EKI-2741 Series

10/100/1000T (X) to Fiber Optic Gigabit Industrial Media Converters

EKI-2741F   EKI-2741LX   EKI-2741SX

Features

- Provides 1 x 1000 Mbps Ethernet port with RJ45 connector
- Provides 1 x 1000 Mbps fiber port with SC or SFP (mini-GBIC) type connector for 1000Base-SX/LX device
- Provides DIP switch for full/half duplex setting
- Supports MDI/MDI-X auto crossover
- Supports Auto-Negotiation
- Supports redundant 12 ~ 48 V_{DC} power input
- Provides flexible mounting: DIN-rail and Wall mount
- Provides Link Fault Pass-through (LFP)
- Jumbo Frame: 9K bytes

Introduction

EKI-2741 is designed to convert Gigabit Ethernet networks to Gigabit fiber networks by transparently converting Ethernet signals to optic signals. Therefore, EKI-2741 is an ideal solution for "fiber to building" applications at central offices or local sites. EKI-2741 supports MDI/MDIX auto detection, so you don't need to use crossover wires. Furthermore, the EKI-2741 accepts a wide voltage range from 12 ~ 48 V_{DC}. Besides, it also provides 3,000 V_{DC} surge (EFT) protection against over-voltage, so it is suitable for harsh operating environments.

EKI-2741 is an enhanced gigabit Ethernet to fiber optic converter. Aside from its standard features, the versatile EKI-2741 also has the LFP (Link Fault Pass-through) feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. EKI-2741 will force the link to shut down as soon as noticed that the other link has failed, giving the application software a chance to react to the situation.

Specifications

Communications

Standard	IEEE 802.3, 802.3u, 802.3ab, 802.3x, IEEE 802.3z	
LAN	10/100/1000Base-T (X), 1000Base-SX or 1000Base-LX	
Transmission Distance	Ethernet: Up to 100 m	
	Fiber:	
	Multi-mode: Up to 550 m	
	Single-mode: Up to 10 km (EKI-2741LX) or up to 110 km (EKI-2741F)	
	SFP: Up to 110 km (EKI-2741F)	
Transmission Speed	Up to 1000 Mbps	
Optical Fiber		
Multi-mode (EKI-2741SX)	Wavelength: 850 nm	
	Tx Power: -4/-9.5 dBm	
	Rx Sensitivity: -18 dBm	
	Parameters: 50/125 um, 62.5/125 um	
Single-mode (EKI-2741LX/LXI)	Wavelength: 1310 nm	
	Tx Power: -3/-9.5 dBm	
	Rx Sensitivity: -20 dBm	
	Parameters: 9/125 um	

Interface

Connectors	1 x RJ45
	1 x SC type fiber connector (EKI-2741SX/LX) or
	1 x SFP type fiber connector (EKI-2741F)
	6-pin removable screw terminal (power & relay)
LED Indicators	P1, P2, P-Fail
	Fiber: LNK/ACT
	Ethernet: 1000M, LNK/ACT
DIP Switch	Port Alarm, LFP

Power

Power Consumption	5.28 W (EKI-2741F)
	5.18 W (EKI-2741SX)
	5.30 W (EKI-2741LX)
Power Input	12 ~ 48 V_{DC}, redundant dual inputs

Mechanism

Dimensions (W x H x D)	37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
Enclosure	IP30, Metal shell with solid mounting kits
Mounting	DIN-rail, Wall

Protection

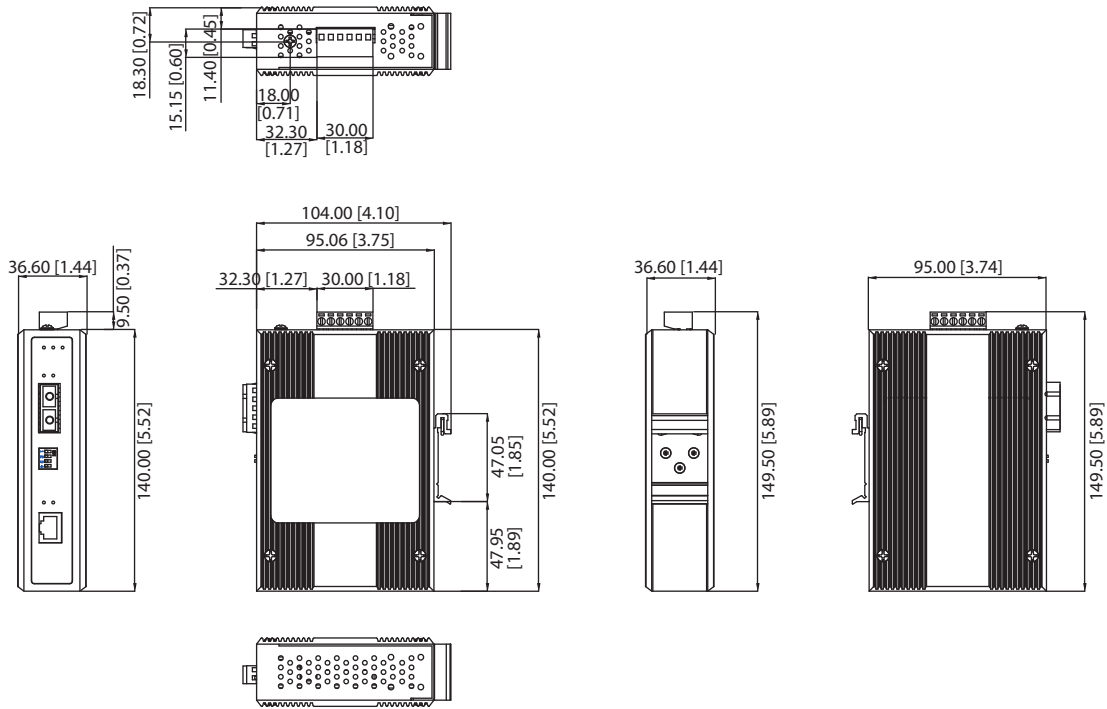|	
Power Reverse	Present
Overload current	Present

Environment

Operating Temperature	-10 ~ 60°C (14 ~ 140°F)
Wide Temp Model	-40 ~ 75°C (-40 ~ 167°F)
Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	5 ~ 95% (non-condensing)
Storage Humidity	0 ~ 95% (non-condensing)
MTBF	515,600 hours (EKI-2741F)
	525,300 hours (EKI-2741SX/LX)

Certification

Safety	UL 60950-1, CAN/CSA-C22.2 No.60950
EMI	FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	EN 61000-4-6
	EN 61000-4-8
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Dimensions

Unit: [mm]

Panel Cut-out Dimensions: 104 x 140 x 36.6 mm (4.1" x 5.52" x 1.44")

Ordering Information

- **EKI-2741F** — Giga Ethernet to SFP Fiber Converter
- **EKI-2741SX** — Giga Ethernet to 1000Base-SX Fiber Converter
- **EKI-2741LX** — Giga Ethernet to 1000Base-LX Fiber Converter

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