AMC-1310

Features

- RS-232 to RS-422/485 converter
- Speed up to 921.6Kbps
- Auto baud rate and direction control
- 3KV isolation and 15KV ESD protection
- Wide range power input (12V to 48Vdc)
- Wide operating temperature (-40 to +70℃)
- Configuration by DIP switch
- Terminator and biasing resisters setting by DIP switch
- Din-Rail mount or wall mount robust housing

Introduction

The standard RS-232 protocol has been widely used in most of industrial equipments for serial port communication. Based on the differential protocol of RS-422/485, they offer better transmission speed, wide range and networking capabilities. Hence, the AMC-1310, industrial RS-232 to RS-422/485 converter takes the important interface and popular to be deployed in the industrial communication network for longer distance and higher reliable applications. It provides complete signal conversion between RS-232 and RS-422/485.

Automatic Direction and High Speed Transmission

The AMC-1310 serial converter supports RS-422, half-duplex 2-wire RS-485 and full-duplex 4-wire RS-485. The RS-485 offers the automatic data direction control feature. It means that no programming effort is required to control the transmission direction of the RS-485 signal. The RS-485 driver is enabled automatically when the circuit senses the transmission from the RS-232 signal.

The data rate supports up to 921.6Kbps, satisfying the need of most automatic control systems.

Wide Power Input, Temperature, and High Endurable Protection

The wide range DC power input from 12V to 48V, this wide range DC power input supports the demanding of versatile industrial applications. Most of industrial applications are harsh environment, The AMC-1310 provides the operating temperature from -40°C to 70°C, give you a reliable solution of a RS-232 to RS-422/485 converter for wide temperature application. The AMC-1310 provides 3KV isolation protection between RS-232 and RS-422/485 interfaces, it also offers 15K ESD protection on the RS-422/485 signal lines.

Specifications

RS-232 Interface
Number of Ports: 1
Connector: DB9 female
Signals: TxD, RxD, GND
Definition of pin-out (DB-9)
RS-422/485 interface
Number of Ports: 1
Connector: Terminal Block

Signals: (Interface selected by DIP switch)
RS-422: TxD+, TxD-, RxD+, RxD-, GND
RS-485 4-wire: TxD+, TxD-, RxD+, RxD-, GND
RS-485 2-wire: Data+, Data-, GND
RS-485 Data Direction: Automatic Data Direction Control
(Terminator and Biasing functions are selective by DIP switch)
Connection Distance
RS-232: 15 meters (50 feet)

RS-422: 1200 meters (4000 feet)

RS-485 2w/4w: 1200 meters (4000 feet), Max. 32 nodes

DIP Switch Configuration

DIP-Switch 1, 2: RS-422/485 wiring mode

DIP-Switch 3, 4: RS-422/485 line terminator

DIP-Switch 5, 6: RS-422/485 biasing register selection

ESD Protection: ESD Contact 8KV, Air 15KV embedded

Optical Isolation: 3KV between RS-232 and RS-422/485

Performance

Baud rate: 50 to 921.6Kbps

Physical Characteristics

Housing: Aluminum

Dimension: 74 x 24.7 x 99 mm (W x H x D)

Weight: 133 g

Environment Operating

Operating Temperature: -40 ~ 70℃ (-40 ~ 158℉)

Operating Humidity: 20 ~ 85% @40℃, non-condensing

Storage Temperature: -40 ~ 85℃ (-40 ~ 185℉)

Storage Humidity: 10 ~ 90% @40℃, non-condensing

Safety and Certifications

EMC: CE, FCC

EMI: FCC Part 15 Subpart B Class B, CE EN55022 Class B

EMS: EN55024: 2010

    EN61000-4-2: 2009 (Level 4)

    EN61000-4-3: 2006 + A2: 2010

    EN61000-4-4: 2004 + A2: 2010

    EN61000-4-5: 2006 (Level 3)

    EN61000-4-6: 2009
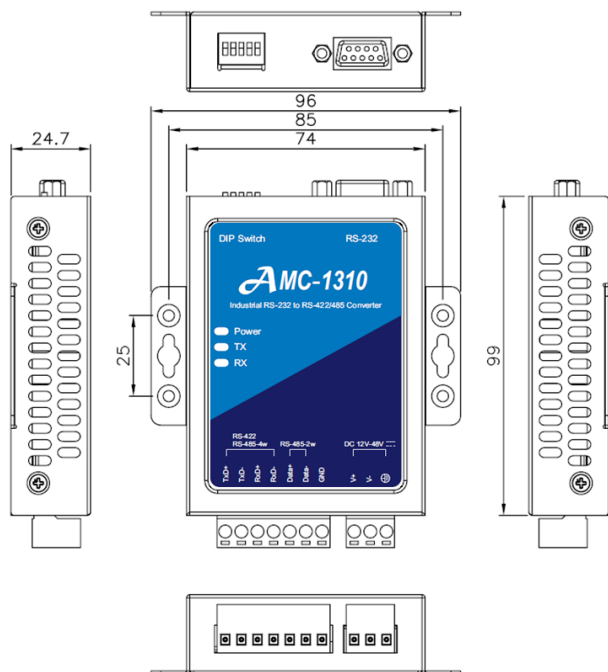
    EN61000-4-8: 2010

    EN61000-4-11: 2004

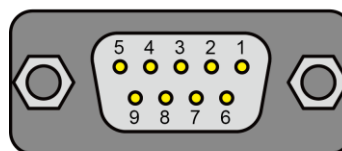Green Product: RoHS, CRoHS, WEEE

Power Requirements: 50mA@24V

Warranty: 3 years

Dimension Drawing

DB9 Female

PIN	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	

Ordering Information

P/N	Product Description	Operating Temperature	Isolation Protection
AMC-1310	RS-232 to RS-422/485 Converter with isolation	-40 ~ 70℃	3KV(RS-422/485)

Includes:

- **AMC-1310 converter**
- **DIN rail kit**
- **Quick start CD-ROM**