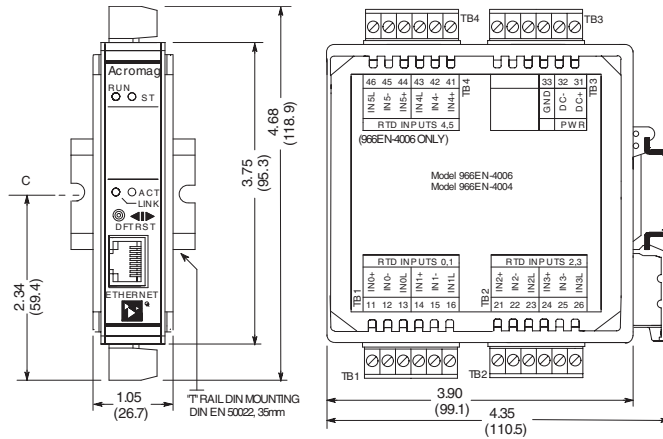


# Ethernet I/O: BusWorks® Series

## 966EN Ethernet Temperature Input Modules



Standard model includes cage clamp terminal blocks.  
Optional terminals are available.

**EtherNet/IP™**  
conformance tested

**Modbus/TCP**  
conformance tested

### 4 or 6-channel RTD/resistance Input ♦ Ethernet/IP, Modbus TCP/IP, i2o® Peer-to-peer Messaging

#### Description

These modules provide an isolated Ethernet network interface for up to six input channels. Multi-range inputs accept signals from a variety of sensors and devices. High-resolution, low noise, A/D converters deliver high accuracy and reliability. 3-way isolation further improves the system performance.

#### Input Ranges

Input ranges are selectable for a 3-channel group.

#### RTD

2-wire and 3-wire RTDs are supported.

Platinum 100 ohm (alpha = 1.3850 or 1.3911)

Nickel 120 ohm

Copper 10 ohm

#### Resistance

0 to 500 ohms

#### Network Communication

EtherNet/IP or Modbus TCP/IP 10/100Mbps with automatic data rate negotiation

#### 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
- 6-input stand-alone module has much lower start-up cost than multi-piece block I/O systems
- Versatile RTD or ohmic inputs support a wide variety of industrial sensors and devices
- RTD break detection (upscale or downscale) identifies sensor wiring failures
- High-resolution 16-bit  $\Sigma$ - $\Delta$  A/D converters ensure precise, high accuracy measurements
- Wide operational temperature range permits installation in extreme environments

#### Performance Specifications

##### Input

Input Type	Input Range	Accuracy (typical)
Pt 100 ohm	-200 to 850°C	±0.25°C
Ni 120 ohm	-80 to 320°C	±0.25°C
Cu 10 ohm	-200 to 260°C	±1.25°C
Resistance	0 to 500 ohms	±0.05 ohms

##### RTD Break Detection

Upscale or downscale selection applies to all channels.

##### Noise Rejection

Normal Mode: Better than 40dB @ 60Hz

Common Mode: Better than 130dB @ 60Hz

##### Input Filter Bandwidth

-3dB at 3Hz, typical

##### Input Conversion Rate

80mS per channel

#### Excitation Current

1mA DC typical, all RTD types.

#### 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

NOTE: i2o function only available on 6-channel Modbus TCP/IP modules

##### ♦ I/O Modules

**966EN-4004**

4-channel RTD input, Ethernet Modbus TCP/IP

**966EN-6004**

4-channel RTD input, EtherNet/IP interface

**966EN-4006**

6-channel RTD input, Ethernet Modbus TCP/IP, i2o

**966EN-6006**

6-channel RTD input, EtherNet/IP interface

##### ♦ Accessories

Industrial Ethernet Switches

Hardware Accessories and Power Supplies

Software Support



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