

CLR-USB-C1485

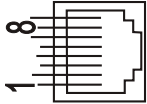
USB/RS-485/RS-422 Industrial Photoelectric Isolation Interface Converter

II. Performance parameters

- Standards: conforming to USBV1.1 and 1.0, EIA RS-485 and RS-422, backwards compatible.
- USB signals: VCC, DATA+, DATA-, GND, FG.
- RS-485 signals: T+, T-, GND.
- RS-422 signals: T+, T-, R+, R-, GND.
- Working modes: asynchronous, point-to-point or point-to-multipoint, 2-line half duplex and 4-line full duplex.
- Direction control: adoption of automatic data stream control for automatic recognition and control of data transmission direction.
- Baud rate: 300-128,000bps, automatic detection of the transmission rate of the serial interface signal.
- Workload ability: point-to-multipoint supported, a maximum of 128 RS-422 or RS-485 interface equipments are supported.
- Transmission distance: 5,000 meters for RS-485/422 end (when 9,600bps) and a maximum of 5 meters for USB.
- Interface protection: 1,500W lightning strike and surge protection and $\pm 5\text{KV}$ electrostatic protection.
- Interface forms: A interface female connector, RJ-45 and DB9 male connectors for USB end.
- Signal indication: 3 indicator lights for Power (PWR), Send (TXD) and Receive (RXD).
- Transmission media: twisted-pair cable or shielded cable.
- Transmission rate: 128,000bps to 300M.
38,400bps to 2.4KM.
9,600bps to 5KM.
- Dimensions: 96mm \times 64mm \times 26mm.
- Working environment: -40 $^{\circ}\text{C}$ to 85 $^{\circ}\text{C}$, relative humidity 5% to 95%.
- Transmission distance: 0-5,000meters (128,000bps-9,600bps)
- Windows95/98/2000/XP/Vista/Win7 and IMAG are supported.

III. Connector and signal

PIN assignment for RJ-45 socket



RS-485/RS-422 output signals and PIN assignment

DB9 connector (PIN)	RJ-45 (PIN)	Output signal	RS-422 full duplex cabling	RS-485 half duplex cabling
1	5	T/R+	Sending(A+)	RS-485 (A+)
2	4	T/R-	Sending(B-)	RS-485 (B-)
3		RXD+	Receiving(A+)	
4		RXD-	Receiving(B-)	Null
5	2, 7	GND	Grounding	Grounding
6	1	N/A		
7	3	N/A		
8	6, 8	N/A		
9		EARTH	Protective grounding	Protective grounding

CLR-USB-C1485 interface converter supports the following 4 communication modes:

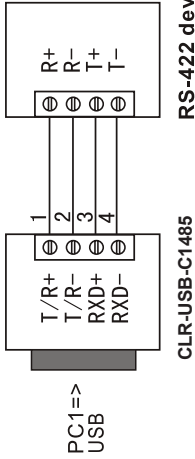
- Point-to-point 4-line full duplex
- Point-to-multipoint 4-line full duplex
- Point-to-point 2-line half duplex
- Point-to-multipoint 2-line half duplex

In order to prevent the signal reflection or interference when converter is used in full-duplex or half-duplex mode, a proper matching resistance should be connected at the terminal of the line (120 Ω 1/4W).

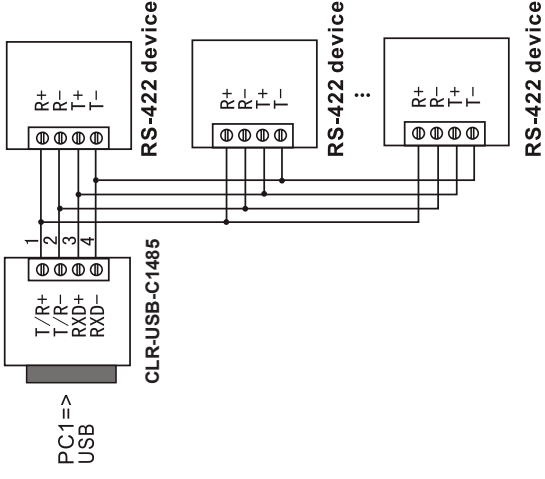
V. Communication Connection Chart

USB to RS-422 conversion

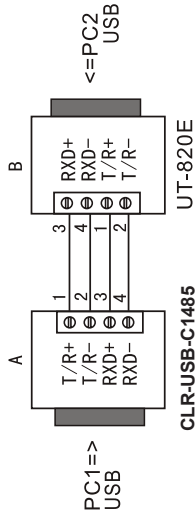
- RS-422 point-to-point / 4-line full duplex



- RS-422 point-to-point / 4-line full duplex

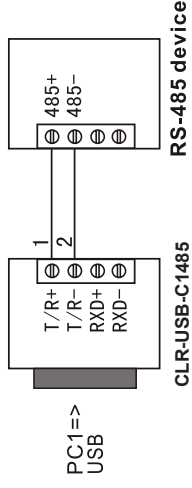


- Full duplex connection between CLR-USB-C1485 interface converters

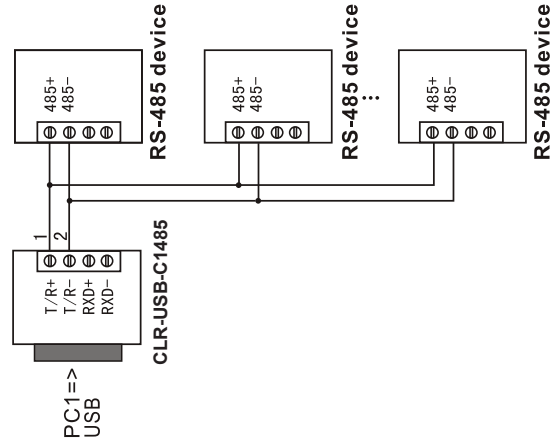


USB to RS-485 conversion

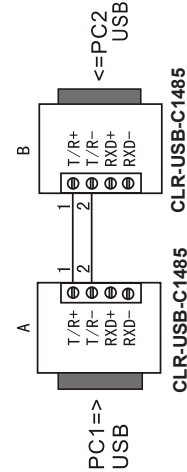
- RS-485 point-to-point / 2-line half duplex



2. RS-485 point-to-multipoint / 2-line half duplex



3. Half duplex connection between CLR-USB-C1485 interface converters



III. Connector and signal

1. Data communication failure
 - A. Check to make sure USB cable is OK.
 - B. Make sure RS-485/RS-422 output interface cable is OK.
 - C. Make sure power supply is OK.
 - D. Make sure the wire terminal connection is OK.
 - E. Make sure the indicator lights flash when receiving.
 - F. Make sure the indicator lights flash when sending.
2. Data missing or incorrect
 - A. Check to see whether the data rate and format at both ends of the communication equipment are consistent.