Moxa EDS-305

Moxa EDS-305 Unmanaged Ethernet Switch User Manual

Model: EDS-305 | Brand: Moxa

1. INTRODUCTION

This manual provides essential instructions for the installation, operation, and maintenance of the Moxa EDS-305 Unmanaged Ethernet Switch. The EDS-305 is a robust industrial Ethernet switch designed for reliable network connectivity in demanding environments. It features 5 10/100BaseT(X) ports and includes a smart relay output for alarm notifications.

2. FEATURES

- 5 10/100BaseT(X) Ethernet ports for flexible network expansion.

- Unmanaged operation for plug-and-play simplicity.

- Relay output warning for power failure and port break alarm.

- Broadcast storm protection to prevent network congestion.

- Rugged design suitable for industrial applications.

3. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the device. Failure to do so may result in injury or damage to the equipment.

- **Power Supply:** Ensure the power source voltage is within the specified range (12-48 VDC). Incorrect voltage can damage the device.

- **Environment:** Install the switch in an environment that meets the specified operating temperature and humidity ranges. Avoid excessive dust, moisture, and direct sunlight.

- **Mounting:** Securely mount the device to prevent accidental falls.

- **Cabling:** Use appropriate cabling for industrial environments to ensure reliable operation and minimize interference.

4. SETUP AND INSTALLATION

4.1 Package Contents

- Moxa EDS-305 Unmanaged Ethernet Switch

- Quick Installation Guide (if included)

- Terminal block for power input and relay output

4.2 Physical Description

The EDS-305 features LED indicators for power and fault status, along with 5 10/100BaseT(X) Ethernet ports on the front panel. The rear panel includes power input terminals and DIP switches for alarm configuration.

Figure 1: Front and side view of the Moxa EDS-305 switch. This image displays the device's front panel with PWR1, PWR2, and FAULT LED indicators, along with five 10/100BaseT(X) Ethernet ports. The Moxa brand logo is visible on the side.

4.3 Power Connection

Connect the 12-48 VDC power supply to the terminal block on the rear panel. The EDS-305 supports redundant power inputs (PWR1 and PWR2) for enhanced reliability.

Figure 2: Rear view of the Moxa EDS-305 switch. This image shows the green terminal block for power inputs (V1+, V1-, V2+, V2-) and the fault relay output. Below the terminal block, a set of blue DIP switches labeled P1 through P5 and 'POST ALARM' are visible, used for configuring port alarm settings.

4.4 Network Connection

Connect standard Ethernet cables (Cat5e or better) from your network devices (e.g., computers, servers, other switches) to the 10/100BaseT(X) ports on the front panel of the EDS-305.

4.5 Alarm Relay Configuration

The EDS-305 features a smart relay output for alarm notifications. The DIP switches on the rear panel allow you to enable or disable port break alarms for individual ports (P1-P5) and the overall POST ALARM function.

Figure 3: Bottom view of the Moxa EDS-305 switch. This image displays the product label with the model name 'EDS-305', production serial number, and various certifications (CE, FCC, UL, RoHS). It also clearly shows the input power specifications (12-48

VDC, 0.4A / 12 VDC, 0.7A) and a set of DIP switches labeled 1 through 5, with 'ON' to enable port alarm and 'OFF' to disable port alarm.

Refer to Figure 3 for the location of the DIP switches. Set the switches to 'ON' to enable the port alarm for the corresponding port, or 'OFF' to disable it. The 'POST ALARM' switch controls the power-on self-test alarm.

5. OPERATING INSTRUCTIONS

5.1 LED Indicators

- **PWR1/PWR2 (Green):** Lit when power input 1/2 is connected and operational.
- **FAULT (Red):** Lit when a power failure or a configured port break alarm is triggered.
- **Link/Act (Green, per port):** Lit when a network link is established. Blinks when data is being transmitted or received.

5.2 Basic Operation

Once powered on and network cables are connected, the EDS-305 operates automatically as an unmanaged switch. It forwards Ethernet frames between connected devices without requiring any configuration.

5.3 Alarm Relay Output

The relay output provides a dry contact closure when an alarm condition (power failure or enabled port break) occurs. This can be connected to an external alarm system or indicator.

6. MAINTENANCE

The Moxa EDS-305 is designed for minimal maintenance. However, periodic checks are recommended:

- **Cleaning:** Keep the device free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.
- **Cable Integrity:** Periodically inspect network and power cables for damage or loose connections.
- **Environmental Conditions:** Ensure the operating environment remains within specified temperature and humidity limits.

7. TROUBLESHOOTING

If you encounter issues with your EDS-305, consider the following troubleshooting steps:

- **No Power:** Check if the PWR1/PWR2 LEDs are off. Verify the power supply connection and voltage. Ensure the power source is active.
- **No Link:** If a Link/Act LED is off for a connected device, check the Ethernet cable connection at both ends. Ensure the connected device is powered on and functioning correctly.
- **FAULT LED Lit:** This indicates a power failure or a port break alarm. Check power connections. If a port break alarm is configured, verify the status of the connected network devices and cables for the enabled ports.
- **Network Performance Issues:** Ensure all cables are in good condition. Check for broadcast storms (though the device has protection, severe issues might still occur).

8. SPECIFICATIONS

Attribute	Specification

Attribute	Specification
Model Number	EDS-305
Ethernet Ports	5 x 10/100BaseT(X)
Input Voltage	12-48 VDC (Redundant Inputs)
Power Consumption	12 VDC @ 0.7A (Max)
Alarm Output	1 relay output with current carrying capacity of 1A @ 24 VDC
Operating Temperature	-40 to 75°C (Note: Product description mentions -40 to 75°C for EDS-308-T, assuming similar for EDS-305)
Storage Temperature	-40 to 85°C
Humidity	5 to 95% RH (non-condensing)
Dimensions (L x W x H)	0.31 x 0.28 x 0.16 inches (Product Dimensions from data)
Item Weight	2.17 pounds
Manufacturer	MOXA
ASIN	B07C7K7YDD
Date First Available	July 6, 2015

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Moxa website or contact your authorized Moxa distributor. Ensure you have your product model number (EDS-305) and serial number available when seeking support.