

uES4F | uES4F-S

Industrial 4 Port Unmanaged Ethernet Switch
IEC 61850-3 and IEEE 1613 Compliant



Product Overview

The uES4F/uES4F-S is an unmanaged industrial grade cost-effective 4 ports Ethernet switch which is IEC 61850-3 and IEEE 1613 Compliant. The uES4F/uES4F-S also supports MDI/MDIX auto detection, so no crossover wires are needed. The switch is made of IP-40 galvanized steel, accepts a wide voltage range of 9-36VDC, 36-75VDC, to high voltage of input 110-370VDC or 90-264VAC.

These features combined with a wide operating temperature of -40°C to 85°C help protect mission-critical applications from network interruptions or temporary malfunctions and make it suitable for the harshest of environments without the use of fans.

Features and Benefits

Table 1. Features

FEATURE	
SUPPORTS	<ul style="list-style-type: none"> •2 x 10/100Base-T(X) auto-negotiation and auto-MDI/MDI-X ports and •2 X 100Base-X SFP ports •Auto-Negotiation function for 100Base-TX interface •Full/half duplex operation •Store and Forward transmission
IP-40 GALVANIZED STEEL HOUSING	
OPERATING TEMPERATURE -40°C TO +85°C	
DIN-RAIL AND WALL MOUNT	

PRODUCT SPECIFICATIONS

Table 2. Technical Specification

DESCRIPTION	SPECIFICATION
10/100BASE-T(X) RJ45 PORTS AUTO MDI/MDIX	2
100BASE-FX SFP PORTS	2
TECHNOLOGY	
PROCESSING	Store-and-Forward
PHYSICAL CHARACTERISTICS	
ENCLOSURE	IP-40 Galvanized Steel
DIMENSIONS (W X D X H)	uES4F: 76.20 (W) x 90.20 (D) x 148.35 (H) mm (3.00 x 3.55 x 5.84 inches) DIN Rail mount 114.3 (W) x 82.51 (D) x 203.20 (H) mm (4.50 x 3.25 x 8.0 inches) Panel mount uES4F-S: 50.80(W) x 88.75(D) x 148.37(H) mm (2.00 x 3.49 x 5.84 inches) DIN Rail mount 51.73(W) x 82.42(D) x 177.80(H) mm (2.04 x 3.25 x 7.00 inches) Panel mount
WEIGHT (G)	uES4F: ~800g uES4F-S: ~600g
POWER	
INPUT POWER	Input 24VDC(Nom), 10-36VDC (Oper), Input 48VDC(Nom), 36-75VDC (Oper), or Input 100-240VDC(Nom), 88-300VDC(Oper) (uES4F only) or 100-240VAC(Nom), 85-264VAC(Oper) 50/60Hz (uES4F only)
POWER CONSUMPTION (TYP.)	2.2 Watts
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Present on terminal block

Features and Benefits

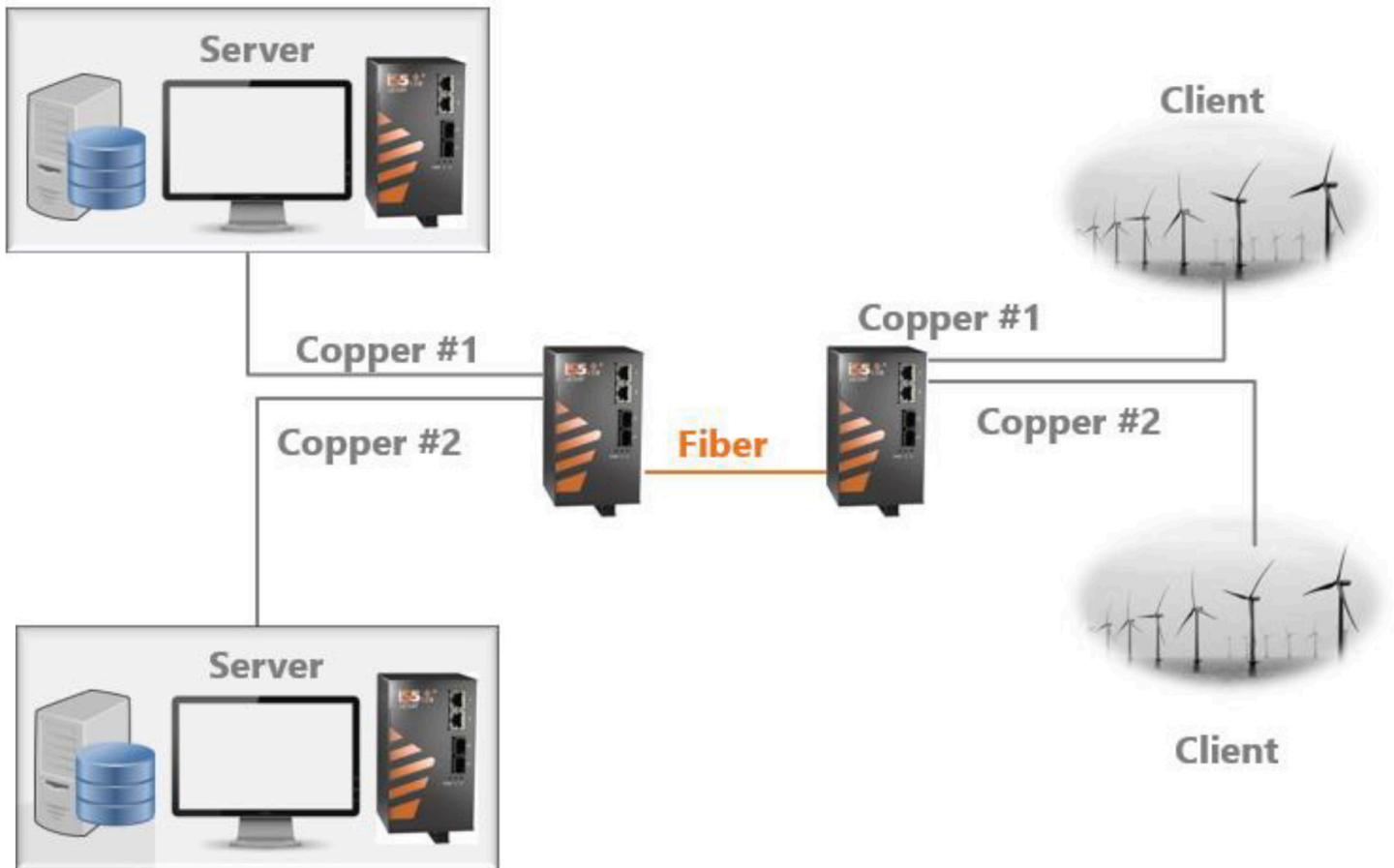
Table 3. Compliance Specification

TYPE	STANDARDS
ELECTROMAGNETIC EMISSIONS	FCC Part 15, CISPR (EN55022) class A, EN 50155 (EN 50121-3-2, EN 55011, EN 50121-4)
ELECTROMAGNETIC IMMUNITY	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
INDUSTRY STANDARDS	IEC 61850-3, IEEE 1613
SAFETY STANDARDS	EN60950-1
OPERATING ENVIRONMENT	-40°C to +85°C (-40° to 185°F) (no fans) EN 60068-2-21
STORAGE ENVIRONMENT	-40°C to +85°C (-40° to 185°F) EN 60068-2-14
OPERATING HUMIDITY	5% to 95% Non-condensing EN 60068-2-30
SHOCK	IEC60068-2-27
FREE FALL	IEC60068-2-32
VIBRATION	IEC 60068-2-6
WARRANTY	5 years, (extendable option with additional terms)

Table 4. Standards and Management

DESCRIPTION	SPECIFICATION
IEEE STANDARDS	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-T(X) and 100Base-FX IEEE 802.3x for Flow control
RFC COMPLIANCE	RFC 4445 MDI

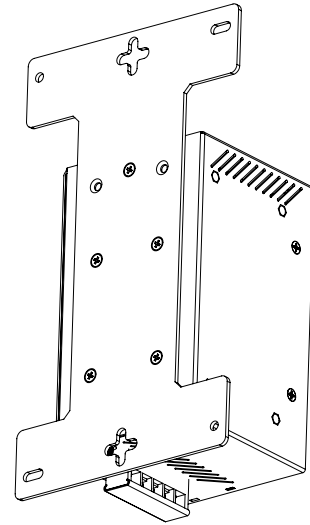
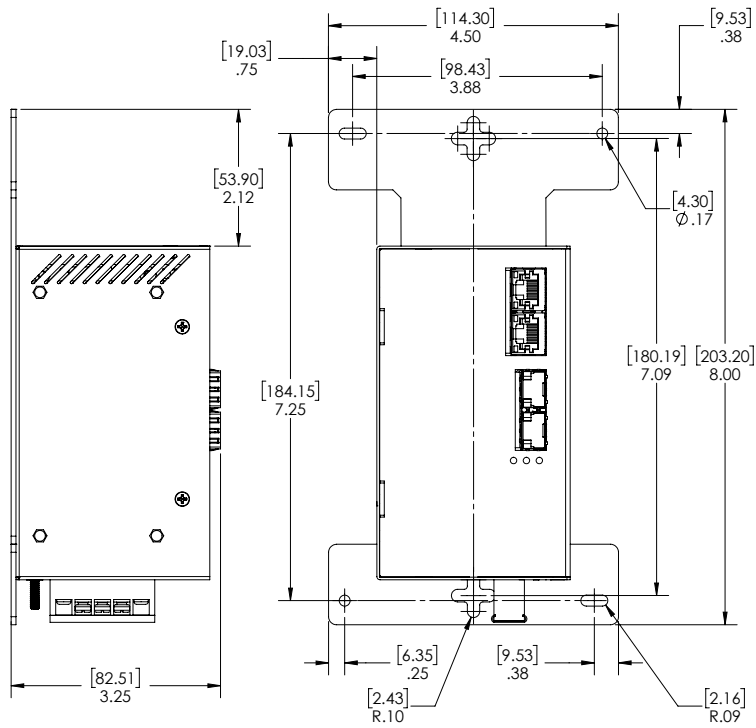
Network Architecture



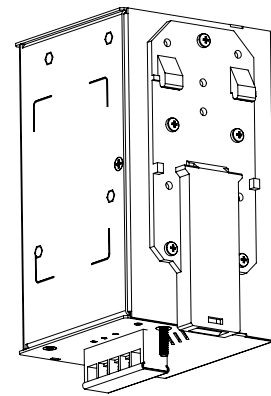
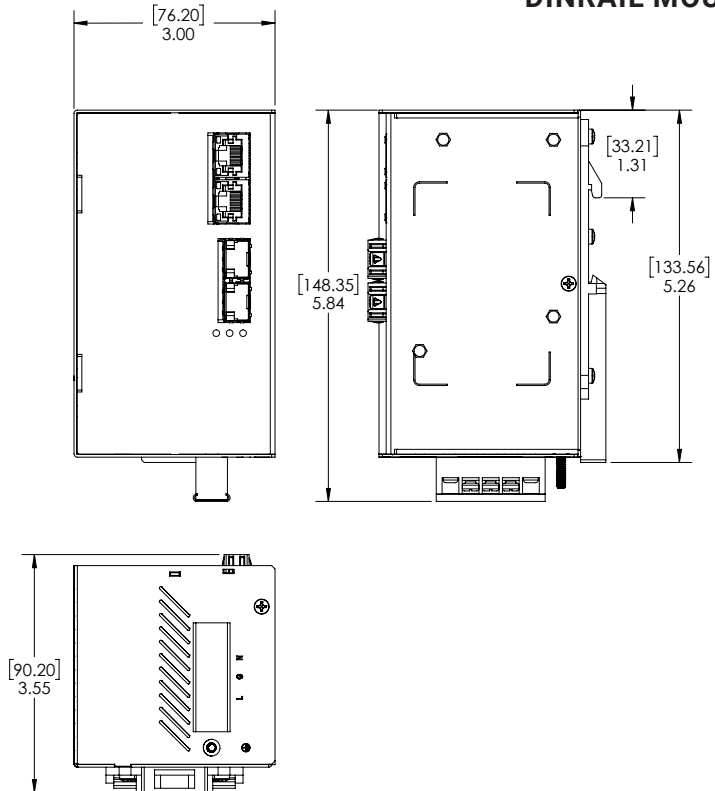
Dimensions (uES4F)

All dimensions are shown in inches [millimeters].

PANEL MOUNT



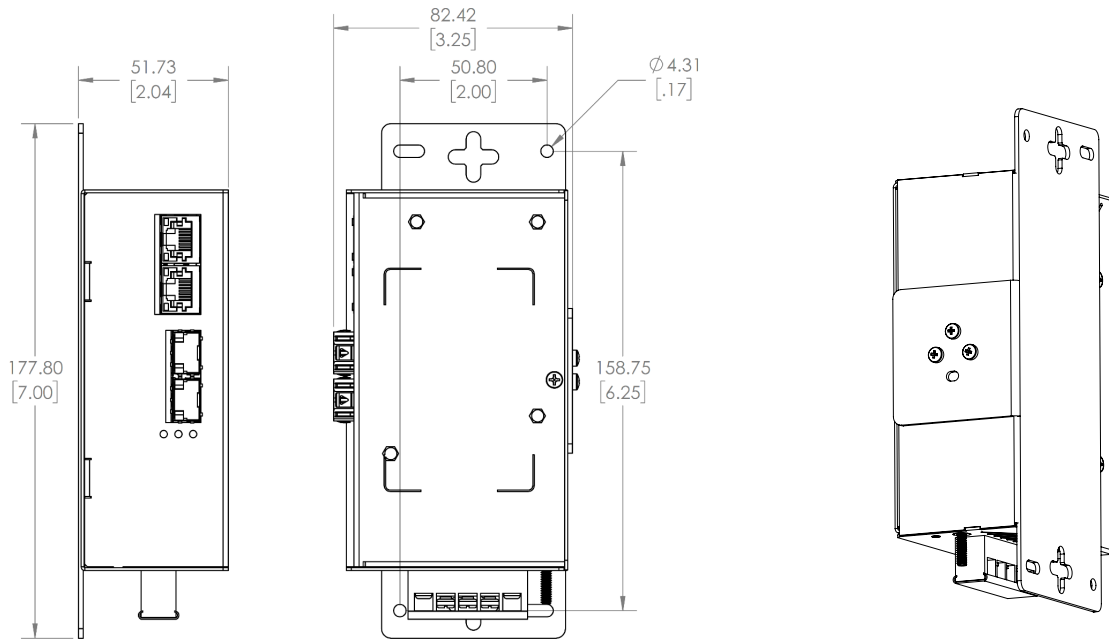
DINRAIL MOUNT



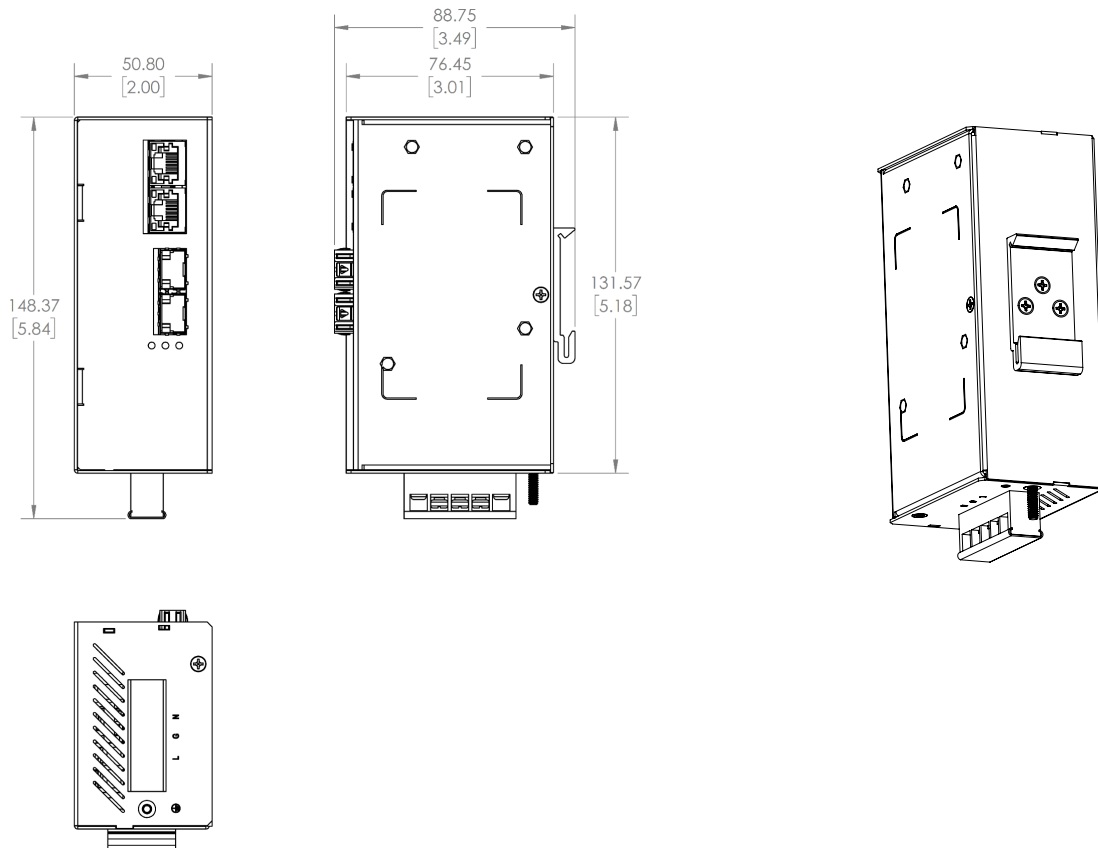
Dimensions (uES4F-S)

All dimensions are shown in inches [millimeters].

PANEL MOUNT



DINRAIL MOUNT



Ordering Information

BASE	POWER SUPPLY	MOUNT	ETHERNET PORT 1&2	ETHERNET PORT 3&4	MOD	DESCRIPTION
uES4F-S		D	2RJ45	2SFP		
uES4F						Core assembly and packaging
uES4F-S						Slim Core assembly and packaging (DC only*)
	LV					Input 9-36VDC
	MV					Input 36-75VDC
	HV					Input 110-370VDC or 90-264VAC
		D				DIN Rail Mounting
		P				Panel Mounting
		N				No Mounting Hardware
			2RJ45			2 X 10/100Base-T(X) RJ45
				2SFP		2 X 100Base-X SFP (Blank no optical transceivers**)
					C1	Conformal Coating

* uES4F-S slim version is only available with LV and MV options

** See Accessories Tab for SFP transceivers

uES4F Sample Order Code

uES4F-HV-D-2RJ45-2SFP

Description: Industrial 4 Port Unmanaged Ethernet Switch, IEC 61850-3 and IEEE 1613 Compliant, (Power Supply 1) Input 110-370VDC or 90-264VAC, (Mount) DIN Rail Mounting, (Ethernet Port 1&2) 2 X 10/100Base-T(X) RJ45, (Ethernet Port 3&4) 2 X 100Base-X SFP.

The same unit, may be ordered with conformal coating by appending '-C1' to the order code, for example: uES4F-HV-D-2RJ45-2SFP-C1

Description: Industrial 4 Port Unmanaged Ethernet Switch, IEC 61850-3 and IEEE 1613 Compliant, (Power Supply 1) Input 110-370VDC or 90-264VAC, (Mount) DIN Rail Mounting, (Ethernet Port 1&2) 2 X 10/100Base-T(X) RJ45, (Ethernet Port 3&4) 2 X 100Base-X SFP. This system will be conformal coated.

uES4F-S Sample Order Code

uES4F-S-LV-D-2RJ45-2SFP

Description: Industrial 4 Port Unmanaged Ethernet Switch Slim Version, IEC 61850-3 and IEEE 1613 Compliant, (Power Supply 1) Input 9-36VDC, (Mount) DIN Rail Mounting, (Ethernet Port 1&2) 2 X 10/100Base-T(X) RJ45, (Ethernet Port 3&4) 2 X 100Base-X SFP.

The same unit, may be ordered with conformal coating by appending '-C1' to the order code, for example: uES4F-S-LV-D-2RJ45-2SFP-C1

Description: Industrial 4 Port Unmanaged Ethernet Switch Slim Version, IEC 61850-3 and IEEE 1613 Compliant, (Power Supply 1) Input 9-36VDC, (Mount) DIN Rail Mounting, (Ethernet Port 1&2) 2 X 10/100Base-T(X) RJ45, (Ethernet Port 3&4) 2 X 100Base-X SFP. This system will be conformal coated.



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