

# Industrial 10/100BaseT(X) to 100BaseFX Media Converters

## EF23 Series

RoHS compliant



### Feature Highlights

- Supports Auto MDI/MDI-X and Auto Negotiation
- Supports Multi-mode 2KM, Single-mode 30KM
- Supports Link Fault Pass-Through (LFP)
- Operating temperature -10~70°C

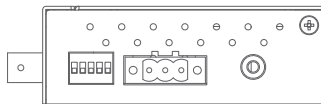
### Product Description

The EF23 Series Industrial Media Converters provide industrial media conversion between 10/100BaseT(X) and 100BaseFX(SC connector); connection options include multi-mode SC connector (2km), and single-mode SC connector (30km). The EF23 Series Media Converter is designed for harsh industrial environments, and complies with FCC/CE standards.

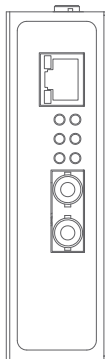
The EF23 Series Media Converter also provides auto MDI/MDI-X, Auto Negotiation, and Link Fault Pass-Through (LFP) function and one 5 pin DIP switch to configure the functions, such as the TX\_Duplex mode, FX\_Duplex mode, Speed mode, LFP, Auto Negotiation.

### Mechanical

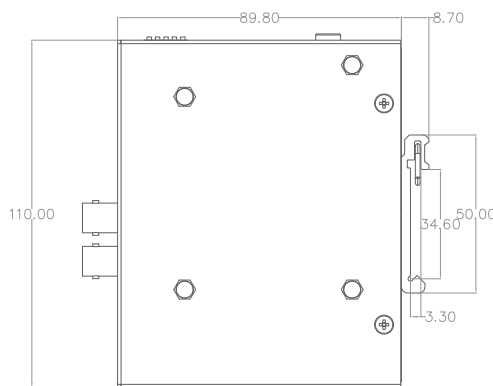
Top view



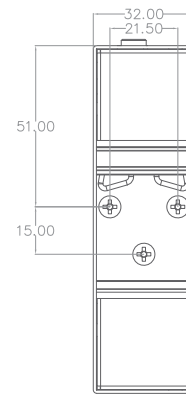
Front view



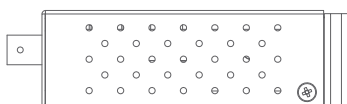
Side view and Panel Mounting View



Rear view



Bottom View



## Specifications

### Technology

<b>Standards</b>	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X), 100BaseFX
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### Interface

<b>RJ45 Ports</b>	10/100BaseT(X)
<b>Fiber Ports</b>	100BaseFX (SC connector)
<b>LED Indicators</b>	PWR,SPD,TX_LINK/ACT,TX_FDX/COL,FX_LINK/ACT,FX_FDX/COL
<b>DIP Switch</b>	TX Duplex mode, FX Duplex mode, Speed mode, LFP, Auto Negotiation

### Power Requirements

<b>Input Voltage</b>	6-48 VDC
<b>Input Current</b>	0.5A max, 6 VDC
<b>Connection</b>	Removable 3-pin Screw Terminal Block
<b>Reverse Polarity Protection</b>	Present

### Physical Characteristics

<b>Housing</b>	Metal, IP50 protection
<b>Dimension</b>	32 x 90 x 110 mm (1.26 x 3.54 x 4.33 in)
<b>Weight</b>	510g
<b>Installation</b>	DIN-Rail mounting, wall mounting(optional)

### Environmental Limits

<b>Operating Temperature</b>	-10°C ~ 70°C (14°F ~ 158°F)
<b>Storage Temperature</b>	-40°C ~ 85°C (-40°F ~ 185°F)
<b>Ambient Relative Humidity</b>	5 to 95%, 55°C (non-condensing)

### Regulatory Approvals

<b>EMI</b>	FCC Part15, CISPR (EN55022) Class A
<b>EMS</b>	EN61000-4-2 (ESD) Level 3, Criteria B / EN61000-4-3 (RS) Level 2, Criteria A EN61000-4-4 (EFT) Level 3, Criteria A / EN61000-4-5 (Surge) Level 3, Criteria B/A EN61000-4-6 (CS) Level 2, Criteria A
<b>Shock</b>	MIL-STD-810F Method 516.5
<b>Drop</b>	MIL-STD-810F Method 516.5
<b>Vibration</b>	MIL-STD-810F Method 514.5 C-1 & C-2
<b>RoHS</b>	Yes
<b>MTBF</b>	823877 hrs (94.04Years) (Data base: MIL-HDBK-217F, GB 25°C)
<b>Warranty Period</b>	5 Year

### Optical Fiber Specifications

P/N	100Base	
	Multi-mode	Single-mode
<b>Distance</b>	2Km	30Km
<b>Bit rate(Mbps)</b>	155	155
<b>Wavelength(nm)</b>	1310(LED)	1310(FP )
<b>Application</b>	Fast Ethernet / OC3	S1.1 / Fast Ethernet
<b>TX Power(dBm)</b>	-14~-20	-8~-15
<b>RX Sens.(dBm)</b>	<-31	<-34
<b>Remark</b>	EF23-1-1Fm-SC-2	EF23-1-1Fs-SC-30

### Ordering Information

<b>EF23-1-1Fm-SC-2</b>	100BaseT(X) to 100BaseFX Media Converter, Multi-mode, SC connector
<b>EF23-1-1Fs-SC-30</b>	100BaseT(X) to 100BaseFX Media Converter, Single mode, SC connector

### Optional Accessories

<b>US315-12(US-TB3)</b>	3-pin Terminal block (5.08 mm) power adaptor,100-240VAC input, 1.25A @ 12 VDC output, US plug
<b>USE315-12(EU-TB3)</b>	3-pin Terminal block (5.08 mm) power adaptor,100-240VAC input, 1.25A @ 12 VDC output, EU plug
<b>AD1024-24F</b>	24W/1A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1048-24FS</b>	48W/2A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1072-24F</b>	72W/3A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1100-24F</b>	100W/4A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1120-24F</b>	120W/5A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1120-48F</b>	120W/2.5A DIN-Rail 48 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>2ESDP-03P</b>	3-pin 5.08mm Terminal Block with 180° Angle

**Regulatory Approvals and Environmental Type Tests**

**EMI Immunity Type Tests**

Test	Description	Test Levels	Severity Levels
FCC part 15	Subpart B	—	Class A
EN55022	2006+A1:2007	—	Class A

**EMS Tests**

Test	Description	Test Levels	Severity Levels	
IEC61000-4-2	ESD	Contact discharge	6KV,Criterion A	Level 3
		Air discharge	8KV,Criterion B	Level 3
IEC61000-4-3	RS	Enclosure ports	3V/m(unmodulated, r.m.s) 80% AM 1KHz, Criterion A	Level 2
IEC61000-4-4	EFT	Power Port	±2KV,Criterion A	Level 3
		Single port	±1KV,Criterion A	Level 3
IEC61000-4-5	Surge	Power Port	±2KV,Criterion A	Level 3
		Single Port	±2KV,Criterion B	Level 3
IEC61000-4-6	CS	Power Port	3V/m(unmodulated, r.m.s) 80% AM 1KHz, Criterion A	Level 2
		Single Port		Level 2

**Environmental Type Test**

Test	Description	Test Levels	Severity Levels	
MIL-STD-810F	Shock	Impact acceleration& pulse duration	40g@11ms	—
MIL-STD-810F	Freefall	8 corners, 12 edges, 6 faces	122cm	—
MIL-STD-810F	Vibration	Packaged Random waveform	x:2.4 Grms y:1.28 Grms z:3.851.04Grms	—
		Operating Random waveform	x:0.740 Grms y:0.204 Grms z:1.04Grms	—

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