EDS-205A/208A Series

5 and 8-port unmanaged Ethernet switches

> 10/100BaseT(X) (RJ45 connector), 100BaseFX (multi/single-mode, SC or ST connector)
> Redundant dual 12/24/48 VDC, 18 to 30 VAC power inputs
> IP30 aluminum housing
> Rugged hardware design well suited for hazardous locations (Class 1 Div. 2/ATEX Zone 2), Transportation (NEMA TS2/ EN 50121-4/e-Mark), and maritime environments (DNV/GL/LR/ABS/NK)
> -40 to 75°C operating temperature range (T models)

IndustrialIT enabled · ⟨Ex⟩ · c(UL)us LISTED · DNV · G L · Lloyd's Register LIFE MATTERS · ABS APPROVED PRODUCT · ClassNK APPROVED · EN 50121 · NEMA TS2 · CE · FC

: Introduction

The EDS-205A/208A series are 5 and 8-port industrial Ethernet switches that support IEEE 802.3 and IEEE 802.3u/x with 10/100M full/half-duplex, MDI/MDI-X auto-sensing. The EDS-205A/208A switches provide 12/24/48 VDC (9.6 to 60 VDC), 18 to 30 VAC redundant power inputs that can be connected simultaneously to live AC/DC power sources. These switches have been designed for harsh industrial environments, such as in maritime (DNV/GL/LR/ABS/NK), rail wayside, highway, or mobile applications(EN 50121-4/NEMA TS2/e-Mark), or hazardous locations (Class I Div. 2, ATEX Zone 2) that comply with FCC, UL, and CE standards.

The EDS-205A/208A switches are available with a standard operating temperature range from -10 to 60°C, or with a wide operating temperature range from -40 to 75°C. All models are subjected to a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. In addition, the EDS-205A/208A switches have DIP switches for enabling or disabling broadcast storm protection, providing another level of flexibility for industrial applications.

: Specifications

Technology
Standards:
IEEE 802.3 for 10BaseT
IEEE 802.3u for 100BaseT(X) and 100BaseFX
IEEE 802.3x for Flow Control
Processing Type: Store and Forward
Flow Control: IEEE 802.3x flow control, back pressure flow control

Switch Properties
MAC Table Size: 1 K
Packet Buffer Size: 512 kbit

Interface
Fiber Ports: 100BaseFX ports (SC/ST connector, multi-mode, single-mode)
RJ45 Ports: 10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection
DIP Switches: Enable/Disable broadcast storm protection
LED Indicators: Power, 10/100M (TP port), 100M (fiber port)

Optical Fiber

	100BaseFX	
	Multi-mode	**Single-mode**
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km[a] 4 km[b]	40 km[c]
Saturation	-6 dBm	-3 dBm

a. 50/125 μm, 800 MHz*km fiber optic cable
b. 62.5/125 μm, 500 MHz*km fiber optic cable
c. 9/125 μm single-mode fiber optic cable

Power Requirements
Input Voltage: 12/24/48 VDC (9.6 to 60 VDC), 18 to 30 VAC (47 to 63 Hz), redundant dual inputs
Input Current:
EDS-205A: 0.1 A @ 24 V
EDS-205A-M/S: 0.11 A @ 24 V
EDS-208A: 0.13 A @ 24 V
EDS-208A-M: 0.17 A @ 24 V
EDS-208A-MM/SS: 0.22 A @ 24 V
Overload Current Protection: 1.1 A
Connection: 1 removable 4-contact terminal block
Reverse Polarity Protection: Present

Physical Characteristics
Housing: Aluminum, IP30 protection
Dimensions:
EDS-205A Series: 30 x 115 x 70 mm (1.18 x 4.52 x 2.76 in)
EDS-208A Series: 50 x 115 x 70 mm (1.96 x 4.52 x 2.76 in)
Weight:
EDS-205A Series: 175 g
EDS-208A Series: 275 g
Installation: DIN-rail mounting, wall mounting (with optional kit)

Environmental Limits
Operating Temperature:
Standard Models: -10 to 60°C (14 to 140°F)
Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Standards and Certifications

Safety: UL 508
Hazardous Location: UL/cUL Class 1 Division 2 Groups A/B/C/D, ATEX Zone 2 Ex nA nC IIC T4 Gc
EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS:
EN 61000-4-2 (ESD) Level 3, EN 61000-4-3 (RS) Level 3,
EN 61000-4-4 (EFT) Level 3, EN 61000-4-5 (Surge) Level 3,
EN 61000-4-6 (CS) Level 3, EN 61000-4-8, EN 61000-4-11
Marine: DNV, GL, LR, ABS, NK
Wheeled Vehicles: e-Mark (E1) (EDS-208A only)
Traffic Control: NEMA TS2
Rail Traffic: EN 50121-4
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6
Note: Please check Moxa's website for the most up-to-date certification status.
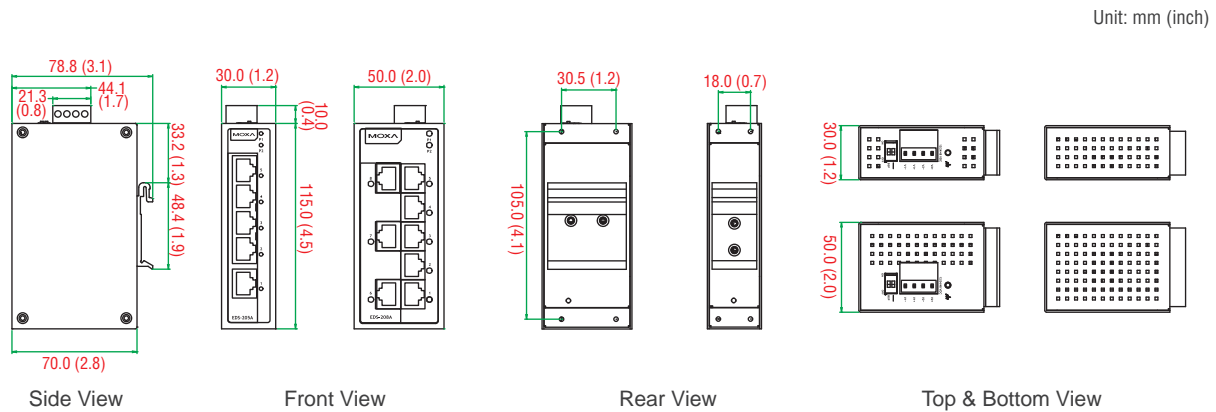
MTBF (mean time between failures)

Time:
EDS-205A Series: 3,040,784 hrs
EDS-208A Series: 2,428,212 hrs
Database: Telcordia (Bellcore), GB

Warranty

Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)

Side View

Front View

Rear View

Top & Bottom View

Ordering Information

Available Models			Port Interface		
Standard Temperature (-10 to 60°C)	Wide Temperature (-40 to 75°C)	10/100BaseT(X)	100BaseFX		
			Multi-mode, SC Connector	Multi-mode, ST Connector	Single-mode, SC Connector
EDS-205A	EDS-205A-T	5	–	–	–
EDS-205A-M-SC	EDS-205A-M-SC-T	4	1	–	–
EDS-205A-M-ST	EDS-205A-M-ST-T	4	–	1	–
EDS-205A-S-SC	EDS-205A-S-SC-T	4	–	–	1
EDS-208A	EDS-208A-T	8	–	–	–
EDS-208A-M-SC	EDS-208A-M-SC-T	7	1	–	–
EDS-208A-M-ST	EDS-208A-M-ST-T	7	–	1	–
EDS-208A-MM-SC	EDS-208A-MM-SC-T	6	2	–	–
EDS-208A-MM-ST	EDS-208A-MM-ST-T	6	–	2	–
EDS-208A-S-SC	EDS-208A-S-SC-T	7	–	–	1
EDS-208A-SS-SC	EDS-208A-SS-SC-T	6	–	–	2

Optional Accessories (can be purchased separately)

DR-4524/75-24/120-24: 45/75/120 W DIN-rail 24 VDC power supplies
MDR-40-24/60-24: 40/60 W DIN-rail 24 VDC power supplies, -20 to 70°C operating temperature
WK-30: Wall mounting kit (EDS-205A series only)
WK-46: Wall mounting kit (EDS-208A series only)
RK-4U: 4U-high 19" rack mounting kit

Package Checklist

- EDS-205A or EDS-208A switch
- Hardware installation guide (printed)
- Warranty card