EKI-1242ECMS
EKI-1242IECMS

Modbus RTU/TCP to EtherCAT Fieldbus Gateway

Features

- Supports dual power input for power redundancy
- Seamless integrate Modbus RTU/TCP and EtherCAT communication
- Modbus Master mode supports 64 connections
- Mounts on DIN-rail and Wall mount
- Designed for protocol extensibility and adaption
- Built-in real time diagnostic to increase highly efficiency of device management
- 'I' models support a wide operating temperature

Introduction

The EKI-1242ECMS Industrial Fieldbus gateway provides seamless communication between Fieldbus and Industrial Ethernet and supports different protocol devices integrating new and existing Modbus RTU/TCP devices with EtherCAT networks. EKI-1242ECMS is a simple and cost-effective way to bring the advantage of fast I/O data transfers between devices.

Specifications

Ethernet Communication

- **Protocols**   EtherCAT, 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   Master
    Functions Support   1, 2, 3, 4, 5, 6, 15, 16, 23
    Max. Number of Connections   64 connections
- **EtherCAT**
    Type   Slave
    Max. Total I/O Data Size (SDO&PDO objects)
    Input   512 bytes
    Output   512 bytes
    Fmmu Channel   4

General

- **LED Indicators**   System: Power, System Status, Protocol status
                        LAN: Speed, Link/Active, Error
- **Reboot Trigger**   Built-in WDT (watchdog timer)
- **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**   0.592 Kg

Power Requirements

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

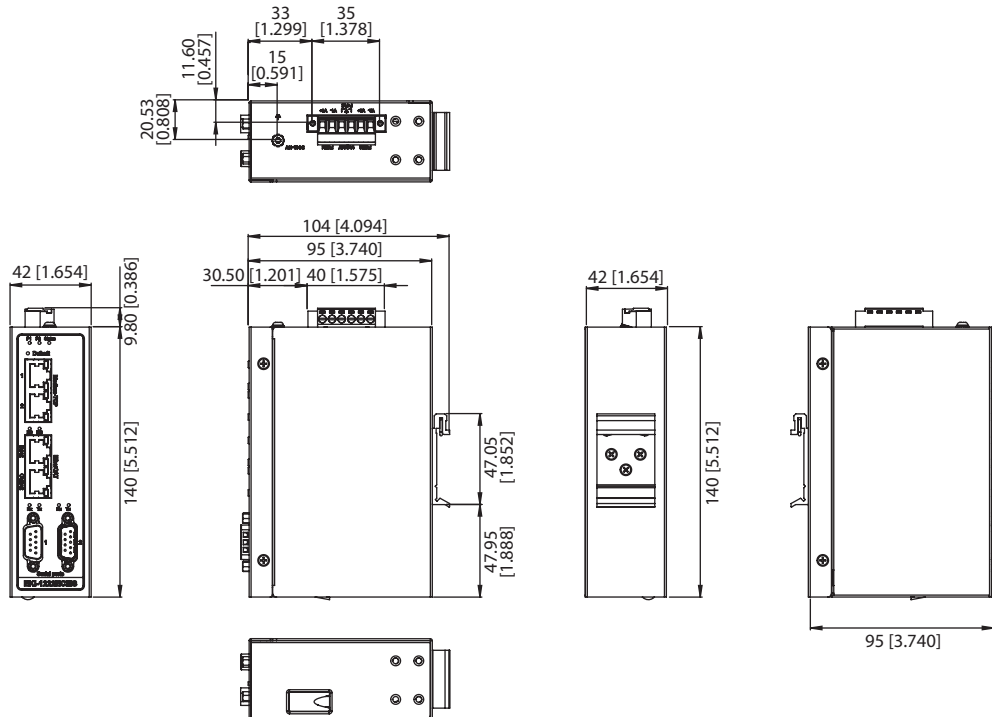### Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
                             'I' models: -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)

ADVANTECH   **Industrial Ethernet Soultions**

All product specifications are subject to change without notice.   Last updated: 18-Jan-2018

Dimensions

Unit: mm [inch]

33 [1.299] 35 [1.378]
11.60 [0.457]
15 [0.591]
20.53 [0.808]

104 [4.094]
95 [3.740]
30.50 [1.201] 40 [1.575]

42 [1.654]
9.80 [0.386]
140 [5.512]

47.05 [1.852]
47.95 [1.888]

42 [1.654]
140 [5.512]

140 [5.512]
95 [3.740]

Ordering Information

- **EKI-1242ECMS**   Modbus RTU/TCP to EtherCAT Fieldbus Gateway
- **EKI-1242IECMS**   Modbus RTU/TCP to EtherCAT Protocol Gateway with wide operating temperature