

# EKI-2741 Series

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



### 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<sub>DC</sub> 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<sub>DC</sub>. Besides, it also provides 3,000 V<sub>DC</sub> 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)  
Up to 1000 Mbps

#### Transmission Speed

##### 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<sub>DC</sub>, 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

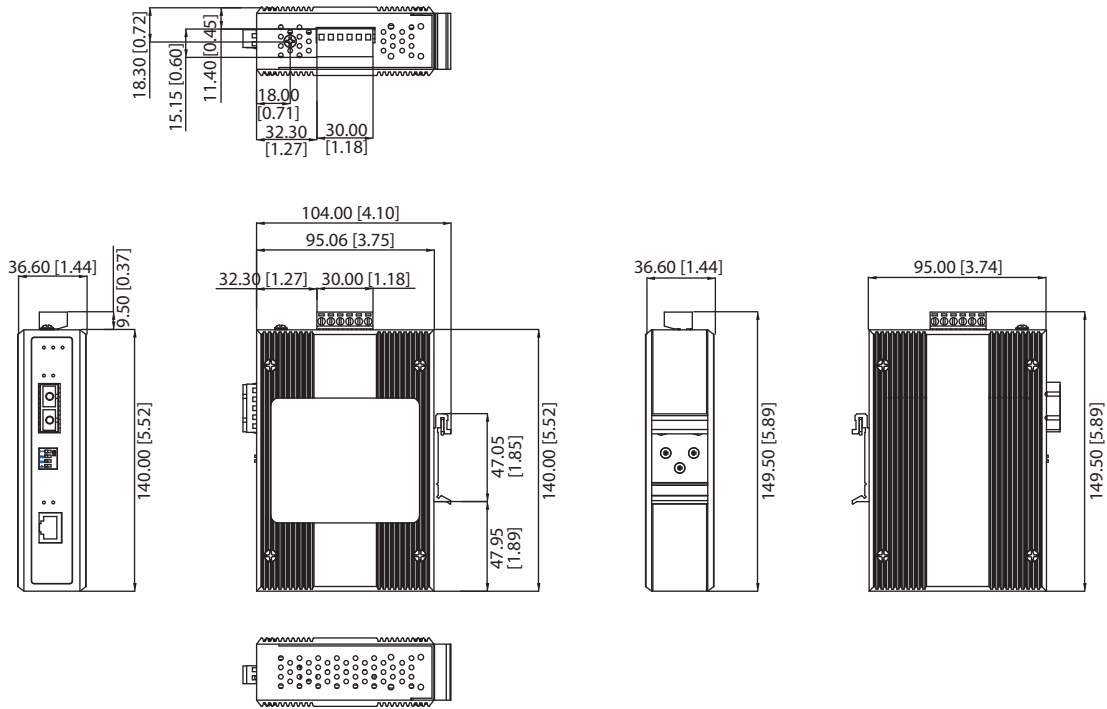
- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)  
Wide Temp Model  
-40 ~ 75°C (-40 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 515,600 hours (EKI-2741F)  
525,300 hours (EKI-2741SX/LX)

#### 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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