ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

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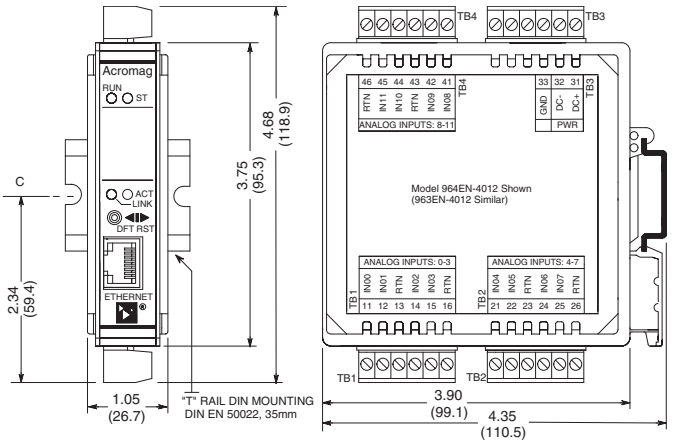
Find the *Acromag BusWorks 963EN-4012* at our website: *Click HERE*

Ethernet I/O: BusWorks® Series

963EN, 964EN Ethernet Analog Input Modules

RoHS Compliant | Ex | c UL us LISTED | CE | 24 HOUR STOCK ITEM | 2 YEAR WARRANTY





Standard model includes cage clamp terminal blocks. Optional terminals are available (see Page 26).

EtherNet/IP™ conformance tested

Modbus/TCP conformance tested

12-channel Single-ended Analog Current or Voltage Input ◆ Ethernet/IP or Modbus TCP/IP Communication

Description

Models

963EN: 12 DC current input channels
964EN: 12 DC voltage input channels

These modules provide an isolated Ethernet network interface for twelve analog input channels. Compact design saves space and lowers system costs. Multi-range inputs accept signals from a variety of sensors and devices. High-resolution, low noise, A/D converters deliver high accuracy and reliability.

Input Ranges

Ranges user-selectable on each terminal block for a group of four input channels (4-channel basis).

DC Current:
0 to 1mA, 0 to 11mA, 0 to 20mA, 4 to 20mA
0 to 20 amps AC (with optional AC sensor)

DC Voltage:
±1V, ±5V, or ±10V DC

Network Communication

EtherNet/IP or Modbus TCP/IP 10/100Mbps

Power Requirement

15 to 36V DC supply (2 Watts) required

Approvals

CE/ATEX marked.
UL, cUL listed, Class I; Div. 2; Groups A, B, C, D.
EtherNet/IP, Modbus/TCP conformance tested.

Key Features & Benefits

- Configurable from standard web browser
- EtherNet/IP or Modbus TCP/IP communication with auto 10/100Mbps data rate negotiation
- 12-input module has very low cost per channel
- Universal DC inputs support a wide variety of industrial sensors and signals
- High-resolution 16-bit Σ-Δ A/D converters ensure precise, high accuracy measurements
- Wide operational temperature range permits installation in extreme environments

Performance Specifications

◆ Input

Accuracy
Better than ±0.05% of span for nominal input ranges.

Analog to Digital Converter (A/D)
16-bit Σ-Δ converter. 0.005% (1/20000) resolution.

Noise Rejection
Normal Mode: Better than 40dB @ 60Hz.
Common Mode: Better than 140dB @ 60Hz.

Input Filter Bandwidth
-3dB at 3Hz, typical.

Input Conversion Rate
180mS per channel.

Input Impedance
DC Current Input: 49.9 ohms.
DC Voltage Input: Greater than 110.5K ohms.

◆ Environmental

Ambient Temperature and Humidity
Operating: -25 to 70°C (-13 to 158°F).
Storage: -40 to 85°C (-40 to 185°F).
Relative Humidity: 5 to 95%, non-condensing.

Isolation
1500V AC for 60 seconds or 250V AC continuous.
3-way isolation between I/O, network, and power.
Inputs share a common.

Ordering Information

◆ I/O Modules

963EN-4012
Current input, 12-channel, Ethernet Modbus TCP/IP

963EN-6012
Current input, 12-channel, EtherNet/IP

964EN-4012
Voltage input, 12-channel, Ethernet Modbus TCP/IP

964EN-6012
Voltage input, 12-channel, EtherNet/IP

◆ Accessories

Industrial Ethernet Switches

Hardware Accessories and Power Supplies

Software Support

Acromag® THE LEADER IN INDUSTRIAL I/O

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

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

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We're here to make your life easier. How can we help you today?

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