Your Global Automation Partner

TURCK

Overview
HMI/PLC TX Operator Panels

TX Operator Panels – Efficient Control and Visualization

The four product lines of the Turck TX operator panel series provide tailor-made solutions for the control (Programmable Logic Controller PLC) and operation (Human Machine Interface HMI) of simple and medium machines and systems.

HMI/PLC – Your benefit

- CODESYS-V3-PLC and HMI in one panel
- Compact and powerful all-in-one solution

More detailed view

- Brilliant TFT displays
- 4" to 21" screen diagonals
- Resistive or capacitive touch
- Gesture control

Panel diversity

- Basic, standard, or premium
- Always the right panel for the best price/performance ratio

Highly communicative PLC

- CODESYS PLC as the core piece for your system solutions
- Numerous Ethernet/fieldbus protocols as master and slave

More Ethernet ports

- Three independent Ethernet ports
- Physically separated networks
- Internal bridge function for switch functionality

Plug-in modules

- Digital and analog I/O signals
- CAN interface
- Additional serial interfaces RS485/ RS232

Visualization with TX VisuPro

- Communication with up to eight controllers at the same time
- Data gateway between PLCs
- PDF, videos, IP cameras, audit trail

Modern hardware

- Scalable system performance
- Glass or foil front
- Capacitive or resistive touch
- Metal or plastic housing

I4.0 + IIOT Ready

- Turck Cloud connection
- OPC UA server/client
- VNC client/server
- MQTT and Node RED in preparation

More approvals

- cULus
- DNV GL ship approval
- For the Ex area: UL Class 1 Div. 2, ATEX, IEC Ex

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Contents

Portfolio of TX Operator Panels

	TX100	TX207
	Basic Line	Basic Line
	Solid HMI operator panels for simple visualization tasks at an optimized good price-performance ratio	HMI/PLC for medium applications featuring data exchange with field devices such as I/O modules, valves, and drives; the TX207 is characterized by the large number of onboard interfaces for Ethernet, RS232, RS485, and CAN
		
Application area		
Function	HMI	HMI or HMI/PLC
Control	–	CODESYS V3
Performance class*	1 - TX104 - TX107, TX110	5 - TX207
Visualization	TX VisuPro	CODESYS TargetVisu (Default)TX VisuPro (Optional)
Display		
Diagonal	4…10"	7"
Touch	Foil front, resistive touch	Foil front,, resistive touch
System		
Controller	Single-core up to 1 GHz	Dual-core 800 MHz
Operating system	RT Linux	RT Linux
General data		
Housing	Robust plastic housing	Robust plastic housing
Temperature range	0…50 °C	0…50 °C
Approvals	CE, cULus	CE, cULus
Approvals for Ex areas	UL Class 1 Div. 2	–

* is used to compare the performance of the devices, based mainly on the computing speed of the processor, which increases proportionally to the factor. Details on the respective processor in the technical data.

Product images are linked to further information.

TX500	TX700
Standard Line	Premium Line
HMI/PLC for simple applications featuring data exchange with a few field devices such as I/O modules, valves, and drives; the TX500 devices can also be used as a HMI for simple visualization tasks	For larger applications featuring data exchange with more field devices, even with different protocols on different interfaces; the TX700 devices are also ideal for demanding visualization tasks
	
HMI or HMI/PLC	HMI or HMI/PLC
CODESYS V3	CODESYS V3
2 - TX504E, TX507E3 - TX507, TX510, TX513	3 - TX705 - TX707, TX710 - TX715, TX721
CODESYS TargetVisu (Default)TX VisuPro (Optional)	CODESYS TargetVisu (Default)TX VisuPro (Optional)
4…13"	5…21"
Foil front, resistive touch	Glass front, capacitive touch, multi-touch and gesture control
Single-core up to 1 GHz	Single to quad-core 800 MHz
Windows CE	RT Linux
High-quality metal housing	High-quality metal housing
0…50 °C	-20…60 °C
CE, cULus	CE, cULus, DNV-GL
UL Class 1 Div. 2	UL Class 1 Div. 2, ATEX, IEC Ex

Product images are linked to further information.

Use Cases and Application Areas

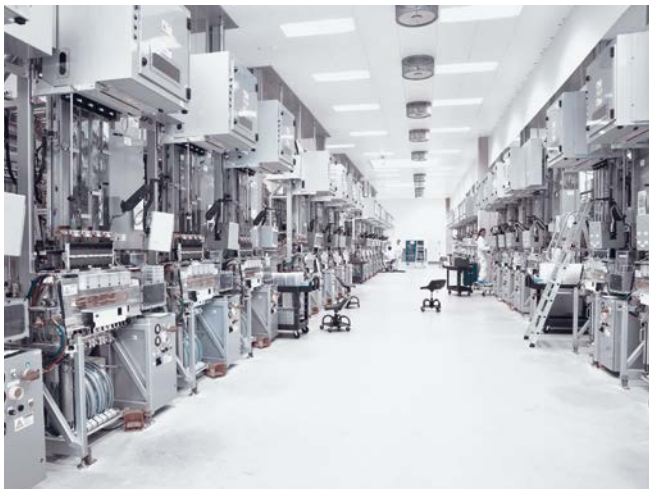
Areas of application and application possibilities for the TX operator panels can be found in automation technology where processes need to be monitored and controlled. The following four examples show a cross-section of typical application.

Logistics

Logistics centers offer a wide range of application possibilities for HMI and HMI/PLC devices – from the packaging and distribution center to the control of loading ramps and roller doors. Important conditions and hazards can be made clearly visible to employees in a flexible and dynamic way, for example, through flashing symbols or color changes. Step-by-step work processes can be illustrated visually as a sequence of pictures or drawings. The display of PDFs or videos are further options for achieving and ensuring continuous quality in work processes.

Systems and assemblies

Many machines and assemblies such as pump controls are still controlled and operated in the traditional way using switches, buttons, and indicator lights. Modern and compact HMI/PLC panels offer added value here, too. Firstly, operating data such as pressures, hour meters, or maintenance intervals can be illustrated in a structured way. Secondly, user administration allows different views and information to be made available to various user groups such as operating personnel or service technicians. Also, parameters can be freely adjusted or adjusted within specified ranges at any time.



Compact machines

Other types of smaller machines are, for example, mixers, dosing feeders, or stirring units. Here, the necessary entries are generally performed by the operating personnel. Recipes from a predefined pool are also frequently used. However, changes and optimizations can even be made and saved during operation. Such adjustments can also be logged transparently in combination with a user administration. For this type of application, predefined objects and widgets such as the "Audit Trail" are available. In addition to the software, hardware is also often required in such applications. Special variants are available with stainless steel front, which fulfill the protection rating up to IP69.

Modularization

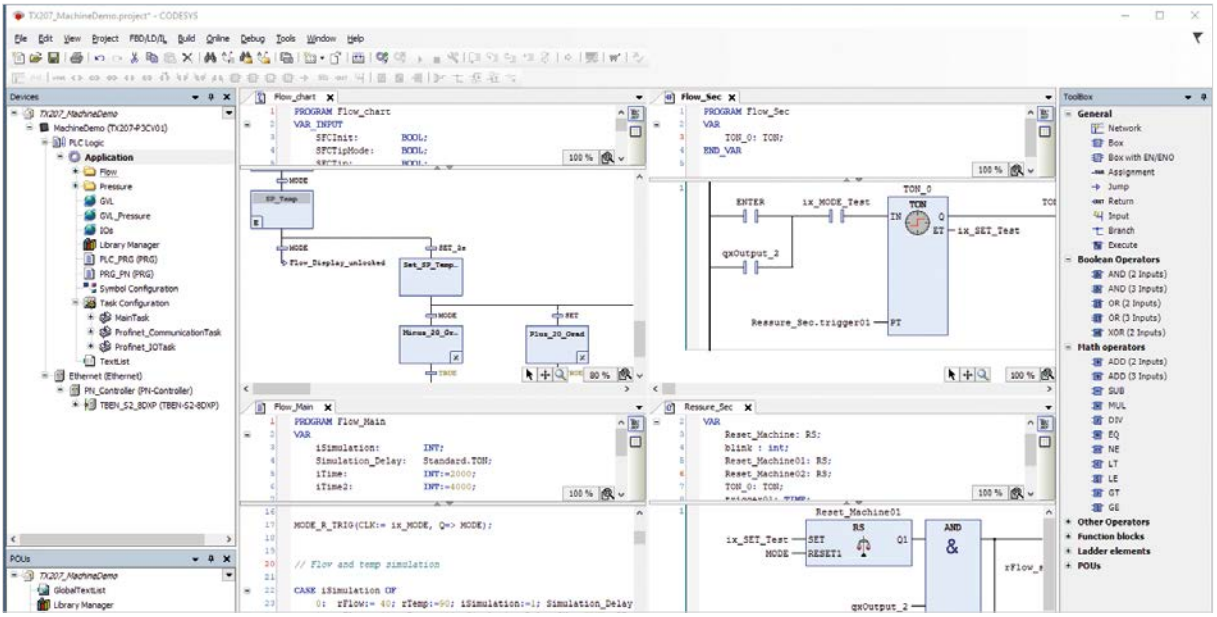
The trend toward the modularization of machines and plants helps the machine manufacturer to standardize plant parts. A kit of independent modules and optional extensions or functions is therefore created, from which users can flexibly put together a configuration to suit their needs. Whether the individual modules or system parts require an HMI or HMI/PLC, or are to be controlled by other modules, can be decided on flexibly according to the level of complexity or optionally at the customer's request. Turck also offers optional PLCs or Field Logic Controllers without their own display. Cost benefits and increased efficiency are just two aspects resulting from the modularization of machines.

CODESYS-PLC

The built-in control functionality can be programmed with CODESYS V3 according to the IEC 61131-3 standard. The user can select any of the standard programming languages available; LD, FBD, IL, ST, CFC, and SFC. All supported Ethernet and fieldbus protocols can be configured via the software that allows real object-oriented PLC programming.

The following figure shows four possible programming languages:

- Top left: Sequential function chart (SFC)
- Top right: Ladder diagram (LD)
- Bottom left: Structured text (ST)
- Bottom right: Function block diagram (FBD or FUP)



In addition to the standard libraries that are already available in the CODESYS setup, Turck supports users with their own libraries and function blocks for IO-Link and the Turck BL ident RFID system. In addition, a large open source community is available on the Internet that offers a wide range of application expertise and provides sample programs and function blocks. One example is the "Open Source Community for Automation Technology", OSCAT for short. At www.oscat.de you will find extensive knowledge that can support you in the development of your applications and thus considerably reduce time and costs.

Communication possibilities

The CODESYS controller supports the master and slave functions shown in the table. The CODESYS-Feature OPC-UA server is also already licensed in the TX HMI/PLC panels. In addition, standard Ethernet TCP/IP or UDP/IP or serial communication via RS232, RS485, or RS422 can be freely programmed.

Protocol	Master	Slave
PROFINET	Yes	–
EtherNet/IP	Yes	–
Modbus TCP	Yes	Yes
CANopen	Yes	–
Modbus RTU	Yes	Yes

CODESYS Visualization Possibilities

TargetVisu

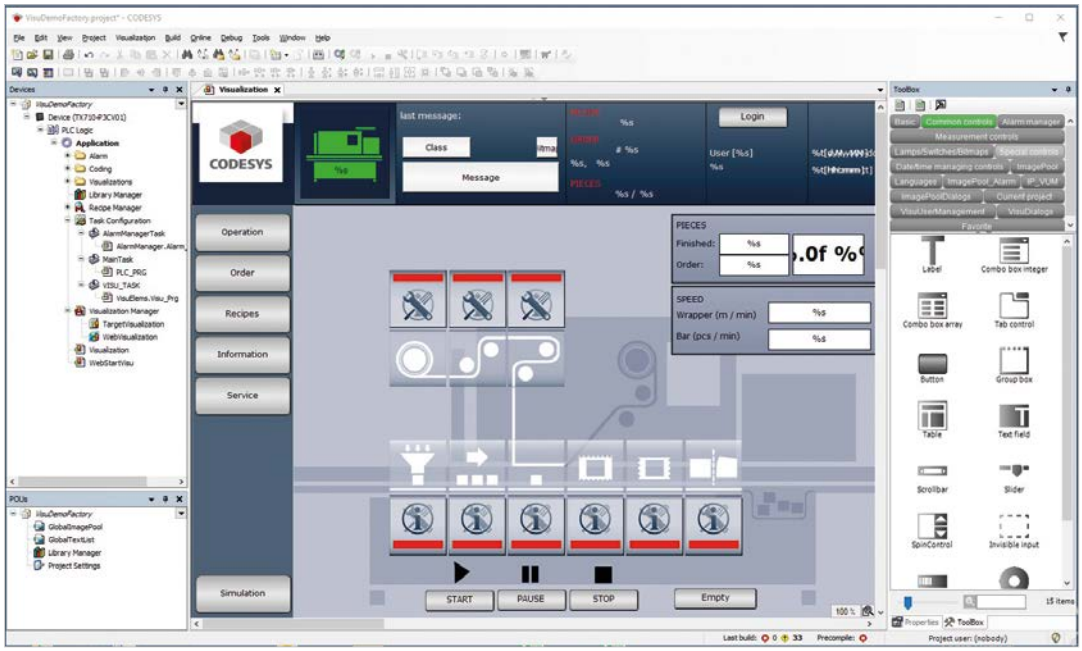
The CODESYS TargetVisu is the visualization that is shown and run locally on the touch screen of the TX operator panels. The integration of the visualization editor into the PLC programming environment ensures maximum efficiency by allowing the PLC programmer to create the visualization in a tool while also programming the controller.

WebVisu

The CODESYS WebVisu is built in a similar way to a TargetVisu. The web-based display variant allows remote access, remote monitoring, as well as service and diagnostics of a plant only with the help of a browser. The WebVisu can thus be easily used in addition to TargetVisu on PCs or mobile devices.

Internal visualization

The visualization pages can also be carried out within the CODESYS programming environment. This is a particularly useful feature in the context of programming and commissioning. Not only can variables and states be very easily observed, they can also be manipulated. This also applies for all visualization pages of the TargetVisu and WebVisu.



Basic elements	General controls	Input options	Special controls	Practical controls	Animation possibilities
Rectangles	Buttons	Keys	Trace	Pointer instruments	Text display
Ellipses	Tables	Toggling	ActiveX elements	Lamps	Color change
Curves	Scroll bars	Picture change	Waiting symbols	Switch	Visible/invisible
Polygons	Slider	Mouse-over	Text editors	Potentiometer	Operable/inactive
Bitmaps	Loading bar	Function calls	–	Bar graphs	Shift
Buttons	Radio buttons	–	–	–	Resizing
Frames	Check boxes	–	–	–	Rotation
Bezier curves	–	–	–	–	Character properties

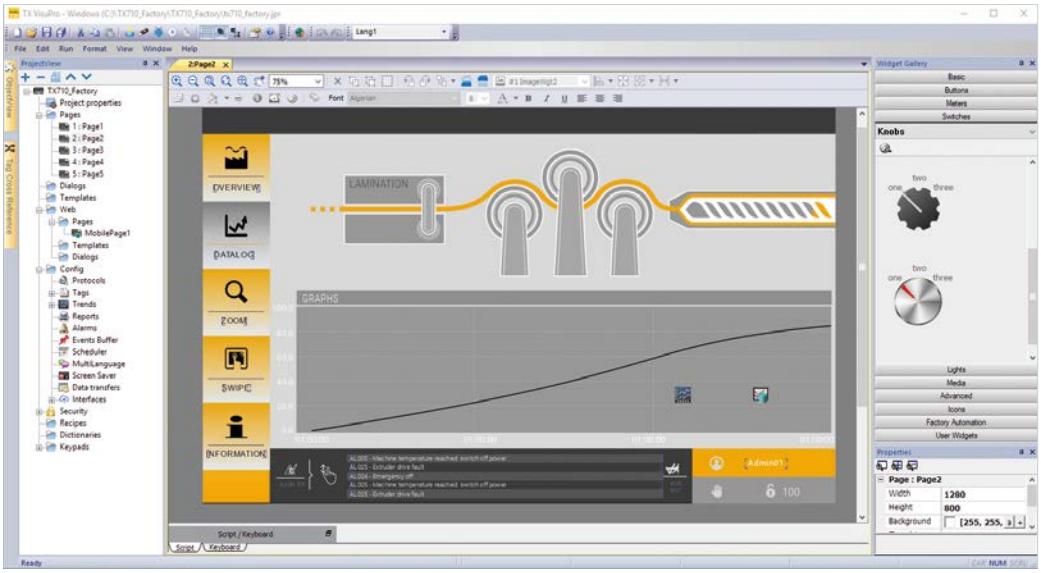
TX VisuPro

TX VisuPro is a modern development environment for the creation of contemporary, innovative, and user-friendly graphical user interfaces. TX VisuPro applications can communicate simultaneously with up to eight of the same or different controllers. Advanced features such as gesture control, scheduler, Java Scripting, IP cameras, emails, or audit trails can be generated quickly and intuitively according to your requirements. The HMI thereby becomes the showpiece of each machine and plant.

TX VisuPro is not licensed and can be downloaded free of charge at www.turck.de. Thanks to the integrated simulation mode, the creation and testing of a visualization is already possible without the available hardware.

Excerpt of the supported HMI protocols and controls:

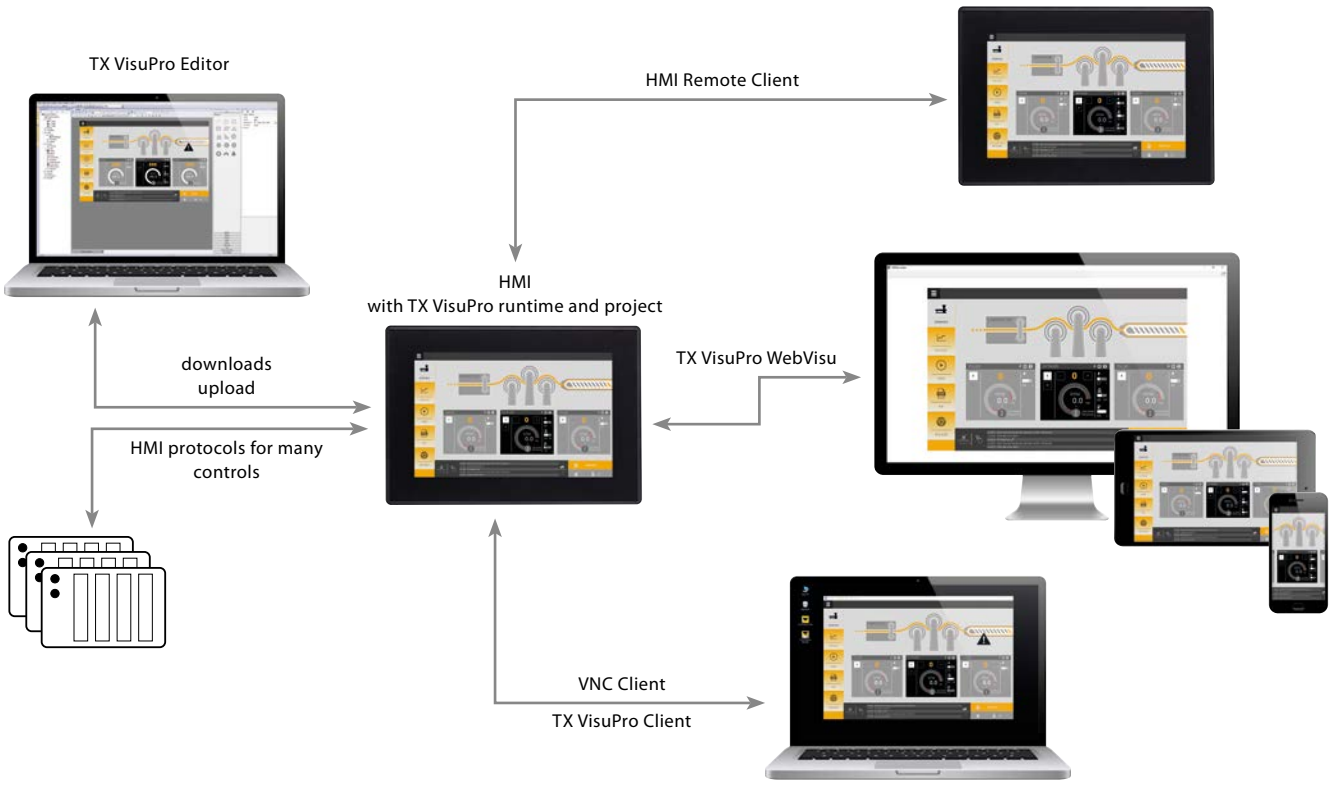
- Siemens Simatic
- Phoenix Contact
- Allen-Bradley
- Beckhoff
- CODESYS (V2, V3)
- Mitsubishi
- Omron
- Modbus (TCP, RTU)
- CANopen
- OPC UA (Server, Client)



Basic elements	General controls	Input options	Special controls	Practical controls	Animation possibilities
Rectangles	Buttons	Keys	Trace	Pointer instruments	Text display
Ellipses	Tables	Toggling	Text editors	Lamps	Color change
Curves	Scroll bars	Picture change	Media player	Switch	Visible/invisible
Polygons	Slider	Mouse-over	Web controls	Potentiometer	Operable/inactive
Bitmaps	Loading bar	Function calls	IP camera	Bar graphs	Shift
Buttons	Radio buttons	Gesture control	Recipes	–	Resizing
Frames	Check boxes	Widget properties	Scheduler	–	Rotation
Bezier curves	Scales	–	Audit tables	–	Character properties
Rings/circles	–	–	Rotation menu	–	–
Icons	–	–	Send email	–	–
–	–	–	Alarm management	–	–
–	–	–	Recipe management	–	–
–	–	–	User administration	–	–

More options for visualization with TX VisuPro

The actual visualization is executed and shown in its native form on the runtime of the centrally displayed HMI. The visualization with TX VisuPro offers yet even more opportunities and features for display and operation. The HMI device can therefore also be accessed remotely in various ways. The figure offers a schematic overview for this.



HMI Remote Client

The HMI Remote Client is practically a twin of the central HMI with the TX VisuPro runtime, which acts as a server in this case. The Remote Client automatically loads the current version of the Visu application from the server during start-up and then executes it independently. The application can then be operated from both devices independently of each other, allowing different content to be accessed at the same time.

TX VisuPro WebVisu

TX VisuPro on the web enables access to all visualization pages that were created as a web type. This can also be other pages and content. This offers hardware-independent remote access via a web browser. All devices that feature an HTML5-enabled web browser, such as web panels, PCs or mobile devices such as tablets or smartphones, can be used for this purpose.

TX VisuPro Client/VNC Client

The TX VisuPro HMI Client is an independent windows application. The tool is part of the TX VisuPro setup and is automatically installed as part of it. The Client enables remote access to the native Visu application of the central HMI. The VNC Client enables full access to all the HMI settings. This is, for example, the ideal solution for remote maintenance and diagnosis of the control panel.

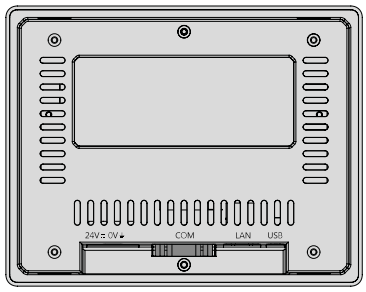
TX100 Series

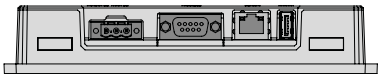
The HMIs of the TX100 product series include three devices with resistive touch display with screen diagonals of 4", 7", or 10". The high-quality plastic housing and the reduced number of interfaces offer an optimal price/performance ratio in cost-sensitive applications. The devices have one Ethernet interface, a serial interface (RS232, RS422 or RS485) and a USB port. The TX100 devices are pure operator interfaces without control function and, like all TX devices, can be easily connected to almost all controllers by means of protocol support. Alternatively, the panels can also be used as a web panel.

Areas of application

- HMI panel
- Web panel

Interfaces:





Type code

TX	1	07	–	00	VP	ST

TX	Product series	1	Series	04	Screen diagonals

Product series
TX Turck HMI

Series
1 TX100 series

Size
04 4.3″
07 7″
10 10.1″

00	PLC	VP	Visualization	ST	Communication

PLC
00 HMI without PLC functionality

Visualization
VP TX VisuPro Runtime

Communication
ST Standard HMI protocols

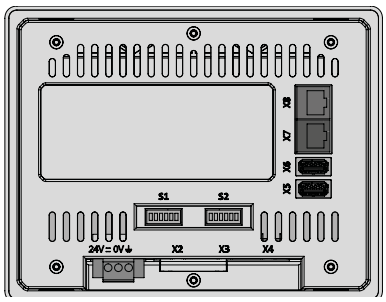
TX207

The TX207 combines the high-quality plastic housing of the TX100 series with a much more powerful hardware platform. The resistive touchscreen has a screen diagonal of 7''. The TX207 has sufficient memory and computing power, and is equipped with a real-time Linux operating system. Therefore, the main application area for this HMI is on the integrated control functionality, and the programming is carried out with CODESYS V3. Numerous interfaces are already on board for the connection of I/Os, drives, and field devices. The TX207 has two Ethernet ports, two RS232 and two RS485, as well as two CAN interfaces and USB host ports.

Areas of application

- Control
- HMI panel
- Web panel

Interfaces:



Type code

TX 2 07 – P3 CV 01

TX Product series	**2** Series	**07** Screen diagonals
Product series **TX** Turck HMI/PLC	**Series** **2** TX200 series	**Size** **07** 7"

P3 PLC	**CV** Visualization	**01** Communication
PLC **P3** CODESYS V3 Runtime	**Visualization** **CV** CODEYS V3 TargetVisu Runtime	**Communication** **01** PROFINET controller EtherNet/IP scanner Modbus TCP master/slave Modbus RTU master/slave CANopen master

TX100 | TX207 Technical Features

Type designation	TX104-00VPST	TX107-00VPST
Ident.-No.	100002311	100002312
Display/touch		
Display	TFT color	TFT color
Touch	Resistive	Resistive
Active screen area	4.3"	7"
Resolution (pixels)	480 x 272	800 x 480
Format	16:9	16:9
Brightness	200 Cd/m² typ.	200 Cd/m² typ.
Dimmable	Yes	Yes
System		
Processor	ARM Cortex A8, 300 MHz	ARM Cortex A8, 1 GHz
Flash memory	2048 MB	4096 MB
RAM memory	256 MB	512 MB
Memory expansion	USB	USB
Real-time clock	–	–
Buzzer	–	–
PLC data		
Programming	–	–
Programming languages	–	–
Programming interfaces	–	–
Program memory	–	–
Retain memory	–	–
Interfaces		
Ethernet ports	1 x 10/100 Mbit	1 x 10/100 Mbit
Serial ports	1x (RS232/RS485/RS422, configurable)	1x (RS232/RS485/RS422, configurable)
USB ports	1x host v.2.0, max. 500 mA	1x host v.2.0, max. 500 mA
SD card	–	–
Expansion slot	–	–
Power supply		
Rated value	24 VDC, max. 0.25 A	24 VDC, max. 0.3 A
Permissible voltage range	18…32 VDC	10…32 VDC
General data		
Operation temperature	0…50 °C	0…50 °C
Approvals	CE, cULus	CE, cULus
Ex approval	UL Class 1 Div. 2	UL Class 1 Div. 2
Protection type	IP66 front, IP20 rear	IP66 front, IP20 rear
Dimensions		
Housing front (W x H)	147 x 107 mm	187 x 147 mm
Installation cutout (W x H)	136 x 96 mm	176 x 136 mm
Mounting depth	29 mm	29 mm
Weight	320 g	540 g

Product images are linked to further information.

TX110-00VPST	TX207-P3CV01
100002313	100002080
TFT color	TFT color
Resistive	Resistive
10.1"	7"
1024 x 600	800 x 480
16:9	16:9
200 Cd/m² typ.	200 Cd/m² typ.
Yes	Yes
ARM Cortex A8, 1 GHz	ARM Cortex A9, Dual Core 800 MHz
4096 MB	4096 MB
512 MB	1024 MB
USB	USB
–	Yes (battery-backed)
–	–
–	CODESYS V3
–	IEC 61131-3 (IL, LD, FBD, SFC, ST)
–	Ethernet
–	20 MB
–	63 kB
1 x 10/100 Mbit	1 x 10/100/1000 Mbit 1 x 10/100 Mbit
1 x (RS232/RS485/RS422, configurable)	2 x (RS232), 2 x (RS422/RS485), 2 x (CAN)
1 x host v.2.0, max. 500 mA	2 x host v.2.0, max. 100 mA
–	–
–	–
24 VDC, max. 0.38 A	24 VDC, max. 0.3 A
10…32 VDC	10…32 VDC
0…50 °C	0…50 °C
CE, cULus	CE, cULus
UL Class 1 Div. 2	–
IP66 front, IP20 rear	IP66 front, IP20 rear
282 x 197 mm	187 x 147 mm
271 x 186 mm	176 x 136 mm
29 mm	29 mm
900 g	560 g

Product images are linked to further information.

TX500 Series

The HMI devices from the TX500 family combine the "Control, Operation and Monitoring" functions and can already be used as a standard line for simple control tasks. The high-quality metal housing is combined with a film front and resistive touch display with screen diagonals from 4" to 13". The Ethernet ports are connected to each other via an integrated switch. In addition to a serial interface (RS232, RS485, or RS422), the devices are equipped with a further two USB ports. Due to the smaller CPU, the two ECO-variants (TX504E and TX507E) should only be used as an operator panel or for very simple control applications.

Areas of application

- Control
- HMI panel

Plug-in module

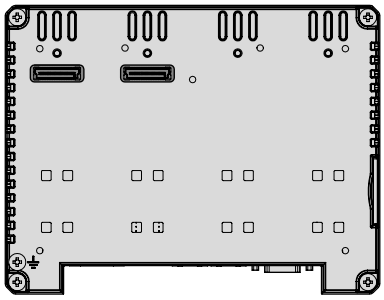
The TX500 devices with displays from 7" feature two interfaces for the connection of optional plug-in modules. Up to two plug-in modules can be inserted on each of the two slots, if one of the two modules has an expansion slot. This is the case, for example, on the serial modules and the plug-in modules for CAN.

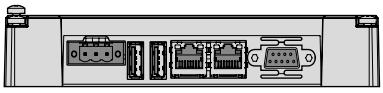
Overview of the available plug-in modules

- RS232 interface
- RS485 interface
- CANopen Manager
- Digital I/O module(8 DI, 6 DO, 1 relay output)
- Multi-functional I/O module(20 DI, 12 DO, 8 AI, 4 AO)

(For more details on the plug-in modules, see Accessories overview)

Interfaces:





Type code

TX	5	04	E	–	P3	CV	01

TX Product series

Product series
TX Turck HMI/PLC

5 Series

Series
5 TX500 series

04 Screen diagonals

Size
04 4.3"
07 7"
10 10.4"
13 13.3"

E Processor – **P3** PLC **CV** Visualization

Processor
E 600 MHz (ECO)
blank 1 GHz

PLC
P3 CODESYS V3 PLC Runtime

Visualization
CV CODESYS V3 TargetVisu Runtime

01 Communication

Communication
01 PROFINET controller (Master)
EtherNet/IP scanner
Modbus TCP master/slave
Modbus RTU master/slave
CANopen master

TX500 Technical Features

Type designation	TX504E-P3CV01	TX507E-P3CV01
Ident.-No.	6828101	6828103
Display/touch		
Display	TFT color	TFT color
Touch	Resistive	Resistive
Active screen area	4.3"	7"
Resolution (pixels)	480 x 272	800 x 480
Format	16 : 9	16 : 9
Brightness	150 Cd/m² typ.	300 Cd/m² typ.
Dimmable	Yes (up to 0%)	Yes (up to 0%)
System		
Processor	ARM Cortex A8, 600 MHz	ARM Cortex A8, 600 MHz
Flash memory	128 MB	128 MB
RAM memory	256 MB	256 MB
Memory expansion	USB, SD card	USB, SD card
Real-time clock	Yes (battery-backed)	Yes (battery-backed)
Buzzer	Yes	Yes
PLC data		
Programming	CODESYS V3	CODESYS V3
Programming languages	IEC 61131-3 (IL, LD, FBD, SFC, ST)	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Programming interfaces	Ethernet	Ethernet
Program memory	20 MB	20 MB
Retain memory	16 kB	16 kB
Interfaces		
Ethernet ports	2 x 10/100 Mbit	2 x 10/100 Mbit
Serial ports	1 x (RS232/RS485/RS422, configurable)	1 x (RS232/RS485/RS422, configurable)
USB ports	1 x host v2.0	1 x host v2.0, 1 x host v2.0/1.1
SD card	Yes	Yes
Expansion slot	1 x plug-in slot	2 x plug-in slots
Power supply		
Rated value	24 VDC, max. 0.55 A	24 VDC, max. 0.7 A
Permissible voltage range	10–32 VDC	10…32 VDC
General data		
Operation temperature	0…50 °C	0…50 °C
Approvals	CE, cULus	CE, cULus
Ex approval	UL Class 1 Div. 2	UL Class 1 Div. 2
Protection type	IP66 front, IP20 rear	IP66 front, IP20 rear
Dimensions		
Housing front (W x H)	147 x 107 mm	187 x 147 mm
Installation cutout (W x H)	136 x 96 mm	176 x 136 mm
Mounting depth	56 mm	47 mm
Weight	950 g	850 g

Product images are linked to further information.

TX507-P3CV01	TX510-P3CV01	TX513-P3CV01
6828104	6828105	6828107
TFT color	TFT color	TFT color
Resistive	Resistive	Resistive
7"	10.4"	13.3"
800 x 480	800 x 600	1280 x 800
16 : 9	4 : 3	16 : 9
300 Cd/m² typ.	300 Cd/m² typ.	300 Cd/m² typ.
Yes (up to 0%)	Yes (up to 0%)	Yes (up to 0 %)
ARM Cortex A8, 1 GHz	ARM Cortex A8, 1 GHz	ARM Cortex A8, 1 GHz
256 MB	256 MB	256 MB
256 MB	256 MB	256 MB
USB, SD card	USB, SD card	USB, SD card
Yes (battery-backed)	Yes (battery-backed)	Yes (battery-backed)
Yes	Yes	Yes
CODESYS V3	CODESYS V3	CODESYS V3
IEC 61131-3 (IL, LD, FBD, SFC, ST)	IEC 61131-3 (IL, LD, FBD, SFC, ST)	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Ethernet	Ethernet	Ethernet
20 MB	20 MB	20 MB
16 kB	16 kB	16 kB
2 x 10/100 Mbit	2 x 10/100 Mbit	2 x 10/100 Mbit
1 x (RS232/RS485/RS422, configurable)	1 x (RS232/RS485/RS422, configurable)	1 x (RS232/RS485/RS422, configurable)
1 x host v2.0, 1 x host v2.0/1.1	1 x host v2.0, 1 x host v2.0/1.1	1 x host v2.0, 1 x host v2.0/1.1
Yes	Yes	Yes
2 x plug-in slots	2 x plug-in slots	2 x plug-in slots
24 VDC, max. 0.7 A	24 VDC, max. 1.0 A	24 VDC, max. 1.2 A
10…32 VDC	10…32 VDC	10…32 VDC
0…50 °C	0…50 °C	0…50 °C
CE, cULus	CE, cULus	CE, cULus
UL Class 1 Div. 2	UL Class 1 Div. 2	UL Class 1 Div. 2
IP66 front, IP20 rear	IP66 front, IP20 rear	IP66 front, IP20 rear
187 x 147 mm	287 x 232 mm	336 x 267 mm
176 x 136 mm	276 x 221 mm	326 x 256 mm
47 mm	56 mm	56 mm
850 g	2200 g	2600 g

Product images are linked to further information.

TX700 Series

The HMI/PLC panels of the TX700 series impress with innovative design. The panels of the Premium Line improve the high quality metal housings with a redesigned front with capacitive glass display. Panels are available with screen diagonals from 5" to 21". The panels now also feature up to three Ethernet ports, which can be used independently for different applications. It is thereby also possible to turn the panels into a universal IoT platform. Remote maintenance and remote access can be quickly and easily achieved with the integrated VNC Server. The PLC programming is freely available via CODESYS V3, the graphical user interface can be created with the visualization editor in CODESYS, or optionally with TX VisuPro.

Areas of application

- Control
- HMI panel
- Multi-touch and gesture control
- IoT gateway
- Extended temperature range of -20…60 °C

Variants for the food industry and extreme environments

The TX700 series now also offers two variants for food and beverage applications (TX700FB, Food&Beverage) and two variants with high brightness displays for improved sunlight readability (TX700HB, High Brightness).

The blue front of the F&B variants (7" and 15") has a stainless steel frame and is fully covered with a polyester coating. This protects the glass front also in the event of possible glass breakage and complies with the requirements of all hygiene regulations.

- Regulations for front and sealing: - DIN EN1672-2 - EHEDG/FDA 21 CFR 177.2006
- Front protection type: IP69
- Resistant to high pressure water, 80 °C

The TX700HB (High Brightness) versions use a special technology called liquid bonding (LOCA) to ensure good sunlight readability. This screen enhancement process improves contrast and brightness (up to 800 candela) by reducing reflection and refraction.

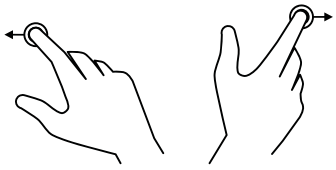
Gesture control via TX VisuPro

The glass front of the TX700 operator panels with capacitive touch supports multi-touch and gesture control functionality. The gestures can be flexibly configured in the TX VisuPro visualization editor. A predefined object, also known as a widget, defines the area of the display the gesture is to be recognized and which action is to be subsequently performed. Modern operating concepts can thereby quickly and flexibly be adapted to the requirements of the individual machine or system. Below is an overview of the typical gestures.

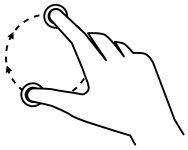
Plug-in modules

The TX700 panels can also be expanded with functions, interfaces, and local I/O signals via plug-in modules. The concept has been adopted from the TX500 panel series. The same plug-in modules can be used.

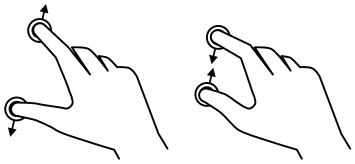
Swipe



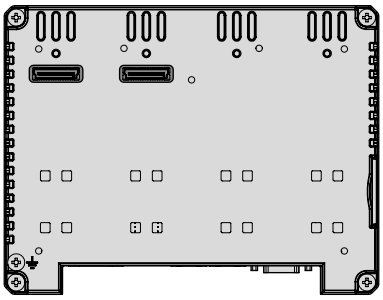
Rotate

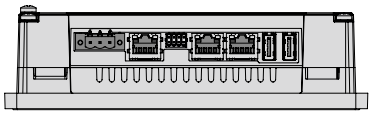


Zoom



Interfaces:





Type code

TX	7	05	FB	–	P3	CV	01

TX Product series

Product series

TX Turck HMI/PLC

7 Series

Series

7 TX700 series

05 Screen diagonal

Size

00 Without display
05 5"
07 7"
10 10.1"
15 15.6"
21 21.5"

FB Variant – **P3 PLC** **CV Visualization**

Variant

Blank Standard
FB Food & beverage
HB High Brightness
S Single Core
D Dual Core
Q Quad Core

PLC

P3 CODESYS V3 PLC Runtime

Visualization

CV CODEYS V3 TargetVisu Runtime
WV WebVisu (CODESYS, TX VisuPro)

01 Communication

Communication

01 PROFINET controller
EtherNet/IP scanner
Modbus TCP master/slave
Modbus RTU master/slave
CANopen master

Technical Features TX700

Type designation	TX705-P3CV01	TX707-P3CV01
Ident.-No.	100002029	100002030
Display/touch		
Display	TFT color	TFT color
Touch	Capacitive	Capacitive
Active screen area	5"	7"
Resolution (pixels)	800 x 480	800 x 480
Format	16 : 9	16 : 9
Brightness	300 Cd/m² typ.	500 Cd/m² typ.
Dimmable	Yes (up to 0%)	Yes (up to 0%)
System		
Processor	ARM Cortex A8, 1 GHz	ARM Cortex A9, Dual Core 800 MHz
Flash memory	4096 MB	4096 MB
RAM memory	512 MB	1024 MB
Memory expansion	USB, SD card	USB, SD card
Real-time clock	Yes (battery-backed)	Yes (battery-backed)
Buzzer	–	–
PLC data		
Programming	CODESYS V3	CODESYS V3
Programming languages	IEC 61131-3 (IL, LD, FBD, SFC, ST)	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Programming interfaces	Ethernet	Ethernet
Program memory	20 MB	20 MB
Retain memory	63 kB	63 kB
Interfaces		
Ethernet ports	2 x 10/100 Mbit	1 x 10/100/1000 Mbit 2 x 10/100 Mbit
Serial ports	1 x (RS232/RS485/RS422, configurable)	1 x (RS232/RS485/RS422, configurable)
USB ports	1 x host v.2.0, max. 500 mA	2 x host v.2.0, max. 500 mA
SD card	Yes	Yes
Expansion slot	1 x plug-in slot	2 x plug-in slots
Power supply		
Rated value	24 VDC, max. 0.6 A	24 VDC, max. 0.7 A
Permissible voltage range	10…32 VDC	10…32 VDC
General data		
Operation temperature	-20…60 °C	-20…60 °C
Approvals	CE, cULus, DNV-GL, LR	CE, cULus, DNV-GL, LR
Ex approval	UL Class 1 Div. 2, ATEX, IEC Ex	UL Class 1 Div. 2, ATEX, IEC Ex
Protection type	IP66 front, IP20 rear	IP66 front, IP20 rear
Dimensions		
Housing front (W x H)	147 x 107 mm	187 x 147 mm
Installation cutout (W x H)	136 x 96 mm	176 x 136 mm
Mounting depth	52 mm	47 mm
Weight	800 g	1100 g

Product images are linked to further information.

TX710-P3CV01	TX715-P3CV01	TX721-P3CV01
100002031	100002032	100002033
TFT color	TFT color	TFT color
Capacitive	Capacitive	Capacitive
10.1"	15.6"	21.5"
1280 x 800	1366 x 768	1920 x 1080
16 : 9	16 : 9	16 : 9
500 Cd/m² typ.	400 Cd/m2 typ.	300 Cd/m² typ.
Yes (up to 0%)	Yes (up to 0%)	Yes (up to 0 %)
ARM Cortex A9, Dual Core 800 MHz	ARM Cortex A9, Quad Core 800 MHz	ARM Cortex A9, Quad Core 800 MHz
4096 MB	8192 MB	8192 MB
1024 MB	2048 MB	2048 MB
USB, SD card	USB, SD card	USB, SD card
Yes (battery-backed)	Yes (battery-backed)	Yes (battery-backed)
–	–	–
CODESYS V3	CODESYS V3	CODESYS V3
IEC 61131-3 (IL, LD, FBD, SFC, ST)	IEC 61131-3 (IL, LD, FBD, SFC, ST)	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Ethernet	Ethernet	Ethernet
20 MB	20 MB	20 MB
63 kB	63 kB	63 kB
1 x 10/100/1000 Mbit 2 x 10/100 Mbit	1 x 10/100/1000 Mbit 2 x 10/100 Mbit	1 x 10/100/1000 Mbit 2 x 10/100 Mbit
1 x (RS232/RS485/RS422, configurable)	1 x (RS232/RS485/RS422, configurable)	1 x (RS232/RS485/RS422, configurable)
2 x host v.2.0, max. 500 mA	2 x host v.2.0, max. 500 mA	2 x host v.2.0, max. 500 mA
Yes	Yes	Yes
2 x plug-in slots	2 x plug-in slots	2 x plug-in slots
24 VDC, max. 1.0 A	24 VDC, max. 1.2 A	24 VDC, max. 1.7 A
10…32 VDC	10…32 VDC	10…32 VDC
-20…60 °C	-20…60 °C	-20…60 °C
CE, cULus, DNV-GL, LR	CE, cULus, DNV-GL, LR	CE, cULus, DNV-GL, LR
UL Class 1 Div. 2, ATEX, IEC Ex	UL Class 1 Div. 2, ATEX, IEC Ex	UL Class 1 Div. 2, ATEX, IEC Ex
IP66 front, IP20 rear	IP66 front, IP20 rear	IP66 front, IP20 rear
282 x 197 mm	422 x 267 mm	552 x 347 mm
271 x 186 mm	411 x 256 mm	541 x 336 mm
56 mm	56 mm	56 mm
1800 g	3500 g	6100 g

Product images are linked to further information.

Technical Features TX700FB and TX700HB

Type code	TX707FB-P3CV01	TX715FB-P3CV01
Ident.-No.	100007471	100007472
Display/touch		
Display	TFT color	TFT color
Touch	Capacitive	Capacitive
Active screen area	7"	15.6"
Resolution (pixels)	800 x 480	1366 x 768
Format	16 : 9	16 : 9
Brightness	500 Cd/m² typ.	400 Cd/m² typ.
Dimmable	Yes (up to 0 %)	Yes (up to 0 %)
System		
Processor	ARM Cortex-A9 dual core 800 MHz	ARM Cortex-A9 quad core 800 MHz
Flash memory	4 GB	8 GB
RAM memory	1 GB	2 GB
Memory expansion	USB, SD card	USB, SD card
Real-time clock	Yes (battery-backed)	Yes (battery-backed)
Buzzer	Yes	Yes
PLC data		
Programming	CODESYS V3	CODESYS V3
Programming languages	IEC 61131-3 (IL, LD, FBD, SFC, ST)	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Programming interfaces	Ethernet	Ethernet
Program memory	20 MB	20 MB
Non-volatile memory	63 Kbyte	63 Kbyte
Interfaces		
Ethernet ports	1 x 10/100/1000 Mbit 2 x 10/100 Mbit	1 x 10/100/1000 Mbit 2 x 10/100 Mbit
Serial ports	1 x (RS232/RS485/RS422, configurable)	1 x (RS232/RS485/RS422, configurable)
USB ports	2 x Host v2.0, max. 500 mA	2 x Host v2.0, max. 500 mA
SD card	Yes	Yes
Expansion slot	2 x plug-in slots	2 x plug-in slots
Power supply		
Rated value	24 VDC, 0.7 A maximum	24 VDC, 1.2 A maximum
Permissible voltage range	10…32 VDC	10…32 VDC
General data		
Operating temperature	-20…+60 °C	-20…+60 °C
Approvals	CE, cULus	CE, cULus
EX approval	–	–
Protection type	IP69K (front), IP20 (rear)	IP69K (front), IP20 (rear)
Dimensions		
Housing front (W x H)	217 x 177 mm	450 x 295 mm
Installation cutout (W x H in mm)	176 x 136 mm	411 x 256 mm
Mounting depth (D in mm)	45 + 10 mm	56 + 8 mm
Weight	2.5 kg	5.2 kg

Product images are linked to further information.

TX707HB-P3CV01	TX710HB-P3CV01
100007473	100007474
TFT color	TFT color
Capacitive	Capacitive
7"	10.1"
800 x 480	1280 x 800
16:9	16:9
600 Cd/m²	800 Cd/m² typ.
Yes (up to 0 %)	Yes (up to 0 %)
ARM Cortex-A9 dual core 800 MHz	ARM Cortex-A9 dual core 800 MHz
4 GB	4 GB
1 GB	1 GB
USB, SD card	USB, SD card
Yes (battery-backed)	Yes (battery-backed)
Yes	Yes
CODESYS V3	CODESYS V3
IEC 61131-3 (IL, LD, FBD, SFC, ST)	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Ethernet	Ethernet
20 MB	20 MB
63 Kbyte	63 Kbyte
1 x 10/100/1000 Mbit 2 x 10/100 Mbit	1 x 10/100/1000 Mbit 2 x 10/100 Mbit
1 x (RS232/RS485/RS422, configurable)	1 x (RS232/RS485/RS422, configurable)
2 x Host v2.0, max. 500 mA	2 x Host v2.0, max. 500 mA
Yes	Yes
2 x plug-in slots	2 x plug-in slots
24 VDC, 0.7 A maximum	24 VDC, 1.0 A maximum
10…32 VDC	10…32 VDC
-20…+60 °C	-20…+60 °C
CE, cULus	CE, cULus
UL Class I Div. 2	UL Class I Div. 2
IP66 (front), IP20 (rear)	IP66 (front), IP20 (rear)
187 x 147 mm	282 x 197 mm
176 x 136 mm	271 x 168 mm
47 + 8 mm	56 + 8 mm
1.5 kg	2.5 kg

Product images are linked to further information.

TX700 IIoT Edge Controller and CODESYS PLC

The IIoT edge controllers of the TX700 series form the link between the conventional automation devices such as PLCs or IO-Link masters and the IIoT applications such as cloud services. They are thus a central element of the IIoT infrastructure. The gateways can be used here as a PLC with CODESYS V3, as a secure router or a powerful HMI with WebVisu and many HMI protocols for all standard controllers. The OT and IT networks are physically separated with individual Ethernet ports to ensure maximum security. Secure HTTPS/TLS-encrypted data transfers with signatures and packet transmission provide protection from data theft and snooping. The VNC server allows swift and easy implementation of remote maintenance and remote access tasks.

Application areas

- Controller
- IIoT gateway

CODESYS v3 PLC

The TX700 IIoT gateways can also be used as conventional IP20 PLCs with CODESYS v3 control and WebVisu. The devices come factory shipped with all the necessary licenses and the several master and slave functions available.

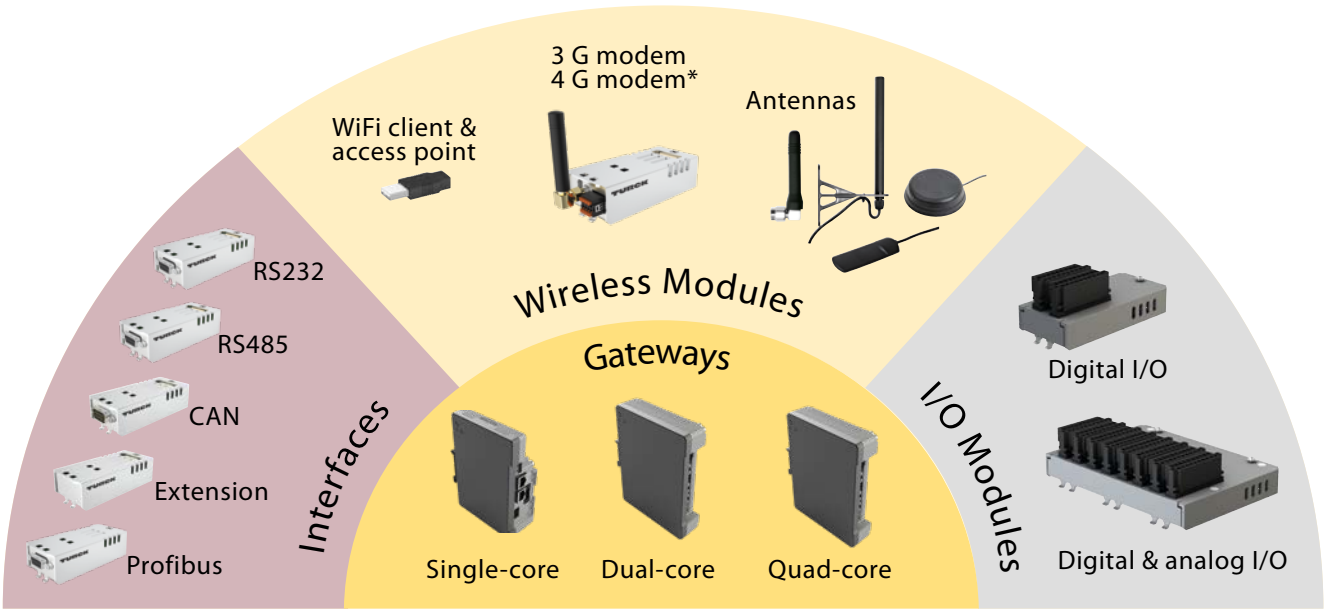
TX VisuPro

Alternatively, the CODESYS visualization can also be replaced with a TX VisuPro runtime at no additional cost. This makes it possible to access the extensive protocol library including the OPC UA server, client and MQTT.

Plug-in modules

Plug-in modules also make it possible to provide TX700 devices with additional functions, interfaces and local I/O signals. The same concept is available with the TX500 device series. The same plug-in modules can therefore also be used here.

Modular and future-proof IIoT concept



*in preparation

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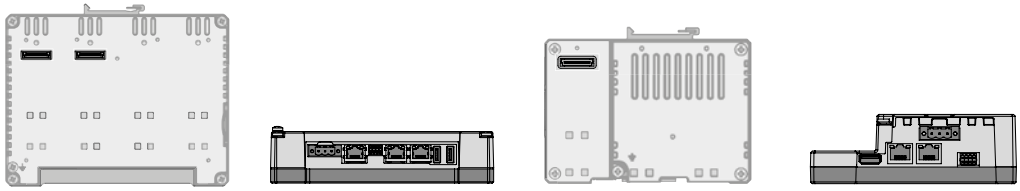
Interfaces



3 RJ45 Ethernet ports
- ETH0: 10/100/1000 Mbit
- ETH1/ETH2: 10/100 Mbit

1 serial interface
- RS232, RS422 or RS485

1 slot for an SD card

Expansion slot
- One slot (TX700S) and two slots (TX700D & Q) for up to four plug-in modules

TX700D and TX700Q

TX700S

Type code

TX	7	05	FB	–	P3	CV	01

TX Product series

Product series
TX Turck HMI/PLC

7 Series

Series
7 TX700 series

05 Screen diagonal

Size
00 Without display
05 5"
07 7"
10 10.1"
15 15.6"
21 21.5"

FB Variant – **P3** PLC **CV** Visualization

Variant
Blank Standard
FB Food & beverage
HB High brightness
S Single core
D Dual core
Q Quad core

PLC
P3 CODESYS V3 PLC runtime

Visualization
CV CODEYS V3 TargetVisu runtime
WV WebVisu (CODESYS, TX VisuPro)

01 Communication

Communication
01 PROFINET controller
EtherNet/IP scanner
Modbus TCP master/slave
Modbus RTU master/slave
CANopen master

Technical Features TX700 IIoT Gateways

Type code	TX700S-P3WV01	TX700D-P3WV01
Ident-No.	100009353	100009354
Display/touch		
Display	No display	No display
Visualization	CODESYS or TX VisuPro WebVisu	CODESYS or TX VisuPro WebVisu
System		
Processor	ARM Cortex A8, 1 GHz	ARM Cortex A9, Dual Core 800 MHz
Flash memory	4 GB	4 GB
RAM memory	512 MB	1 GB
Memory expansion	USB, SD card	USB, SD card
Real-time clock	Yes (battery-backed)	Yes (battery-backed)
Buzzer	Yes	Yes
PLC data		
Programming	CODESYS V3	CODESYS V3
Programming languages	IEC 61131-3 (IL, LD, FBD, SFC, ST)	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Programming interfaces	Ethernet	Ethernet
Program memory	20 MB	20 MB
Non-volatile memory	63 Kbyte	63 Kbyte
Interfaces		
Ethernet ports	2 x 10/100 Mbit	1 x 10/100/1000 Mbit 2 x 10/100 Mbit
Serial ports	1 x (RS232/RS485/RS422, configurable)	1 x (RS232/RS485/RS422, configurable)
USB ports	1 x Host v2.0, max. 500 mA	2 x Host v2.0, max. 500 mA
SD card	Yes	Yes
Expansion slot	1 x plug-in slot	2 x plug-in slots
Power supply		
Rated value	24 VDC, 0.35 A maximum	24 VDC, 0.5 A maximum
Permissible voltage range	10…32 VDC	10…32 VDC
General data		
Operating temperature	-20…60 °C	-20…60 °C
Approvals	CE, cULus	CE, cULus
EX approval	UL Class I Div. 2, (ATEX and IECEx in preparation)	UL Class I Div. 2, (ATEX and IECEx in preparation)
Protection type	IP20	IP20
Dimensions		
Housing (H x D)	134 x 102 mm	174 x 144 mm
Width on DIN rail (W)	45 mm	44 mm
Weight	0.56 kg	0.65 kg

Product images are linked to further information.

	TX700Q-P3WV01
	100009355
	No display
	CODESYS or TX VisuPro WebVisu
	ARM Cortex A9, Quad Core 800 MHz
	8 GB
	2 GB
	USB, SD card
	Yes (battery-backed)
	Yes
	CODESYS V3
	IEC 61131-3 (IL, LD, FBD, SFC, ST)
	Ethernet
	20 MB
	63 Kbyte
	1x 10/100/1000 Mbit 2x 10/100 Mbit
	1 x (RS232/RS485/RS422, configurable)
	2 x Host v2.0, max. 500 mA
	Yes
	2 x plug-in slots
	24 VDC, 0.55 A maximum
	10…32 VDC
	-20…60 °C
	CE, cULus
	UL Class I Div. 2, (ATEX and IECEx in preparation)
	IP20
	174 x 144 mm
	44 mm
	0.65 kg

Product images are linked to further information.

Accessories

Plug-in modules

Figure	Ident-No.	Type code	Description	
	100002598	TX-RS485	RS485 interface	Galvanically isolated 9-pin SUB-D male connector terminal With plug-in expansion slot
	100002599	TX-RS232	RS232 interface	9-pin SUB-D male connector terminal With plug-in expansion slot
	6828210	TX-CAN	CANopen Manager	CANopen Manager/Master in CODESYS Max. 1 Mbit Galvanically isolated 9-pin SUB-D male connector terminal With plug-in expansion slot
	6828203	TX-IO-DX06	8 DI, 6 DO, 1 relay output	I/O module 8 digital inputs, 24 VDC, pnp 6 digital outputs, 24 VDC, 0.5A, pnp 1 relay, NO contact (NO)
	6828201	TX-IO-XX03	20 DI, 12 DO 0.5A, 8 AI, 4 AO	I/O module 20 digital inputs, 24 VDC, pnp 12 digital outputs, 24 VDC, 0.5A, pnp 8 analog inputs, U, I, RTD, TC 4 analog outputs, U, I
	100004786	TX-EXTEND	Plug-in extension	Can be used with TX504 und TX705 Required for use of the TX-IO-XX03 I/O module With plug-in expansion slot
	100010167	TX-DP-S	PROFIBUS-DP slave	PROFIBUS-DP slave in TX VisuPro Max. 12 Mbit/s transmission speed 9-pin SUB-D female connector No expansion slot
	100009535	TX-UMTS	2G/3G modem	2G/3G mobile communication module Micro-SIM slot Can be used with TX700 series With plug-in expansion slot

Protective film

Figure	Ident-No.	Type designation	Number per unit	Use
	100003928	TX-PROTFOIL-04	10 pcs.	TX504 or TX104
	100003930	TX-PROTFOIL-07	10 pcs.	TX507 or TX107 or TX207
	100003931	TX-PROTFOIL-10	10 pcs.	TX510
	100003932	TX-PROTFOIL-13	10 pcs.	TX513

The protective films can be used for HMI devices with resistive touch. More variants with added UV protection are available.

Product images are linked to further information.

Mounting Accessories

Ident-No.	Type designation	Mounting clamp, old	Mounting clamp, new	Power supply	Serial	CAN	Use
100003186	TX100-MOUNT-07	–	4 x 	1 x 	–	–	TX104-00VPST TX107-00VPST
100003187	TX100-MOUNT-10	–	11 x 	1 x 	–	–	TX110-00VPST
100003206	TX200-MOUNT-07	–	4 x 	1 x 	–	1x 	TX207-P3CV01
6828220	TX500-MOUNT-07	4 x 	–	1 x 	–	–	TX504E-P3CV01 TX507E-P3CV01 TX507-P3CV01
6828221	TX500-MOUNT-10	10 x 	–	1 x 	–	–	TX510-P3CV01
6828222	TX500-MOUNT-13	14 x 	–	1 x 	–	–	TX513-P3CV01
100003188	TX700-MOUNT-07	–	4 x 	1 x 	1 x 	–	TX705-P3CV01 TX707-P3CV01
100003189	TX700-MOUNT-10	–	9 x 	1 x 	1 x 	–	TX710-P3CV01
100003190	TX700-MOUNT-15	–	12 x 	1 x 	1 x 	–	TX715-P3CV01
100003191	TX700-MOUNT-21	–	14 x 	1 x 	1 x 	–	TX721-P3CV01

The sets with mounting brackets and connectors are always included in the delivery. However, they can also be ordered separately as spare parts.

Ident-No.	Type code	Power supply	Description
100002938	TX-PSC		Power supply connector, all TX HMI and PLC variants

Product images are linked to further information.

Overview of Approvals

Ident-No.	Type	UL
100002311	TX104-00VPST	Yes (E484727)
100002312	TX107-00VPST	
100002313	TX110-00VPST	
100002080	TX207-P3CV01	Yes (E484727)
6828101	TX504E-P3CV01	Yes (E484727))
6828103	TX507E-P3CV01	
6828104	TX507-P3CV01	
6828105	TX510-P3CV01	
6828107	TX513-P3CV01	
100002029	TX705-P3CV01	Yes (E484727)
100002030	TX707-P3CV01	
100002031	TX710-P3CV01	
100002032	TX715-P3CV01	
100002033	TX721-P3CV01	
100007471	TX707FB-P3CV01	Yes (E484727)
100007472	TX715FB-P3CV01	
100007473	TX707HB-P3CV01	
100007474	TX710HB-P3CV01	
100009353	TX700S-P3WV01	Yes (E484727)
100009354	TX700D-P3WV01	
100009355	TX700Q-P3WV01	
6828201	TX-IO-XX03	Yes (E484727)
6828203	TX-IO-DX06	
6828210	TX-CAN	
100002599	TX-RS232	
100004786	TX-EXTEND	
100002598	TX-RS485	–
100010167	TX-DP-S	
100009535	TX-UMTS	Yes (E484727)

UL Class I Div. 2	ATEX	IEC Ex	DNV-GL
Yes (E484803)	–	–	–
Yes (E484803)	–	–	–
Yes (E484803)	–	–	–
Yes (E484803)	Yes	Yes	Yes (TAA000027Z)
–	–	–	–
Yes (E484803)	In preparation	In preparation	–
Yes (E484803)	In preparation	In preparation	–
Yes (E484803)	–	–	Yes (TAA000027Z)
–			
Yes (E484803)			
–			
Yes (E484803)			–
–			
Yes (E484803)			

Turck Cloud Solutions

Turck Cloud Portal

Turck Cloud Solutions offers a Cloud solution that is specifically tailored to industrial requirements and can be hosted locally or externally. The bidirectional encrypted communication is designed to maximize data security. Dashboards allow a clear overview of the machine data and statuses, and convenient operation of the machines. Additional features, such as data analysis or monitoring of production processes, create immediate real added value.

Key Features

- Scalable Cloud solutions
- Hosted locally or externally
- Encrypted, bidirectional, and efficient data transmission
- Fast and easy integration
- Can be customized
- Efficient system monitoring
- Simple remote diagnostics
- Predictive maintenance
- Identification of the optimization fields
- Easy entry into Industry 4.0

Ident-No.	Type designation	Description
9940005	TCS-Portal-Project-Registration-01	Setup of a project in the Turck Cloud Portal
9940006	TCS-Portal-Device-Registration-01	Registration of a device in the Turck Cloud Portal
9940007	TCS-Portal-Device-Dataflat-Month-01	Monthly data flat rate per device in the Turck Cloud Portal
9940008	TCS-Portal-Customization-01	Customer-specific adaptation of the Turck Cloud Portal

Note: Cloud Solutions are only available in certain countries. Please contact your local sales contact.

TCG20 - Edge gateways for the control cabinet

The EDGE gateways in the TCG20 series offer several interfaces for simple integration into automation networks. As a result, both new systems and existing systems that already have their own controllers can be quickly and easily integrated into Cloud systems. Thanks to the built-in web-based EDGE PLC with its intuitive graphical editor, data can be pre-processed and prepared as required with the TCG20 series without any additional hardware or software.

Key Features

- Fully integrated into the Turck Cloud
- Web-based EDGE PLC
- End-to-end encryption
- Optional LAN, WiFi, UMTS
- OPC UA and MQTT enable flexible Cloud connections
- Integration into virtually any automation system via Ethernet, serial and CAN interfaces
- Built-in firewall
- VPN clients
- NAT router

Ident-No.	Type designation	UMTS	WiFi	Ethernet ports
100002555	TCG20-UMTS-1ETH-CRS-01	•	–	1
100002556	TCG20-UMTS-5ETH-CRS-01	•	–	5
100002557	TCG20-WLAN-1ETH-CRS-01	–	•	1
100002558	TCG20-WLAN-5ETH-CRS-01	–	•	5
100002559	TCG20-UMTS-WLAN-1ETH-CRS-01	•	•	1
100002560	TCG20-UMTS-WLAN-5ETH-CRS-01	•	•	5

Product images are linked to further information.

CODESYS-V3 Controls

IP67 controllers in the robust block I/O housing

The CODESYS-V3 controller TBEN-L-PLC is a compact IP67 PLC for the control of smaller, medium, or modular machines. With its robust housing, wide temperature range, and high protection rating, the TBEN-L-PLC enables machine-oriented automation concepts directly in the field without the need for control cabinets. The use of pre-assembled cables reduces the cabling requirements and enables fast and efficient commissioning.

Key Features

- Simple programming with CODESYS V3 acc. to IEC-61131-3
- CODESYS WebVisu (optional)
- Fully integrated into the Turck Cloud
- Extremely robust
- Temperature range -40…+70 °C
- 2 Ethernet ports
- 2 serial interfaces (RS232, RS485)
- CAN interface
- 8 local DX I/O signals
- Output current up to 2 A per channel

Ident-No.	Type designation	Description
6814018	TBEN-L5-PLC-10	IP67 controller, power supply 7/8", 5-pin
100000272	TBEN-L5-PLC-11	IP67 controller, power supply 7/8", 5-pin with WebVisu license
6814019	TBEN-L4-PLC-10	IP67 controller, power supply 7/8", 4-pin
100000273	TBEN-L4-PLC-11	IP67 controller, power supply 7/8", 4-pin with WebVisu license

Programmable gateways for modular I/O systems BL20 and BL67

The generation of programmable gateways for the modular I/O systems BL20 and BL67 are programmable via CODESYS V3. Thanks to the Turck multiprotocol technology, the devices can be used in any of the three Ethernet protocols PROFINET, EtherNet/IP™, and Modbus TCP. As distributed intelligence, the programmable gateways can pre-process data on-site, control tasks autonomously, or act as a protocol converter.

Key Features

- Simple programming with CODESYS V3 acc. to IEC-61131-3
- CODESYS WebVisu (optional)
- Can be used in PROFINET, EtherNet/IP™, and Modbus TCP networks thanks to multi-protocol Ethernet technology
- Autonomous control of applications even without higher-level control
- Modbus TCP master
- OPC UA server (in preparation)

Ident-No.	Type designation	Description
6827394	BL67-PG-EN-V3	Programmable BL67 gateway, multiprotocol Ethernet
100000041	BL67-PG-EN-V3-WV	Programmable BL67 gateway, multiprotocol Ethernet, with CODESYS WebVisu
6827393	BL20-PG-EN-V3	Programmable BL20 gateway, multiprotocol Ethernet
6827398	BL20-PG-EN-V3-WV	Programmable BL20 gateway, multiprotocol Ethernet, with CODESYS WebVisu

More information is available at www.turck.de

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