

EX47000 Series

IEC61850/ IEEE1613 Unmanaged Hardened 8-port 10/100BASE-TX Ethernet Switch



Overview



Certified by IEC 61850-3 and compliant with IEEE 1613, EtherWAN's EX47000 series is specially designed for electrical power generation and distribution

environments. It comes with the flexibility of four to eight 10/100BASE-TX RJ-45 ports and two 100BASE-FX ports. offering various mounting options such as DIN-Rail and rack mount. In addition, the EX47000 is able to function at temperatures ranging from -40°C to 75°C (-40°F to 167°F).

Features

- ▶ Complies with IEC61850-3 & IEEE1613 Environmental requirements for power substation automation systems
- ▶ Complies with EN50121-4 environmental requirement for Railway application
- ▶ Complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- ▶ Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment
- ▶ 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- ▶ DIP switch configuration for link down alarm
- ▶ Full wire-speed forwarding rate
- ▶ Alarms for power failure by relay output
- ▶ Redundant 12 to 48VDC Power inputs or 12VDC Jack
- ▶ -40°C to 75°C (-40°F to 167°F) operating temperature range

Ordering Information

EX47080-00Z	8-port 10/100BASE-TX Hardened Unmanaged Ethernet Switch
EX47062-X0Z	6-port 10/100BASE-TX + 2-port 100BASE-FX Hardened Unmanaged Ethernet Switch
EX47061-X0Z	6-port 10/100BASE-TX + 1-port 100BASE-FX Hardened Unmanaged Ethernet Switch
EX47042-X0Z	4-port 10/100BASE-TX + 2-port 100BASE-FX Hardened Unmanaged Ethernet Switch
EX47041-X0Z	4-port 10/100BASE-TX + 1-port 100BASE-FX Hardened Unmanaged Ethernet Switch

100FX Fiber Options:

- (X) = 1 : Multi Mode (SC)
2 : Multi Mode (ST)
6 : Multi Mode (SC) WDM-TX:1310nm/RX:1550nm-2Km
7 : Multi Mode (SC) WDM-TX:1550nm/RX:1310nm-2Km
8 : Multi Mode (SC) WDM-TX:1310nm/RX:1550nm-5Km
9 : Multi Mode (SC) WDM-TX:1550nm/RX:1310nm-5Km

- A : Single Mode (SC) -20Km
B : Single Mode (SC) -40Km
H : Single Mode (ST) -20Km
P : Single Mode (SC) WDM -TX:1310nm/RX:1550nm -20Km
Q : Single Mode (SC) WDM -TX:1550nm/RX:1310nm -20Km
R : Single Mode (SC) WDM -TX:1310nm/RX:1550nm -40Km
S : Single Mode (SC) WDM -TX:1550nm/RX:1310nm -40Km

*More 100FX Fiber Options also available upon

Power Input Interface:

(Z) = B : Terminal Block & DC Jack

Power Supply: (Optional)

- *Option A - The Terminal Block type external power supply are not included. Please order the following part numbers as requested:
DR-30-24, DR-60-24, DR-75-24, DR-120-24 or 41-136046-X X=1, 2, 3, 4, 5
- **Option B - The external power adapter and power cord are not included, Please order the following part numbers as requested:
41-136044-X X=1, 2, 3, 4, 5

Installation Type: DIN Rail (mounting kit is included)

Optional Panel mounting kit,
Part number: KP-AA96-480



Specifications

Technology

Standards:

- IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX/FX/SFP, IEEE802.3x

Forward and Filtering Rate:

- 14,880pps for 10Mbps
- 148,810pps for 100Mbps

Packet Buffer Memory:

- 448K bits

Processing Type:

- Store-and-Forward
- Half-duplex back-pressure and IEEE802.3x full-duplex flow control

Address Table Size:

- 2048 MAC addresses

Power

Input:

- Input Voltage: 12VDC (Power Jack); 12 to 48VDC (Terminal Block)

Power Consumption:

- 6W Max. 12VDC @ 0.5A, 24VDC @ 0.25A, 48VDC @ 0.125A

Reverse Polarity Protection:

- Present

Mechanical

Casing:

- Aluminum case

Dimensions:

- 60mm (W) x 125mm (D) x 145mm (H)
(2.36" (W) x 4.92" (D) x 5.7" (H))

Weight:

- 1Kg (2.2lbs.)

Installation:

- DIN-Rail, Panel Mounting

Environment

Operating Temperature:

- -40°C to 75°C (-40°F to 167°F)
Tested @-40°C to 85°C (-40°F to 185°F)

Storage Temperature:

- -40°C to 85°C (-40°F to 185°F)

Ambient Relative Humidity:

- 5% to 95% (non-condensing)

Interface

LED Indicators:

- Per Unit: Power Status: Power 1, 2, 3 (Green)
- Per Port:10/100TX, 100FX: Link/Activity (Green)
- Fault

Alarm Contact:

- One relay output with current 1A @ 24VDC

Regulatory Approvals:

ISO:

- Manufactured in an ISO9001 facility

Safety:

- UL508 (Pending)

EMI:

- FCC Part 15, Class A
- EN61000-6-4
 - EN55022
 - EN61000-3-2
 - EN61000-3-3

EMS:

- EN61000-6-2
 - EN61000-4-2 (ESD Standards)
Enclosure Contact: + / - 8KV; Criteria B
Enclosure Air: + / - 15KV; Criteria B
 - EN61000-4-3 (Radiated FRI Standards)
35V/m, 80 to 3G; 80% AM Criteria A
 - EN61000-4-4 (Burst Standards)
Enclosure Ports: + / - 4KV
D.C. Power Ports: + / - 4KV; Criteria B
A.C. Power Ports: + / - 4KV; Criteria B
 - EN61000-4-5 (Surge Standards)
Signal Ports: + / - 2KV; Line-to-Line; Criteria B
D.C. Power Ports: + / - 4KV; Line-to-earth; Criteria B
 - EN61000-4-6 (Induced RFI Standards)
Signal Ports: 10V @ 0.15 – 80MHz; Criteria A
D.C. Power Ports: 10V @ 0.15 – 80MHz; Criteria A
A.C. Power Ports: 10V @ 0.15 – 80MHz; Criteria A
Earth Ground Ports: 10V @ 0.15 – 80MHz; Criteria A
 - EN61000-4-8 (Magnetic Field Standards)
Enclosure Ports: 1000A/m @ 50, 60Hz; Criteria A

Environmental Test Compliance:

- IEC60068-2-6 (Vibration Resistance)
5G @ 150Hz; Criterion 3 (Operation/Storage/Transport)
- IEC60068-2-27 (Shock)
25G @ 11ms (Half-Sine Shock Pulse; Operation)
50G @ 11ms (Half-Sine Shock Pulse; Storage/Transport)
- IEC60068-2-32 (Free Fall)
1M (3.281ft.)

Diagrams

