



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA000027Z**  
Revision No:  
**1**

## This is to certify:

### That the Peripheral Equipment

with type designation(s)

**TX705/707/710/712/715/721-P3CV01, TX707HB/710HB-P3CV01, TX815HB-P3CV01, TX807/810/812/815/821-P3CV01, TX700S/700D/700Q-P3WV01, TX800L-P3WV01**

Issued to

**Hans Turck GmbH & Co. KG**  
**Mülheim an der Ruhr, Nordrhein-Westfalen, Germany**

is found to comply with

**DNV rules for classification – Ships, offshore units, and high speed and light craft**

## Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

### Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
<b>TX705/707/710/712/715/721-P3CV01</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>B</b>	<b>C / IP66 (front), IP20 (rear)</b>
<b>TX707HB/710HB-P3CV01</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>B</b>	<b>C / IP66 (front), IP20 (rear)</b>
<b>TX815HB-P3CV01</b>	<b>D</b>	<b>B</b>	<b>A</b>	<b>B</b>	<b>C / IP66 (front), IP20 (rear)</b>
<b>TX807/810/812/815/821-P3CV01</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>B</b>	<b>C / IP66 (front), IP20 (rear)</b>
<b>TX700S/700D/700Q-P3WV01</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>B</b>	<b>A / IP20</b>
<b>TX800L-P3WV01</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>B</b>	<b>A / IP20</b>

Issued at **Hamburg** on **2023-12-19**

for **DNV**

This Certificate is valid until **2028-06-19**.

DNV local unit: **Essen**

Approval Engineer: **Heinz Scheffler**

.....  
**Joannis Papanuskas**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

HMI / PLC Serie	
Part Number	Description
TX705-P3CV01	<ul style="list-style-type: none"> <li>- 5" TFT color display, resolution 800x480 pixel, 64K colors.</li> <li>- Dimmable LED backlight</li> <li>- Projected capacitive touchscreen. True glass design. Multitouch operation</li> <li>- 2 Ethernet ports</li> <li>- SD Card slot</li> <li>- 1 Plug-in module slot for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 15 cm, Steering: 10 cm</li> </ul>
TX707-P3CV01 TX807-P3CV01	<ul style="list-style-type: none"> <li>- 7" TFT color display, resolution 800x480 pixel, 16M colors.</li> <li>- Dimmable LED backlight</li> <li>- Projected capacitive touchscreen. True glass design. Multitouch operation</li> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 85 cm, Steering: 40 cm</li> </ul>
TX707HB-P3CV01	<ul style="list-style-type: none"> <li>- 7" TFT color display, resolution 800x480 pixel, 16M colors, high brightness</li> <li>- Dimmable LED backlight</li> <li>- Projected capacitive touchscreen. True glass design. Multitouch operation</li> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 30 cm, Steering: 20 cm</li> </ul>
TX710-P3CV01 TX810-P3CV01	<ul style="list-style-type: none"> <li>- 10.1" TFT color display, resolution 1280x800 pixel, 16M colors.</li> <li>- Dimmable LED backlight</li> <li>- Projected capacitive touchscreen. True glass design. Multitouch operation</li> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 115 cm, Steering: 75 cm</li> </ul>
TX710HB-P3CV01	<ul style="list-style-type: none"> <li>- 10.1" TFT color display, resolution 1280x800 pixel, 16M colors, high brightness</li> <li>- Dimmable LED backlight</li> <li>- Projected capacitive touchscreen. True glass design. Multitouch operation</li> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 30 cm, Steering: 10 cm</li> </ul>
TX712-P3CV01 TX812-P3CV01	<ul style="list-style-type: none"> <li>- 12.3" TFT color display, resolution 1920x720 pixel, 16M colors</li> <li>- Dimmable LED backlight</li> <li>- Projected capacitive touchscreen. True glass design. Multitouch operation</li> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 40 cm, Steering: 10 cm</li> </ul>

Model name	Description
TX715-P3CV01 TX815-P3CV01	<ul style="list-style-type: none"> <li>- 15.6" TFT color display, resolution 1366x768 pixel, 16M colors.</li> <li>- Dimmable LED backlight</li> <li>- Projected capacitive touchscreen. True glass design. Multitouch operation</li> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 180 cm, Steering: 130 cm</li> </ul>
TX815HB-P3CV01	<ul style="list-style-type: none"> <li>- 15.6" TFT color display, resolution 1920x1080 pixel, 16M colors.</li> <li>- Dimmable LED backlight</li> <li>- Projected capacitive touchscreen. True glass design. Multitouch operation</li> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 85 cm, Steering: 60 cm</li> </ul>
TX721-P3CV01 TX821-P3CV01	<ul style="list-style-type: none"> <li>- 21.5" TFT color display, resolution 1920x1080 pixel, 16M colors.</li> <li>- Dimmable LED backlight</li> <li>- Projected capacitive touchscreen. True glass design. Multitouch operation</li> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 220 cm, Steering: 130 cm</li> </ul>
TX700S-P3WV01	<ul style="list-style-type: none"> <li>- 2 Ethernet ports</li> <li>- SD Card slot</li> <li>- 1 Plug-in module slot for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 35 cm, Steering: 25 cm</li> </ul>
TX700D-P3WV01 TX800L-P3WV01	<ul style="list-style-type: none"> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 40 cm, Steering: 30 cm</li> </ul>
TX700Q-P3WV01	<ul style="list-style-type: none"> <li>- 3 Ethernet ports</li> <li>- SD Card slot</li> <li>- 2 Plug-in module slots for system expansion</li> <li>- Standard Compass Safe Distance: Standard: 35 cm, Steering: 25 cm</li> </ul>

Model name	Description
<b>Accessories</b>	
TX-CAN	CAN Interface - DB9 CAN connector
TX-EXTEND	Plug-in Extender Module
TX-IO-XX03	Multifunction I/O Module - 20 Digital Inputs configurable as counter/encoder channels - 12 Digital Outputs - 8 Analog Inputs configurable for voltage, current or temperature measurement - 1 PT100 input for cold junction compensation of thermocouples - 4 Analog Outputs configurable for voltage or current
TX-IO-DX06	Compact I/O Module - 8 Digital Inputs - 6 Digital Outputs - 1 Relay Output

### Application/Limitation

#### Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

#### Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

#### Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV for evaluation and approval. Major changes in the software are to be approved before being installed.

### Type Approval documentation

Documents and Test Reports: TAA000027Z List of Documents & Test Reports Rev.0

### Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

### Tests carried out

Applicable tests according to Class Guidelines DNV-CG-0339, August 2021.

For the bridge mounted components the 'Compass safe distance' was measured according to section 11.2 of IEC 60945 4th edition (2002).

## Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE