

# 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



- Plug-in expansion module for use with HMIs of the TX500 and TX700 product series
- I/O Modules
- 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

Type	TX-IO-XX03
ID	6828201
<b>Supply</b>	
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 <sub>rms</sub>
<b>Digital inputs</b>	
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 (on S inputs), 0.0002 (on E inputs) ms
Sensor supply	24 VDC
Electrical isolation	1500 V <sub>rms</sub>
<b>Analog inputs</b>	
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 %

Operating Mode RTD/Resistance	
Temperature scale	°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 scale	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 <sub>ms</sub>

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

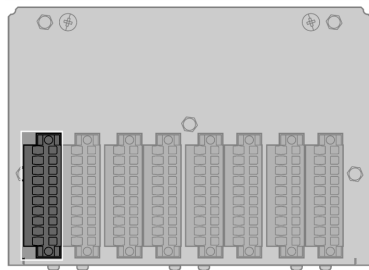
Operating mode voltage	
Load resistor	>1 k $\Omega$
Output signal type	Single-ended
Output signal range	+/-10 V
Linearity	0.15 %

Operating mode current	
Load resistor	<470 $\Omega$
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

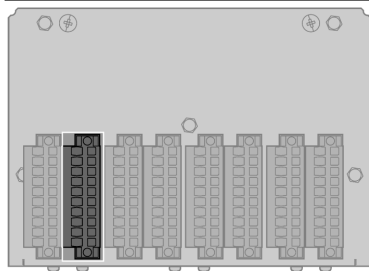
## Connection and pin assignment



Analog Inputs

Pin Assignment CN1

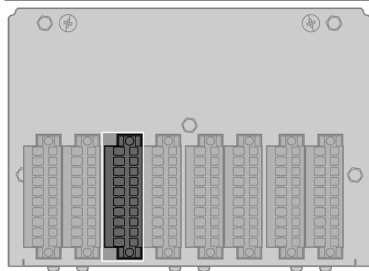
1	1 = Pt100_1 Vers.
2	2 = CH_1 + Input
3	3 = CH_1 - Input
4	4 = COM-AGND
5	5 = Shield (housing)
6	6 = Pt100_2 Vers.
7	7 = CH_2 + Input
8	8 = CH_2 - Input
9	9 = COM-AGND
10	10 = Shield (housing)



Analog Inputs

Pin Assignment CN2

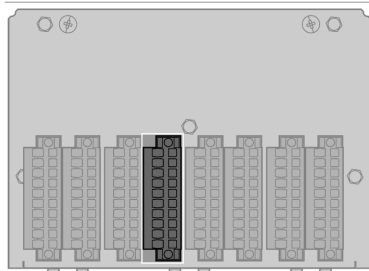
1	1 = Pt100_3 Vers.
2	2 = CH_3 + Input
3	3 = CH_3 - Input
4	4 = COM-AGND
5	5 = Shield (housing)
6	6 = Pt100_4 Vers.
7	7 = CH_4 + Input
8	8 = CH_4 - Input
9	9 = COM-AGND
10	10 = Shield (housing)



Analog Outputs

Pin Assignment CN3

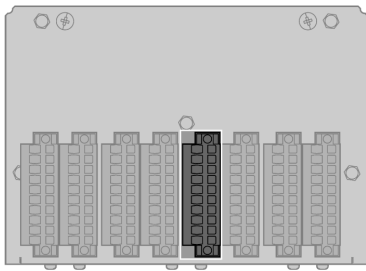
1	1 = CH1
2	2 = COM-AGND
3	3 = CH2
4	4 = COM-AGND
5	5 = Shield (housing)
6	6 = CH3
7	7 = COM-AGND
8	8 = CH4
9	9 = COM-AGND
10	10 = Shield (housing)



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

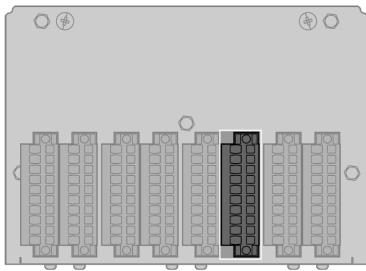
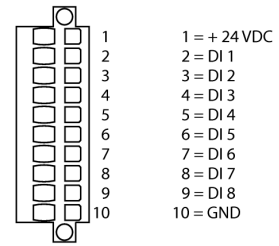
Pin Assignment CN4

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



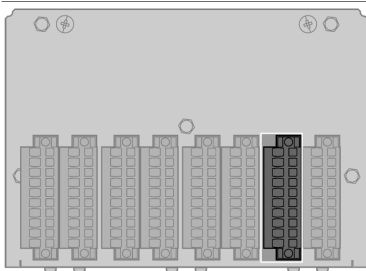
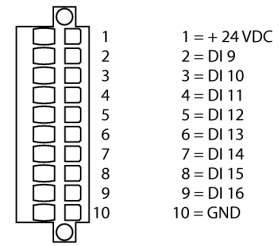
**Digital Inputs**

**Pin Assignment CN5**



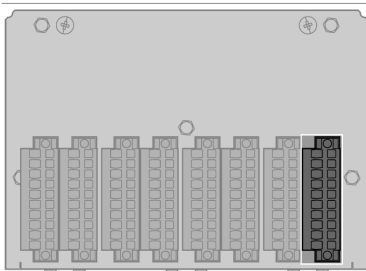
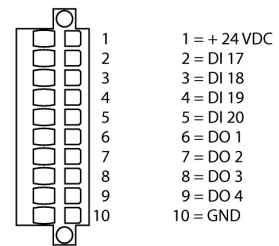
**Digital Inputs**

**Pin Assignment CN6**



**Digital Inputs and Outputs**

**Pin Assignment CN7**



**Digital Outputs**

**Pin Assignment CN8**

