![Chipsmall logo]

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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EKI-2541M/MI
10/100T (X) to Multi-Mode SC Type Fiber Optic Industrial Media Converter

EKI-2541S/SI
10/100T (X) to Single-Mode SC Type Fiber Optic Industrial Media Converter

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
- Supports redundant 12-48 V_{DC} power input
- Provides flexible mounting: DIN-rail and Panel mount
- Supports wide operating temperatures from -40 to 75°C (EKI-2541MI/SI)

EKI-2541M **EKI-2541S**

Introduction

The 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, the 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 to 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)

The EKI-2541M/2541S is an enhanced Ethernet to fiber-optic converter. Aside from its standard features, the versatile the 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 the 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**: IEEE 802.3, 802.3u, 802.3x
- **LAN**: 10/100Base-T (X), 100Base-FX
- **Transmission Distance**: Ethernet: Up to 100 m
  Fiber: Multi-mode: up to 2 km
  Fiber: Single-mode: up to 30 km
- **Transmission Speed**: Up to 100 Mbps
- **Optical Fiber**
  Multi-mode (EKI-2541M/MI): Wavelength: 1310 nm
  Tx Power: -14/-20 dBm
  Rx Sensitivity: -31 dBm
  Parameters: 50/125 um,62.5/125 um

  Single-mode (EKI-2541S/SI): Wavelength: 1310 nm
  Tx Power: -8/-15 dBm
  Rx Sensitivity: -34 dBm
  Parameters: 9/125 um

Interface

- **Connectors**: 1 x RJ45
  1 x SC type fiber connector
  6-pin removable screw terminal (power)
- **LED Indicators**: P1, P2, P-Fail
  Ethernet: 10/100 m, LNK/ACT
  Fiber: HDX/FDX, LNK/ACT
- **DIP Switch**: Port/Power Alarm, LFP
  Fiber: HDX/FDX, Converter/Switch

Power

- **Power Consumption**: Max. 2.7 W
- **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")
- **Mounting**: DIN-rail, Wall
- **Enclosure**: IP30, Metal shell with solid mounting

Protection

- **Power Reverse**: Present
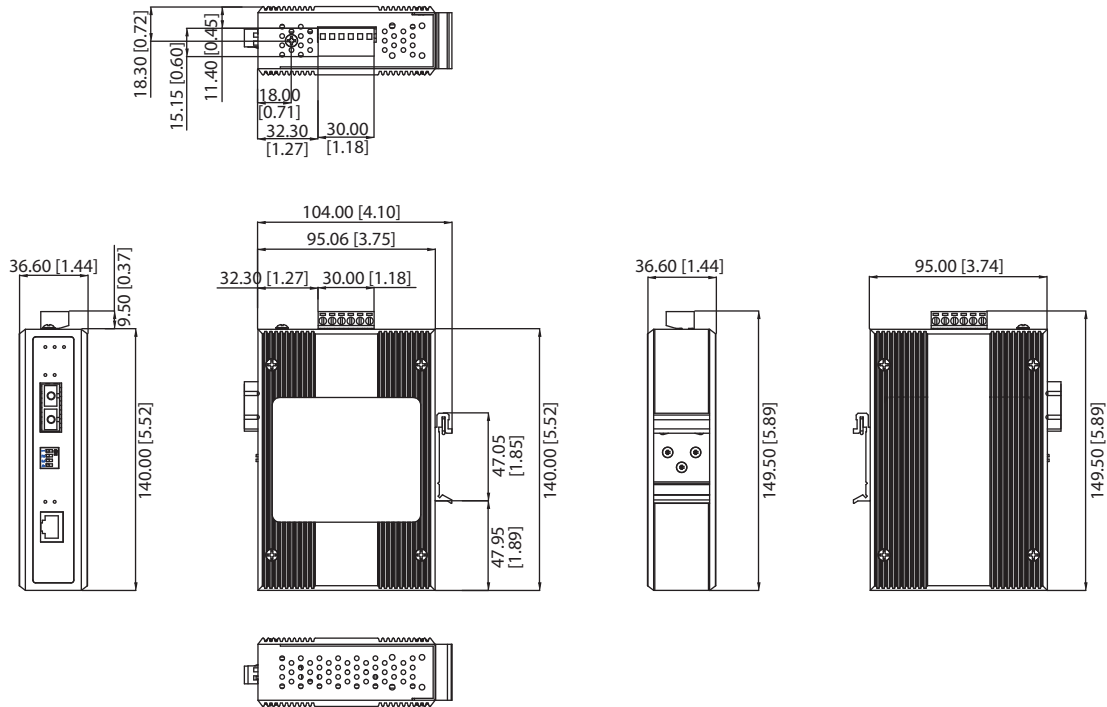- **Overload current**: Present

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**: 577,175 hours

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-2541M** Ethernet to Multi-mode Fiber Converter
- **EKI-2541MI** Ethernet to Multi-mode Fiber Converter w/ Wide Temp.
- **EKI-2541S** Ethernet to Single-mode Fiber Converter
- **EKI-2541SI** Ethernet to Single-mode Fiber Converter w/ Wide Temp.