

# EKI-3541M

# EKI-3541S

## 10/100T (X) to Multi-Mode SC Type Fiber Optic Industrial Media Converter

## 10/100T (X) to Single-Mode SC Type Fiber Optic Industrial Media Converter

**NEW**



### 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
- Supports Link Fault Pass-through (LFP) function
- 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<sub>DC</sub> power input
- Provides flexible mounting: DIN-rail and Wall mount

### Introduction

EKI-3541M/3541S 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-3541M/3541S is an ideal solution for "fiber to building" applications at central offices or local sites. EKI-3541M/3541S supports MDI/MDIX auto detection, so you don't need to use crossover wires. Furthermore, the EKI-3541M/3541S can work normally from -10 to 60°C and accepts a wide voltage range from 8.4 ~ 52.4 V<sub>DC</sub>. Besides, it also provides 4,000 V<sub>DC</sub> surge (EFT) protection against over-voltage, so it is suitable for harsh operating environments.

#### Link Fault Pass-Through (LFP)

EKI-3541M/3541S is an enhanced Ethernet to fiber-optic converter. Aside from its standard features, the versatile EKI-3541M/3541S 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-3541M/3541S 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-3541M)
    - Wavelength: 1310 nm
    - Tx Power: -14/-20 dBm
    - Rx Sensitivity: -31 dBm
    - Parameters: 50/125 um, 62.5/125 um
  - Single-mode (EKI-3541S)
    - 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
- **LED Indicators** 6-pin removable screw terminal (power)  
P1, P2, P-Fail
- **DIP Switch** LFP, LNK/ACT (FX), FDX/COL (FX)  
T(X):Speed and HDX/FDX, LFP  
Fiber: HDX/FDX, T(X):Auto-Negotiation

#### Power

- **Power Consumption** Max. 2.4 W
- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs

#### Mechanism

- **Dimensions (W x H x D)** 28.5 x 120 x 85.3 mm (1.02" x 4.73" x 3.35")
- **Mounting** DIN-rail, Wall
- **Enclosure** IP40, plastic and metal shell with solid mounting kits

#### Protection

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

#### Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 597,488 hours (EKI-3541M and EKI-3541S)

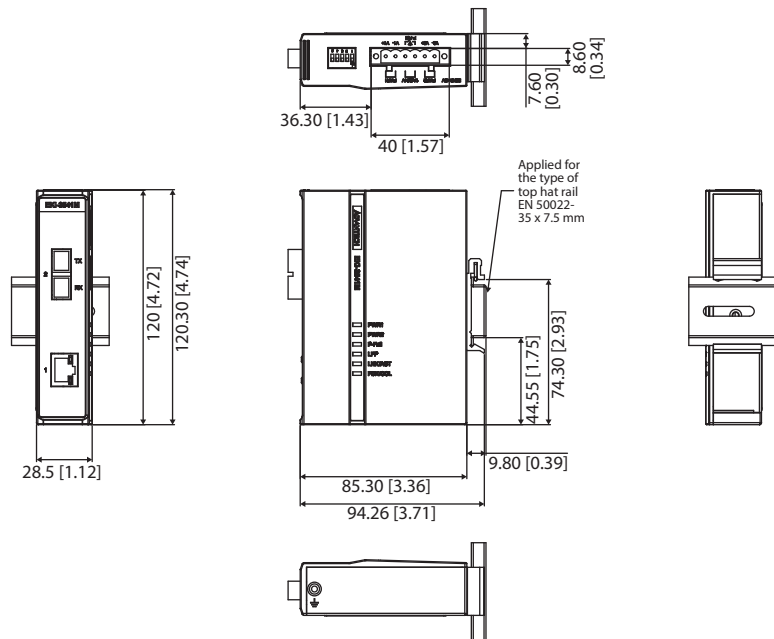
#### Certification

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950
- **EMI** FCC Part 15 Subpart B Class A, EN 55011/55022 Class A
- **EMS** EN 61000-4-2 (Level 3)  
EN 61000-4-3 (Level 3)  
EN 61000-4-4 (Level 4)  
EN 61000-4-5 (Level 3)  
EN 61000-4-6 (Level 3)  
EN 61000-4-8 (Level 4)
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32

## Dimensions

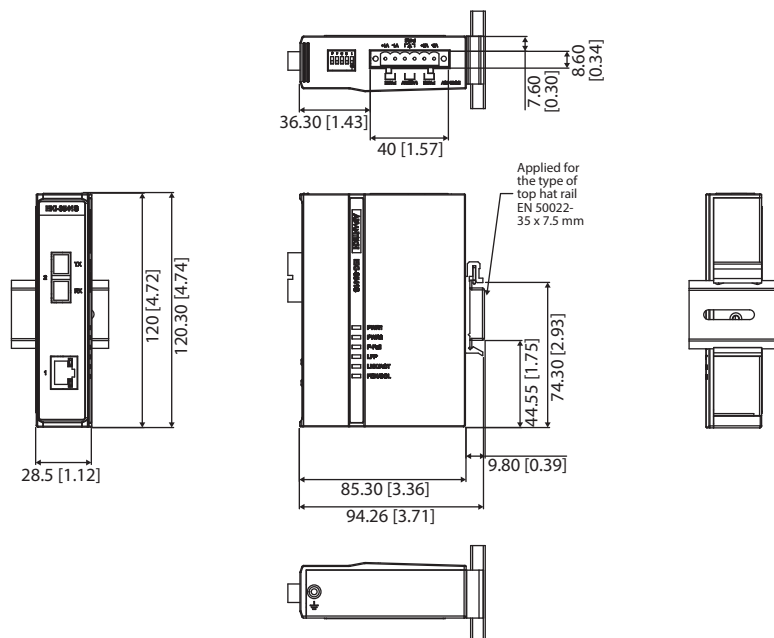
Unit: mm [inch]

### EKI-3541M



**Panel Cut-out Dimensions: 94.26 x 120.30 x 28.5 mm (3.71" x 4.74" x 1.44")**

### EKI-3541S



**Panel Cut-out Dimensions: 94.26 x 120.30 x 28.5 mm (3.71" x 4.74" x 1.44")**

## Ordering Information

- **EKI-3541M** 10/100T (X) to Multi-Mode SC Type Fiber Optic Industrial Media Converter
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