

EtherDevice™ Switch EDS-308/305 Series

Industrial 8- or 5-Port Unmanaged Ethernet Switches

Features

High Performance Network Switching Technology

- 10/100BaseT(X) (RJ45), 100BaseFX (SC connector, Multi/Single mode)
- Broadcast storm protection
- Support IEEE 802.3/ 802.3u/ 802.3x
- Store and Forward switching process type
- 10/100M, Full/Half-Duplex, MDI/MDI-X auto-sensing

Industrial Grade Reliability

- Power failure, port break alarm by relay output
- Redundant dual DC power inputs

Rugged Design

- Operating temperature ranges from 0 to 60°C, or extended operating temperature from -40 to 75°C



- IP30, rugged high-strength metal case
- DIN-Rail or panel mounting ability
- Long-haul transmit distance of 40 km or 80 km
- For hazardous location (Class 1 Div. 2/Zone 2)

Recommended Accessories

- DR Series DIN-Rail 24 VDC Power Supplies



Overview

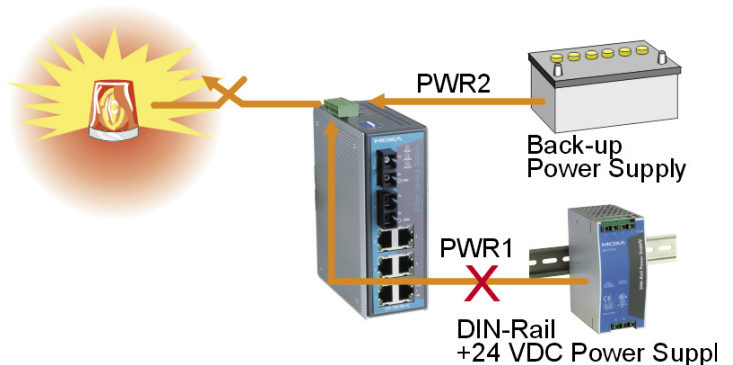
The EDS-308/305 Series of MOXA EtherDevice™ Switch includes 8- and 5-port Ethernet Switches that provide an economical solution for your industrial Ethernet connection, and the built-in relay warning function alerts maintainers when power failures or port breaks occur.

These switches have been designed for harsh industrial environments, such as in hazardous locations (class I division 2 or zone 2) that comply with FCC, TÜV, UL, and CE standards.

EDS-308/305 Series includes 2 models: one with an operating temperature range of 0 to 60°C, and the other one with extended operating temperature of -40 to 75°C. These 2 models are designed for standard and extended operating temperatures respectively, and go through a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control.

Redundant Power Inputs

EDS-308/305 provides two power inputs that can be connected simultaneously to live DC power sources. If one of the power inputs fails, the other live source acts as a backup to automatically provide the EDS-308/305's power needs.



Relay Output Alarm for Port Breaks, Power Failure

EDS-308/305 provides relay contact outputs to warn technicians on the shop floor when the power fails or a port

link breaks, so that they can respond quickly with appropriate emergency operation procedures.

Broadcast Storm Protection

EDS-308/305 protects itself from receiving too many broadcast packets. During normal use, broadcast packets will be forwarded to all ports except the source port. However, EDS-308/305 will discard broadcast or multicast packets if

the number of those packets exceeds a threshold in a preset period of time. When the preset period expires, it will then resume receiving broadcast or multicast packets until the threshold is reached again.

Transparently transmits VLAN Tag Packets

IEEE 802.1 standard defines the VLAN tag, including TPID Control (Information) with an additional 4 bytes inserted

into an untagged Ethernet frame. EDS-308/305 can transmit and receive these data packet without any change.

Specifications

Technology

Standards: IEEE802.3, 802.3u, 802.3x

Processing Type: Store and Forward

Flow Control: IEEE802.3x flow control, back pressure flow control

Interface

RJ45 Ports: 10/100BaseT(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection

Fiber Ports: 100BaseFX ports (SC connector)

LED Indicators: Power, Faults, 10/100M

DIP Switch: Port break alarm mask

Alarm Contact: One relay output with current carrying capacity of 1A @ 24 VDC

Optical Fiber

Distance: Single mode fiber for 15 km, Multi mode fiber for 2 km

Wavelength: 1310 nm

Min. TX Output: -15 dBm (Single), -20 dBm (Multi)

Max. TX Output: -6 dBm (Single), -14 dBm (Multi)

Sensitivity: -36 to -32 dBm (Single), -34 to -30 dBm (Multi)

Recommended Diameter: 9/125 μ m (Single)
62.5/125 μ m (Multi)

Power

Input Voltage: 12 to 48 VDC, redundant inputs

Input Current (@24V):

0.25A (EDS-305, EDS-305-M, EDS-305-S, EDS-308)

0.35A (EDS-308-M, EDS-308-S, EDS-308-MM, EDS-308-SS)

Overload Current Protection:

1.1A (EDS-305, EDS-305-M, EDS-305-S, EDS-308)

1.6A (EDS-308-M, EDS-308-S, EDS-308-MM, EDS-308-SS)

Connection: Removable 6-pin Terminal Block

Reverse Polarity Protection: Present

Mechanical

Casing: IP30 protection, metal case

Dimensions: 53.6 x 135 x 105 mm (W x H x D)

Weight: 0.63 kg

Installation: DIN-Rail, Wall Mounting

Environment

Operating Temperature:

0 to 60°C (32 to 140°F),

-40 to 75°C (-40 to 167°F) for -T models

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Regulatory Approvals

Safety

UL60950, UL 508, CSA C22.2 No. 60950, EN60950

Hazardous location:

UL/cUL Class 1, Division 2, Groups A, B, C and D

ATEX Class 1, Zone 2, EEx nC IIC

EMI:

FCC Part 15, CISPR (EN55022) class A

EMS:

EN61000-4-2 (ESD), level 3

EN61000-4-3 (RS), level 3

EN61000-4-4 (EFT), level 3

EN61000-4-5 (Surge), level 3

EN61000-4-6 (CS), level 3

Shock: IEC60068-2-27

Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6

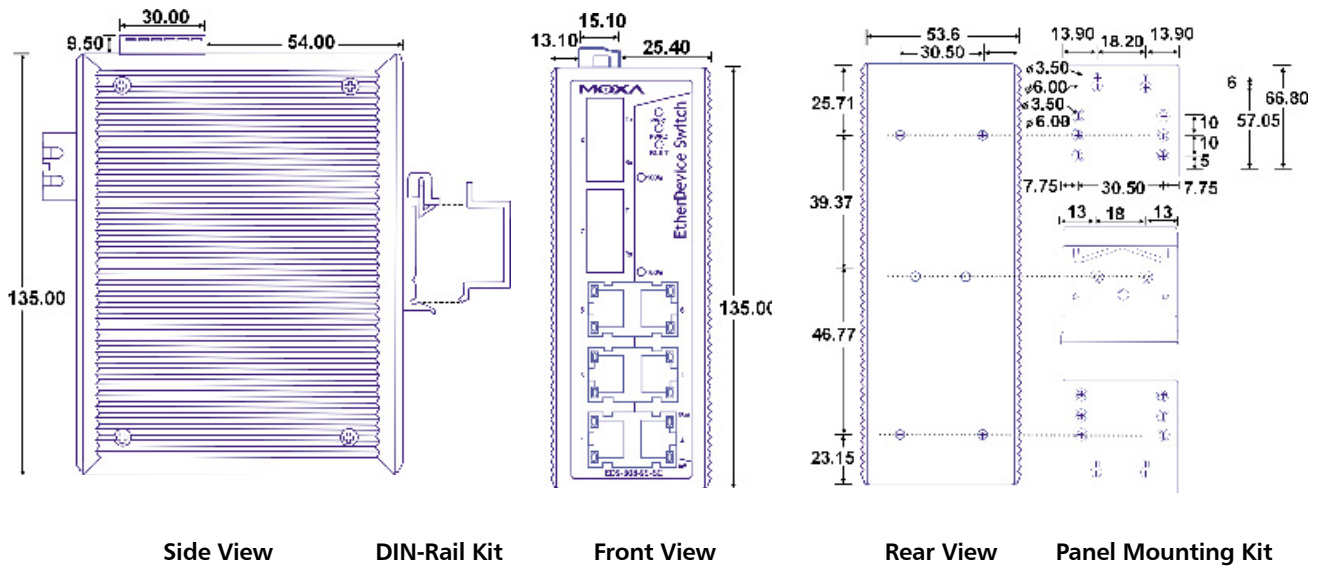
MTBF: EDS-305 420,000 hrs

EDS-308 310,000 hrs

Data Base: MIL-HDBK-217F, GB

WARRANTY: 5 years

Dimensions, unit = mm (inch)



Ordering Information

Industrial 8-port Unmanaged Ethernet Switch (Operating Temperature from 0 to 60°C)

EDS-308: Unmanaged Ethernet Switch with 8 10/100BaseT(X) ports

EDS-308-M-SC: Unmanaged Ethernet Switch with 7 10/100BaseT(X) ports, 1 multi mode 100BaseFX port, SC connector, 0 to 60°C

EDS-308-S-SC: Unmanaged Ethernet Switch with 7 10/100 BaseT(X) ports, 1 single mode 100 BaseFX port, SC connector, 0 to 60°C

EDS-308-MM-SC: Unmanaged Ethernet Switch with 6 10/100BaseT(X) ports, 2 multi mode 100BaseFX ports, SC connector, 0 to 60°C

EDS-308-SS-SC: Unmanaged Ethernet Switch with 6 10/100BaseT(X) ports, 2 single mode 100BaseFX ports, SC connector, 0 to 60°C

Industrial 5-port Unmanaged Ethernet Switch (Operating Temperature from 0 to 60°C)

EDS-305: Unmanaged Ethernet Switch with 5 10/100BaseT(X) ports, 0 to 60°C

EDS-305-M-SC: Unmanaged Ethernet Switch with 4 10/100BaseT(X) ports, 1 multi mode 100 BaseFX port, SC connector, 0 to 60°C

EDS-305-S-SC: Unmanaged Ethernet Switch with 4 10/100BaseT(X) ports, 1 single mode 100BaseFX port, SC connector, 0 to 60°C

All items include: User's Manual

Extended Operating Temperature Models (-40 to 75°C) are also available with the following ordering numbers

EDS-308-T, EDS-308-M-SC-T, EDS-308-S-SC-T, EDS-308-MM-SC-T, EDS-308-SS-SC-T, EDS-305-T, EDS-305-M-SC-T, EDS-305-S-SC-T

Long haul transmit for Single mode optical fiber of 40 km and 80 km are also available.

Optional Accessories

DR-4524: 45W/2A DIN-Rail 24 VDC Power Supply with universal 85 to 264 VAC input

DR-75-24: 75W/3.2A DIN-Rail 24 VDC Power Supply with universal 85 to 264 VAC input

DR-120-24: 120W/5A DIN-Rail 24 VDC Power Supply with 88 to 132 VAC/176 to 264 VAC input by switch

See page 4-6 for more detailed information about these DIN-Rail Power Supplies.

WK-46: Wall Mounting kit