



I-7510AR

Three Way Isolated RS-422/485 Repeater/Converter

Features

- Automatic RS-485 Direction Control
- Transmission Speed of up to 115200 bps
- Operating Temperatures, -25 °C ~ +75 °C
- 3-way 3000 VDC Isolation Protection
- ESD Protection for RS-485 Data Line
- Power Input, +10 ~ +30 VDC
- DIN-Rail Mounting



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.

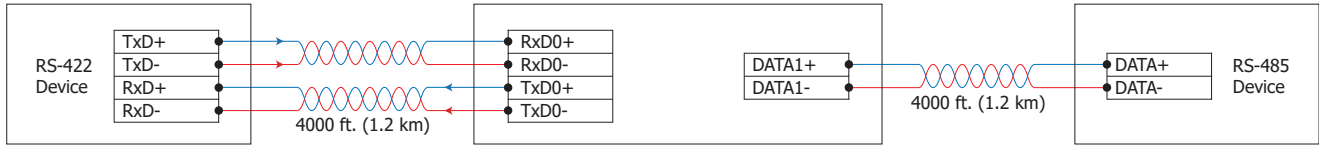
System Specifications

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 H x D)	72 mm x 122 mm x 35 mm	
Installation	DIN-Rail Mounting	
Environment		
Operating Temperature	-25 °C ~ +75 °C	
Storage Temperature	-30 °C ~ +75 °C	
Humidity	10 ~ 90% RH, non-condensing	

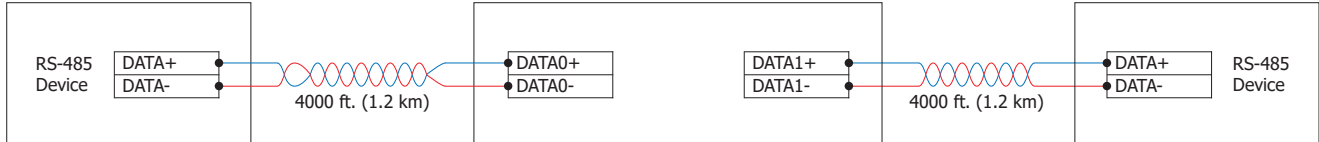
Applications

Applications for RS-422/485

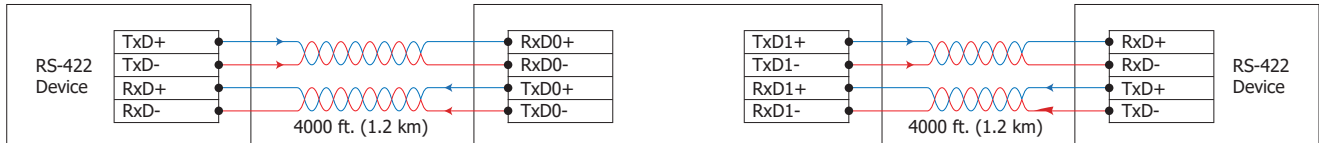
RS-422 to RS-485 Converter (Only for half duplex application)



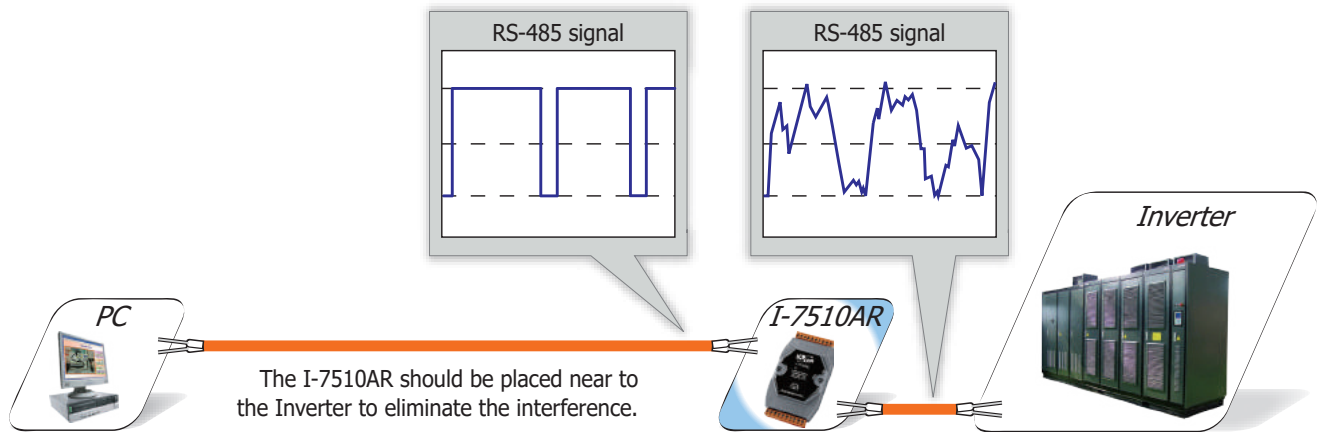
RS-485 to RS-485 Repeater (Only for half duplex application)



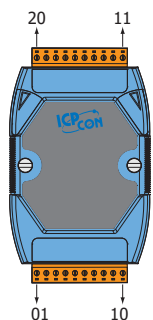
RS-422 to RS-422 Repeater



Applications for 3-way isolation

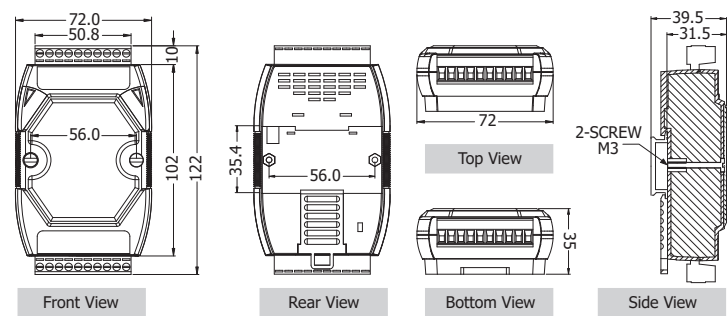


Pin Assignments



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 Tx/D0+	RS-422	17 Tx/D1+
	05 Tx/D0-		16 Tx/D1-
	06 Rx/D0+		15 Rx/D1+
	07 Rx/D0-		14 Rx/D1-
	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	Power Supply, 110~240VAC or 127~230VDC to 24VDC/0.25A, 6 W, two pins USA plug
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