



RS-232 to RS-422/485 Converters



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

I-7520: Isolated RS-232 to RS-485 Converter
I-7520A: Isolated RS-232 to RS-422/485 Converter
I-7520R: RS-232 to Isolated RS-485 Converter
I-7520AR: RS-232 to Isolated RS-422/485 Converter

Features

- Auto Switching Baud Rate, 300~115200 bps
- 3000 V_{DC} Isolation Protection on the RS-485 side
- ESD Protection for the RS-232/422/485 Data Line
- Transmission Speed of up to 115200 bps
- Power Input of +10 ~ +30 V_{DC}
- Supports Operating Temperatures from -25 °C ~ +75 °C
- DIN-Rail



Introduction

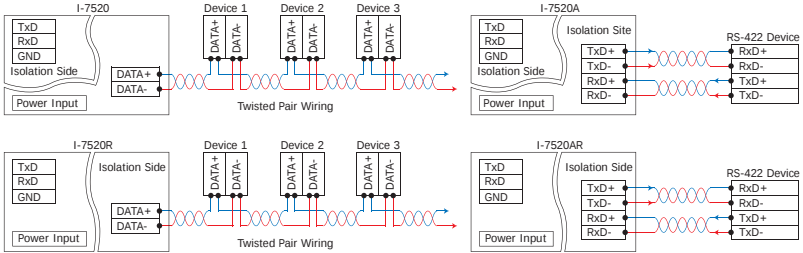
Most industrial computer systems provide standard RS-232 serial ports. Though widely accepted, RS-232 has limited transmission speed, range, and networking capabilities. The RS-422 and RS-485 standards overcome these limitations by using differential voltage lines for data and control signals, which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

The design of the isolation between the I-7520 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.

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-		
2-wire Cabling/4-wire Cabling		Belden 8941 (2P twisted-pair cable)/Belden 8942 (4P twisted-pair cable), if different cables are used, the transmission distance may change		
Transfer Distance		Max. 1,200 m for at speed 9.6 kbps; Max. 400 m at 115.2 kbps		
Max. Devices Supported		256 (Without repeater)		
Self-Tuner Asic Inside		Yes		
Speed		300 ~ 115200 bps		
ESD Protection		Yes		
3000 V _{DC} Isolated Voltage		On RS-232 side	On RS-485 side	On RS-232 side On RS-485 side
Connection	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 V _{DC} ~ +30 V _{DC} (Non-isolated)		
Power Consumption		1.2 W		
Mechanical				
Casing		Plastic		
Flammability		Fire Retardant Materials (UL94-V0 Level)		
Dimensions (W x H x D)		72 mm x 118 mm x 35 mm		
Installation		DIN-Rail		
Environment				
Operating Temperature		-25 °C ~ +75 °C		
Storage Temperature		-30 °C ~ +75 °C		
Humidity		10 ~ 90% RH, non-condensing		

Applications



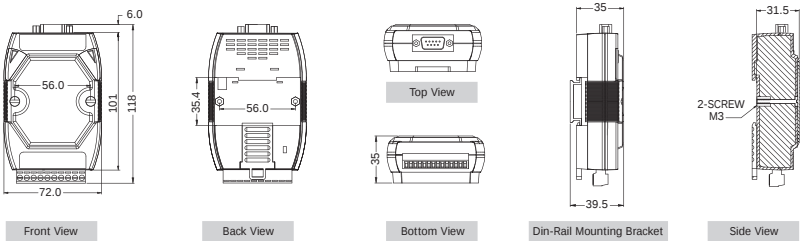
Pin Assignments

I-7520/I-7520R				I-7520A/I-7520AR			
Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
RS-485	01 DATA+			RS-485	01 DATA1+		
	02 DATA-				02 DATA1-		
	03 --				03 --		
	04 --				04 Tx/D+		
	05 --				05 Tx/D-		
	06 --				06 Rx/D+/DATA2+		
	07 --				07 Rx/D-/DATA2-		
	08 --				08 --		
	09 (R)+Vs				09 (R)+Vs		
	10 (B)GND				10 (B)GND		

Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
01	DATA+		05	GND
02	DATA-		06	--
03	--		07	--
04	--		08	--
05	RxD		09	--
06	TxD		10	--

RS-232: Female DB-9 Connector

Dimensions (Unit: mm)



Ordering Information

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

Accessories

GPSU06U-6	24 V _{DC} /0.25 A, 6 W Power Supply
DIN-KA52F	24 V _{DC} /1.04 A, 25 W Power Supply with Din-Rail Mounting
I-7510 CR	Isolated RS-485 Repeater (RoHS)
I-7510A CR	Isolated RS-422/485 Repeater (RoHS)
CA-0915	9-Pin Male-Female D-Sub Cable, 1.5 m