EC-4BY1SWC/U Series EthernetConnect™ Switch

4-PORT, SELF-MANAGED, POE+ SWITCH WITH EXTENDED UPLINK

Product Features

- No Programming Required
- 10/100 Mbps Ethernet
  - 4 x 10/100BASE-T/TX Electrical Ports Supporting PoE+
  - 1 x 100 Mbps Extended Electrical Uplink
- Transmits Four Individual Ethernet Data Channels Over Standard Cat5/Cat5e/Cat6 UTP Cable or Over Coaxial Cable
- Extends Ethernet up to 914 m (3,000 ft) at 10 Mbps or 610 m (2,000 ft) at 100 Mbps Over Cat5/Cat5e/Cat6 UTP Cable
- Extends Ethernet up to 1,524 m (5,000 ft) at 10 Mbps or 610 m (2,000 ft) at 100 Mbps Over Coaxial Cable
- Extended Temperature Operation of –40°C to 75°C (–40° to 167°F)
- 30 W PoE Capability on Ethernet Ports
- Electrical Ports Support Autonegotiation for 10 Mbps or 100 Mbps, Full-Duplex or Half-Duplex Data
- Pre-Programmed Port for Uplink
- Full 10/100 Mbps Bandwidth
- Supports Multicast and Unicast
- Automatic MDI/MDI-X Crossover
- Designed to Meet Full Compliance with the Environmental Requirements (Ambient Operating Temperature, Mechanical Shock, Vibration, Humidity with Condensation, High-Line/Low-Line Voltage Conditions and Transient Voltage Protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment

EC-4BY1SWCPOE-W   EC-4BY1SWUPOE-W

- Voltage Transient Protection on all Power and Signal Input/Output Lines Provides Protection from Power Surges and Other Voltage Transient Events
- Power and Activity Status LED Indicators
- Hot-Swappable Rack Modules
- Interchangeable Between Stand-Alone or Rack Mount Use
- IEEE802.3at Compliant
- Designed and Manufactured in the USA

The EthernetConnect™ **EC-4BY1SWC/U Series** has two models that provide different front panel connectors; the C model for coaxial applications and the U model for UTP applications.

The EthernetConnect **EC-4BY1SWC/U Series** is an Ethernet switch with uplink management functionality that operates on the Ethernet over copper (EoC). It provides four ports operating at 10/100 Mbps and is designed to combine these four electrical ports into a single electrical extended port that forwards the data to the next network device. The switch does not require programming prior to use.

The **EC-4BY1SWC/U Series** comes pre-programmed, preventing network video flooding with DIP switch selection of the extended distance port as uplink. Ports 1 through 4 can supply up to 30 W of Power over Ethernet (PoE) and incorporate PoE+ features based on the IEEE802.3at standard. Front panel LED indicators confirm the operating status of the Ethernet switch.

The **EC-4BY1SWC/U Series** can be either wall-mounted or chassis-mounted for rack installation. All application configurations should be verified at time of ordering to facilitate ease of installation.

MODELS

EC-4BY1SWCPOE-W — EthernetConnect 4-port coaxial self-managed PoE switch, 30 W per port, EoC using coaxial cable, extended uplink, wall mount

EC-4BY1SWUPOE-W — EthernetConnect 4-port UTP self-managed PoE switch, 30 W per port, EoC using Cat5/Cat5e/Cat6 UTP, extended uplink, wall mount

ELECTRICAL

Operating Voltage
  Non PoE — 12 VDC (9 VDC[†] when in USRACK or EURACK)
  PoE — 48 VDC
Power Consumption — 10 W; PSE source power up to 120 W
Current Protection — Automatic resettable solid-state current limiters
MTBF — >100,000 hours
LED Indicators — Data Link/Data Activity; Power; Power over Ethernet (PoE+)

DATA

Data Interface — Ethernet
Data Rate — 10/100 Mbps; IEEE802.3 compliant; Ethernet ports: Full/half-duplex; Uplink port: Full-duplex

Standards
  POE+ — IEEE802.3af/at
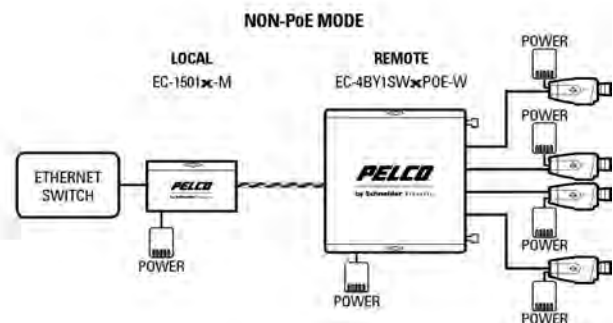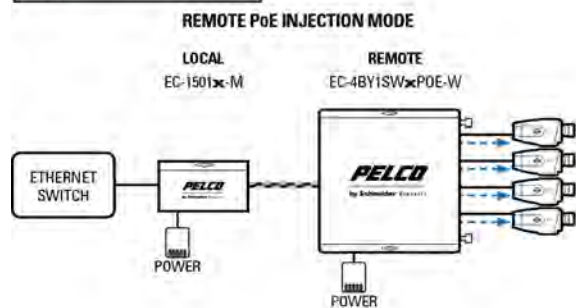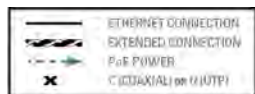 RFC — 768 UDP, 2068 HTTP, 793 TCP, 791 IP, 1783 TFTP, 894 IP over Ethernet

Maximum Transmission Distances

Media	COAX-RG59/U		UTP, 1 Pair	
Extended Port Data Rate	10 Mbps	100 Mbps	10 Mbps	100 Mbps
Extended Distance*	1,524 m (5,000 ft)	610 m (2,000 ft)	914 m (3,000 ft)	610 m (2,000 ft)

*Distance figures are obtained using in-house testing mirroring installations. Factors such as coaxial and copper cable quality, the number of connectors and splices in the cable run, the use of PoE, and environmental conditions encountered within the installation might affect the actual transmission distance and should be taken into consideration.

GENERAL

Dimensions — 15.5 x 13.5 x 2.8 cm (6.1" D x 5.3" W x 1.1" H)
Operating Temperature — –40° to 75°C (–40° to 167°F)
Storage Temperature — –40° to 80°C (–40° to 176°F)
Relative Humidity — 0% to 95%, noncondensing
Unit Weight — <0.45 kg (1 lb)
Shipping Weight — <0.9 kg (2 lb)

MECHANICAL

Connectors
  Power — Terminal block
  Coaxial — Female BNC
  UTP — RJ-45
  Data — RJ-45
Surface Mount — Wall or flat surface screw attachment

CERTIFICATIONS/RATINGS

- CE, Class A
- FCC, Part 15, Class A
- UL/cUL Listed
- C-Tick
- Designed to meet NEMA TS-1/TS-2 and the Caltrans traffic signal control equipment environmental standards

RECOMMENDED ACCESSORIES

ECPS-12VDC-3A[†] — EthernetConnect 12 VDC, 3 A power supply for non-PoE pass-through mode applications

ECPS-48VDC-5A[†] — EthernetConnect 48 VDC, 5 A DIN-rail mount power supply for PoE applications

USRACK[†] — Rack-mount chassis, 14-slot, 9 VDC, 6.5 A, internal power supply, US power cord

EURACK[†] — Rack-mount chassis, 14-slot, 9 VDC, 6.5 A, internal power supply, EU power cord

RACK1B — Single-width blank module for empty rack slots

[†]Contact Pelco pre-sales support, or refer to the appropriate installation and operation manual when configuring and specifying power for a deployment.

TYPICAL APPLICATIONS

Note: Coaxial applications use the EC-4BY1SW**C**POE-W and EC-1501**C**-M; UTP applications use the EC-4BY1SW**U**POE-W and EC-1501**U**-M.

IMPORTANT NOTE. PLEASE READ. The network implementations are shown as general representations only and are not intended to show detailed network topologies. Your actual network will differ, requiring changes or perhaps additional network equipment to accommodate the systems as illustrated. Please contact your local Pelco representative to discuss your specific requirements.