

BusWorks® Ethernet I/O

Modbus TCP/IP Communication



989EN 16-Channel Discrete I/O with Counter/Timers

Models

989EN-4016: Industrial-grade
989EN-4C16: Commercial (no counters)

These modules provide an isolated Ethernet interface for any input/output mix of up to 16 discrete signals. Inputs sense status of dry contacts, switches, power supplies, and DC logic. Industrial-grade units have eight 32-bit pulse counters with timers, alarms, and non-volatile memory for metering, totalizing, and low-frequency periodic measurement. Outputs control solid-state switching of lamps, horns, and other devices.

Input/Output Ranges

Input: 0-28V DC, 31V DC maximum
Output: 0-28V DC, 0.5A/ch max, 2A total

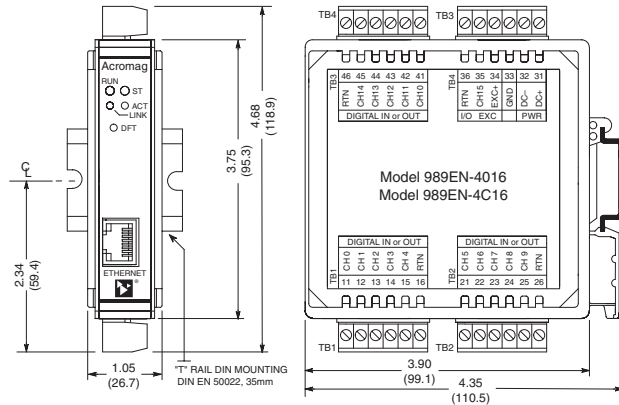
Counter/Timers (Industrial-grade units)
8 up/down counters, 32-bit, 200Hz max
8 timers, 16-bit, 1mS resolution

Ethernet Communication

Modbus TCP/IP, 10/100Base-T(X)

Power Requirement

18 to 36V DC



Standard model includes cage clamp terminal blocks. Optional terminals available (see Catalog 8400-100).

Approvals (industrial-grade only)

CE, UL/cUL, ATEX (all pending)
Zone 2, Class 1, Division 2, ABCD

Special Features

- 16 solid-state discrete I/O channels (any mix of inputs/outputs)
- 3-way isolation and surge suppression
- Web browser configuration
- Automatic MDI/MDI-X negotiation
- Inputs accept 2- or 3-wire sensors and active logic switches (dry contacts, prox, namur, 5-28V DC logic)
- Inputs detect level and change of state
- 8 configurable counter/timers
 - 32-bit up/down pulse/event counters (with non-volatile memory)
 - 16-bit periodic timers for "last pulse"
 - Momentary/latch alarms (each counter)
- Programmable debounce (0-65 seconds with 1mS resolution)
- Programmable power-up conditions
- Over-temperature, over-current, and over-voltage output protection
- Ability to "read-back" output states
- Watchdog timer output configurable for failsafe or hold-last-value operation
- Self-test and auto-copy functions

Environmental Specifications

Operating Temperature Range

989EN-4016: -40 to 65°C (-40 to 149°F).
989EN-4C16: 0 to 55°C (32 to 131°F).

Storage Temperature Range

989EN-4016: -40 to 85°C (-40 to 185°F).
989EN-4C16: 0 to 70°C (32 to 158°F).

Relative Humidity

5 to 95%, non-condensing.

Isolation

3-way isolation of I/O, power, network circuits.
Peak: 1500V AC, ANSI/ISA-82.01-1988.
Continuous: 250V AC, 354V DC.

Ordering Information

989EN-4016

16 I/O channels with pulse counter/timers

989EN-4C16

Commercial-grade, 16 I/O, no counter/timers

Accessories

See www.acromag.com for more information.

EIS-308

Ethernet switch, 8-port

5035-360

Ethernet cable, CAT5E, 5 ft., shielded, crossover

PS5R-D24

Power supply (24V DC, 2.1A).