

# TYPE EXAMINATION CERTIFICATE



## Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

- [1] Type Examination Certificate Number: **DEMKO 18 ATEX 2116X Rev. 0**
- [2] Product: **Open type Termination Boards, HiCTB08-SCT-44C-SC-RA, HiCTB16-SCT-44C-SC-RA, HiCTB16-SDC-24C-SC-RA, HiCTF16-HON-FC-RIO16-SD-PF and HiCTF16-HON-SC-UNI16-SD-PF**
- [3] Manufacturer: **Pepperl+Fuchs GmbH**
- [4] Address: **Lilienthalstrasse 200, Mannheim, 68307 Germany**
- [5] This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [6] UL International Demko A/S 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 Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.
- The examination and test results are recorded in confidential report no. **4788284964.1.1**
- [7] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 60079-0:2012+A11:2013**                      **EN 60079-7:2015**  
**EN 60079-15:2010**                                **IEC 60079-15, 5<sup>th</sup> Edition**
- except in respect of those requirements listed at item 18 of the Schedule.
- [8] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
- [9] This Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.
- [10] The marking of the product shall include the following:

 **II 3 G Ex ec nC IIC T4 Gc**

**Certification Manager**  
Jan-Erik Storgaard

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

**Date of issue: 2018-12-20**

**Certification Body**

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark  
Tel. +45 44 85 65 65, [info.dk@ul.com](mailto:info.dk@ul.com), [www.ul.com](http://www.ul.com)



## Schedule

### TYPE EXAMINATION CERTIFICATE No.

DEMKO 18 ATEX 2116X Rev. 0

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#### Description of Product:

The devices are open-type termination boards intended for installation in a suitable enclosure only accessible by use of a tool. They are used in instrumentation and control technology (I&C technology) as carrier resp. as interface between field circuits, control circuits and modules. The modules then provide galvanic isolation of these circuits. The termination boards are to contain modules that are separately certified HiC modules. The chassis utilized for mechanical support consists of polycarbonate with a minimum thickness of 1.5mm.

Models HiCTB08-SCT-44C-SC-RA, HiCTB16-SCT-44C-SC-RA, HiCTB16-SDC-24C-SC-RA, HiCTF16-HON-FC-RIO16-SD-PF and HiCTF16-HON-SC-UNI16-SD-PF.

#### MODEL DIFFERENCES:

The Model HiCTB08, HiCTB16, and HiCTF16 termination boards differ in the number of barrier modules that may be connected, in the physical size and in the values of components not affecting safety.

The printed wiring board are rated a minimum of 105 C, V-1, various manufacturers.

Model HiCTB08, two provided mechanically secured together to form one large circuit, overall dimensions approximately 108 mm by 200 mm by 2mm thick. 8 barrier modules may be connected.

Model HiCTB16, two provided mechanically secured together to form one large circuit, overall dimensions approximately 216 mm by 200 mm by 2 mm thick. 16 barrier boards may be connected.

Model HiCTF16, two provided mechanically secured together to form one large circuit, overall dimensions approximately 273 mm by 155 mm by 2 mm thick. 16 barrier boards may be connected.

The electrical circuits are made by terminals and connectors which are soldered directly to the printed circuit board.

Model HiCTB08, one light blue connector of various construction designated TB01 soldered to the PCB. Sixteen 20-pin female connectors, designated SL1\_\*, SL2\_\*, approximately 30mm. by 8mm. by 6mm thick for insertion of various barrier modules, protected by "Quick Lock" clamps to the PWB.

Furthermore, in model HiCTB08-SCT-44C-SC-RA, one black connector of various construction soldered to the PCB. One low profile header with latches (HART interface, male, 34 pins).

Model HiCTB16, two light blue connectors of various construction, designated TB01 and TB02 soldered to the PCB. Thirty-two 20-pin female connectors, designated SL1\_\*, SL2\_\*, approximately 30mm. by 8mm. by 6mm thick for insertion of various barrier modules, protected by "Quick Lock" clamps to the PWB.

Furthermore, in model HiCTB16-SCT-44C-SC-RA, two black connectors of various construction soldered to the PCB. Two low profile headers with latches (HART interface, male, 34 pins).

Furthermore, in model HiCTB16-SDC-24C-SC-RA, one low profile header with latches (HART interface, male, 34 pins). One Sub-D connector, secured by screws (male, 37 pins).

Model HiCTF16, two light blue intrinsically safe connectors of various construction, designated TB01 and TB02, socket and plug secured by screws, socket soldered to the PCB. Thirty-two 20-pin female connectors, designated SL1\_\*, SL2\_\*, approximately 30mm. by 8mm. by 6mm thick for insertion of various barrier modules, protected by "Quick Lock" clamps to the PWB.

Furthermore, in model HiCTF16-HON-FC-RIO16-SD-PF, one Sub-D connector, secured by screws (male, 37 pins).

Furthermore, in model HiCTF16-HON-FC-RIO16-SD-PF, two jumpers provided (SL01, SL02), with a mass of 100 mg.

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015.

#### Temperature range:

The ambient temperature range is -20 °C to +60 °C.

#### Electrical data

Input = 19 Vdc ... 30 Vdc

#### Routine tests:

Dielectric test according to EN 60079-7 cl. 7.1 performed on a statistical basis in accordance with ISO 2859-1 with an acceptance quality limit (AQL) of 0.04.

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#### Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [ 8 ] on page 1 of this Type Examination Certificate.

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#### Special Conditions of Use:

- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN 60079-0, accessible only by the use of a tool.
- The equipment shall only be used in an area of not more than pollution degree 2, as defined in EN 60664-1.

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#### Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.