



# 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](http://www.iecex.com)

Certificate No.: **IECEX PTB 08.0048U** issue No.: **1**

Status: **Current**

Certificate history:  
Issue No. 1 (2013-1-31)  
Issue No. 0 (2008-11-20)

Date of Issue: **2013-01-31** Page 1 of 4

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

Electrical Apparatus: **Feed-through terminal block, type MSB 2,5\*\*\*, MSDB 2,5\*\*\* and MSB 2,5\*\*\*-PE**  
Optional accessory:

Type of Protection: **Increased Safety**

Marking: **Ex eb IIC, Ex eb I**

Approved for issue on behalf of the IECEx  
Certification Body:

Dr.-Ing. Uwe Klausmeyer

Position:

Head of Section "Flameproof Enclosures"

Signature:  
(for printed version)

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**  
Flachmarktstraße 8  
32825 Blomberg  
Germany

Additional Manufacturing location  
(s):

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/ExTR08.0044/01](#)

Quality Assessment Report:  
[NL/DEK/QAR11.0009/00](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### Description of equipment

Feed-through terminal block, type MSB 2,5\*\*\*, MSDB 2,5\*\*\* and protective conductor terminal blocks, type MSB 2,5\*\*\*-PE consist of an insulating housing (polyamide PA 6.6) in different colours, current bar and springs (screwless-type clamping units).

The terminal blocks are fastened on mounting rails or mounting plates (\*\*-F, \*\*-M, \*\*-RZ).

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 and in combination with the type MSDB 2,5 \*\*\* insertion bridges.

**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 protective conductor terminal block MSB 2,5\*\*\*-PE is added.
- 2) Test according to IEC 60079-0:2011
- 3) New marking

Annexe: Annex-IECEX PTB 08.0048U Issue 1.pdf



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

**Electrical Apparatus:** Feed-through terminal blocks,  
Type MSB 2,5\*\*\*, MSDB 2,5\*\*\*  
  
Protective conductor terminal blocks  
Type MSB 2,5\*\*\*-PE

Description of equipment

Feed-through terminal blocks, type MSB 2,5\*\*\*, MSDB 2,5\*\*\* and protective conductor terminal blocks, type MSB 2,5\*\*\*-PE consist of an insulating housing (polyamide PA 6.6) in different colours, current bar and springs (screwless-type clamping units). The terminal blocks are fastened on mounting rails or mounting plates (\*\*\*-F, \*\*\*-M, \*\*\*-RZ). The terminal blocks serve to connect copper conductors in terminal compartments designed to Increased Safety "e" or Protection by Enclosure "tb".

Accessories are end supports, end cover plates and in combination with the terminal blocks, type MSDB 2,5 \*\*\* insertion bridges. The terminal blocks are fastened on mounting rails or mounting plates.

Nomenclature

M	S	D	B	2,5	***	PE
1	2	3	4	5	6	7

- 1) M = Mini
- 2) S = Spring cage
- 3) D = Double connection
- 4) B = Terminal block
- 5) 2,5 = Rated cross-section
- 6) = kind of fixing

without suffix = mounting on DIN rail acc. to IEC 60715-TH 15

- F = Mounting with flange
- M = Middle Terminal Block, mounting in conjunction with other variants only
- NS 35 = Mounting on DIN rail acc. to IEC 60715-TH 35
- RZ = Mounting using engagement pin

7) -PE = Protective conductor terminal





Technical data

Feed-through terminal blocks, fastened on mounting rails	MSB 2,5 MSDB 2,5	MSB 2,5-M MSDB 2,5-M	MSB 2,5-NS 35 MSDB 2,5-NS 35	MSB 2,5-RZ MSDB 2,5-RZ
Rated insulation voltage	630 V	630 V	630 V	630 V
Rated voltage, max	690 V	690 V	690 V	690 V
Rated cross section 2,5 mm <sup>2</sup> Max. rated current Temperature rise 40 K Temperature rise 45 K	21 A 22 A	21 A 22 A	21 A 22 A	21 A 22 A
Max. cross section 4 mm <sup>2</sup> Max. rated current Temperature rise 40 K Temperature rise 45 K	26 A 28 A	26 A 28 A	26 A 28 A	26 A 28 A
Connecting Capacity	0,08 mm <sup>2</sup> – 4 mm <sup>2</sup> rigid 0,08 mm <sup>2</sup> – 2,5 mm <sup>2</sup> flexible			
Number of conductors per terminal connection	1 conductor per clamping unit			
Resistance	0,87 mΩ			
Operating temperature range	-50 °C ... +110 °C			

Feed-through terminal blocks fastened on mounting plates	MSB 2,5-F MSDB 2,5-F	MSB 2,5-M MSDB 2,5-M	MSB 2,5-RZ MSDB 2,5-RZ
Rated insulation voltage	500 V	500 V	500 V
Rated voltage, max	550 V	550 V	550 V
Rated cross section 2,5 mm <sup>2</sup> Max. rated current Temperature rise 40 K Temperature rise 45 K	21 A 22 A	21 A 22 A	21 A 22 A
Max. cross section 4 mm <sup>2</sup> Max. rated current Temperature rise 40 K Temperature rise 45 K	26 A 28 A	26 A 28 A	26 A 28 A

Connecting Capacity	0,08 mm <sup>2</sup> – 4 mm <sup>2</sup> rigid 0,08 mm <sup>2</sup> – 2,5 mm <sup>2</sup> flexible
Number of conductors per terminal connection	1 conductor per clamping unit
Resistance	0,87 mΩ
Operating temperature range	-50 °C ... +110 °C



Protective conductor terminal blocks (fastened on mounting rails)	MSB 2,5-PE MSB 2,5-NS 35-PE
Connecting Capacity	0,08 mm <sup>2</sup> – 4 mm <sup>2</sup> rigid 0,08 mm <sup>2</sup> – 2,5 mm <sup>2</sup> flexible
Number of conductors per terminal connection	1 conductor per terminal connection
Operating temperature range	-50 °C ... +110 °C

#### Schedule of Limitations

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

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.