# EX47000 Series

# IEC61850-3/IEEE1613 Hardened Unmanaged 8-port 10/100BASE Ethernet Switch

















### Overview

EtherWAN's EX47000 Series is a hardened unmanaged Fast Ethernet switching platform, designed for easy deployment in harsh environments.

The EX47000 Series is equipped with 8 Fast Ethernet ports, with a combination of Fast Ethernet copper ports and 100FX ports for long distance connectivity. Although unmanaged, the EX47000 is feature-rich with full wire speed Fast Ethernet throughput, making the EX47000 Series a powerful network switch. With its hardened-grade specifications and IEC61850 & IEEE1613 certifications, the EX47000 Series is capable of operating under high EMI environments at the temperatures ranging from -40°C to 75°C, making it an ideal choice for harsh applications.

EtherWAN – "When Connectivity is Crucial."

### **Spotlight**

- Hardened Grade
  - Supports -40°C to 75°C (-40°F to 167°F) operating temperature
- Versatile mounting Options
  - · DIN-Rail or panel mounting
- Fiber Connectivity
  - Up to two 100BASE-FX ports with SC, ST and WDM options

### **Hardware Specifications**

#### **Technology**

#### **Standards**

- IEEE802.3. 10BASE-T
- IEEE802.3u 100BASE-TX/100BASE-FX
- IEEE802.3x Full duplex and flow control

#### **Forward and Filtering Rate**

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

#### **Packet Buffer Memory**

• 448K bits

#### **Processing Type**

- Store-and-Forward
- Auto Negotiation
- Half-duplex back-pressure and IEEE802.3x full-duplex flow control
- Auto MDI/MDIX

#### **Address Table Size**

• 2048 MAC addresses

#### **Power**

#### Input

Redundant power inputs:
 12 to 48VDC (Terminal Block)
 12VDC (DC Jack)

#### **Power Consumption**

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

#### **Protection**

• Reverse polarity protection

#### Mechanical

#### Casing

- Aluminum Case
- IP30

#### **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 (Top hat type 35mm) or Panel mounting

#### **Interface**

#### **Ethernet Ports**

- 10/100BASE-TX: 16, 15 or 14 ports
- 100BASE-FX: 0, 1 or 2 ports

#### **LED Indicators**

• Per Unit: Power 1 (Green)

Power 2 (Green)

Power 3 (Green)

Fault (Red)

• Per Port: Link/Act (Green)

100M (Green)

#### **Alarm Contact**

• One relay output with current 1A @ 24VDC

#### **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)

#### **Regulatory Approvals**

#### ISO

Manufactured in an ISO9001 facility

#### FMI

#### FCC Part 15B, Class A

EN61000-6-4

#### **EMS**

#### EN61000-6-2

- EN61000-4-2 (ESD Standards)
- EN61000-4-3 (Radiated FRI Standards)
- EN61000-4-4 (Burst Standards)
- EN61000-4-5 (Surge Standards)
- EN61000-4-6 (Induced RFI Standards)
- EN61000-4-8 (Magnetic Field Standards)

#### **Environmental Test Compliance**

#### IEC60068-2-6 Fc (Vibration)

IEC60068-2-27 Ea (Shock)

FED STD 101C Method 5007.1 (Free fall w/ package)

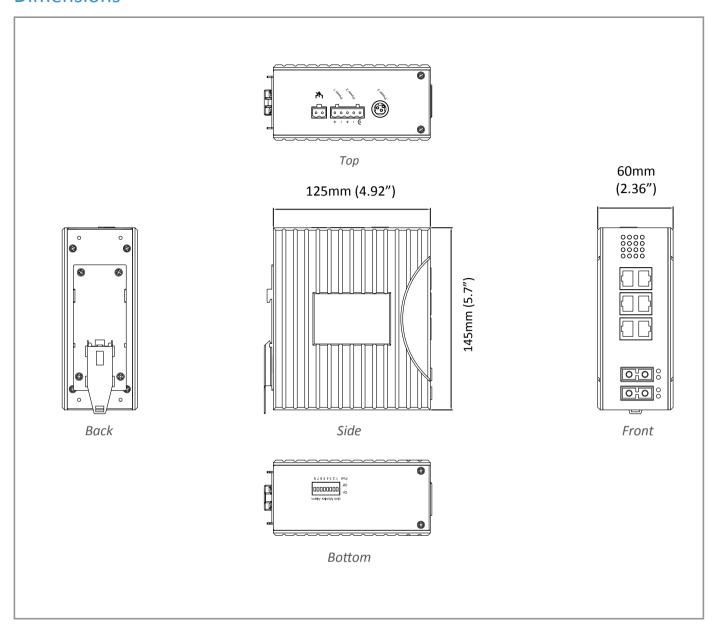
#### **Industrial Compliance**

#### IEC61850 / IEEE1613

EN50121-4

NEMA TS2

### **Dimensions**



## **Ordering Information**

#### Model

EX47080-00B	8-port 10/100BASE-TX Hardened Unmanaged Ethernet Switch
EX47062-X0B	6-port 10/100BASE-TX + 2-port 100BASE-FX Hardened Unmanaged Ethernet Switch
EX47061-X0B	6-port 10/100BASE-TX + 1-port 100BASE-FX Hardened Unmanaged Ethernet Switch
EX47042-X0B	4-port 10/100BASE-TX + 2-port 100BASE-FX Hardened Unmanaged Ethernet Switch
EX47041-X0B	4-port 10/100BASE-TX + 1-port 100BASE-FX Hardened Unmanaged Ethernet Switch
EX47026-X0B	2-port 10/100BASE-TX + 6-port 100BASE-FX Hardened Unmanaged Ethernet Switch

<sup>\*</sup> DIN-Rail mounting kit included

## Ordering Information - continued

100FX Fiber Options (X)

1	Multi Mode (SC) - 2Km
2	Multi Mode (ST) - 2Km
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
Α	Single Mode (SC) - 20Km
В	Single Mode (SC) - 40Km
Н	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

<sup>\*</sup>More 100FX Fiber options also available upon request.

**Optional Accessories** 

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KP-AA96-480	Panel mounting kit
DR-30-24	30W/1.5A DIN-Rail 24VDC Industrial Power Supply (for Terminal Block)
DR-60-24	60W/2.5A DIN-Rail 24VDC Industrial Power Supply (for Terminal Block)
DR-75-24	75W/3.2A DIN-Rail 24VDC Industrial Power Supply (for Terminal Block)
DR-120-24	120W/5A DIN-Rail 24VDC Industrial Power Supply (for Terminal Block)
41-136046-X	36W/3A 12VDC hardened power adapter with open wire in aluminum housing (for Terminal Block) (X) = 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA
41-136044-X	36W/3A 12VDC hardened power adapter with latched DC Jack in aluminum housing (for DC Jack) (X) = 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA