EKI-2541M Series
EKI-2541S Series

10/100TX to Multi-mode SC Type Fiber Optic Industrial Media Converters
10/100TX to Single-mode SC Type Fiber Optic Industrial Media Converters

Features

- Provides 1 x 10/100 Mbps Ethernet port with RJ45 connector
- Provides 1 x 100 Mbps multi-mode/single-mode SC type fiber port
- Provides internal jumper for Link Fault Pass-through (LFP) setting
- Supports full/half duplex flow control
- Supports store and forward transmission
- Supports auto-negotiation
- Supports MDI/MDI-X auto crossover
- Provides surge (EFT) protection 3,000 V_{DC} for power line
- Supports 4,000 V_{DC} Ethernet ESD protection
- Supports redundant +12-48 V_{DC} power input
- Provides flexible mounting: DIN-rail & Panel Mounting
- Supports wide Operating Temperature from -40 ~ 85° C

Introduction

EKI-2541M/2541S is designed to convert Ethernet networks to fiber networks by transparently converting Ethernet signals to optic signals. The advantages of fiber optics are wide bandwidth, EMI immunity and long-distance transmissions.

Therefore, EKI-2541M/2541S is an ideal solution for "fiber to building" applications at central offices or local sites.

EKI-2541M/2541S supports MDI/MDIX auto detection, so you don't need to use crossover wires. Furthermore, the EKI-2541M/2541S can work normally from -10 ~ 60° C and 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.

Link Fault Pass-Through (LFP)

EKI-2541M/2541S is an enhanced Ethernet to fiber-optic converter. Aside from its standard features, the versatile EKI-2541M/2541S 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. Use the internal jumper to enable the LFP function, then EKI-2541M/2541S 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, 802.3x
- **LAN** 10/100Base-TX, 100Base-FX
- **Transmission Distance** Ethernet: Up to 100m
  Fiber: Multi-mode: up to 2 km
  Fiber: Single-mode: up to 30 km
- **Transmission Speed** Up to 100 Mbps

Interface

- **Connectors** 1 x RJ-45
  1 x SC type fiber connector
  6-pin removable screw terminal (power)
- **LED Indicators** P1, P2, P-Fail
  Ethernet: 10/100M, LNK/ACT
  Fiber: HDX/FDX, LNK/ACT
- **DIP Switch** Port/Power Alarm, LFP
  Fiber: HDX/FDX, Converter/Switch

Power

- **Power Consumption** Max. 5W
- **Power Input** 2 x Unregulated 12 ~ 48 V_{DC}

Mechanism

- **Dimensions (W x H x D)** 37 x 140 x 95 mm
- **Mounting** DIN-rail, Wall

Protection

- **ESD (Ethernet)** 4,000 V_{DC}
- **Surge (EFT for power)** 3,000 V_{DC}
- **Power Reverse** Present
- **Overload** 0.9 A@ 12 V_{DC} (Re-settable 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** 577,175 hrs

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, EN61000-3-2/3, 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-2541M** Industrial Ethernet to Multi-mode SC Type Fiber Optic Converter
- **EKI-2541MI** Industrial Ethernet to Multi-mode SC Type Fiber Optic Converter, Wide Temp.
- **EKI-2541S** Industrial Ethernet to Single-mode SC Type Fiber Optic Converter
- **EKI-2541SI** Industrial Ethernet to Single-mode SC Type Fiber Optic Converter, Wide Temp.