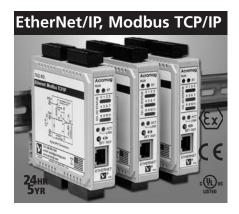
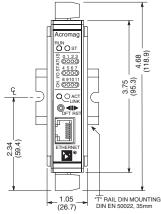
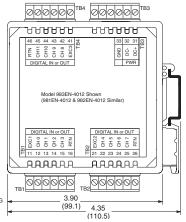
BusWorks Ethernet I/O









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





Modbus/TCP

981/982/983EN Discrete I/O

12-Channel I/O: Active-Low Inputs, Sinking Outputs (Low-Side Switching)

Models

981EN: 12 input channels 982EN: 12 output channels 983EN: 12 input/output channels

Description

These modules provide an isolated Ethernet network interface for twelve discrete input and/or output channels. The outputs provide direct on/off, high/low, or open/close control of industrial devices. The inputs sense the status of motors, pumps, valves and other equipment. The 983EN model with tandem I/O provides output level control and status verification in one unit.

Input Range

0 to 35V DC

Output Range

0 to 35V 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.

Special Features

- Configurable from standard web browser
- EtherNet/IP or Modbus TCP/IP communication with auto 10/100Mbps data rate negotiation
- 12-channel stand-alone module has far lower start-up cost than multi-piece block I/O systems
- 0-35V DC solid-state logic interface can monitor or control a wide variety of devices
- Bidirectional I/O models facilitate loopback monitoring of the output state
- Socketed SIP resistors provide input and output
 5.6K ohm pull-ups to the excitation supply
- Three selectable failsafe modes (off, last-state, or pre-defined) help prevent unsafe conditions
- Compact packaging with pluggable terminals saves space and simplifies wiring
- Wide operational temperature range

Performance

■ General Specifications

See Page 17 for communication and other specs.

■ Input (981 & 983 models)

Input Type

Twelve active-low, buffered inputs, with a common connection. Built-in 5.6K ohm pullups to excitation terminal socketed for 4-channel groups.

Input Signal Voltage Range

0 to 35V DC, maximum.

Input Impedance

100K ohms, typical.

Input Signal Threshold

TTL compatible with 100mV of hysteresis, typical.

■ Output (982 & 983 models)

Output Type

12 independent, open-drain, MOSFET switches.

Output Voltage and ON Resistance

0 to 35V DC max. (0 to 500mA/channel continuous). 0.28 ohms maximum ON resistance.

■ Environmental

Ambient Temperature and Humidity

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

solation

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

Ordering Info

NOTE: i2o function is only available on Ethernet Modbus TCP/IP modules with discrete outputs

Models

981EN-4012

Discrete input, Ethernet Modbus TCP/IP

981EN-6012

Discrete input, EtherNet/IP

982EN-4012

Discrete output, Ethernet Modbus TCP/IP, i2o communication

982EN-6012

Discrete output, EtherNet/IP

983EN-4012

Discrete input/output, Ethernet Modbus TCP/IP, i2o communication

983EN-6012

Discrete input/output, EtherNet/IP