

# EDS-308 Series

## 8-port unmanaged Ethernet switches



### Features and Benefits

- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- -40 to 75°C operating temperature range (-T models)

### Certifications



## Introduction

The EDS-308 Ethernet switches provide an economical solution for your industrial Ethernet connections. These 8-port switches come with a built-in relay warning function that alerts network engineers when power failures or port breaks occur. In addition, the switches are designed for harsh industrial environments, such as the hazardous locations defined by the Class 1 Div. 2 and ATEX Zone 2 standards.

The switches comply with FCC, UL, and CE standards and support either a standard operating temperature range of -10 to 60°C or a wide operating temperature range of -40 to 75°C. All switches in the series undergo a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. The EDS-308 switches can be installed easily on a DIN rail or in a distribution box.

## Specifications

### Input/Output Interface

|                        |   |
|------------------------|---|
| Alarm Contact Channels | 1 relay output with current carrying capacity of 1 A @ 24 VDC |
|------------------------|---|

### Ethernet Interface

|   |  |
|---|--|
| 10/100BaseT(X) Ports (RJ45 connector)             | EDS-308/308-T: 8<br>EDS-308-M-SC/308-M-SC-T/308-S-SC/308-S-SC-T/308-S-SC-80: 7<br>EDS-308-MM-SC/308-MM-SC-T/308-MM-ST/308-MM-ST-T/308-SS-SC/308-SS-SC-T/308-SS-SC-80: 6<br><br>All models support:<br>Auto negotiation speed<br>Full/Half duplex mode<br>Auto MDI/MDI-X connection |
| 100BaseFX Ports (multi-mode SC connector)         | EDS-308-M-SC: 1<br>EDS-308-M-SC-T: 1<br>EDS-308-MM-SC: 2<br>EDS-308-MM-SC-T: 2   |
| 100BaseFX Ports (multi-mode ST connector)         | EDS-308-MM-ST: 2<br>EDS-308-MM-ST-T: 2   |
| 100BaseFX Ports (single-mode SC connector)        | EDS-308-S-SC: 1<br>EDS-308-S-SC-T: 1<br>EDS-308-SS-SC: 2<br>EDS-308-SS-SC-T: 2   |
| 100BaseFX Ports (single-mode SC connector, 80 km) | EDS-308-S-SC-80: 1<br>EDS-308-SS-SC-80: 2  |

|               |   |                         |            |                |                     |                     |
|---------------|---|-------------------------|------------|----------------|---------------------|---------------------|
| Standards     | IEEE 802.3 for 10BaseT<br>IEEE 802.3u for 100BaseT(X) and 100BaseFX<br>IEEE 802.3x for flow control   |                         |            |                |                     |                     |
| Optical Fiber |   |                         | 100BaseFX  |                |                     |                     |
|               |   |                         | Multi-Mode |                | Single-Mode (40 km) | Single-Mode (80 km) |
|               | Fiber Cable Type  |                         | OM1        | 50/125 $\mu$ m | G.652               | G.652               |
|               |   |                         |            | 800 MHz x km   |                     |                     |
|               | Typical Distance  |                         | 4 km       | 5 km           | 40 km               | 80 km               |
|               | Wave-length   | Typical (nm)            |            | 1300           | 1310                | 1550                |
|               |   | TX Range (nm)           |            | 1260 to 1360   | 1280 to 1340        | 1530 to 1570        |
|               |   | RX Range (nm)           |            | 1100 to 1600   | 1100 to 1600        | 1100 to 1600        |
|               | Optical Power   | TX Range (dBm)          |            | -10 to -20     | 0 to -5             | 0 to -5             |
|               |   | RX Range (dBm)          |            | -3 to -32      | -3 to -34           | -3 to -34           |
|               |   | Link Budget (dB)        |            | 12             | 29                  | 29                  |
|               |   | Dispersion Penalty (dB) |            | 3              | 1                   | 1                   |
|               | <p>Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.</p> <p>Note: Compute the "typical distance" of a specific fiber transceiver as follows: Link budget (dB) &gt; dispersion penalty (dB) + total link loss (dB).</p> |                         |            |                |                     |                     |

#### DIP Switch Configuration

|                    |                  |
|--------------------|------------------|
| Ethernet Interface | Port break alarm |
|--------------------|------------------|

#### Switch Properties

|                    |                   |
|--------------------|-------------------|
| MAC Table Size     | 2 kbits           |
| Packet Buffer Size | 768 K             |
| Processing Type    | Store and Forward |

#### Power Parameters

|                             |   |
|-----------------------------|---|
| Input Current               | EDS-308/308-T: 0.07 A @ 24 VDC<br>EDS-308-M-SC/S-SC Series, 308-S-SC-80: 0.12 A @ 24 VDC<br>EDS-308-MM-SC/MM-ST/SS-SC Series, 308-SS-SC-80: 0.15 A @ 24 VDC |
| Connection                  | 1 removable 6-contact terminal block(s)   |
| Operating Voltage           | 9.6 to 60 VDC   |
| Input Voltage               | Redundant dual inputs, 12/24/48 VDC   |
| Reverse Polarity Protection | Supported   |
| Overload Current Protection | Supported   |

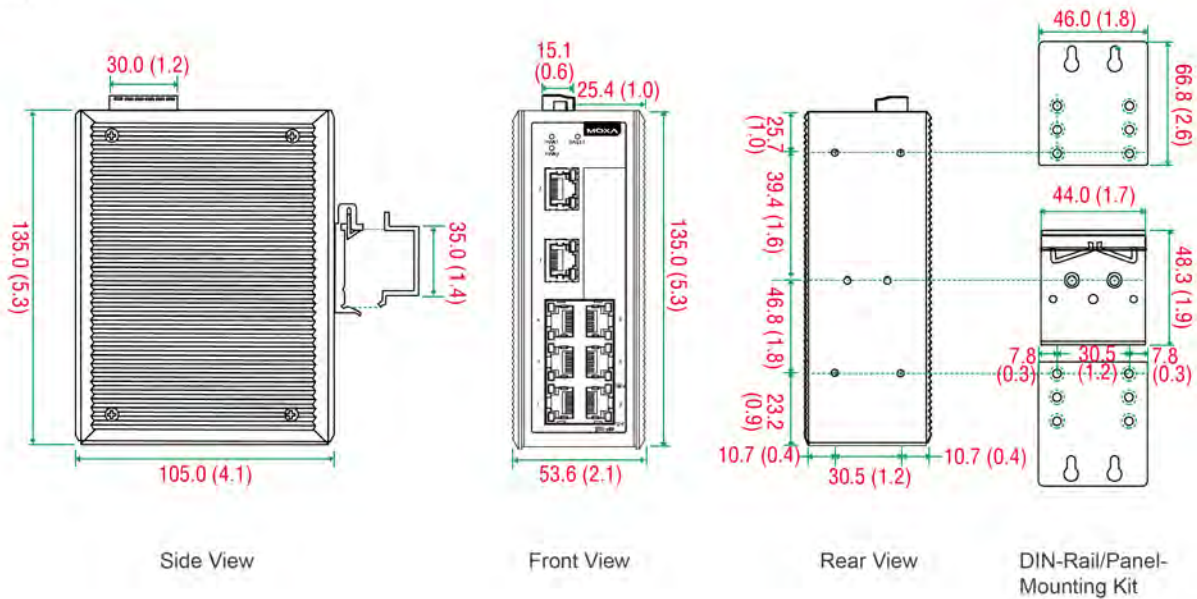
#### Physical Characteristics

|            |   |
|------------|---|
| Housing    | Metal                                       |
| IP Rating  | IP30  |
| Dimensions | 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in) |

|  |  |
|--|--|
| Weight                                 | 790 g (1.75 lb)  |
| Installation                           | DIN-rail mounting, Wall mounting (with optional kit)   |
| <b>Environmental Limits</b>            |  |
| Operating Temperature                  | Standard Models: -10 to 60°C (14 to 140°F)<br>Wide Temp. Models: -40 to 75°C (-40 to 167°F)  |
| Storage Temperature (package included) | -40 to 85°C (-40 to 185°F)   |
| Ambient Relative Humidity              | 5 to 95% (non-condensing)  |
| <b>Standards and Certifications</b>    |  |
| Hazardous Locations                    | ATEX, Class I Division 2   |
| EMI                                    | CISPR 32, FCC Part 15B Class A   |
| EMC                                    | EN 55032/24  |
| Vibration                              | IEC 60068-2-6  |
| EMS                                    | IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV<br>IEC 61000-4-6 CS: 10 V<br>IEC 61000-4-8 PFMF |
| Safety                                 | UL 508, UL 60950-1, CSA C22.2 No. 60950-1  |
| Shock                                  | IEC 60068-2-27   |
| Freefall                               | IEC 60068-2-32   |
| <b>MTBF</b>                            |  |
| Time                                   | 255,528 hrs  |
| Standards                              | MIL-HDBK-217F  |
| <b>Warranty</b>                        |  |
| Warranty Period                        | 5 years  |
| Details                                | See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>   |
| <b>Package Contents</b>                |  |
| Device                                 | 1 x EDS-308 Series switch  |
| Installation Kit                       | 1 x cap, plastic, for SC fiber port<br>2 x cap, plastic, for SC fiber port (-SC models)<br>2 x cap, plastic, for ST fiber port (-ST models)  |
| Documentation                          | 1 x quick installation guide<br>1 x warranty card  |

## Dimensions

Unit: mm (inch)



## Ordering Information

| Model Name       | 10/100BaseT(X) Ports RJ45 Connector | 100BaseFX Ports Multi-Mode, SC Connector | 100BaseFX Ports Multi-Mode, ST Connector | 100BaseFX Ports Single-Mode, SC Connector | Operating Temp. |
|------------------|-------------------------------------|--|--|---|-----------------|
| EDS-308          | 8                                   | –  | –  | –   | -10 to 60°C     |
| EDS-308-T        | 8                                   | –  | –  | –   | -40 to 75°C     |
| EDS-308-M-SC     | 7                                   | 1  | –  | –   | -10 to 60°C     |
| EDS-308-M-SC-T   | 7                                   | 1  | –  | –   | -40 to 75°C     |
| EDS-308-MM-SC    | 6                                   | 2  | –  | –   | -10 to 60°C     |
| EDS-308-MM-SC-T  | 6                                   | 2  | –  | –   | -40 to 75°C     |
| EDS-308-MM-ST    | 6                                   | –  | 2  | –   | -10 to 60°C     |
| EDS-308-MM-ST-T  | 6                                   | –  | 2  | –   | -40 to 75°C     |
| EDS-308-S-SC     | 7                                   | –  | –  | 1   | -10 to 60°C     |
| EDS-308-S-SC-T   | 7                                   | –  | –  | 1   | -40 to 75°C     |
| EDS-308-SS-SC    | 6                                   | –  | –  | 2   | -10 to 60°C     |
| EDS-308-SS-SC-T  | 6                                   | –  | –  | 2   | -40 to 75°C     |
| EDS-308-S-SC-80  | 7                                   | –  | –  | 1   | -10 to 60°C     |
| EDS-308-SS-SC-80 | 6                                   | –  | –  | 2   | -10 to 60°C     |

## Accessories (sold separately)

### Power Supplies

|           |   |
|-----------|---|
| DR-120-24 | 120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature |
| DR-4524   | 45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50°C operating temperature                                       |
| DR-75-24  | 75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature                                     |

|           |   |
|-----------|---|
| MDR-40-24 | DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature |
| MDR-60-24 | DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature |

#### Wall-Mounting Kits

|       |   |
|-------|---|
| WK-46 | Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm |
|-------|---|

#### Rack-Mounting Kits

|       |                           |
|-------|---------------------------|
| RK-4U | 19-inch rack-mounting kit |
|-------|---------------------------|

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