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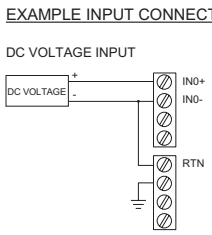
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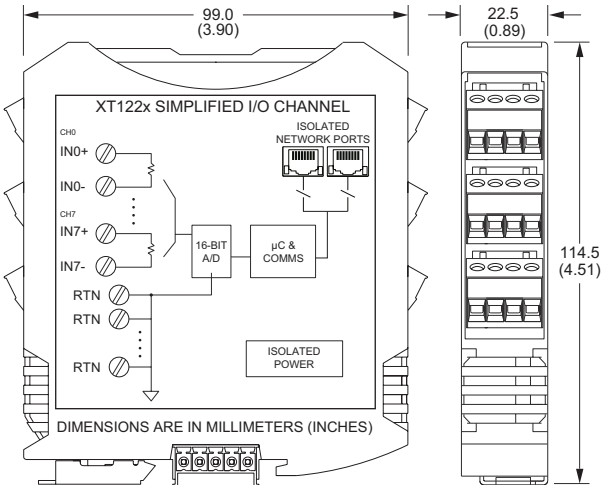
Find the *Acromag BusWorks XT1211-000* at our website: ***Click HERE***

Ethernet I/O: BusWorks® XT Series

XT1220 Ethernet Analog Voltage Input Modules







8-channel differential analog voltage input ◆ Modbus TCP/IP, Ethernet/IP, Profinet, or i2o communication

Description

The XT1220 offers an isolated Ethernet network interface for up to eight differential voltage input channels. Isolated differential inputs deliver better measurements, superior noise rejection, and eliminate the need for signal isolators.

Rugged construction, high density design, and easy USB-to-PC/Windows setup combine for a very effective and reliable module. These units are ideal for remote monitoring, distributed control, or SCADA applications.

Input Ranges

±5V, ±10V, 0 to 5V, 0 to 10V.

Ethernet Communication

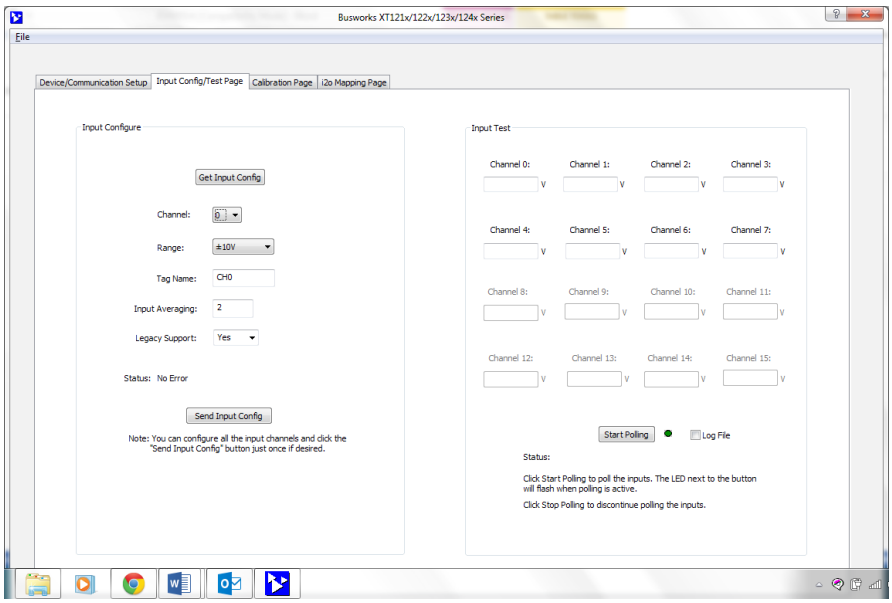
Modbus TCP/IP, Ethernet/IP, Profinet, i2o® peer-to-peer, 10/100Base-T(X) PriorityChannel™ device determinism

Power Requirement

12 to 32V DC (2.8W)

Key Features & Benefits

- Easy setup with Windows software via USB
- High input impedance (100K ohms) reduces loading on voltage loops
- User-configurable sample averaging (1-200) on a per-channel basis
- 10ms network updates for all 8 input channels
- i2o peer-to-peer updates based on percent-of-change and/or timed updates
- High-resolution 16-bit Σ-Δ A/D converter ensures precise, high accuracy measurements
- High-Density 22.5mm wide package with pluggable, front-facing terminals
- Dual Ethernet 10/100 ports (auto-negotiation) reduce switch port requirements
- 1500V AC isolation (between I/O, power, and network ports) and surge/transient protection
- Supports bussed/rail and redundant power
- -40°C to +70°C wide temperature operation
- Withstands 25g shock and 4g vibration
- CE compliant. UL/cUL Class 1 Div 2 Zone 2 approval. ATEX Certified.



BusWorks XT software (download free from www.acromag.com) allows you to configure I/O modules offline with USB or save the configuration file and download settings into units later at your convenience.

Acromag® THE LEADER IN INDUSTRIAL I/O

Tel 248-295-0880 ■ sales@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

Bulletin #8400-788g

Ethernet I/O: BusWorks® XT Series

XT1220 Ethernet Analog Input Modules

Performance Specifications

IMPORTANT: To prevent damage or errors from grounded PCs and surges, Acromag strongly recommends use of the USB-ISOLATOR when configuring an XT1000 I/O module.

USB Interface

USB Connector
Type: USB Mini-B type socket, 5-pin
Data rate: 12Mbps. USB v1.1 and 2.0 compatible
Maximum cable length: 5.0 meters

USB Transient Protection
Transient voltage suppression on power and data lines

Driver
Not required. Uses Windows HID drivers

Input

Accuracy
±0.05% of span, typical for nominal input ranges

Analog to Digital Converter (A/D)
16-bit Σ-Δ converter. 334.85uV/bit resolution.

Noise Rejection
Better than -110dB @ 60Hz

Input Filter Bandwidth
-3dB at 25KHz, typical

Input Conversion Rate
10ms for all 8 input channels

Input Impedance
100.2K ohms

Ethernet Communication

Protocols
Modbus TCP/IP, i2o peer-to-peer, Ethernet/IP, or Profinet depending on model number.

Ethernet Communication Controller
Innovasic RapID™ Platform with PriorityChannel™ for determinism at the device regardless of network load.

Modbus TCP/IP (slave)
Port 502 reserved. Supports up to 10 sockets.

i2o Peer-to-Peer (master/slave)
Can map each of 8 analog input channels separately to output channels. Timed (1-65535 sec) or percent-of-change updates. Supports GPRS/GSM systems.

Ethernet/IP (adapter)
Supports 10 connections. EDS file on website

Profinet (server)
Supports 1 connection. GSDML file on website

Connectors
Two shielded 8-pin RJ-45 sockets, 10BaseT/100BaseTX

Wiring
Auto-crossover for MDI or MDI-X

IP Address
User-configurable. 192.168.1.100 default IP address

Data Rate
Auto-negotiated, 10Mbps or 100Mbps

Compliance
IEEE 802.3, 802.3u, 802.3x.

Environmental

Operating temperature
-40 to 70°C (-40 to 158°F)

Storage temperature
-40 to 85°C (-40 to 185°F)

Relative humidity
5 to 95% non-condensing

MTBF: 486,024 hrs. at 25°C
365,543 hrs. at 40°C

Power Requirement
12 to 32V DC, 2.8W maximum
(116mA maximum @ 24V)

Isolation
4-way isolation between I/O channels, network (each port), and power.
Peak: 1500V AC, ANSI/ISA-82.01-1988
Continuous: 250V AC, 354V DC

Shock and Vibration Immunity
Vibration: 4g, per IEC 60068-2-64
Shock: 25g, per IEC 60068-2-27

Electromagnetic Compatibility (EMC) Compliance
Radiated Emissions: BS EN 61000-6-4, CISPR 16
RFI: BS EN 61000-6-2, IEC 61000-4-3
Conducted RFI: BS EN 61000-6-2, IEC 61000-4-6
ESD: BS EN 61000-6-2, IEC 61000-4-2
EFT: BS EN 61000-6-2, IEC 61000-4-4
Surge Immunity: BS EN 61000-6-2, IEC 61000-4-5

Approvals
CE compliant. UL/cUL listed. ATEX Certified
Designed for Class I; Division 2; Groups ABCD; Zone 2.
Ⓔx II 3 G Ex nA IIC T4 Gc -40°C ≤ Ta ≤ +80°C

Physical

General
General purpose plastic enclosure for mounting on 35mm "T-type" DIN rail.

Case Material
Self-extinguishing polyamide, UL94 V-0 rated, color light gray. General purpose NEMA Type 1 enclosure.

Circuit Board
Military grade fire-retardant epoxy glass (IPC-4101/98)

I/O Connectors
Removable plug-in type terminal blocks rated for 12A/250V; AWG #26-12, stranded/solid copper wire

Dimensions
Width = 22.5mm (0.9 inches), Length = 114.5mm (4.51 inches), Depth = 99.0mm (3.90 inches)

Shipping Weight
0.5 pounds (0.22 Kg) packed

Ordering Information

Models

XT1221-000
8-channel differential voltage input module, Modbus/TCP and i2o protocol

XT1222-000
8-channel differential voltage input module, Ethernet/IP protocol

XT1223-000
8-channel differential voltage input module, Profinet protocol

Software

XT-SIP (recommend one kit per customer)
Software Interface Package. Includes software (XT-CONFIG), isolator (USB-ISOLATOR), two USB cables (4001-112, 4001-113), Ethernet cable (5035-360).

Accessories

XT BUS-KIT
DIN rail bus power/excitation connector kit. Includes one DIN rail bus connector (1005-070), one left-side female connector terminal block (1005-220) and one right side male connector terminal block (1005-221).

USB-ISOLATOR
USB-to-USB isolator, includes USB cable (4001-112)

PS5R-VD24
Power supply (24V DC, 2.5A)

DIN RAIL 3.0
DIN RAIL 16.7
DIN rail strip, Type T, 3 inches (75mm) or 16.7 (425mm)

20RM-16-DIN
19" rack-mount kit with DIN rail

ISO9001
AS9100
MADE IN USA

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