



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 ▶▶▶▶

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

Introduction

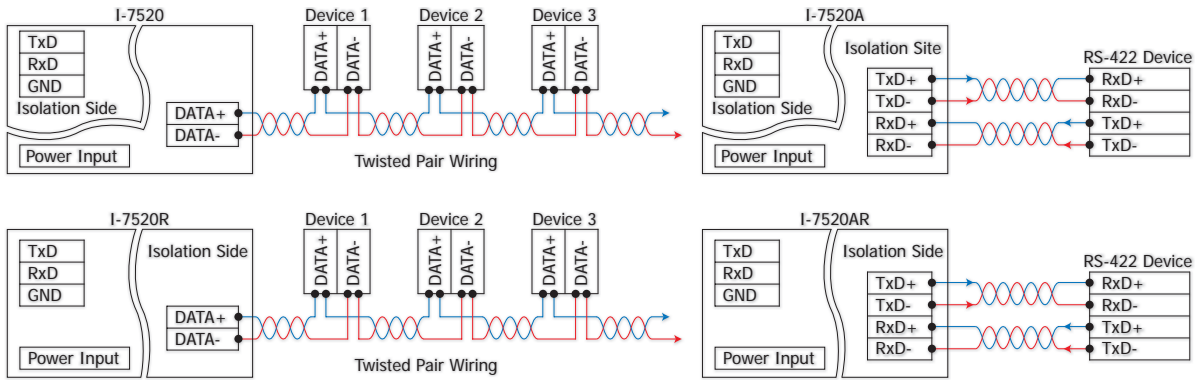
Most industrial computer systems provide standard RS-232 serial ports. Though widely accepted, RS-232 has limited transmission speed, range, and networking capabilities. The RS-422 and RS-485 standards overcome these limitations by using differential voltage lines for data and control signals, which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

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- |
| | RS-485 | Data+, Data- | | The RS-422 and RS-485 cannot be used simultaneously |
| Transfer 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 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-Rai | | | |
| Environment | | | | |
| Operating Temperature | -25 °C ~ +75 °C | | | |
| Storage Temperature | -30 °C ~ +75 °C | | | |
| Humidity | 10 ~ 90% RH, non-condensing | | | |

Applications

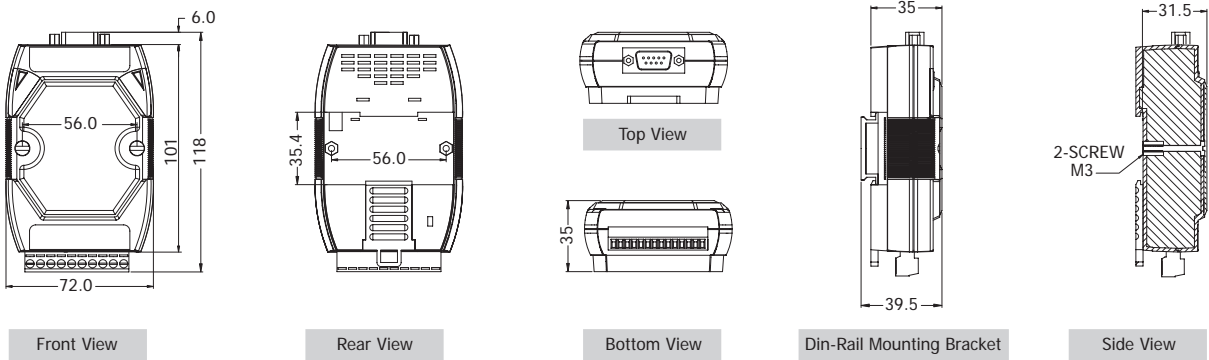


Pin Assignments

| I-7520/I-7520R | | | | | I-7520A/I-7520AR | | | | |
|----------------|----------------|----------------|--------------|----------------|------------------|----------------|----------------|--------------|----------------|
| Terminal No. | Pin Assignment | Pin Assignment | Terminal No. | Pin Assignment | Terminal No. | Pin Assignment | Pin Assignment | Terminal No. | Pin Assignment |
| RS-485 | 01 | DATA+ | 01 | 06 | RS-485 | 01 | DATA1+ | 01 | 06 |
| | 02 | DATA- | 02 | 07 | | 02 | DATA1- | 02 | 07 |
| | 03 | -- | 03 | 08 | | 03 | -- | 03 | 08 |
| | 04 | -- | 04 | 09 | | 04 | TxD+ | 04 | 09 |
| | 05 | -- | 05 | 05 | | 05 | TxD- | 05 | 05 |
| | 06 | -- | 06 | 04 | | 06 | RxD+/DATA2+ | 06 | 04 |
| | 07 | -- | 07 | 03 | | 07 | RxD-/DATA2- | 07 | 03 |
| | 08 | -- | 08 | 02 | | 08 | -- | 08 | 02 |
| | 09 | (R)+Vs | 09 | 01 | | 09 | (R)+Vs | 09 | 01 |
| | 10 | (B)GND | 10 | 10 | | 10 | (B)GND | 10 | 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 Vdc/0.25 A, 6 W Power Supply |
| DIN-KA52F | 24 Vdc/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 |