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

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

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 & Panel Mounting
- Supports wide operating temperatures from -40 ~ 75°C (EKI-2541MI/SI)

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-T(X), 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
Optical Fiber	
Multi Mode (EKI-2541M/MI)	Wavelength: 1310nm Tx Power: -14/-20 dBm Rx Sensitivity: -31dBm Parameters: 50/125um,62.5/125um
Signal Mode (EKI-2541S/SI)	Wavelength: 1310nm Tx Power: -8/-15 dBm Rx Sensitivity: -34dBm Parameters: 9/125um

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. 2.7W
Power Input	12 ~ 48 V_{DC}, redundant dual inputs

Mechanism

Dimensions (W x H x D)	37 x 140 x 95 mm
Mounting	DIN-rail, Wall
Enclosure	IP30, Metal shell with solid mounting

Protection

Power Reverse	Present
Overload	0.9 A @ 12 V_{DC} (Resetable 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	Ethernet to MM Fiber Converter
EKI-2541MI	Ethernet to MM Fiber Converter w/ Wide Temp.
EKI-2541S	Ethernet to SM Fiber Converter
EKI-2541SI	Ethernet to SM Fiber Converter w/ Wide Temp.