

CERTIFICATE

(1) EU-Type Examination

(2) **Component intended for use on/in equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **KEMA 00ATEX2053U**

Issue Number: **5**

(4) Product: **PCB Single Terminal Blocks Types FRONT 2,5-H/...-EX and FRONT 2,5-V/...-EX**

(5) Manufacturer: **Phoenix Contact GmbH & Co. KG**

(6) Address: **Flachsmarktstraße 8, 32825 Blomberg, Germany**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) DEKRA Certification B.V., Notified Body number 0344 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential test report number NL/KEM/ExTR07.0025/03.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0 : 2018

EN 60079-7 : 2015 + A1 : 2018

except in respect of those requirements listed at item 18 of the Schedule.

(10) The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:



II 2 GD Ex eb IIC Gb

Date of certification: 19 July 2024

DEKRA Certification B.V.

L.G. van Schie
Certification Manager



Throughout this document, a point is used as the decimal separator.

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(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate KEMA 00ATEX2053U**

Issue No. 5

(15) **Description**

PCB Single Terminal Blocks Types FRONT 2,5-H/...-EX and FRONT 2,5-V/...-EX, with accessories for the connection of copper conductors to electronic modules in enclosures in type of protection increased safety "e". The PCB Terminal Blocks may be used in explosive dust atmospheres when mounted in enclosures certified for dust ignition protection by enclosure "t". The fixing on printed circuit boards is through double pin soldering.

Additional explanation:

The PCB Terminal Blocks of the type FRONT are single terminals for a maximum cross-section of 2.5 mm² (2,5) available in Horizontal (H) and Vertical (V) versions with a pitch for the mounting pins of 5 mm (SA 5) or 10 mm (SA 10) to be soldered at a PCB. The Terminals can be aligned to create different numbers of positions.

Service temperature range: -60 °C to +110 °C.

Electrical data and type designation

See Annex 1 to Report No. NL/KEM/ExTR07.0025/03

Installation instructions

The manufacturers instructions shall be followed in detail to assure safe operation.

(16) **Report Number**

NL/KEM/ExTR07.0025/03.

(17) **Schedule of Limitations**

1. The PCB Terminal Blocks and accessories are designed for interconnection of copper wires in enclosures for type of protection by increased safety "e".
2. When assembling the PCB Terminal Blocks and accessories the clearances and creepage distances shall be respected.
3. If conductors with smaller cross sections than the rated cross section are connected, the belonging lower current has to be laid down in the Certificate of Conformity of the complete equipment.
4. Based on the self-heating with the specified rated current and ambient temperatures of -60 °C to +40 °C measured at the mounting position in electrical equipment, e.g. junction and connection boxes, the PCB Terminal Blocks may be used for temperature class T6. When used in electrical equipment of temperature classes T1 to T5, the insulating material shall not exceed the maximum operating temperature.
5. To avoid mechanical stress to the soldered joints, the PCB Terminal Blocks have to be mechanically supported by e.g. screwing or, bending the solder pins.
6. When assembling the PCB Terminal Blocks the instructions in the manufacturer's documentation shall be respected.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/KEM/ExTR07.0025/03.

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

Type designation

FRONT 2,5 - H / SA 5 - EX
 I II III IV V

Designation	Explanation	Value	Explanation
I	Type indicator	FRONT	Single PCB Terminal Blocks with screw connection.
II	Rated cross section	2,5	2.5 mm², 14 AWG
III	Electrical contacts between plug and header	H V	Horizontal connection direction, 0°. Vertical connection direction, 90°.
IV	Indicator for plug	SA 5 SA 10	Mounting Pin distance 5 mm Mounting Pin distance 10 mm
V	Indicator for use in potential explosive atmospheres	EX	With EX approval

Electrical data

Type:	FRONT 2,5-H/...-EX FRONT 2,5-V/...-EX
Rated insulation voltage [V]	
- without spacer [V]	160
- with one spacer [V]	250
- with two spacers [V]	400
Rated voltage [V]	
- without spacer [V]	176
- with one spacer [V]	275
- with two spacers [V]	440
Nominal current [A]	21
Max. load current [A]	21
Contact resistance [mΩ]	0.6
Rated conductor cross-section [mm²] or (AWG)	2.5 or (14)
Connectable conductor cross-section	
- rigid [mm²] or (AWG)	0.2 - 2.5 or (24 - 14)
- flexible [mm²] or (AWG)	0.2 - 2.5 or (24 - 14)
Multi-conductor connection	
(Two conductor with the same cross section and conductor type)	
- rigid [mm²] or (AWG)	0.2 – 0.75 or (24 - 18)
- flexible [mm²] or (AWG)	0.2 – 0.75 or (24 - 18)