

# EKI-1242ECMS EKI-1242IECMS

## Modbus RTU/TCP to EtherCAT Fieldbus Gateway



### Features

- Supports dual power input for power redundancy
- Seamlessly integrate Modbus RTU/TCP and EtherCAT communication protocols
- Modbus master mode supports up to 64 connections
- Mountable via DIN rail and wall mount
- Designed for protocol extensibility and adaption
- Built-in real-time diagnostics to enhance device management efficiency
- "I" models support a wide operating temperature

### Introduction

The EKI-1242ECMS industrial fieldbus gateway provides seamless communication between Fieldbus and Ethernet devices with its support for different protocol devices, thereby being capable of integrating new and existing Modbus RTU/TCP devices into EtherCAT networks. The EKI-1242ECMS is a simple and cost-effective way to bring the advantage of fast I/O data transfer 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
- **EtherCAT**
  - Type Slave
- **Max. Total I/O Data Size (SDO&PDO objects)**
  - Input 512 bytes
  - Output 512 bytes
  - FFMMU Channels 4

#### 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

#### Power Requirements

- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 5.2 W

#### Environment

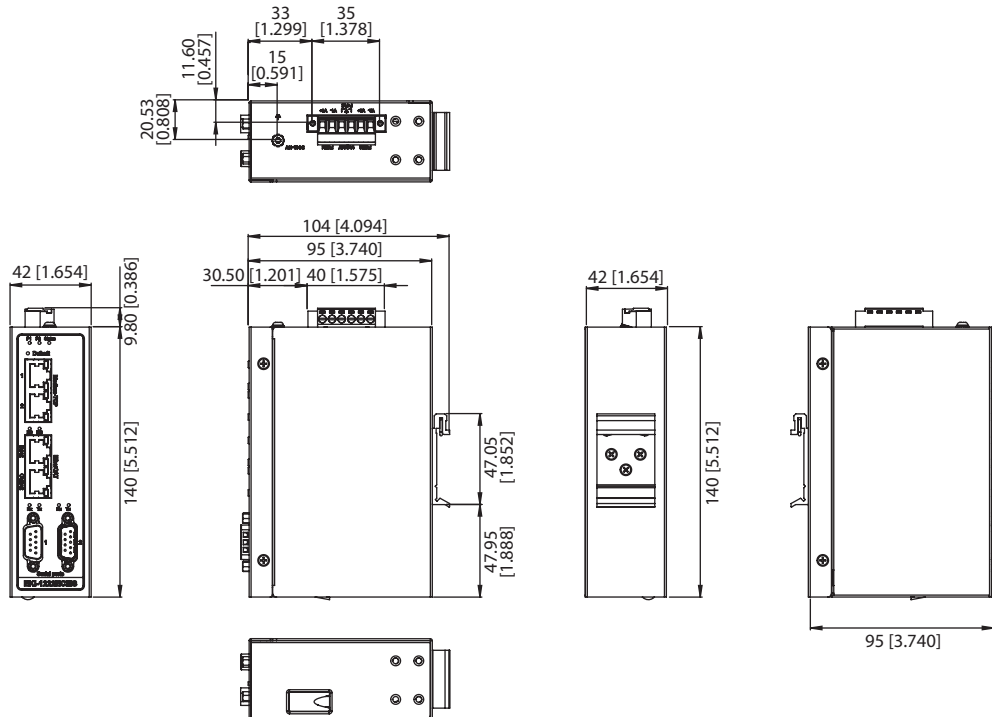
- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)  
"I" models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

#### Regulatory Approvals

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

## Dimensions

Unit: mm [in.]



## Ordering Information

- **EKI-1242ECMS** Modbus RTU/TCP to EtherCAT Fieldbus Gateway
- **EKI-1242IECMS** Modbus RTU/TCP to EtherCAT Fieldbus Gateway with Wide Operating Temperature