PROTOS X

PX-302 – Two-channel 4-20 mA Analog Input Terminal

The PX-302 Analog Input Terminal provides two electrically isolated 4-20 mA inputs with 12-bit resolution and Run and Error LED status. Use with the Protos X™ I/O System.

Automation Direct

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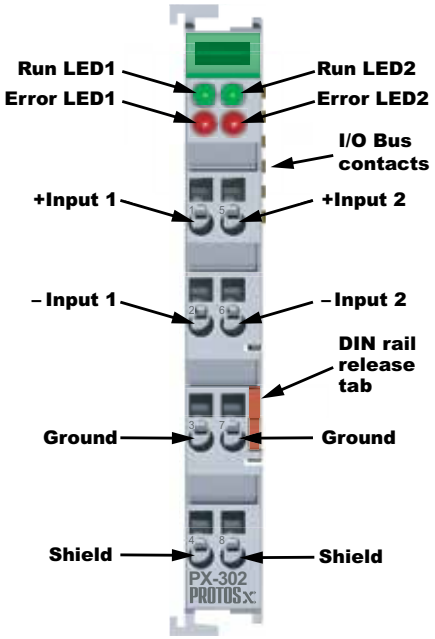
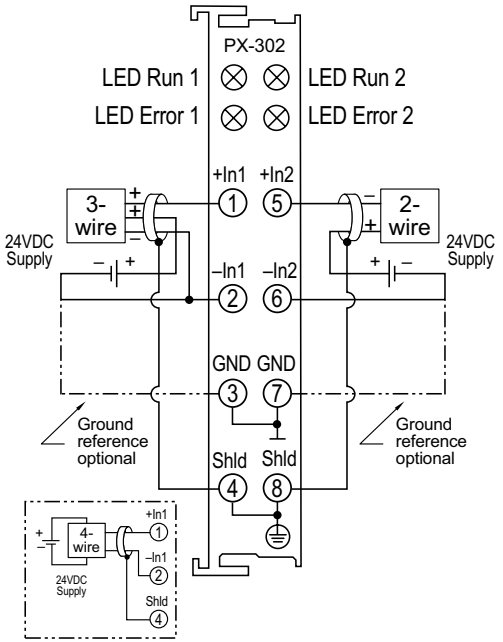
PX-302 Analog Current Input Terminal	
Number of Channels	2
Input Ranges	4- 20 mA
Resolution	12 bits
Input Type	External ground reference
Data Format	Decimal: 0-32767
Data Bytes Consumed	PX-MOD: 4-bytes input
	PX-TCP1/TCP2: 8-bytes in/ 8-bytes out (not used)
Input Power Source	Loop power external
Current Consumption (from Terminal Power Bus)	NA
Input Impedance	50Ω internal resistor
Absolute Max Ratings	35VDC surge
Conversion Time	Approx. 2ms
Full Scale Calibration Error	± 0.3% of full scale
Current Consumption (from I/O Bus)	60mA
Electrical Isolation	500V_{ms} (I/O bus/field potential)
Heat Dissipation	1W max.
Adjacent Mounting on Bus Terminals with Power Contact	Yes
Adjacent Mounting on Bus Terminals without Power Contact	Yes
Passes Terminal Bus Power	No
Passes PE Bus	No
Status Indicators	4, see LED Status chart

LED Status	On	Off
Green LED: RUN	Normal Operation	Watchdog-timer overflow if no data transmitted within WD set time.
Red LED: ERROR	Broken wire or current is > 21.5mA	Normal Operation

General Specifications	
Operating Temperature	32° to 131°F (0° to 55°C)
Storage Temperature	13° to 185°F (-25° to 85°C)
Relative Humidity	5% to 95%, non-condensing
Environment Air	No corrosive gases permitted
Mounting/Orientation Restrictions	35mm DIN rail/None
Vibration	conforms to EN 60068-2-6
Shock	conforms to EN 60068-2-27, EN 60068-2-29
Noise Immunity	conforms to EN 61000-6-2/ EN61000-6-4
Protection Class	IP20
Weight	70g
Dimensions (WxHxD)	12 x 100 x 68.8 mm (0.47 x 3.94 x 2.71 in)
Agency Approvals	UL File No. E157382, CE



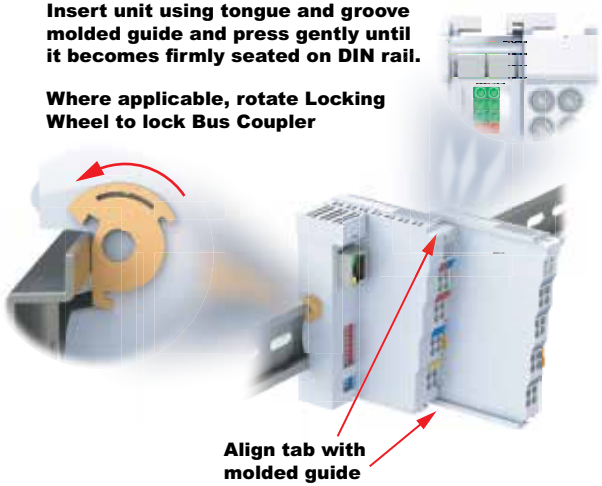


MOUNTING

For system assembly, first attach a bus coupler by snapping onto 35mm DIN rail and securing into position using the DIN rail locking wheel (where applicable) located on the left side of the coupler. To add a bus terminal, insert unit onto right side of bus coupler using the tongue and groove at the top and bottom of the unit, pressing gently until it snaps onto the DIN rail. A proper connection cannot be made by sliding the units together on the DIN rail. When correctly installed, no significant gap can be seen between the attached units. Bus connection is made through the six slide contacts located on the upper right side of the units. Add up to 64 bus terminals per bus coupler, including a bus end terminal.

Insert unit using tongue and groove molded guide and press gently until it becomes firmly seated on DIN rail.

Where applicable, rotate Locking Wheel to lock Bus Coupler



Align tab with molded guide

IMPORTANT

For complete assembly instructions and compatibility between terminals see the PX-USER-M manual available for free download at www.automationdirect.com.

REMOVAL

A locking mechanism prevents individual units from being pulled off. For bus terminal removal, pull the orange DIN rail release tab firmly to unlatch the unit from the rail. If attached to other terminal units, slide unit forward until released. For bus couplers with locking wheels, release the DIN rail locking wheel, then pull firmly on DIN rail release tab.

Where applicable, rotate Locking Wheel to unlock Bus Coupler

Firmly pull DIN Rail Release Tab to unlatch unit from rail.

HOT SWAP NOT PERMITTED

Always remove power from the system before inserting or removing bus terminals or couplers as failure to do so could cause malfunction or damage to the terminals, couplers or other connected devices.

Document Name	Edition/Revision	Date
PX-302-DS	1st ED.	9/15/2014

WARNING

To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call Technical Support at 770-844-4200.

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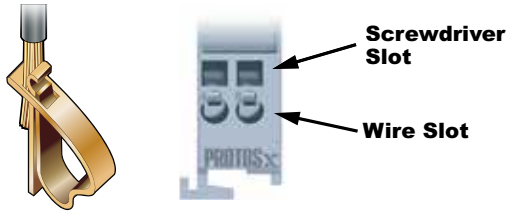
WIRING CONNECTION

Wire connection is made through a spring clamp style terminal. This terminal is designed for a single-conductor solid or stranded wire. Wire connection is made by firmly pushing the screwdriver into the screwdriver slot, inserting the wire into the wire slot and removing the screwdriver, locking the wire into position.



Wiring Specifications	
Connection Type	Spring Clamp Terminals
Wire Gauge / Wire Cross Section	28-14 AWG / 0.08 - 2.5mm^2
Screwdriver Width	2.5mm (0.10) such as our TW-SD-MSL-2
Wire Stripping Length	8mm