

# 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 & Wallmounting
- Provides Link Fault Pass-through (LFP)
- Supports wide operating temperatures from -40 ~ 75° C (EKI-2741LXI)
- 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** IEEE802.3, 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/LXI) or up to 110 km (EKI-2741F)  
SFP: Up to 110 km (EKI-2741F)  
Up to 1000 Mbps
- **Transmission Speed** Up to 1000 Mbps
- **Optical Fiber** Multi Mode (EKI-2741SX)  
Wavelength: 850nm  
Tx Power: -4/-9.5dBm  
Rx Sensitivity: -18dBm  
Parameters: 50/125um, 62.5/125um
- **Signal Mode** (EKI-2741LX/LXI)  
Wavelength: 1310nm  
Tx Power: -3/-9.5 dBm  
Rx Sensitivity: -20dBm  
Parameters: 9/125um

#### Interface

- **Connectors** 1 x RJ-45  
1 x SC type fiber connector (EKI-2741SX/LX/LXI) 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  
Port Alarm, LFP
- **DIP Switch**

#### Power

- **Power Consumption** 5.28 W (EKI-2741F)  
5.18 W (EKI-2741SX)  
5.30 W (EKI-2741LX/LXI)
- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs

#### Mechanism

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

#### Protection

- **Power Reverse** Present
- **Overload** 0.9 A/12 V<sub>DC</sub> (Resetable Fuse)

#### 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 hrs (EKI-2741F)  
525,300 hrs (EKI-2741SX/LX/LXI)

#### Certifications

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950
- **EMC** U.S.A.: FCC Part 15 CISPR 22  
EU: EN55011, EN61000-6-4, EN55022 Class A,  
EN61000-3-s2/3, EN55024,  
IEC61000-4-2/3/4/5/6/8, EN61000-6-2
- **Shock** IEC60068-2-27
- **Freefall** IEC60068-2-32
- **Vibration** IEC60068-2-6

### Ordering Information

- **EKI-2741F** Giga Ethernet to SFP Type Fiber Converter
- **EKI-2741SX** Giga Ethernet to 1000Base-SX Fiber Converter
- **EKI-2741LX** Giga Ethernet to 1000Base-LX Fiber Converter
- **EKI-2741LXI** Ethernet to 1000Base-LX Converter w/Wide Temp