



I-7510AR

Three Way Isolated RS-422/485 Repeater/Converter

Features

- Automatic RS-485 Direction Control
- Transmission Speed of up to 115200 bps
- 3-way 3000 Vdc Isolation Protection
- ESD Protection for RS-485 Data Line



Introduction

The I-7510AR provides 3-way optical isolation between one piece of RS-422/RS-485 power side equipment and the rest of the system. It can also be used as a repeater to extend the transmission of an existing network. Additionally, an RS-485 system can be expanded beyond the 256 node limitation imposed by the standard. It can also be used to convert a four-wire RS-422 signal into a 2-wire RS-485 signal, and vice versa.

The I-7510AR is exactly the same as the I-7510A, except for the isolation side. The isolation side of the I-7510A is located in the input interface circuit, but the isolation side of the I-7510AR is located in the input and output interface circuit. In other words the I-7510AR is 3-way isolation repeater module.

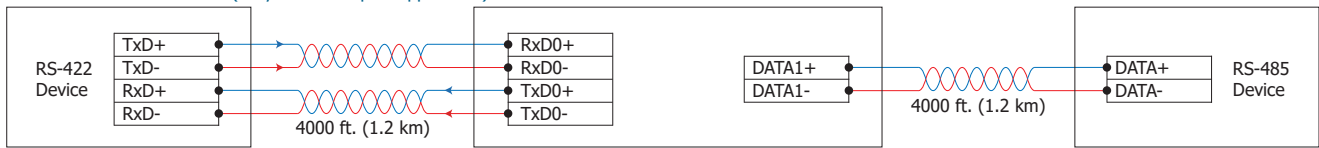
System Specifications

| Interface | | |
|------------------------|---|---|
| Serial Interface | RS-422 | TxD+, TxD-, RxD+, RxD- The RS-422 and RS-485 cannot be used simultaneously |
| | RS-485 | Data+, Data- |
| Transmission Distance | Max. 1,200 m at 9.6 kbps; Max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change) | |
| Self-Tuner Asic Inside | Yes | |
| Speed | 300 ~ 115200 bps | |
| ESD Protection | Yes | |
| Isolated Voltage | 3-way 3 kV Isolated | |
| Connector | Removable 10-Pin Terminal Block x 2 | |
| LED Indicators | | |
| Power/Communication | Yes | |
| Power | | |
| Input Voltage Range | +10 Vdc ~ +30 Vdc | |
| Power Consumption | 2.2 W | |
| Mechanical | | |
| Casing | Plastic | |
| Dimensions (W x L x H) | 72 mm x 35 mm x 122 mm | |
| Installation | DIN-Rail Mounting | |
| Environment | | |
| Operating Temperature | -25 °C ~ +75 °C | |
| Storage Temperature | -30 °C ~ +75 °C | |
| Humidity | 10 ~ 90% RH, non-condensing | |

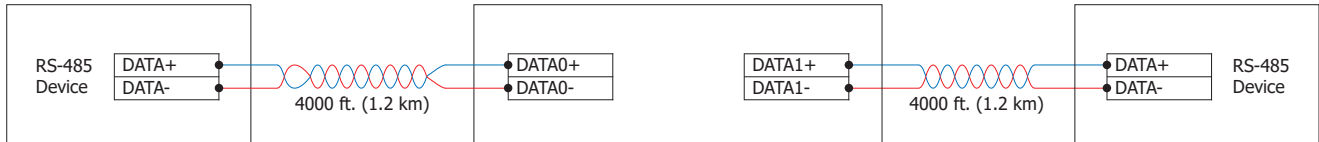
Applications

Applications for RS-422/485

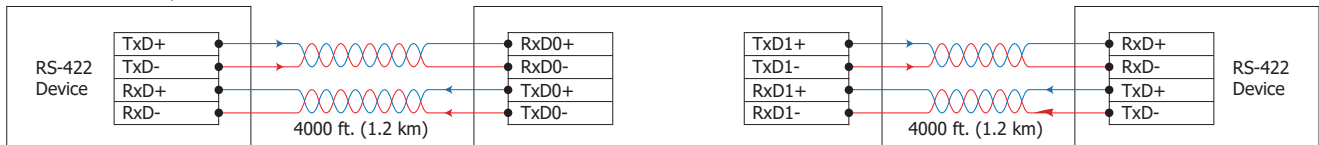
RS-422 to RS-485 Converter (Only for half duplex application)



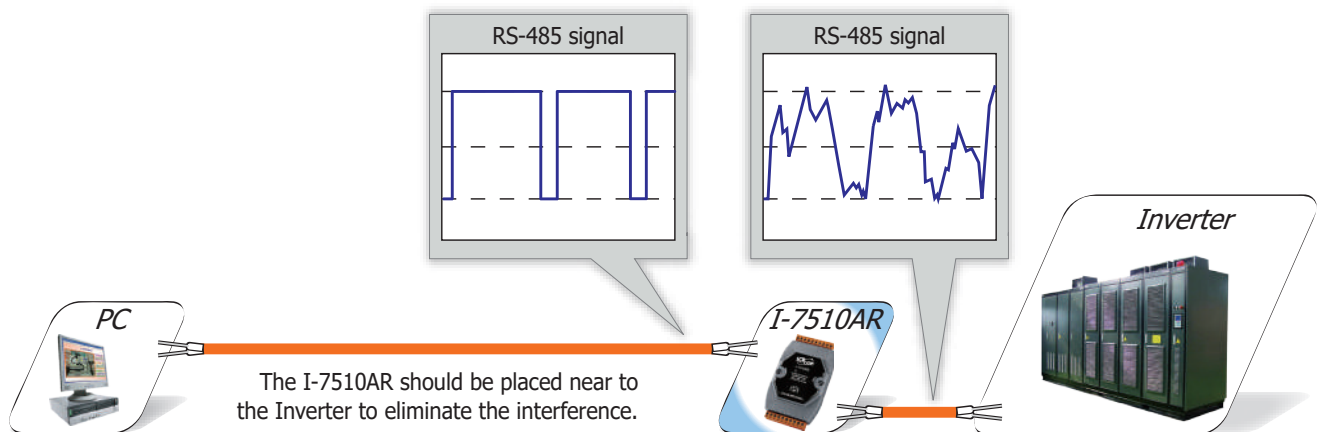
RS-485 to RS-485 Repeater (Only for half duplex application)



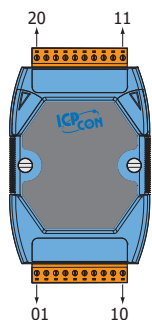
RS-422 to RS-422 Repeater



Applications for 3-way isolation

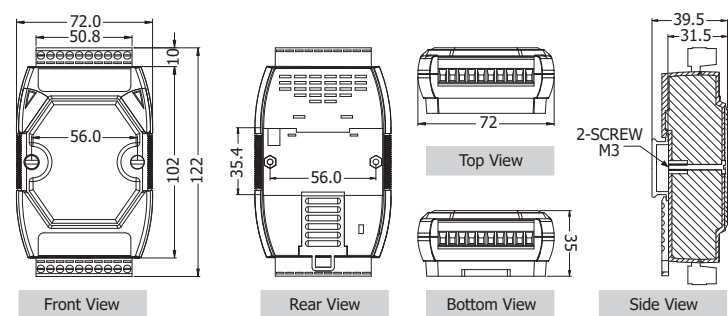


Pin Assignments



| Terminal No. | Pin Assignment | Terminal No. | Pin Assignment |
|--------------|----------------|--------------|----------------|
| RS-485 01 | DATA0+ | RS-485 20 | DATA1+ |
| 02 | DATA0- | 19 | DATA1- |
| 03 | -- | 18 | -- |
| RS-422 04 | TxD0+ | RS-422 17 | TxD1+ |
| 05 | TxD0- | 16 | TxD1- |
| 06 | RxD0+ | 15 | RxD1+ |
| 07 | RxD0- | 14 | RxD1- |
| 08 | -- | 13 | -- |
| 09 | (R)+Vs | 12 | -- |
| 10 | (B)GND | 11 | -- |

Dimensions (Units: mm)



Ordering Information

| | |
|---------------|--|
| I-7510AR CR | Three Way Isolated RS-422/485 Repeater/Converter (Blue Cover) (RoHS) |
| I-7510AR-G CR | Three Way Isolated RS-422/485 Repeater/Converter (Gray Cover) (RoHS) |

Accessories

| | |
|--------------|--|
| GPSU06U-6 CR | Power Supply, 110~240 V _{AC} to 24 V _{DC} /0.25 A, 6 W, two pins USA plug (RoHS) |
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