EKI-2541M

Industrial Ethernet to Fiber Optic Converters

NEW

Features

- Provides 1 x 10/100 Mbps Ethernet port with RJ45 connector
- Provides 1 x 100 Mbps multi-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 +12-48 V_{DC} power input
- Provides flexible mounting: DIN-rail & Panel Mounting
- Supports operating temperatures from -10 ~ 60° C

Introduction

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

EKI-2541M supports MDI/MDIX auto detection, so you don't need to use crossover wires. Furthermore, the EKI-2541M 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 is an enhanced Ethernet to fiber-optic converter. Aside from its standard features, the versatile EKI-2541M 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-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
- **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** — 1A/125V Replaceable Fuse

Environment

- **Operating Temperature** — -10 ~ 60° C
  Wide Temp Model — -40 ~ 75° C
- **Storage Temperature** — -10~85° C
- **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
          IEC61000-4-2/3/4/5/6/8/11/12
      EN61000-6-2
- **Shock** — IEC60068-2-27
- **Freefall** — IEC60068-2-32
- **Vibration** — IEC60068-2-6

Ordering Information

- **EKI-2541M** — Industrial Ethernet to 1000Base-LX SC Type Fiber Optic Converter