

TX HMI/PLC Series

Plug-In Module

20 DI, 12 DO 0.5 A ,4 AI (U, I, RTD, TC), 4 AO (U, I)

TX-IO-XX03

| | |
|------|------------|
| Type | TX-IO-XX03 |
| ID | 6828201 |

| | |
|---------------------------|---|
| Supply | |
| Supply voltage | 24 VDC |
| Admissible range | 12...30 VDC |
| System power supply | From the HMI |
| Voltage supply connection | Pluggable strip with cage clamp terminals |
| Electrical isolation | optical, 1500 V _{ms} |

| | |
|---------------------------|---|
| Digital inputs | |
| Number of channels | 20 |
| Connectivity inputs | 3 pluggable strips with spring-type terminals 10-pin, 3.5-mm pattern (Weidmueller — Omnimate BLZF 3.5/180F) |
| Input type | PNP |
| Low-level signal voltage | < 6 V |
| High level signal voltage | > 12 V |
| Low level signal current | < 1 mA |
| High level signal current | > 3 mA |
| Input delay | 0.05 ms (on S inputs), 0.0002 ms (on E inputs) |
| Sensor supply | 24 VDC |
| Electrical isolation | 1500 V _{ms} |

| | |
|----------------------------|--|
| Analog inputs | |
| Number of channels | 4 |
| Operating modes | Current, voltage, resistance, thermocouple |
| Resolution | 12 Bit |
| Basic fault limit at 25 °C | 0.1 % |

| | |
|------------------------|---|
| Operating mode voltage | |
| Max. input voltage | 15 V |
| Input signal types | 4 differential (alternatively 8 AI single-ended, only in voltage mode) |
| Measuring range | +/-100 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, 0 ... 1 V, 0 ... 10 V |
| Linearity | 0.1 % |
| Basic error at 25 °C | 0.1 % |
| Repeat accuracy | < 0.2 % |

| | |
|------------------------|---|
| Operating mode current | |
| Max. Eingangsspannung | 15 V |
| Max. input current | 20 mA |
| Load resistance | 200 Ω |
| Input signal types | 4 differential inputs, externally powered |
| Measuring range | 0...20 mA, 4...20 mA |
| Linearity | 0.1 % |
| Basic error at 25 °C | 0.1 % |



- Plug-in extension module for use with HMIs of the TX700 and TX800 product series
- I/O module
- 20 digital inputs, 24 VDC, PNP
- 12 digital outputs, 24 VDC, 0.5 A, PNP
- 4 analog inputs, U, I, RTD, TC
- 4 analog outputs, U, I

| Operating Mode RTD/Resistance | |
|-------------------------------|------------------------------|
| Temperature unit | °Degree Celsius, °Fahrenheit |
| Measuring range | -100 ... 850 °C |
| Connection type | 2-, 3-, 4-wire |
| measurement current | 1.2 mA |
| Repeat accuracy | < 0.1 % |

| Operating Mode Thermocouple | |
|-----------------------------|---|
| Temperature unit | µV |
| Measuring range | E (-270...1000 °C), J (-210...760 °C), K (-270...1370 °C), R (0...1768 °C), S (0...1768 °C), T (-270...400 °C) |
| Cold junction compensation | External via Pt100 comp. Input (CN4 Pin 1-5) |
| Basic error at 25 °C | 0.1 % |

| Digital outputs | |
|----------------------------|---|
| Number of channels | 12 |
| Connectivity outputs | 2 pluggable strips with spring-type terminals 10-pin, 3.5-mm pattern (Weidmueller — Omnimate BLZF 3.5/180F) |
| Output type | PNP |
| Output voltage | 24 VDC |
| Output current per channel | 0.5 A |
| Simultaneity factor | 0.23 |
| Output delay | 0.15 ms |
| Short-circuit protection | yes |
| Actuator power supply | 24 VDC externally fed |
| Electrical isolation | 1500 V _{ms} |

| Analog outputs | |
|--------------------|--|
| Number of channels | 4 |
| Operating modes | +/-100 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, 0 ... 1 V, 0 ... 10 V +/-2 mA, +/-10 mA, +/-20 mA |
| Resolution | 12 bit |

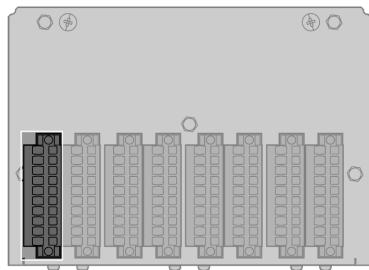
| Operating mode voltage | |
|------------------------|--------------|
| Load resistor | > 1 kΩ |
| Output signal type | Single-ended |
| Output signal range | +/-10 V |
| Linearity | 0.15 % |

| Operating mode current | |
|------------------------|-----------|
| Load resistance | < 470 Ω |
| Output signal type | Active |
| Output signal range | 0...20 mA |
| Linearity | 0.2 % |

| Standard/Directive conformity | |
|-------------------------------|------------------------------------|
| Approvals and certificates | CE, cULus, Class 1, Div. 2, DNV-GL |

| General Information | |
|------------------------|---------------------------------------|
| Dimensions (W x L x H) | 125.2 x 89.3 x 33.7 mm |
| Ambient temperature | 0...+50 °C |
| Protection class | IP20 |
| Housing material | Metal |
| Housing color | Silver |
| Mounting | On HMIs of the TX500 and TX700 series |

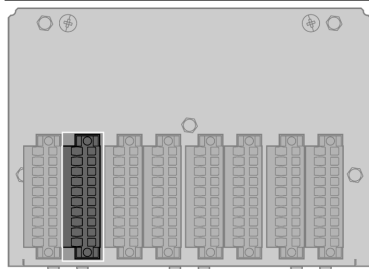
Connection and pin assignment



Analog Inputs

Pin Assignment CN1

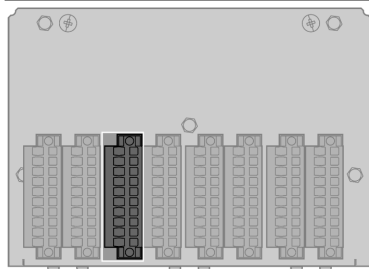
| | |
|----|-----------------------|
| 1 | 1 = Pt100_1 Vers. |
| 2 | 2 = CH_1 + Input |
| 3 | 3 = CH_1 - Input |
| 4 | 4 = COM-AGND |
| 5 | 5 = Shield (housing) |
| 6 | 6 = Pt100_2 Vers. |
| 7 | 7 = CH_2 + Input |
| 8 | 8 = CH_2 - Input |
| 9 | 9 = COM-AGND |
| 10 | 10 = Shield (housing) |



Analog Inputs

Pin Assignment CN2

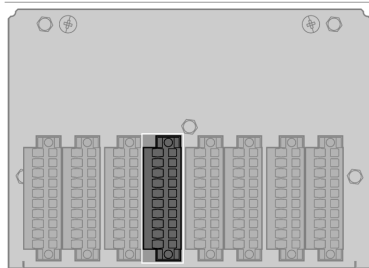
| | |
|----|-----------------------|
| 1 | 1 = Pt100_3 Vers. |
| 2 | 2 = CH_3 + Input |
| 3 | 3 = CH_3 - Input |
| 4 | 4 = COM-AGND |
| 5 | 5 = Shield (housing) |
| 6 | 6 = Pt100_4 Vers. |
| 7 | 7 = CH_4 + Input |
| 8 | 8 = CH_4 - Input |
| 9 | 9 = COM-AGND |
| 10 | 10 = Shield (housing) |



Analog Outputs

Pin Assignment CN3

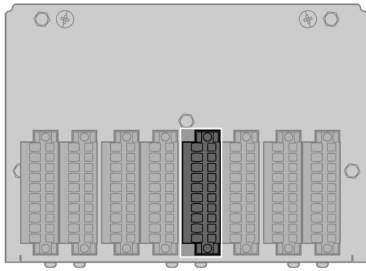
| | |
|----|-----------------------|
| 1 | 1 = CH1 |
| 2 | 2 = COM-AGND |
| 3 | 3 = CH2 |
| 4 | 4 = COM-AGND |
| 5 | 5 = Shield (housing) |
| 6 | 6 = CH3 |
| 7 | 7 = COM-AGND |
| 8 | 8 = CH4 |
| 9 | 9 = COM-AGND |
| 10 | 10 = Shield (housing) |



Cold Junction Compensation (Pt100) and Power Supply Digital I/O

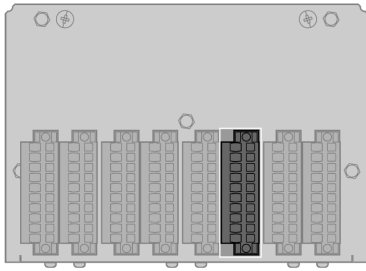
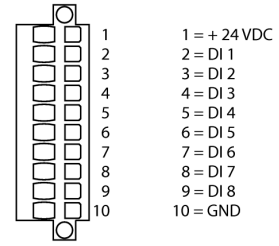
Pin Assignment CN4

| | |
|----|----------------------|
| 1 | 1 = Pt100_5 Vers. |
| 2 | 2 = CH_5 + Input |
| 3 | 3 = CH_5 - Input |
| 4 | 4 = COM-AGND |
| 5 | 5 = Shield (housing) |
| 6 | 6 = n.c. |
| 7 | 7 = + 24 VDC in |
| 8 | 8 = + 24 VDC in |
| 9 | 9 = GND in |
| 10 | 10 = GND in |



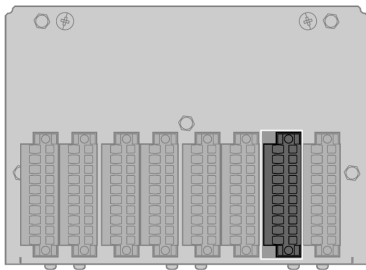
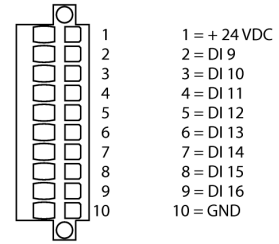
Digital Inputs

Pin Assignment CN5



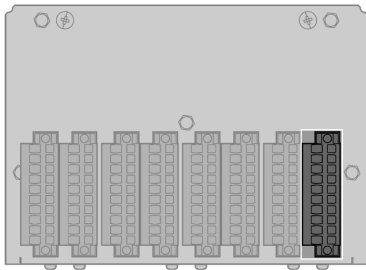
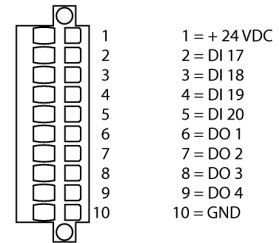
Digital Inputs

Pin Assignment CN6



Digital Inputs and Outputs

Pin Assignment CN7



Digital Outputs

Pin Assignment CN8

