# **EDS-305 Series**

# 5-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-305 Ethernet switches provide an economical solution for your industrial Ethernet connections. These 5-port switches come with a builtin 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 0 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-305 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
Eth am at Interfere	
Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	EDS-305/305-T: 5 EDS-305-M-SC/M-ST/S-SC Series, EDS-305-S-SC-80: 4
	All models support:
	Auto negotiation speed
	Full/Half duplex mode
	Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-305-M-SC Series: 1
100BaseFX Ports (multi-mode ST connector)	EDS-305-M-ST Series: 1
100BaseFX Ports (single-mode SC connector)	EDS-305-S-SC: 1
, ,	EDS-305-S-SC-T: 1
100BaseFX Ports (single-mode SC connector, 80	EDS-305-S-SC-80: 1
km)	



Standards

IEEE 802.3 for 10BaseT

IEEE 802.3u for 100BaseT(X) and 100BaseFX

IEEE 802.3x for flow control

Optical Fiber

		10		0BaseFX	
		Multi-Mode		Single-Mode (40 km)	Single-Mode (80 km)
Fiber Cable Type		OM1	50/125 μm	G.652	G.652
			800 MHz x km		
Тур	oical Distance	4 km 5 km		40 km	80 km
	Typical (nm)	1300		1310	1550
Wavelen- gth	TX Range (nm)	1260 to 1360		1280 to 1340	1530 to 1570
	RX Range (nm)	1100 to 1600		1100 to 1600	1100 to 1600
	TX Range (dBm)	-10 to -20		0 to -5	0 to -5
Optical	RX Range (dBm)	-3 to -32		-3 to -34	-3 to -34
Optical Power	Link Budget (dB)	12		29	29
	Dispersion Penalty (dB)	3		1	1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.

Note: Compute the "typical distance" of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

### **DIP Switch Configuration**

Ethernet Interface	Port break alarm
Switch Properties	
MAC Table Size	1 K
Packet Buffer Size	384 K
Processing Type	Store and Forward
Power Parameters	
Input Current	EDS-305/305-T: 0.11 A @ 24 VDC EDS-305-M/S Series: 0.15 A @ 24 VDC
Connection	1 removable 6-contact terminal block(s)
Operating Voltage	12 to 48 VDC
Input Voltage	24 VDC, Redundant dual inputs
Reverse Polarity Protection	Supported
Overload Current Protection	Supported
Physical Characteristics	
Housing	Metal
IP Rating	IP30



**Dimensions** 

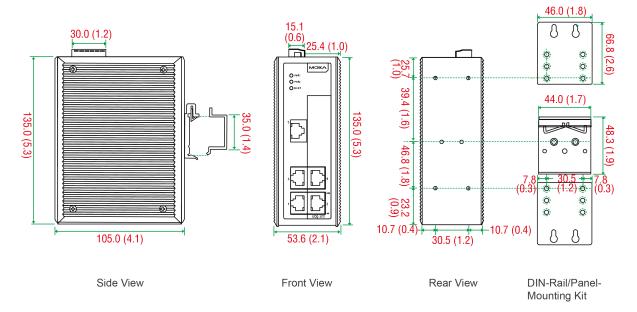
53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)

Weight	790 g (1.75 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)
Environmental Limits	
Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) 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)
Standards and Certifications	
Hazardous Locations	ATEX, Class I Division 2
EMI	CISPR 32, FCC Part 15B Class A
Maritime	DNV-GL
EMC	EN 55032/24
Vibration	IEC 60068-2-6
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 3 V 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
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Time	422,742 hrs
Standards	MIL-HDBK-217F
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty
Package Contents	
Device	1 x EDS-305 Series switch
Installation Kit	2 x cap, plastic, for RJ45 port 1 x cap, plastic, for SC fiber port (-SC models) 1 x cap, plastic, for ST fiber port (-ST models)
Documentation	1 x quick installation guide 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-305	5	-	-	-	0 to 60°C
EDS-305-T	5	-	-	-	-40 to 75°C
EDS-305-M-SC	4	1	-	-	0 to 60°C
EDS-305-M-SC-T	4	1	-	-	-40 to 75°C
EDS-305-M-ST	4	-	1	-	0 to 60°C
EDS-305-M-ST-T	4	-	1	-	-40 to 75°C
EDS-305-S-SC	4	-	-	1	0 to 60°C
EDS-305-S-SC-80	4	-	-	1	0 to 60°C
EDS-305-S-SC-T	4	-	-	1	-40 to 75°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	$45 \text{W}/2 \text{A}$ DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to $50^\circ$ C operating temperature
DR-75-24	$75\text{W}/3.2\text{A}$ DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to $60^{\circ}\text{C}$ 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	x 66.8 x 1 mm
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#### **Rack-Mounting Kits**

RK-4U 19-inch rack-mounting kit

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