

## TX700 HMI/PLC Series

### 5" Display - CODESYS V3 PLC with TARGET and WEB VISU

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

#### TX705-P3CV01



- 5" TFT wide screen color display
- LED backlight
- 800 x 480 pixel resolution
- 64 K colors
- Capacitive touchscreen with glass front
- 2 separated RJ45 Ethernet ports with 10/100 Mbit
- 1 serial interface (RS232, RS485, RS422)
- 1 USB host port
- 1 SD card slot

|                              |   |
|------------------------------|---|
| <b>Type designation</b>      | TX705-P3CV01  |
| Ident-No.                    | 100002029   |
| <b>Display / Touch</b>       |   |
| Display                      | TFT colour  |
| Touchscreen                  | Capacitive, Glass front   |
| Active screen area           | 5"  |
| Resolution (pixels)          | 800 × 480 WVGA  |
| Format                       | 16:9  |
| Brightness                   | 300 Cd/m <sup>2</sup> typ.  |
| dimnable                     | yes, To 0 %   |
| <b>Controller</b>            |   |
| Processor                    | ARM Cortex A8, 1 GHz  |
| Memory                       | 4 GB Flash  |
| RAM memory                   | 512 MB  |
| Add-on memory                | 1 x SD card slot, 1 x USB host port   |
| Real time clock              | Yes (battery-buffered)  |
| <b>PLC data</b>              |   |
| 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  |
| <b>Interfaces</b>            |   |
| Onboard                      | 2 × RJ45 Ethernet, 1 × RS232/485/422, 1 × USB host, 1 × power supply, 2 × expansion slot  |
| Onboard for selection        | CANopen Master (via extension module)   |
| Ethernet                     | 2 x 10/100 Mbit   |
| Protocols                    | PROFINET (Controller/Master)<br>EtherNet/IP (Scanner/Master)<br>Modbus TCP (Master/Slave) |
| Fieldbus                     | Modbus RTU (Master/Slave)<br>CANopen (Master)   |
| USB                          | 1 × host port   |
| Serial                       | RS232 / RS485 / RS422   |
| Expansion slot               | One slot for up to two plug-in modules  |
| <b>Power supply</b>          |   |
| Rated value                  | 24 VDC, max. 0.6 A  |
| Admissible voltage range     | 10...32 VDC   |

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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<br>cULus<br>LR<br>DNV GL   |
| Ex approval                  | ATEX<br>IEC Ex<br>Haz. Loc. Class I, Division 2, Groups A,B,C and D |
| Protection class             | IP66 front, IP20 rear<br>NEMA type: 12/4X                           |

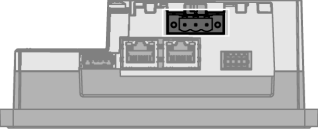
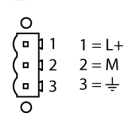
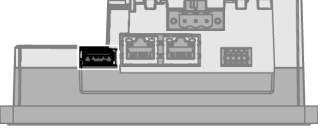
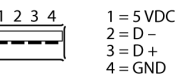
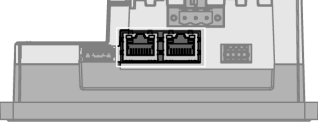

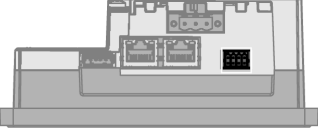


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**Dimensions**


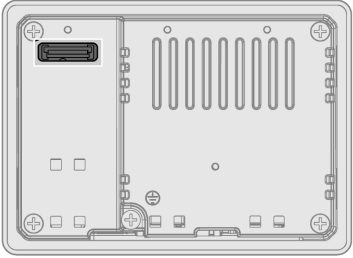
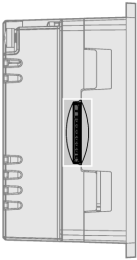
|                   |                   |
|-------------------|-------------------|
| Front (W x H x D) | 147 x 107 x 52 mm |
| Cut-out (W x H)   | 136 x 96 mm       |
| Mounting depth    | 52+8 mm           |
| Weight            | approx. 1.2 kg    |

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**Connection and pin assignment**



|   |  |   |
|---|--|---|
|    | <p><b>Power Supply</b><br/>The power supply connector is delivered with each device.<br/>7/8" male receptacle for enclosure (example):<br/>RSF 40-1M W/LN<br/>Ident. no. U-36648</p>   | <p>Pin Assignment</p>    |
|    | <p><b>USB Interface</b></p>  | <p>Pin Assignment</p>    |
|  | <p><b>Ethernet Ports</b><br/>The Ethernet ports are independent.<br/>Ethernet cordsets (examples):<br/><b>RJ45-RJ45:</b><br/>RJ45S RJ45S 441-2M<br/>Ident. no. U-06842<br/><b>RJ45-M12 D-code:</b><br/>RSSD RJ45S 441-2M<br/>Ident. no. U3-00525<br/><b>RJ45-M8:</b><br/>PSGS 4M RJ45S 4413-2M<br/>Ident. no. U2-24205<br/><b>RJ45-M12 D-code female receptacle:</b><br/>RJ45S FKSDDED 441-1M<br/>Ident. no. U-03569</p> | <p>Pin Assignment</p>  <ul style="list-style-type: none"> <li>1 = TX +</li> <li>2 = TX -</li> <li>3 = RX +</li> <li>4 = n.c.</li> <li>5 = n.c.</li> <li>6 = RX -</li> <li>7 = n.c.</li> <li>8 = n.c.</li> </ul>  |
|  | <p><b>Serial Interface</b><br/>The serial interface can be operated either as RS232, RS485 or RS422. The adjacent wiring diagrams show the respective pin assignments.<br/><b>PLEASE NOTE:</b> In RS485 mode, pins 1 and 2 as well as 3 and 4 must be externally connected!</p>  | <p>Pin Assignment in RS232 Operating Mode</p>  <ul style="list-style-type: none"> <li>1 = RX</li> <li>2 = TX</li> <li>3 = CTS</li> <li>4 = RTS</li> <li>5 = +5 VDC output</li> <li>6 = GND</li> <li>7 = n.c.</li> <li>8 = shield</li> </ul> <p>Pin Assignment in RS485 Operating Mode</p>  <ul style="list-style-type: none"> <li>1 = B- (RX-)</li> <li>2 = A- (TX-)</li> <li>3 = B+ (RX+)</li> <li>4 = A+ (TX+)</li> <li>5 = +5 VDC output</li> <li>6 = GND</li> <li>7 = n.c.</li> <li>8 = shield</li> </ul> <p>Pin Assignment in RS422 Operating Mode</p> |

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|  |  |  |
|--|--|--|
|  |  |  <ul style="list-style-type: none"> <li>1 = RX-</li> <li>2 = TX-</li> <li>3 = RX+</li> <li>4 = TX+</li> <li>5 = +5 VDC output</li> <li>6 = GND</li> <li>7 = n.c.</li> <li>8 = shield</li> </ul> |
|   | <p><b>Port for Plug-in Module</b></p>  |  |
|  | <p><b>SD Card Slot</b><br/>SD card</p> |  |

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**Accessories**

| Type code      | Ident-No. | Description   | Dimension drawing   |
|----------------|-----------|---|---|
| TX700-MOUNT-07 | 100003188 | TX700 mounting bracket and power connectors for 5–7" devices  |  |
| TX-LTE-WLAN    | 100025179 | Plug-in LTE and Wi-Fi modem with LTE/UMTS/GSM, Wi-Fi and GNSS |  |

**Function accessories**

| Type code  | Ident-No. | Description  | Dimension drawing   |
|------------|-----------|--|---|
| TX-IO-XX03 | 6828201   | Plug-in I/O module — 20 DI, 12 DO, 4 AI (U/I/RTD/TC), 4 AO (U/I)                   |  |
| TX-IO-DX06 | 6828203   | Plug-in I/O module — 8 DI, 6 DO, 1 relay output (NO)                               |  |
| TX-EXTEND  | 100004786 | Plug-in extension module for mechanical adjustment for using the TX-IO-XX03 module |  |


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**Function accessories**

| Type code | Ident-No. | Description   | Dimension drawing   |
|-----------|-----------|---|---|
| TX-UMTS   | 100009535 | Plug-in radio modem with 2G/3G support                            |    |
| TX-DP-S   | 100010167 | Plug-in PROFIBUS DP slave interface, 9-pin SUB-D female connector |    |
| TX-CAN    | 6828210   | Plug-in CANopen interface, 9-pin SUB-D male connector             |  |
| TX-RS485  | 100002598 | Plug-in interface for RS485/RS422, 9-pin SUB-D female connector   |  |
| TX-RS232  | 100002599 | Plug-in interface for RS232, 9-pin SUB-D female connector         |  |

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**Function accessories**

| Type code | Ident-No. | Description                                    | Dimension drawing   |
|-----------|-----------|--|---|
| TX-PSC    | 100002938 | Power Supply Male Connector for TX HMI Devices |  |