

TX700 HMI/PLC Series

21" Display - CODESYS V3 PLC with TARGET and WEB VISU

High-Quality Metal Housing and Glass Front with a Capacitive Touch

TX721-P3CV01



- 21" TFT wide screen color display
- LED backlight
- 1920x1080 pixel resolution
- 16 M colors
- Capacitive touchscreen with glass front
- 1 RJ45 Ethernet port with 10/100/1000 Mbit
- 2 RJ45 Ethernet ports with 10/100 Mbit
- 1 serial interface (RS232, RS485, RS422)
- 2 USB host ports
- 1 SD card slot

Type designation	TX721-P3CV01
Ident-No.	100002033
Display / Touch	
Display	TFT colour
Touch	Capacitive
Active screen area	21.5"
Resolution (pixels)	1920x1080 Full HD
Format	16:9
Brightness	300 Cd/m² typ.
dimmmable	yes,to 0 %
Controller	
Processor	ARM Cortex A9, Quad-core 800 MHz
Memory	8192 MB
RAM memory	2048 MB
Add-on memory	1x SD card slot, 2 USB host ports
Real time clock	yes (battery-backed)
PLC data	
Programming	CODESYS V3
Released for CODESYS version	V 3.5.12.10
Programming languages	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Programming interface	Ethernet
Program memory	20000 kByte
Non-volatile memory	63 kByte
Interfaces	
Onboard	3 × RJ45 Ethernet, 1 × RS232/485/422, 2 × USB host, 1 × power supply, 2 × expansion slot
Onboard for selection	CANopen Master (via extension module)
Ethernet	ETH0 - 10/100/1000 Mbit ETH1 - 10/100 Mbit ETH2 - 10/100 Mbit
Protocols	PROFINET (Controller/Master) EtherNet/IP™ (Scanner/Master) Modbus TCP (Master/Slave) Modbus RTU (Master/Slave)
Fieldbus	CANopen (Master)
USB	2x Host Ports
Serial	RS232 / RS485 / RS422
Expansion slot	2 x plug-in
Power supply	
Rated value	24 VDC, max. 1.7 A
Admissible voltage range	10...32VDC

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General data

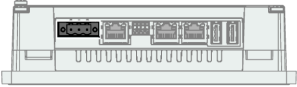
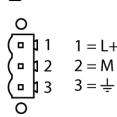
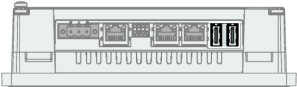
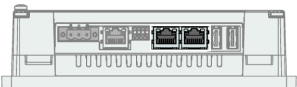
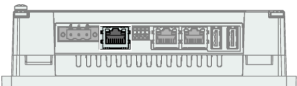
Operating ambient conditions	-20...60 °C, 5...85 % relative humidity, non-condensing
Storage ambient conditions	-20...70 °C, 5...85 % rel. humidity, non-condensing
Approvals	CE RoHS cULus
Protection class	IP66 front, IP20 rear

Dimensions

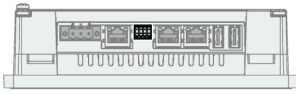
Front (W x H x D)	552x347x56mm
Cut-out (W x H)	541x336mm
Mounting depth	56+8.5 mm
Weight	approx. 6.1 kg

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Connection and pin assignment

	Power Supply The power supply connector is delivered with each device.	Pin Assignment  1 = L+ 2 = M 3 = $\perp$
	USB Interface	Pin Assignment  1 = 5 VDC 2 = D - 3 = D + 4 = GND
	Ethernet Ethernet ports ETH1 and ETH2 (10/100 Mbit) The Ethernet ports are independent, but can be bridged with ETH0. Ethernet cables (examples): RJ45 male connector – RJ45 male connector: RJ45S-RJ45S-4414-2M (order number: 6441423) RJ45 male connector – M12 male connector, 4-pin, D-coded: RSSD-RJ45S-4414-2M (order number: 6441413) RJ45 male connector – M8 male connector, 4-pin: PSGS4M-RJ45S-4414-2M (order number: 6933005) RJ45 male connector – M12 female receptacle, 4-pin, D-coded: RJ45-FKSDD-4414-2M (order number: 6935282)	Pin Assignment  1 = TX + 2 = TX - 3 = RX + 4 = n.c. 5 = n.c. 6 = RX - 7 = n.c. 8 = n.c.
	Ethernet Ethernet port ETH0 (10/100/1000 Mbit)	Pin Assignment  1 = TX + 2 = TX - 3 = RX + 4 = n.c. 5 = n.c. 6 = RX - 7 = n.c. 8 = n.c.

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Serial Interface

The serial interface can be operated either as RS232, RS485 or RS422. The adjacent wiring diagrams show the respective pin assignments.

Pin Assignment in RS232 Operating Mode

- 1 = RX
- 2 = TX
- 3 = CTS
- 4 = RTS
- 5 = +5 VDC output
- 6 = GND
- 7 = n.c.
- 8 = shield



Pin Assignment in RS485 Operating Mode

- 1 = B- (RX-)
- 2 = A- (TX-)
- 3 = B+ (RX+)
- 4 = A+ (TX+)
- 5 = +5 VDC output
- 6 = GND
- 7 = n.c.
- 8 = shield



Pin Assignment in RS422 Operating Mode

- 1 = RX-
- 2 = TX-
- 3 = RX+
- 4 = TX+
- 5 = +5 VDC output
- 6 = GND
- 7 = n.c.
- 8 = shield



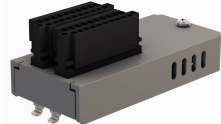
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Function accessories

Type code	Ident-No.	Description	Dimension drawing
TX-IO-XX03	6828201	Plug-In I/O-Modul - 20 DI, 12 DO, 8 AI (U / I / RTD / TC), 4 AO (U / I)	
TX-IO-DX06	6828203	Plug-In I/O-Modul - 8 DI, 6 DO, 1 Relais Output (NO)	
TX-UMTS	100009535	Plug-In Funkmodem mit 2G/3G-Unterstützung	
TX-DP-S	100010167	Plug-In Schnittstelle Profibus DP Slave, 9-polige SUB-D Kupplung	
TX-CAN	6828210	Plug-In Schnittstelle für CANopen, 9-poliger SUB-D Stecker	

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Function accessories

Type code	Ident-No.	Description	Dimension drawing
TX-RS485	100002598	Plug-In Schnittstelle für R485 / RS422, 9-polige SUB-D Kupplung	
TX-RS232	100002599	Plug-In Schnittstelle für RS232, 9-polige SUB-D Kupplung	