

EDS-316 系列

16 埠非網管型乙太網路交換器



特色與優點

- 發生電源故障和通訊埠連結中斷時可透過繼電器輸出警告
- 廣播風暴防護
- -40 至 75°C 寬工作溫度範圍 (-T 型號)

認證



簡介

EDS-316 乙太網路交換器為可工業乙太網路連線提供經濟實惠的解決方案。此系列16埠交換器具有內建繼電器警告功能，可在發生電源故障或連接埠中斷時警告網路工程師。此外，此系列交換器專為嚴苛的工業環境所設計，例如由Class 1 Div. 2 和 ATEX Zone 2 標準定義的危險場所等。

此系列交換器符合 FCC、UL 和 CE 標準，支援 -10 至 60°C 的標準工作溫度範圍，或介於 -40 至 75°C 的寬工作溫度範圍；此系列中的所有交換器都經過 100% 燒機測試，確保符合工業自動化控制應用的特殊需求。EDS-316 交換器可輕鬆安裝在 DIN 軌道或配接箱中。

規格

Input/Output Interface

Alarm Contact Channels	1 relay output with current carrying capacity of 1 A @ 24 VDC
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Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	EDS-316 models: 16 EDS-316-MM-SC/MM-ST/MS-SC/SS-SC models: 14 EDS-316-SS-SC-80 models: 14 EDS-316-M-SC/M-ST/S-SC models: 15 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-316-M-SC models: 1 EDS-316-MM-SC models: 2 EDS-316-MS-SC models: 1
100BaseFX Ports (multi-mode ST connector)	EDS-316-M-ST models: 1 EDS-316-MM-ST models: 2
100BaseFX Ports (single-mode SC connector)	EDS-316-MS-SC models: 1 EDS-316-S-SC models: 1 EDS-316-SS-SC models: 2
100BaseFX Ports (single-mode SC connector, 80 km)	EDS-316-SS-SC-80 models: 2

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control																																																													
Optical Fiber	<table><tr><th colspan="2" rowspan="2"></th><th colspan="3">100BaseFX</th></tr><tr><th>Multi-Mode</th><th>Single-Mode (40 km)</th><th>Single-Mode (80 km)</th></tr><tr><th rowspan="2">Fiber Cable Type</th><th rowspan="2">OM1</th><td>50/125 μm</td><th rowspan="2">G.652</th><th rowspan="2">G.652</th></tr><tr><td>800 MHz x km</td></tr><tr><th colspan="2">Typical Distance</th><td>4 km</td><td>5 km</td><td>40 km</td><td>80 km</td></tr><tr><th rowspan="3">Wavelength</th><th>Typical (nm)</th><td colspan="2">1300</td><td>1310</td><td>1550</td></tr><tr><th>TX Range (nm)</th><td colspan="2">1260 to 1360</td><td>1280 to 1340</td><td>1530 to 1570</td></tr><tr><th>RX Range (nm)</th><td colspan="2">1100 to 1600</td><td>1100 to 1600</td><td>1100 to 1600</td></tr><tr><th rowspan="4">Optical Power</th><th>TX Range (dBm)</th><td colspan="2">-10 to -20</td><td>0 to -5</td><td>0 to -5</td></tr><tr><th>RX Range (dBm)</th><td colspan="2">-3 to -32</td><td>-3 to -34</td><td>-3 to -34</td></tr><tr><th>Link Budget (dB)</th><td colspan="2">12</td><td>29</td><td>29</td></tr><tr><th>Dispersion Penalty (dB)</th><td colspan="2">3</td><td>1</td><td>1</td></tr></table> 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).							100BaseFX			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	Typical Distance		4 km	5 km	40 km	80 km	Wavelength	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
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DIP Switch Configuration

Ethernet Interface	Port break alarm
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Switch Properties

Packet Buffer Size	1.25 Mbits
MAC Table Size	4 K
Processing Type	Store and Forward

Power Parameters

Input Voltage	12/24/48 VDC Redundant dual inputs
Input Current	0.34 A (EDS-316) @ 24 VDC 0.35 A (EDS-316-S-SC) @ 24 VDC 0.35 A (EDS-316-M-SC, EDS-316-M-ST) @ 24 VDC 0.40 A (EDS-316-SS-SC) @ 24 VDC 0.39 A (EDS-316-MM-SC, EDS-316-MM-ST) @ 24 VDC
Connection	1 removable 6-contact terminal block(s)
Operating Voltage	9.6 to 60 VDC
Reverse Polarity Protection	Supported
Overload Current Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	80.1 x 135 x 105 mm (3.15 x 5.31 x 4.13 in)
Weight	1140 g (2.52 lb)
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 (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	EN 62368-1 UL 508 UL 60950-1 CSA C22.2 No. 60950-1
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
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: 10 V IEC 61000-4-8 PFMF
Hazardous Locations	ATEX Class I Division 2
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Maritime	DNV

MTBF

Time	EDS-316 models: 2,226,219 hrs EDS-316-MM/MS/SS models: 1,904,659 hrs EDS-316-M/S models: 2,048,802 hrs
Standards	MIL-HDBK-217F

Warranty

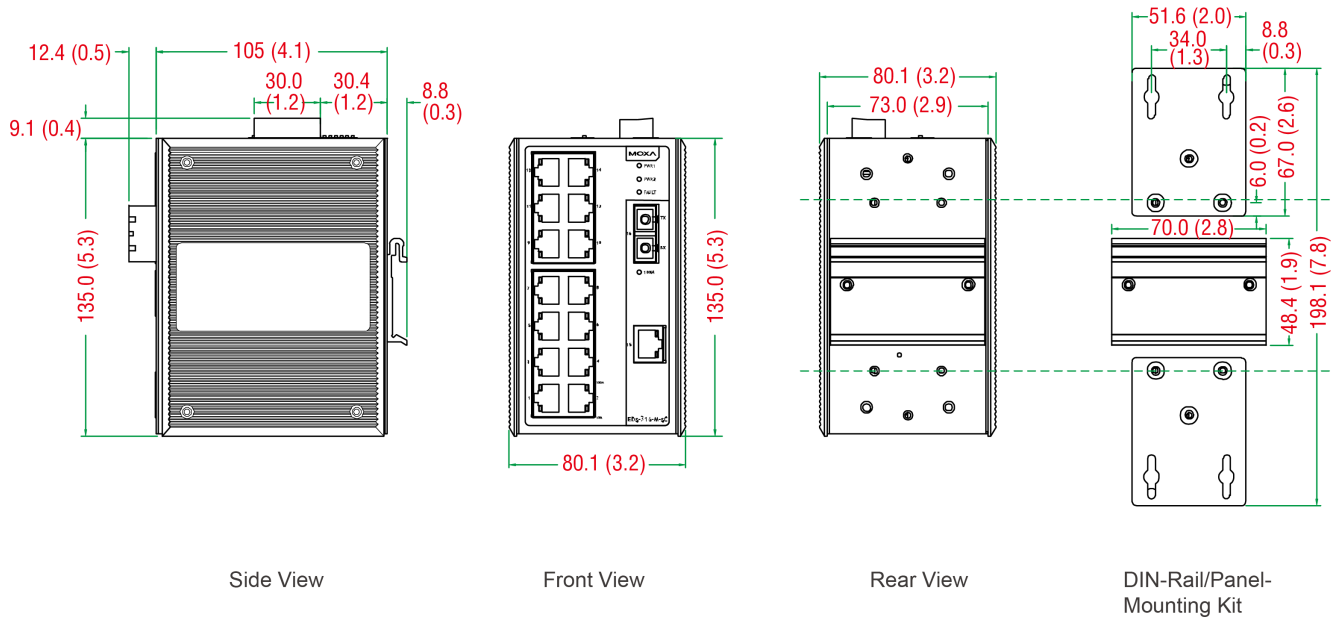
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x EDS-316 Series switch
Installation Kit	4 x cap, plastic, for RJ45 port 1 x cap, plastic, for SC fiber port (-M-SC/S-SC models) 2 x cap, plastic, for SC fiber port (-MS-SC/MM-SC models) 1 x cap, plastic, for ST fiber port (-M-ST models) 2 x cap, plastic, for ST fiber port (-MM-ST models)
Documentation	1 x quick installation guide 1 x warranty card

尺寸

單位：公釐（英吋）



訂購資訊

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-316	16	–	–	–	-10 to 60°C
EDS-316-T	16	–	–	–	-40 to 75°C
EDS-316-M-SC	15	1	–	–	-10 to 60°C
EDS-316-M-SC-T	15	1	–	–	-40 to 75°C
EDS-316-M-ST	15	–	1	–	-10 to 60°C
EDS-316-M-ST-T	15	–	1	–	-40 to 75°C
EDS-316-MM-SC	14	2	–	–	-10 to 60°C
EDS-316-MM-SC-T	14	2	–	–	-40 to 75°C
EDS-316-MM-ST	14	–	2	–	-10 to 60°C
EDS-316-MM-ST-T	14	–	2	–	-40 to 75°C
EDS-316-MS-SC	14	1	–	1	-10 to 60°C
EDS-316-S-SC	15	–	–	1	-10 to 60°C
EDS-316-S-SC-T	15	–	–	1	-40 to 75°C

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-316-SS-SC	14	–	–	2	-10 to 60°C
EDS-316-SS-SC-80	14	–	–	2	-10 to 60°C
EDS-316-SS-SC-T	14	–	–	2	-40 to 75°C

配件（選購）

Power Supplies

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
HDR-60-24	60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature
NDR-120-24	120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
NDR-120-48	120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
NDR-240-48	240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -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
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Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit
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