



Lloyd's
Register

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	Hans Turck GmbH & Co. KG Witzlebenstrasse, 7 45472 – Mülheim an der Ruhr Germany
PLACE OF PRODUCTION	Via Monte Fiorino, 9 37057 San Giovanni Lupatoto (VR) Italy
DESCRIPTION	HMIs (Human Machine Interfaces) with display and touchscreen, and plug-in accessories
TYPE	eX700 Series: TX705-P3CV01(*) TX715-P3CV01(*) TX707-P3CV01(*) TX721-P3CV01(*) TX710-P3CV01(*) with the following plug-in accessories: TX-CAN(*) TX-IO-XX-03(*) TX-RS485(*) TX-IO-DX03(*) <small>(*) model name can be followed by 0 or 1 or 2 or 3 characters identifying cosmetic parts not affecting LR Technical Requirements.</small>
APPLICATION	Marine, Offshore and Industrial application for use in environmental categories ENV1 and ENV2 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1, 2017.
SPECIFIED STANDARDS	Manufacturer's Specification

Certificate No.	19/00008
Issue Date	11 February 2019
Expiry Date	10 February 2024
Sheet	1 of 4

M. Crucil
Trieste Technical Support Office
Lloyd's Register EMEA

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71 Fenchurch Street, London EC3M 4BS

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RATINGS

Power supply:	24 V dc
Protection Index:	IP 66 (front) IP 20 (rear)

TX705-P3CV01	
- Display - Colours:	5" TFT 16:9 LED - 64K
- Resolution:	800x480 WVGA
- Touchscreen:	True glass projected capacitive, multitouch
- CPU:	ARM Cortex-A8 - 1GHz
- Operating System:	Linux RT
- Interfaces	n.2 Ethernet port n.1 USB port n.1 serial port (n.2 using plug-in modules) SD card slot n.1 plug-in module slot for system expansion

TX707-P3CV01	
- Display - Colours:	7" TFT 16:9 LED - 16M
- Resolution:	800x480 WVGA
- Touchscreen:	True glass projected capacitive, multitouch
- CPU:	ARM Cortex-A9 dual core 800 MHz
- Operating System:	Linux RT
- Interfaces	n.3 Ethernet port n.2 USB port n.1 serial port (n.3 using plug-in modules) SD card slot n.2 plug-in module slots for system expansion

TX710-P3CV01	
- Display - Colours:	10.1" TFT 16:9 LED - 16M
- Resolution:	1280x800 WXGA
- Touchscreen:	True glass projected capacitive, multitouch
- CPU:	ARM Cortex-A9 dual core 800 MHz
- Operating System:	Linux RT
- Interfaces	n.3 Ethernet port n.2 USB port n.1 serial port (n.3 using plug-in modules) SD card slot n.2 plug-in module slots for system expansion

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TX715-P3CV01	
- Display - Colours:	15.6" TFT LED - 16M
- Resolution:	1366x768 HD
- Touchscreen:	True glass projected capacitive, multitouch
- CPU:	ARM Cortex-A9 quad core 800 MHz
- Operating System:	Linux RT
- Interfaces	n.3 Ethernet port n.2 USB port n.1 serial port (n.3 using plug-in modules) SD card slot n.2 plug-in module slots for system expansion
TX721-P3CV01	
- Display - Colours:	21.5" TFT LED - 16M
- Resolution:	1920x1080 HD
- Touchscreen:	True glass projected capacitive, multitouch
- CPU:	ARM Cortex-A9 quad core 800 MHz
- Operating System:	Linux RT
- Interfaces	n.3 Ethernet port n.2 USB port n.1 serial port (n.3 using plug-in modules) SD card slot n.2 plug-in module slots for system expansion
Accessories:	
TX-CAN	CAN interface, DB9 CAN connector
TX-RS485	RS-422/485 interface with optical insulation
TX-IO-XX03	I/O module - 20 digital input - 12 digital output - 8 analogue input - 1 Pt100 cold junction input - 4 analogue output
TX-IO-DX03	I/O module, compact - 8 digital input - 6 digital output - 1 relay output

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ADDITIONAL TESTS

Compass Safe Distance, according to IEC 60945:2002

	standard compass [m]	steering compass [m]
TX705-P3CV01	0.15	0.10
TX707-P3CV01	0.85	0.40
TX710-P3CV01	1.15	0.75
TX715-P3CV01	1.80	1.30
TX721-P3CV01	2.20	1.30

Cold test, IEC 60068-2-1, cl.6: at -25°C, 5 hours

Dry Heat test, IEC 60068-2-2, cl.6: at +55°C, 16 hours

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No.19/00008 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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