturerhöhung [K]	37 (16,9 A; 1,5 mm ²)	37 (17,7 A; 1,5 mm ²)
Durchgangswiderstand [mΩ]	1,3	1,6
Bemessungsquerschnitt [mm ²] (AWG)	1,5 (16)	1,5 (16)
Anschließbare Leiterquerschnitte		
- starr und flexibel [mm ²] (AWG)	0,25 - 1,5 (24-16)	0,25 - 1,5 (24-16)
Typ:	QTC 1,5-TWIN	QTTCB 1,5
Bemessungsisolationsspannung [V]	500	400
Bemessungsspannung [V]	550	440
- bei überspringender Brückung [V]	352	352
- bei abgelängter Brücke mit Trennplatte Typ D [V]	220	220
- bei abgelängter Brücke mit Trennplatte Typ ATP [V]	275	275
Nennstrom [A]	17	16
- bei Brückung Typ FBS ...-5 [A]	17	15
Max. Belastungsstrom [A]	17	16
Temperaturerhöhung [K]	38 (17 A; 1,5 mm ²)	38 (16,3 A; 1,5 mm ²)
Durchgangswiderstand [mΩ]	1,4	--
-1. Etage	--	1,6
-2. Etage	--	1,3
Bemessungsquerschnitt [mm ²] (AWG)	1,5 (16)	1,5 (16)
Anschließbare Leiterquerschnitte		
- starr und flexibel [mm ²] (AWG)	0,25 - 1,5 (24-16)	0,25 - 1,5 (24-16)

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Anhang 1 zu EG Baumusterprüfbescheinigung KEMA 03ATEX2557 U, Ausgabe 4

Typ:	QTTCB 1,5-PV
Bemessungsisolationsspannung [V]	400
Bemessungsspannung [V]	440
- bei überspringender Brückung [V]	352
- bei abgelängter Brücke mit Trennplatte Typ D [V]	220
- bei abgelängter Brücke mit Trennplatte Typ ATP [V]	275
Nennstrom [A]	18
- bei Brückung Typ FBS ..-5 [A]	17
Max. Belastungsstrom [A]	18
Temperaturerhöhung [K]	38 (18,2 A; 1,5 mm ²)
Durchgangswiderstand [mΩ]	--
-1. Etage	1,6
-2. Etage	1,3
Bemessungsquerschnitt [mm ²] (AWG)	1,5 (16)
Anschließbare Leiterquerschnitte	
- starr und flexibel [mm ²] (AWG)	0,25 - 1,5 (24-16)

Schutzleiter-Reihenklennen:

Typ:	QTC 1,5-PE	QTC 1,5-QUATTRO-PE
Bemessungsquerschnitt [mm ²] (AWG)	1,5 (16)	1,5 (16)
Anschließbare Leiterquerschnitte:		
starr und flexibel [mm ²] (AWG)	0,25 - 1,5 (24-16)	0,25 - 1,5 (24-16)
Typ:	QTC 1,5-TWIN-PE	QTTCB 1,5-PE
Bemessungsquerschnitt [mm ²] (AWG)	1,5 (16)	1,5 (16)
Anschließbare Leiterquerschnitte:		
starr und flexibel [mm ²] (AWG)	0,25 - 1,5 (24-16)	0,25 - 1,5 (24-16)