

No configuration required when used as a simple switch with Acromag I/O modules.

## 900EN-S005 Ethernet Switch:

### 5-Ports, 10/100Mbps

#### Description

Acromag's five-port Ethernet switch is specially designed for use in industrial applications. Rugged construction and a variety of security features ensure reliable operation under demanding conditions. Internal intelligence enables "connect and go" operation for fast and easy network installation with auto-negotiation of data rate, flow control, and crossover signal compatibility. No configuration is necessary when the 900EN-S005 is used as a simple switch with Acromag I/O modules. For advanced users, this switch offers numerous control functions that are easily configured through DIP-switch settings or programmed using your computer.

#### Network Communication

Five shielded RJ-45 sockets, 8-pin, 10Base-T / 100Base-TX

Wired MDI-X with automatic MDI-X / MDI crossover

Auto-negotiated 10Mbps or 100Mbps

Auto-negotiated full or half duplex

IEEE 802.3, 802.3u, 802.3x compliance

#### Power Requirement

15 to 36V DC supply (2.6 Watts) required

#### Approvals

CE/ATEX marked.

UL, cUL listed, Class I; Div. 2; Groups A, B, C, D.

#### Special Features

##### Industrial-Grade

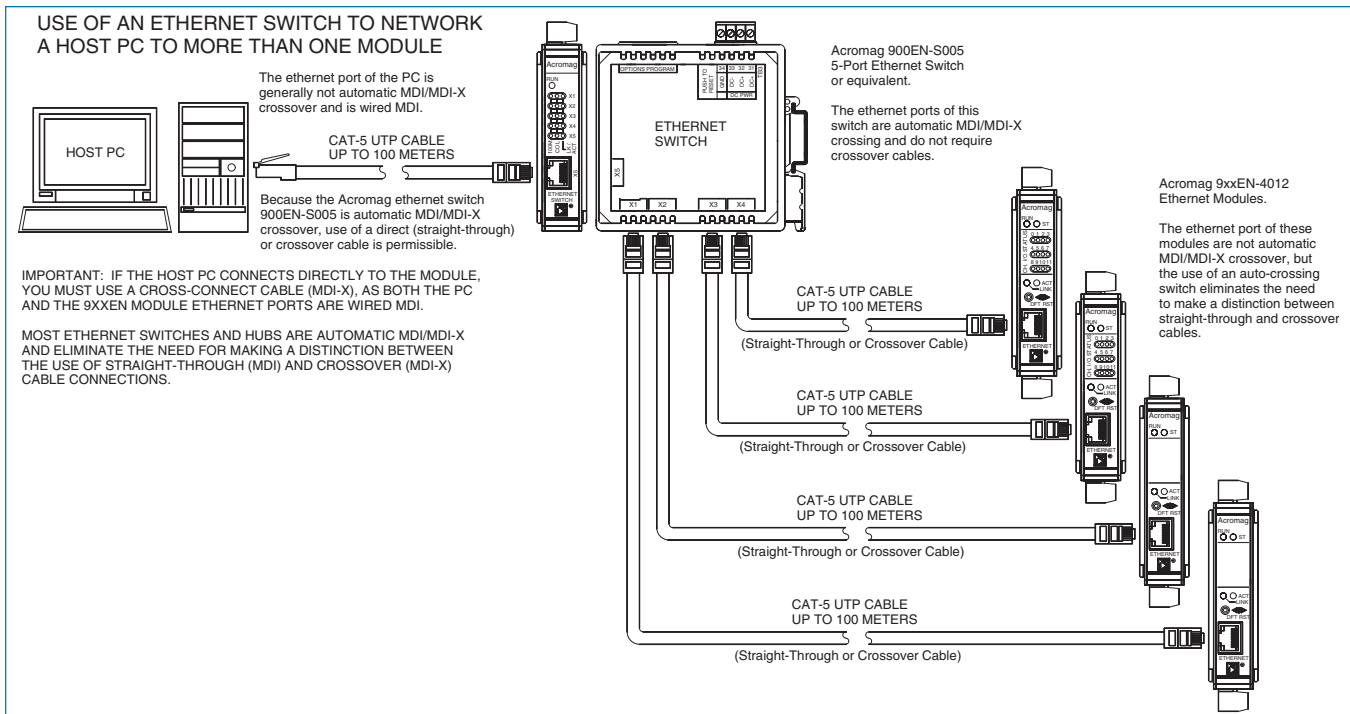
- Reliable performance over wide -25 to 70°C ambient temperature range
- Wide-Range DC-power with redundant power connection for optional standby backup power
- Hardened for harsh environments to protect from RFI, EMI, ESD, EFT, and surges
- Fully isolated for safety and increased noise immunity with power-to-network and port-to-port isolation
- Easy mounting, removal, and replacement with plug-in terminal and DIN-rail mount

##### High-Performance

- 10Base-T and 100Base-TX support automatically negotiates 10/100Mbps, half or full duplex with flow controls per IEEE 802.3
- Store and forward operation for 1024 frames provides integrated address look-up supporting 1K absolute MAC addresses
- Auto MDI/MDI-X crossover & auto-polarity eliminates special up-link/down-link ports or crossover cables
- Unmanaged stand-alone operation does not require PC control
- Broadcast storm protection helps unburden switch resources from excessive broadcast messaging
- Integrated 128KB (32Kx32-bit) high-speed SRAM frame buffer is shared by all five ports and supports 1.4Gbps memory bandwidth

#### Advanced Features

- Three programmable LED's per port provide link, activity, full/half duplex, speed indication
- Optional DIP-switch programming offers alternative control of switch functions
- Half-duplex back pressure flow controls defer transmission by other stations to avoid network congestion.
- Energy miser function shuts down individual port power if no cable is connected to conserve energy
- Toggle switch reset and default address generator is also useful to invoke DIP switch field programming and to restore communications to a known state
- Smart address management features automatic address learning, address aging, and address migration
- Advanced options are programmable via connection to your PC parallel port – LPTx (requires optional configuration cable)
- Supports virtual LAN definitions with port-based VLAN controls allowing establishment of VLAN groups for additional security between groups and applications (requires optional configuration cable)
- Queue priority management controls with advanced quality of service (QoS) supports "DiffServ" and IEEE 802.1p-based priority to prioritize different classes of voice, video, and data traffic, plus port-based priority (requires optional configuration cable)



## Performance Specifications

### Ethernet Interface

#### Connector

Five shielded RJ-45 sockets, 8-pin, 10BaseT/100BaseTX.

#### Wiring

Wired MDI-X w/ automatic MDI-X / MDI crossover.

#### Data Rate

Auto-negotiated, 10Mbps or 100Mbps.

#### Duplex

Auto-negotiated, Full or Half Duplex.

#### Compliance

IEEE 802.3, 802.3u, 802.3x.

#### Port Status Indicators

Three LED's per port - red, yellow, and green. Two selectable indication modes combine speed, link status, activity indication, and duplex indication.

#### Address Learning

Automatic, stores up to 1K (1024) MAC addresses.

#### Address Aging

Automatic, 5 minute default, can be disabled.

#### Address Migration

Automatic.

#### Broadcast Storm Protection

Disabled (default), but may optionally select a variable receive threshold.

### Priority

Transmit all high priority before any low priority (default) with a variable high:low interleave (optional). Optionally select DiffServ, 802.1p, and port-based priority controls.

### Virtual LAN

Supports virtual LAN definitions.

### Communication Distance

Distance between two devices generally limited to 100 meters. Hubs and switches can extend distance.

### Program Interface

DIP-switches and EEPROM/I<sup>2</sup>C interfaces allow some operating parameters to be modified and optional modes of operation to be set with or without a PC.

### Environmental

#### Ambient Temperature

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

Power and network circuits are isolated from each other for common-mode voltages up to 250VAC, or 354V DC off DC power ground, on a continuous basis (will withstand 1500VAC dielectric strength test for one minute without breakdown).

#### Power Requirements

Non-polarized 15-36V DC SELV (2.6 Watts).

### Electromagnetic Interference Immunity (EMI)

Product has demonstrated resistance to digital upsets with interference from switching solenoids, commutator motors, and drill motors.

### Regulatory Approvals

Electromagnetic Compatibility (EMC): EN50082-1.

ESD: EN61000-4-2.

RFI: EN61000-4-3 and EN50204.

EFT: EN61000-4-4.

Surge: EN61000-4-5.

CRFI: EN61000-4-6.

Emissions: EN50081-1.

Radiated Emissions: EN55022 Class A.

## Ordering Information

### Models

900EN-S005

Ethernet switch, 5-port

### Accessories (See Page 36)

5035-355

Ethernet straight cable, CAT5, 3 feet long, shielded

5035-360

Crossover cable for module configuration, CAT5E, 5 feet long, shielded

PS5R-D24

Power supply (24V DC, 2.1A)