# **EKI-2541M/MI** EKI-2541S/SI

## 10/100-TX to Multi-Mode SC-Type Fiber **Optic Hardened Medial converter**

10/100-TX to Single-Mode SC-Type Fiber **Optic Hardened Medial converter** 



 Redundant 12 ~ 48 V<sub>DC</sub> power input Flexible mounting options: DIN rail and panel mount 

• 1 x 10/100 Mbps Ethernet port with RJ45 connector 1 x 100 Mbps multi-mode/single-mode SC-type fiber port

Internal jumper for link fault pass-through - Supports full/half duplex flow control - Supports store and forward transmission

Supports auto-negotiation Supports MDI/MDI-X auto-crossover

**Features** 

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Wide operating temperatures range of -40 ~ 75°C (EKI-2541MI/SI)

## Introduction

The EKI-2541M/2541S are designed to transparently convert Ethernet networks to fiber networks. The advantages of fiber optics are the wide bandwidth, EMI immunity, and longdistance transmission. Therefore, the EKI-2541M/2541S are ideal for fiber-to-building applications at central offices or local sites. These converters support MDI/MDIX auto detection, thus eliminating the need to use crossover wires. Furthermore, they can operate normally at temperatures of -10 ~ 60°C and they accept a wide voltage range of 12 ~ 48 V<sub>DC</sub>. They also feature 3,000 V<sub>DC</sub> surge protection (EFT) against overvoltage, making them highly suitable for harsh operating environments. The EKI-2541M/2541S are enhanced Ethernet to fiber-optic converters. Aside from their standard features, these versatile converters also feature link fault pass-through. Typically, 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. However, the EKI-2541M/2541S will force the link to shut down as soon as the link failure is detected, thus giving the application software a chance to correct the problem.

# **Specifications**

#### Communications

•	Standard	IEEE 802.3, 802.3u, 802.3x
•	LAN	10/100BASE-TX, 100BASE-FX
•	<b>Transmission Distance</b>	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	Wavelength: 1310 nm
	(EKI-2541M/MI)	Tx Power: -14/-20 dBm
		Rx Sensitivity: -31 dBm
		Parameters: 50/125 um,62.5/125 um
	Single-mode	Wavelength: 1310 nm
	(EKI-2541S/SI)	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 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- Power Input

#### Mechanism

- Dimensions (W x H x D) 30 x 140 x 95 mm (1.18"x5.51"x3.74")
- Mounting DIN-rail, Wall (optional)
- 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
- Operating Humidity
- Storage Humidity
- MTBF

-40 ~ 85°C (-40 ~ 185°F)

## **EKI-2541M/MI EKI-2541S/SI**



#### 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 IEC 60068-2-27

IEC 60068-2-32

- Shock
- Freefall
- IEC 60068-2-6 Vibration

## **Ordering Information**

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