

# EX33000 Series

## Unmanaged Industrial 16-port 10/100BASE Ethernet Switch



- > Flexible configuration for 16-port 10/100BASE Ethernet ports
- > Redundant 12 - 48VDC power inputs
- > Versatile mounting options



### Features

- > Provides 14 10/100BASE-TX ports plus 2 100BASE-FX ports
- > Supports 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- > Redundant power inputs (12 - 48VDC) with Terminal Block and DC Jack (12VDC)
- > Alarms for power failure by relay output
- > -10°C to 60°C (-14°F to 140°F) and is tested for functional operation @ -20°C to 70°C (-4°F to 158°F)
- > Provides DIN-rail, Panel or Rack mounting
- > Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment

### Ordering Information

EX33160-00Z	16-port 10/100BASE-TX Industrial Unmanaged Ethernet Switch
EX33151-X0Z	15-port 10/100BASE-TX + 1-port 100BASE-FX Industrial Unmanaged Ethernet Switch
EX33142-X0Z	14-port 10/100BASE-TX + 2-port 100BASE-FX Industrial Unmanaged Ethernet Switch

#### 100FX Fiber Options :

- (X) = 1 : Multi Mode (SC) - 2Km
- 2 : Multi Mode (ST) - 2Km
- A : Single Mode (SC) - 20Km
- B : Single Mode (SC) - 40Km
- H : Single Mode (ST) - 20Km
- 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

- 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 request.

#### Power Input Interface :

(Z) = B : Terminal Block & DC Jack

#### Power Supply : (Optional)

\*The Terminal Block type external power supply are not included. Please order the following part numbers, as required: DR-30-24, DR-60-24, DR-75-24, DR-120-24 or 41-136046-X (X)=1: US, 2: EU, 3: UK, 4: AU, 5: JP

\*\*The external power adapter and power cord are not included. Please order the following part numbers, as required: 41-136044-X (X)=1: US, 2: EU, 3: UK, 4: AU, 5: JP

#### Installation Type : DIN Rail (mounting kit is included)

Optional Panel mount kit, part number: KP-AA96-480



Optional Rack mount kit, part number: KR-BK43-400



# Specifications

Technology	
Standards	<ul style="list-style-type: none"> <li>IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX/100BASE-FX, IEEE802.3x</li> </ul>
Forward and Filtering Rate	<ul style="list-style-type: none"> <li>14,880pps for 10Mbps</li> <li>148,810pps for 100Mbps</li> </ul>
Packet Buffer Memory	<ul style="list-style-type: none"> <li>1.625M bits</li> </ul>
Processing Type	<ul style="list-style-type: none"> <li>Store-and-Forward</li> <li>Half-duplex back-pressure and IEEE802.3x full-duplex flow control</li> </ul>
Address Table Size	<ul style="list-style-type: none"> <li>4096 MAC addresses</li> </ul>
Latency	<ul style="list-style-type: none"> <li>Less than 10µs</li> </ul>

Power	
Input	<ul style="list-style-type: none"> <li>Input Voltage: 12 to 48VDC (Terminal Block); 12VDC (DC Jack)</li> </ul>
Power Consumption	<ul style="list-style-type: none"> <li>7.4W Max. 0.6A @ 12VDC, 0.3A @ 24VDC, 0.15A @ 48VDC</li> </ul>
Overload Current Protection	<ul style="list-style-type: none"> <li>Present</li> </ul>
Reverse Polarity Protection	<ul style="list-style-type: none"> <li>Present</li> </ul>

Mechanical	
Casing	<ul style="list-style-type: none"> <li>Metal case</li> <li>IP30</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>69mm (W) x 110mm (D) x 135mm (H) (2.72" (W) x 4.33" (D) x 5.31" (H))</li> </ul>
Weight	<ul style="list-style-type: none"> <li>0.87Kg (1.92lbs.)</li> </ul>
Installation	<ul style="list-style-type: none"> <li>DIN-Rail (Top hat type 35mm), Panel, Rack Mounting</li> </ul>

Interface	
Ethernet Port	<ul style="list-style-type: none"> <li>10/100BASE-TX: 16, 15 or 14 ports</li> <li>100BASE-FX: 0, 1 or 2 ports</li> </ul>
LED Indicators	<ul style="list-style-type: none"> <li>Per Unit: Power Status (Power 1, Power 2, Power 3)</li> <li>Per Port: 10/100TX, 100FX: Link/Activity</li> </ul>
Alarm Contact	<ul style="list-style-type: none"> <li>One relay output with current 1A @ 24VDC</li> </ul>

Environment	
Operating Temperature	<ul style="list-style-type: none"> <li>-10°C to 60°C (14°F to 140°F)</li> <li>Tested @ -20°C to 70°C (-4°F to 158°F)</li> </ul>
Storage Temperature	<ul style="list-style-type: none"> <li>-40°C to 85°C (-40°F to 185°F)</li> </ul>
Ambient Relative Humidity	<ul style="list-style-type: none"> <li>5% to 95% (non-condensing)</li> </ul>

Regulatory Approvals	
ISO	<ul style="list-style-type: none"> <li>Manufactured in an ISO9001 facility</li> </ul>
Safety	<ul style="list-style-type: none"> <li>UL508</li> </ul>
EMI	<ul style="list-style-type: none"> <li>FCC Part 15, Class A, VCCI</li> <li>EN61000-6-4                             <ul style="list-style-type: none"> <li>EN55022</li> <li>EN61000-3-2</li> <li>EN61000-3-3</li> </ul> </li> </ul>
EMS	<ul style="list-style-type: none"> <li>EN61000-6-2                             <ul style="list-style-type: none"> <li>EN61000-4-2 (ESD Standards)                                     <ul style="list-style-type: none"> <li>Contact: +/- 6KV</li> <li>Air: +/- 8KV</li> </ul> </li> <li>EN61000-4-3 (Radiated RFI Standards)                                     <ul style="list-style-type: none"> <li>10V/m, 80 to 1000MHz; 80% AM</li> <li>3V/m, 1400 to 2000MHz; 80% AM</li> <li>1V/m, 2000 to 2700MHz; 80% AM</li> </ul> </li> <li>EN61000-4-4 (Burst Standards)                                     <ul style="list-style-type: none"> <li>Signal Ports: +/- 4KV</li> <li>D.C. Power Ports: +/- 4KV</li> </ul> </li> <li>EN61000-4-5 (Surge Standards)                                     <ul style="list-style-type: none"> <li>Signal Ports: +/- 1KV; Line-to-Line</li> <li>D.C. Power Ports: +/- 0.5KV; Line-to-Earth</li> </ul> </li> <li>EN61000-4-6 (Induced RFI Standards)                                     <ul style="list-style-type: none"> <li>Signal Ports: 10Vrms @ 0.15 - 80MHz; 80% AM</li> <li>D.C. Power Ports: 10Vrms @ 0.15 - 80MHz; 80% AM</li> </ul> </li> <li>EN61000-4-8 (Magnetic Field Standards)                                     <ul style="list-style-type: none"> <li>30A/m @ 50, 60Hz</li> </ul> </li> </ul> </li> </ul>
Environmental Test Compliance	<ul style="list-style-type: none"> <li>IEC60068-2-6 Fc (Vibration Resistance)                             <ul style="list-style-type: none"> <li>5g @ 10 - 150Hz, Amplitude 0.35mm (Operation/Storage/Transport)</li> </ul> </li> <li>IEC60068-2-27 Ea (Shock)                             <ul style="list-style-type: none"> <li>25g @ 11ms (Half-Sine Shock Pulse; Operation)</li> <li>50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport)</li> </ul> </li> <li>FED STD 101C Method 5007.1 (Free fall w/ package)                             <ul style="list-style-type: none"> <li>-Tested with Cross Weight and Drop High standard table</li> </ul> </li> </ul>

# Diagrams

Unit: mm

