Moxa EDS-308-SS-SC

Moxa EDS-308-SS-SC Unmanaged Industrial Ethernet Switch User Manual

Introduction   Overview   Hardware   Setup   Operation   Maintenance   Troubleshooting   Specifications

1. INTRODUCTION

This manual provides essential instructions for the installation, operation, and maintenance of the **Moxa EDS-308-SS-SC Unmanaged Industrial Ethernet Switch**. To ensure safe and efficient use, please read this manual thoroughly before operating the device. Keep this manual for future reference.

2. PRODUCT OVERVIEW

2.1 Key Features

- **Unmanaged Industrial Ethernet Switch:** Designed for plug-and-play operation without complex configuration.

- **Port Configuration:** 6 x 10/100BaseTX Ethernet ports (RJ45) and 2 x 100BaseFX single-mode SC fiber ports.

- **Fiber Optic Connectivity:** Single-mode fiber for extended distance communication.

- **Smart Relay Output Alarm:** Provides an alarm contact for event notification, such as power failure or port link down.

- **Industrial Design:** Rugged housing, wide operating temperature range, and redundant power inputs for reliable operation in harsh industrial environments.

2.2 Package Contents

Before installation, verify that the package contains the following items:

- Moxa EDS-308-SS-SC Industrial Ethernet Switch

- Terminal block for power input and relay output

- Quick Installation Guide

- Warranty Card

If any of these items are missing or damaged, please contact your sales representative immediately.

3. HARDWARE DESCRIPTION

3.1 Front Panel Layout

The front panel of the EDS-308-SS-SC switch features the Ethernet ports, fiber ports, LED indicators, and the model number label.

3.2 Port Description

- **10/100BaseTX Ports (RJ45):** Ports 1 to 6 are 10/100 Mbps auto-sensing Ethernet ports with auto MDI/MDI-X function. These ports automatically detect the speed and duplex mode of the connected device and adjust accordingly.
- **100BaseFX Ports (SC, Single Mode):** Ports 7 and 8 are 100 Mbps fiber optic ports using SC connectors. These ports support single-mode fiber for long-distance communication.

3.3 LED Indicators

The EDS-308-SS-SC features several LED indicators to provide status information:

- **PWR1 (Green):** Illuminates when power input 1 is active.
- **PWR2 (Green):** Illuminates when power input 2 is active.
- **FAULT (Red):** Illuminates when a power failure or a port link failure occurs.
- **Link/Act (Green, per port):** Illuminates when a valid network link is established. Blinks when data is being transmitted or received.

3.4 Power Input and Relay Output Terminal Block

The device uses a removable terminal block for power input and relay output connections. This block is typically located on the top panel.

Figure 2: Angled view of the Moxa EDS-308-SS-SC, highlighting the terminal block for power and relay output at the top, and the various ports on the front panel.

- **Power Input:** Supports redundant dual DC power inputs (PWR1, PWR2) for enhanced reliability.
- **Relay Output:** A single relay output for alarm events.

4. INSTALLATION AND SETUP

4.1 Safety Precautions

- Ensure power is disconnected before installation or wiring.
- Install the device in a well-ventilated area.
- Properly ground the device to prevent electrical hazards and ensure stable operation.

4.2 Mounting Options

The EDS-308-SS-SC can be mounted on a DIN-rail or directly to a wall.

4.2.1 DIN-Rail Mounting

1. Attach the DIN-rail mounting kit (if not pre-installed) to the rear panel of the switch.

2. Hook the top of the DIN-rail clip over the top edge of the DIN-rail.

3. Press the switch firmly against the DIN-rail until it snaps into place.

4.2.2 Wall Mounting

1. Remove the DIN-rail attachment plate from the switch.

2. Use screws to secure the wall mounting plate (if provided) to the switch.

3. Mount the switch to a wall or cabinet surface using appropriate screws.

4.3 Wiring the Power Input

The EDS-308-SS-SC supports redundant 12/24/48 VDC power inputs. Connect the power sources to the PWR1 and PWR2 terminals on the terminal block. Ensure correct polarity.

- **PWR1:** Connect the positive (+) and negative (-) wires of the first DC power source.
- **PWR2:** Connect the positive (+) and negative (-) wires of the second DC power source (optional, for redundancy).

4.4 Wiring the Relay Output

The relay output provides a dry contact for alarm signaling. Connect external alarm devices (e.g., warning lights, buzzers) to the relay output terminals on the terminal block. The relay will activate (close or open, depending on configuration) when a fault condition is detected.

4.5 Grounding the Switch

Connect the grounding wire from the grounding screw on the switch to a proper earth ground. This is crucial for electrical safety and to protect the device from electromagnetic interference (EMI).

4.6 Network Connection

4.6.1 Ethernet (RJ45) Ports

Connect standard Cat5e or better Ethernet cables from your network devices (e.g., PCs, PLCs, other switches) to the RJ45 ports (1-6) on the EDS-308-SS-SC. The auto MDI/MDI-X function eliminates the need for crossover cables.

4.6.2 Fiber Optic (SC) Ports

Connect single-mode fiber optic cables with SC connectors to ports 7 and 8. Ensure that the transmit (TX) fiber from one device connects to the receive (RX) port of the other device, and vice-versa.

5. OPERATING INSTRUCTIONS

5.1 Powering On

After all connections are securely made, apply power to the switch. The PWR1 and/or PWR2 LEDs should illuminate green, indicating successful power-up.

5.2 Checking Network Connectivity

Once network devices are connected to the switch, observe the Link/Act LEDs for each port:

- A solid green Link/Act LED indicates a successful network link.

- A blinking green Link/Act LED indicates active data transmission or reception.
- If the Link/Act LED is off, check the cable connection and the status of the connected device.

5.3 Alarm Functionality

The FAULT LED will illuminate red and the relay output will activate if a power failure (both PWR1 and PWR2 off) or a port link failure (any connected port loses link) occurs. This provides immediate notification of critical events.

6. Maintenance

6.1 General Care

- Keep the switch clean and free from dust and debris.
- Ensure adequate ventilation around the device to prevent overheating.
- Avoid exposing the switch to extreme temperatures, humidity, or corrosive environments beyond its specified operating conditions.

6.2 Cleaning

Use a soft, dry cloth to clean the exterior of the switch. For stubborn dirt, a slightly damp cloth with mild detergent can be used, ensuring no liquid enters the device. Do not use abrasive cleaners or solvents.

6.3 Fiber Optic Port Cleaning

Regularly inspect and clean fiber optic connectors to ensure optimal performance. Use specialized fiber optic cleaning tools and procedures to avoid damaging the delicate fiber ends.

7. Troubleshooting

This section provides solutions to common issues you might encounter with the EDS-308-SS-SC switch.

Problem	Possible Cause	Solution
No Power (PWR LEDs off)	- No power supply connected. - Faulty power supply. - Incorrect wiring.	- Verify power supply connection. - Check power supply functionality. - Ensure correct polarity and secure wiring to the terminal block.
No Link (Link/Act LED off)	- Faulty or disconnected network cable. - Connected device is off or faulty. - Incorrect fiber connection (TX/RX swapped).	- Check and re-seat network cables. Try a different cable. - Verify the connected device is powered on and functioning. - For fiber, ensure TX connects to RX and vice-versa. Clean fiber connectors.

Problem	Possible Cause	Solution
FAULT LED is Red	• Power failure (both PWR1 and PWR2 off). • Port link failure on one or more ports.	• Check power supplies and connections. • Inspect all connected network cables and devices for link status.
Network Communication Issues	• IP address conflicts (if devices are configured statically). • Excessive network traffic. • Faulty network interface card (NIC) on connected device.	• Verify IP configurations of connected devices. • Monitor network traffic. • Test with a different network device.

8. SPECIFICATIONS

Model	EDS-308-SS-SC
Ethernet Ports	6 x 10/100BaseTX (RJ45, Auto MDI/MDI-X)
Fiber Optic Ports	2 x 100BaseFX (SC Connector, Single Mode)
Input Voltage	12/24/48 VDC (Redundant Dual Inputs)
Power Consumption	Max. 4.8 W @ 24 VDC (Typical)
Alarm Contact	1 Relay Output, 1A @ 24 VDC
Operating Temperature	-40 to 75°C (-40 to 167°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5 to 95% (non-condensing)
Housing	IP30 Aluminum Alloy
Dimensions (W x H x D)	53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Mounting	DIN-rail, Wall Mount
Standards	IEEE 802.3, 802.3u, 802.3x
UPC	747356312011

9. WARRANTY AND SUPPORT

Moxa products are backed by a standard warranty. For detailed warranty information, terms, and conditions, please refer to the official Moxa website or the warranty card included with your product.

For technical support, product documentation, or to report issues, please visit the Moxa support portal or

contact your local authorized Moxa distributor. Ensure you have your product model number (EDS-308-SS-SC) and serial number ready when seeking support.

Related Documents - EDS-308-SS-SC

EDS-308/309 Series Quick Installation Guide Moxa EtherDevice Switch Version 11.2, January 2021 Technical Support Contact Information www.moxa.com/support MOXA © 2021 Moxa Inc. All rights reserved. P/N: 1802003083016	[Moxa EDS-308/309 Series Quick Installation Guide - Industrial Ethernet Switches](#) Concise HTML guide for Moxa EDS-308/309 Series industrial Ethernet switches, covering features, panel layout, mounting, wiring, and specifications. Optimized for accessibility and SEO.
EDS-205A/208A Series Quick Installation Guide Moxa EtherDevice Switch Version 8.3, January 2021 Technical Support Contact Information www.moxa.com/support MOXA © 2021 Moxa Inc. All rights reserved. P/N: 1802002050028	[Moxa EDS-205A/208A Series: Industrial Ethernet Switch Quick Installation Guide](#) Comprehensive quick installation guide for Moxa EDS-205A and EDS-208A series industrial Ethernet switches. Covers overview, panel layouts, mounting, wiring, specifications, and regulatory information.

[Moxa EDS-316 Series Industrial Ethernet Switch Quick Installation Guide](#)
Quick installation guide for the Moxa EDS-316 Series industrial Ethernet switches, covering features, panel layouts, mounting, wiring, specifications, and hazardous location information.

[Moxa EDS-600 Series Quick Installation Guide](#)
This document provides a quick installation guide for the Moxa EDS-600 Series industrial Ethernet switches. It covers package contents, advanced networking features, panel views for different models (EDS-608, EDS-611, EDS-616, EDS-619), mounting instructions (DIN-rail and wall), wiring requirements for power, relay, and digital inputs, communication port details, DIP switch settings for Turbo Ring, LED indicators, and detailed technical specifications.

[Moxa EDS-518E Series Quick Installation Guide](#)
This guide provides quick installation instructions for the Moxa EDS-518E Series EtherDevice Switch, covering package contents, features, panel views, mounting dimensions, DIN-rail and wall mounting, wiring requirements, and LED indicators.

[Moxa Managed Switch Next Generation OS (v3.x) User Manual](#)
Comprehensive user manual for Moxa's Managed Switch Next Generation OS (v3.x), covering installation, configuration, web interface, security, and diagnostics for models like EDS-4008 and EDS-G4014.