



I-7520/I-7520A/I-7520R/I-7520AR

Isolated RS-232 to RS-422/485 Converter

Features

- Automatic RS-485 Direction Control
- ESD Protection for the RS-232/422/485 Data Line
- Power Input, +10 ~ +30 VDC
- 3000 VDC Isolation Protection on the RS-485 side
- Transmission Speed of up to 115200 bps
- Operating Temperatures, -25 °C ~ +75 °C
- DIN-Rail Mounting



Introduction

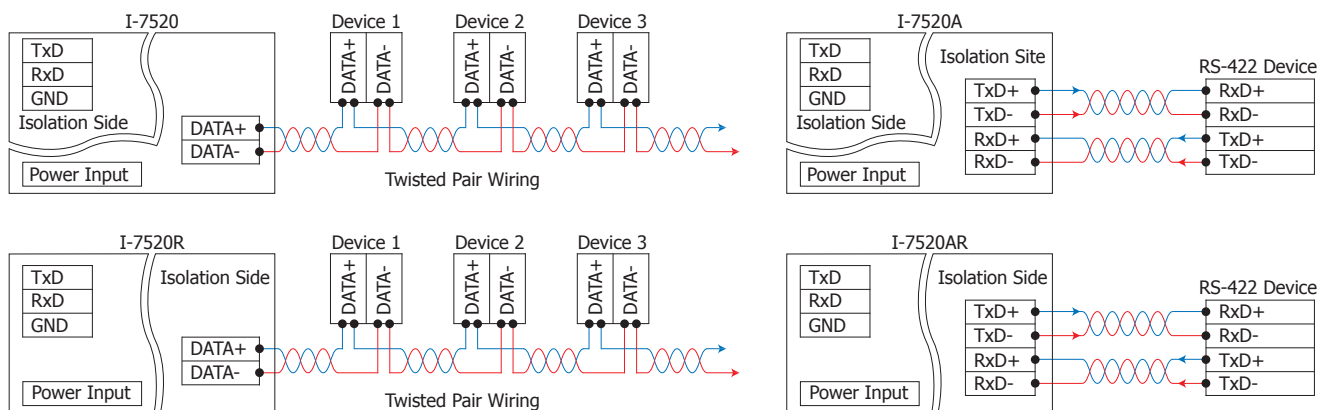
Most industrial computer systems provide standard RS-232 serial ports. Though widely accepted, RS-232 has limited transmission speed, range, and networking capabilities. The RS-422 and RS-485 standards overcome these limitations by using differential voltage lines for data and control signals, which transparently converts RS-232 signals into isolated RS-422 or RS-485 signal with no need to change any hardware or software. The I-7520AR lets you easily build an industrial grade, long-distance communication system using standard PC hardware.

The design of the isolation between the I-7520/A and the I-7520R/AR is different. If the user wants to supply power from the PLC/PC, the I-7520R/AR should be used, otherwise the isolation will be broken. Refer to the I-7000 bus converter manual for detailed information.

System Specifications

Models		I-7520	I-7520R	I-7520A	I-7520AR
Interface					
Serial Interface	RS-232	TxD, RxD, GND			
	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			
3000 Vdc Isolated Voltage		on RS-232 side	on RS-485 side	on RS-232 side	on RS-485 side
Connector	RS-232	9-Pin Female D-Sub			
	RS-422/485	Removable 10-Pin Terminal Block			
LED Indicators					
Power/Communication		Yes			
Power					
Input Voltage Range		+10 Vdc ~ +30 Vdc (Non-isolated)			
Power Consumption		1.2 W			
Mechanical					
Casing		Plastic			
Dimensions (W x H x D)		72 mm x 118 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



Pin Assignments

I-7520/I-7520R

Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
RS-485	01 DATA+	01	06	--
	02 DATA-	02	07	--
	03 --	03	08	--
	04 --	04	09	--
	05 --	05	10	--
	06 --	06		
	07 --	07		
	08 --	08		
	09 (R)+Vs	09		
	10 (B)GND	10		

RS-232: Female DB-9 Connector

RS-232

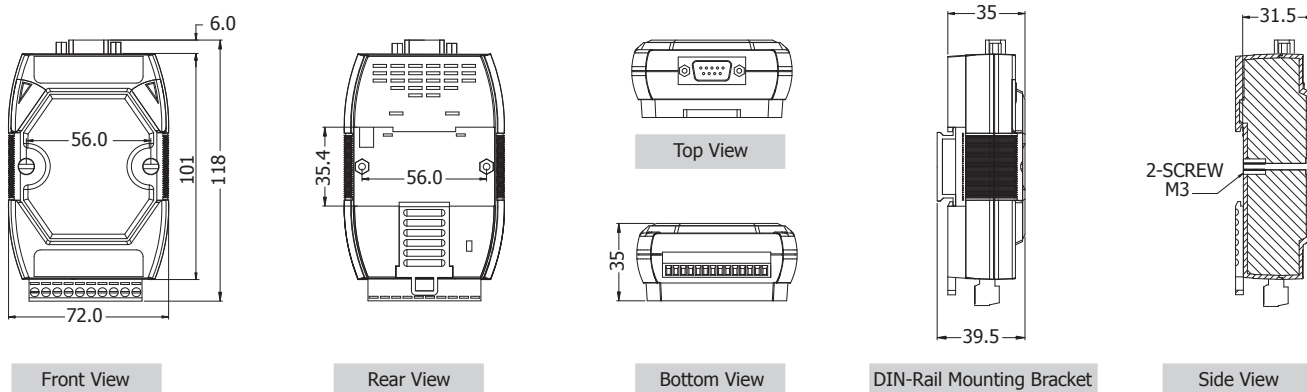


I-7520A/I-7520AR

Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
RS-485	01 DATA1+	01	06	--
	02 DATA1-	02	07	--
	03 --	03	08	--
	04 TxD+	04	09	--
RS-422/485	05 TxD-	05		
	06 RxD+/DATA2+	06		
	07 RxD-/DATA2-	07		
	08 --	08		
	09 (R)+Vs	09		
	10 (B)GND	10		

RS-232: Female DB-9 Connector

Dimensions (Units: mm)



Ordering Information

I-7520 CR	Isolated RS-232 to RS-485 Converter (Blue Cover) (RoHS)
I-7520-G CR	Isolated RS-232 to RS-485 Converter (Gray Cover) (RoHS)
I-7520A CR	Isolated RS-232 to RS-422/485 Converter (Blue Cover) (RoHS)
I-7520A-G CR	Isolated RS-232 to RS-422/485 Converter (Gray Cover) (RoHS)
I-7520R CR	RS-232 to Isolated RS-485 Converter (Blue Cover) (RoHS)
I-7520R-G CR	RS-232 to Isolated RS-485 Converter (Gray Cover) (RoHS)
I-7520AR CR	RS-232 to Isolated RS-422/485 Converter (Blue Cover) (RoHS)
I-7520AR-G CR	RS-232 to Isolated RS-422/485 Converter (Gray Cover) (RoHS)

Accessories

GPSU06U-6	Power Supply, 110~240VAC or 127~230VDC to 24VDC/0.25A, 6 W, two pins USA plug
I-7510 CR	Isolated RS-485 Repeater (Blue Cover) (RoHS)
I-7510A CR	Isolated RS-422/485 Repeater/Converter (Blue Cover) (RoHS)
CA-0915 CR	DB9 Male to DB9 Female Cable [RS-232; Pin1-Pin9], 1.5M (RoHS)