

# TYPE EXAMINATION CERTIFICATE



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

[3] Type Examination Certificate Number: **DEMKO 20 ATEX 2333X Rev. 1**

[4] Product: **HMI Touch Panel and HMI/Gateway/PLC, Model TX700 series**

[5] Manufacturer: **Hans Turck GmbH & Co. KG**

[6] Address: **Witzleben Straße 7, D-45472 Mülheim an der Ruhr, Germany**

[7] This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] 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. **DK/ULD/ExTR20.0001/01**.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2012 + A11:2013**

**EN 60079-15: 2010**

**EN 60079-31:2014**

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

[10] 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.

[11] This Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.

[12] The marking of the product shall include the following:

 **II 3 G Ex nA IIC T5...T4 Gc**

 **II 3 D Ex tc IIIC T95°C Dc**

### 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:** 2020-02-27

**Re-issued:** 2021-01-25

### 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.

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Description of Product:

TX700 Series are Human Machine Interfaces (HMIs) with a touch screen display. They are intended to be panel-mounted and only the front face has been investigated as the enclosure and IP66 rating minimum in accordance with EN 60079-0. All models are to be powered by a Class 2 or limited power supply (LPS).

Only models TX707 and TX710 may be followed by HB (TX707HB and TX710HB), that identifies a different display with higher readability, and different Adaptor board, but less power consumption than already certified TX721.

TX700 (S, D or Q) series are Human Machine Interfaces (HMIs), Gateway or PLC similar in construction to TX700(HB) series, but instead of touch screen display is provided with a solid front cover and are intended to be mounted within a suitable Ex certified panel. All models are to be powered by a Class 2 or limited power supply (LPS).

TX700 series may utilize the following Optional Accessory: TX-UMTS-Ex, covered under this report.

The accessory Module is installed using an expansion port at the rear cover of the HMIs. The module is secured to the rear cover by two fasteners and one or two screws.

The TX-UMTS-Ex module is a Wireless Modem - UMTS/GSM.

The accessory module mentioned above is intended to be mounted only with the appropriate main unit covered by this certificate and is not to be used separately.

Nomenclature:

TX7	**	P3CV01
I	II	III

I – Product model name:  
TX7 – TX700 Series

II – Display touchscreen model:  
05 - TFT color 5" widescreen display touchscreen  
07 - TFT color 7" widescreen display touchscreen  
10 - TFT color 10.1" widescreen display touchscreen  
15 - TFT color 15.6" widescreen display touchscreen  
21 - TFT color 21.5" widescreen display touchscreen

III- Null - No special features  
HB - Different Adaptor Board and Display (only for models TX707HB and TX710HB)

TX700	***
I	II

I- Product model name:  
TX700 – TX700 series

II- Cover Dimension:  
TX700S - 5" solid front cover  
TX700D - 7" solid front cover  
TX700Q - 7" solid front cover with Quad Core CPU and increased RAM and Flash

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  $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +60^{\circ}\text{C}$ .

The relation between maximum ambient temperature and the assigned temperature class is as follows:

Maximum ambient temperature range	Temperature Class
$-20^{\circ}\text{C}$ up to $60^{\circ}\text{C}$	T4
$0^{\circ}\text{C}$ up to $50^{\circ}\text{C}$	T5



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Electrical data:

Model Type	Power supply voltage	Current consumption
TX705-P3CV01	24 Vdc, Class 2	0.6 A at 24Vdc (max)
TX707-P3CV01	24 Vdc, Class 2	0.7 A at 24Vdc (max)
TX707HB-P3CV01	24 Vdc, Class 2	0.7 A at 24Vdc (max)
TX710-P3CV01	24 Vdc, Class 2	1.0 A at 24Vdc (max)
TX710HB-P3CV01	24 Vdc, Class 2	1.0 A at 24Vdc (max)
TX715-P3CV01	24 Vdc, Class 2	1.2 A at 24Vdc (max)
TX721-P3CV01	24 Vdc, Class 2	1.7 A at 24Vdc (max)
TX700S-P3WV01	24 Vdc, Class 2	0.35 A at 24Vdc (max)
TX700D-P3WV01	24 Vdc, Class 2	0.5 A at 24Vdc (max)
TX700Q-P3WV01	24 Vdc, Class 2	0.55 A at 24Vdc (max)

Accessory modules type (24Vdc powered from Operator Interface Terminal):

-TX-UMTS-Ex: 2 x Digital Inputs (12+30 Vdc, 3mA); 2 x Digital Outputs (12 - 30 Vdc, 0.5A).

Routine tests:

Routine tests are not required.

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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:

- Only use the device in an area of not more than pollution degree 2 as defined in EN 60664-1.
- Install the device in an enclosure with a protection class of as least IP54 in accordance with EN 60079-0.
- When used in Zone 22: Install the device in a housing of protection class IP6X in accordance with EN 60079-0.
- Only disconnect and connect circuits when no voltage is applied.
- Avoid layers of dust on the graphic panel which may cause the accumulation of static charges.
- Provide transient protection which is not exceeding 140% of the peak rated voltage at the supply terminals to the equipment
- Ambient temperature and Temperature Class – see instructions.

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Essential Health and Safety Requirements

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

Additional information

The TX700 series has in addition passed the tests for Ingress Protection to IP 66 in accordance with EN60529:1991+A1:2000+A2:2013.

The trademark **TURCK** will be used as the company identifier on the marking label.

