



## 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
- Transmission Speed of up to 115200 bps



### Introduction

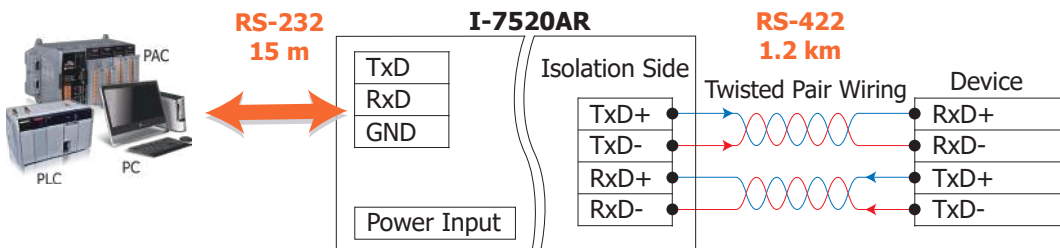
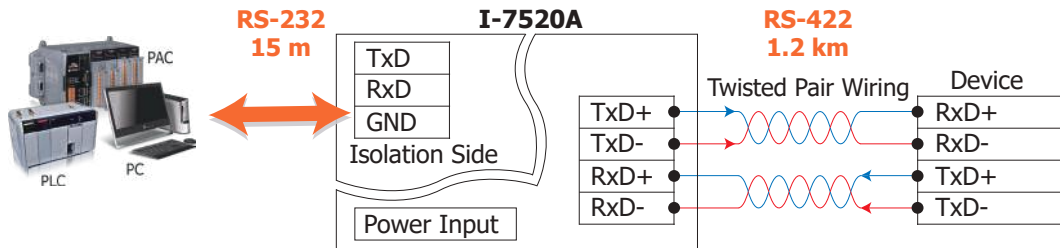
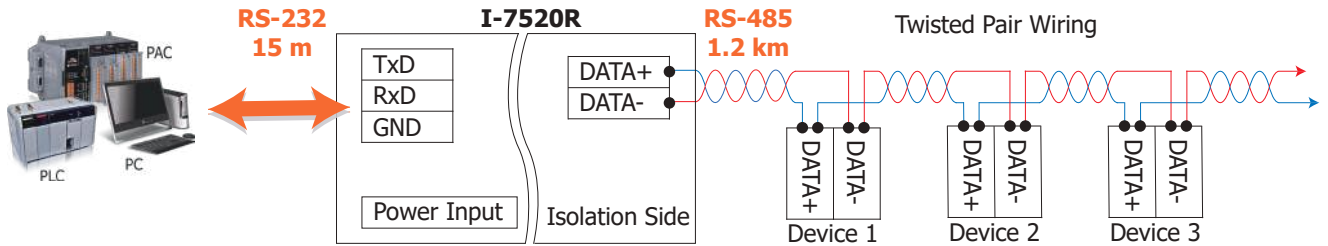
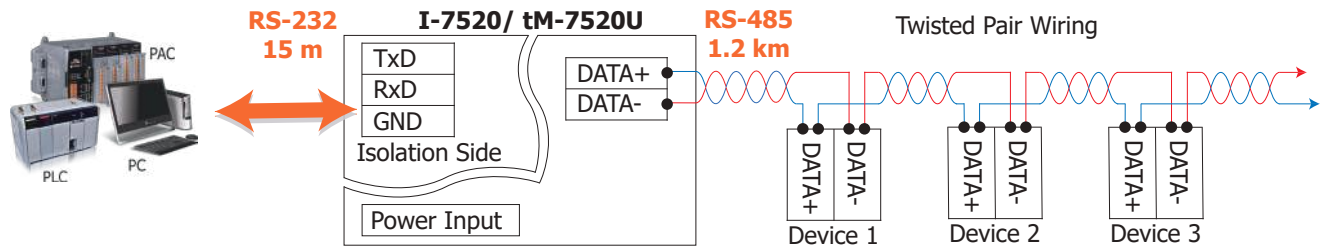
Most industrial computer systems provide standard RS-232 serial ports. Though widely accepted, RS-232 has limited transmission speed, range, and networking capabilities. The RS-422 and RS-485 standards overcome these limitations by using differential voltage lines for data and control signals, which 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 **User's Manual**.

### System Specifications

Models	I-7520	I-7520R	I-7520A	I-7520AR
<b>Interface</b>				
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-422/485 side
Connector	RS-232	9-Pin Female D-Sub		
	RS-422/485	Removable 10-Pin Terminal Block		
<b>LED Indicators</b>				
Power/Communication	Yes			
<b>Power</b>				
Input Voltage Range	+10 Vdc ~ +30 Vdc (Non-isolated)			
Power Consumption	1.2 W			
<b>Mechanical</b>				
Casing	Plastic			
Dimensions (W x L x H)	72 mm x 35 mm x 118 mm			
Installation	DIN-Rail Mounting			
<b>Environment</b>				
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	--
	02	DATA-		02
	03	--	03	--
	04	--	04	--
	05	--	05	--
	06	--	06	--
	07	--	07	--
	08	--	08	--
	09	(R)+Vs	09	--
	10	(B)GND	10	--

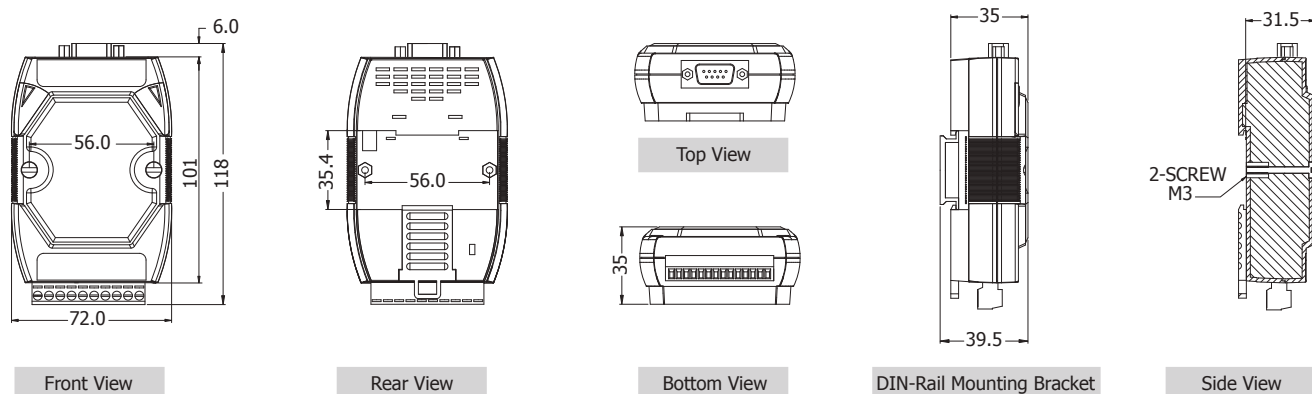
RS-232: Female DB-9 Connector



I-7520A/I-7520AR				
Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
RS-485	01	DATA1+	01	--
	02	DATA1-		02
	03	--	03	--
	04	TxD+	04	--
	05	TxD-	05	--
RS-422/485	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 CR	Power Supply, 110~240 VAC to 24 VDC/0.25 A, 6 W, two pins USA plug (RoHS)
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)