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 designation	TX-IO-XX03
Ident no.	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_{rms}
Digital inputs	
Number of channels	20
Connectivity inputs	3 pluggable strips with cage clamp 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_{rms}
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
Linearität	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
Linearität	0.1 %
Basic error at 25 °C	0.1 %

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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 steckbare Federzugklemmleisten 10 pol., 3,5 mm Raster (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_{rms}
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
Linearität	0.15 %
Operating mode current	
Load resistor	<470 Ω
Output signal type	Active
Output signal range	0…20 mA
Linearität	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 33.7mm
Protection class	IP20
Housing material	Metal
Housing color	Silver
Mounting	On HMIs of the TX500 and TX700 series

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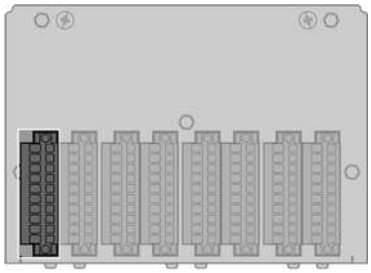
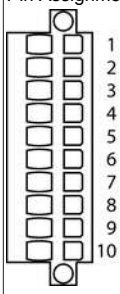
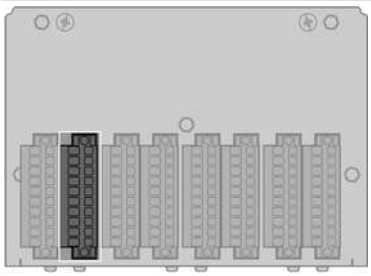
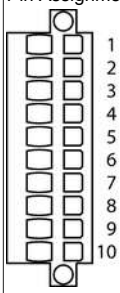
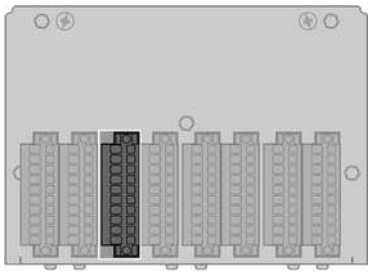
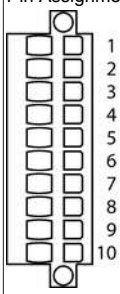
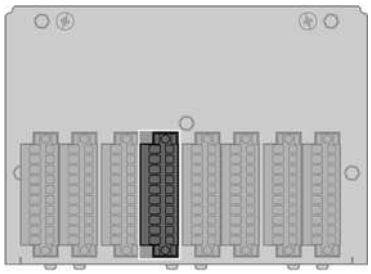
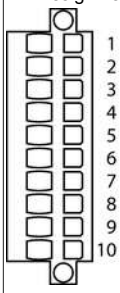
Connection and pin assignment

	**Analog Inputs**	Pin Assignment CN1  1 = Pt100_1 Vers. 2 = CH_1 + Input 3 = CH_1 – Input 4 = COM-AGND 5 = Shield (housing) 6 = Pt100_2 Vers. 7 = CH_2 + Input 8 = CH_2 – Input 9 = COM-AGND 10 = Shield (housing)
	**Analog Inputs**	Pin Assignment CN2  1 = Pt100_3 Vers. 2 = CH_3 + Input 3 = CH_3 – Input 4 = COM-AGND 5 = Shield (housing) 6 = Pt100_4 Vers. 7 = CH_4 + Input 8 = CH_4 – Input 9 = COM-AGND 10 = Shield (housing)
	**Analog Outputs**	Pin Assignment CN3  1 = CH1 2 = COM-AGND 3 = CH2 4 = COM-AGND 5 = Shield (housing) 6 = CH3 7 = COM-AGND 8 = CH4 9 = COM-AGND 10 = Shield (housing)
	**Cold Junction Compensation (Pt100) and Power Supply Digital I/O**	Pin Assignment CN4  1 = Pt100_5 Vers. 2 = CH_5 + Input 3 = CH_5 – Input 4 = COM-AGND 5 = Shield (housing) 6 = n.c. 7 = + 24 VDC in 8 = + 24 VDC in 9 = GND in 10 = GND in

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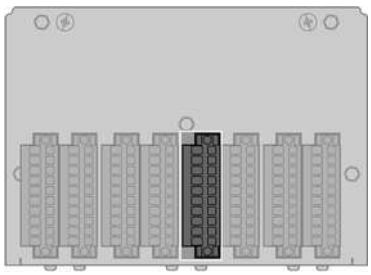
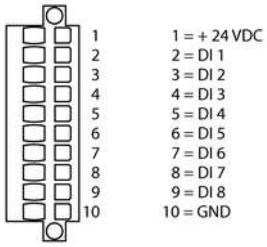
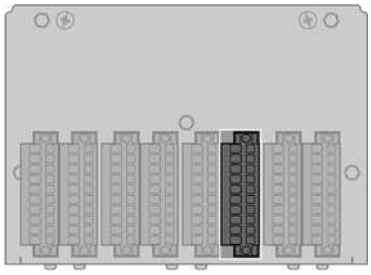
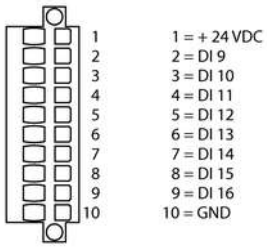
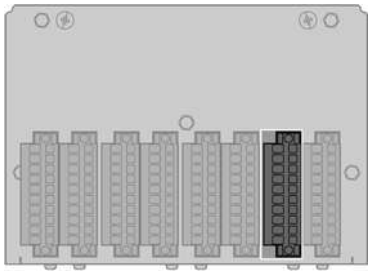
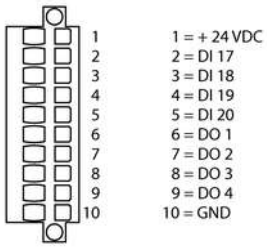
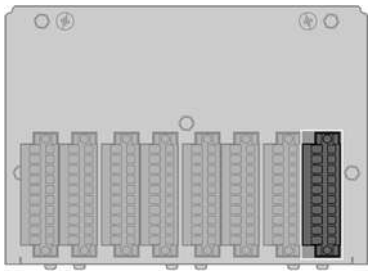
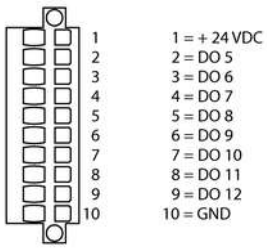
	**Digital Inputs**	Pin Assignment CN5  1 = + 24 VDC 2 = DI 1 3 = DI 2 4 = DI 3 5 = DI 4 6 = DI 5 7 = DI 6 8 = DI 7 9 = DI 8 10 = GND
	**Digital Inputs**	Pin Assignment CN6  1 = + 24 VDC 2 = DI 9 3 = DI 10 4 = DI 11 5 = DI 12 6 = DI 13 7 = DI 14 8 = DI 15 9 = DI 16 10 = GND
	**Digital Inputs and Outputs**	Pin Assignment CN7  1 = + 24 VDC 2 = DI 17 3 = DI 18 4 = DI 19 5 = DI 20 6 = DO 1 7 = DO 2 8 = DO 3 9 = DO 4 10 = GND
	**Digital Outputs**	Pin Assignment CN8  1 = + 24 VDC 2 = DO 5 3 = DO 6 4 = DO 7 5 = DO 8 6 = DO 9 7 = DO 10 8 = DO 11 9 = DO 12 10 = GND

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