EKI-1242IEIMS

Industrial Fieldbus Gateway

Features

- Supports dual power input for power redundancy
- Converts Modbus RTU/TCP to PROFINET, OPC UA, or EtherNet/IP
- Mountable via DIN rail and wall mount
- Designed for protocol extensibility and adaption
- Built-in real-time diagnostics to increase device management efficiency
- "I" models support a wide operating temperature

Introduction

The EKI-1242IEIMS industrial protocol gateway provides seamless communication between Fieldbus and Ethernet devices, supporting a range of protocols. Integrating new and existing Modbus TCP devices to PROFINET, OPC UA or EtherNet/IP networks, this gateway can collect data and perform data exchange between Modbus TCP to PROFINET, OPC UA or EtherNet/IP. Simple and cost-effective, the EKI-1242IEIMS brings the advantage of fast I/O data transfer between devices while delivering high performance with protocol extensibility and adaptation.

Specifications

Ethernet Communication

- **Protocols**   EtherNet/IP, OPC UA, PROFINET, Modbus TCP
- **Number of Ports** 4
- **Speed**   10/100 Mbps, Auto MDI/MDIX
- **Connector**   8-pin RJ45
- **Protection**   Built-in 1.5 kV magnetic isolation

Serial Communications

- **Port Type**   RS-232/422/485, software-selectable
- **No. of Ports**   2
- **Protocol**   Modbus RTU
- **Port Connector**   DB9 male
- **Data Bits**   5, 6, 7, 8
- **Stop Bits**   1, 1.5, 2
- **Parity**   None, odd, even, space, mark
- **Flow Control**   XON/XOFF, RTS/CTS
- **Baud Rate**   50 bps ~ 921.6 kbps
- **Serial Signals**   RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND
                       RS-422: TxD+, TxD-, RxD+, RxD-, GND
                       RS-485: Data+, Data-, GND

Software

- **Modbus RTU/TCP**
  Mode   Client
  Functions Support   1, 2, 3, 4, 5, 6, 15, 16, 23
  Max. Number of Connections EtherNet/IP: 64
                              PROFINET: 64
                              OPC UA: 1400

EtherNet/IP

Class   Adapter
Max. Number of Connections 32 explicit messaging, 5 implicit messaging
Max. Total I/O Data Size   Input: 496 bytes
                            Output: 496 bytes

PROFINET

- **Type**   IO-Device
- **Slot**   64
- **Cyclic data exchange**   8 ms cycle time
- **Max. Total I/O Data Size** Input: 512 bytes
                              Output: 512 bytes

OPC UA

- **Type**   Server
- **Max. Number of Connections** 128 connections
- **Max. Total I/O Data Size**   Input: 8192 bytes
                                Output: 8192 bytes

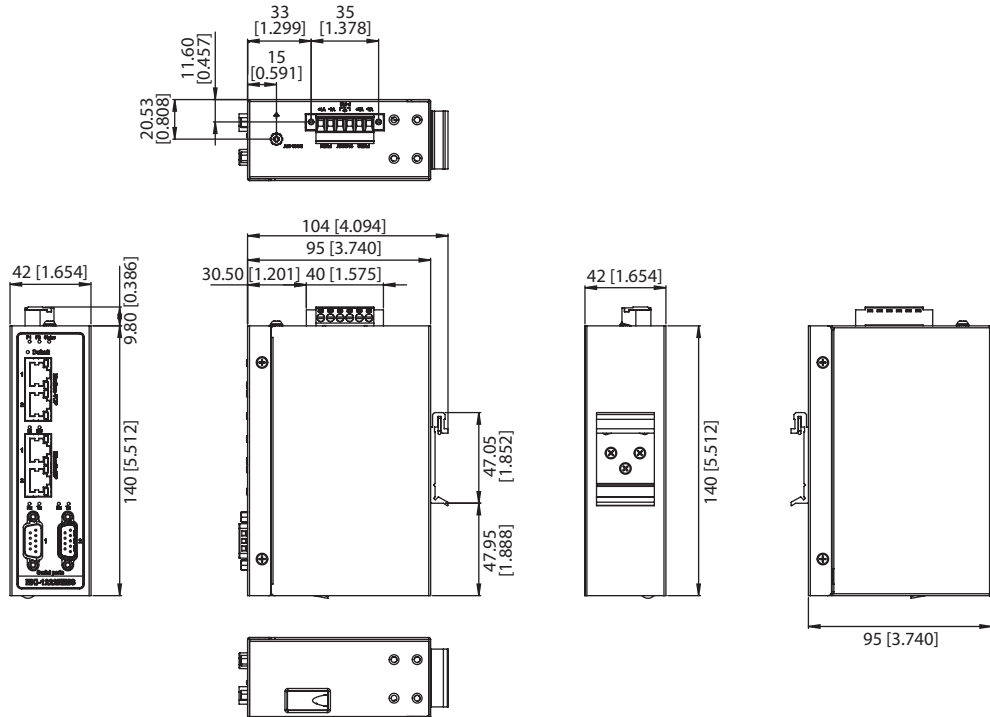### General

- **LED Indicators**   System: power, system status, protocol status
                       LAN: speed, link/active, error
- **Reboot Trigger**   Built-in WDT
- **MicroSD Card**   Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure**   Metal with solid mounting hardware
- **Mounting**   DIN rail, wall
- **Weight**   0.497 Kg

Last updated: 21-Feb-2024

Dimensions

Unit: mm [in.]

Power Requirements

- **Power Input**   12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector**   Terminal block
- **Power Consumption**   5.2 W

Environment

- **Operating Temperature** -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature**   -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity**   10 ~ 95% RH

Regulatory Approvals

- **EMC**   CE, FCC Part 15 Subpart B (Class A)

Ordering Information

- **EKI-1242IEIMS-A**   Industrial Fieldbus Gateway