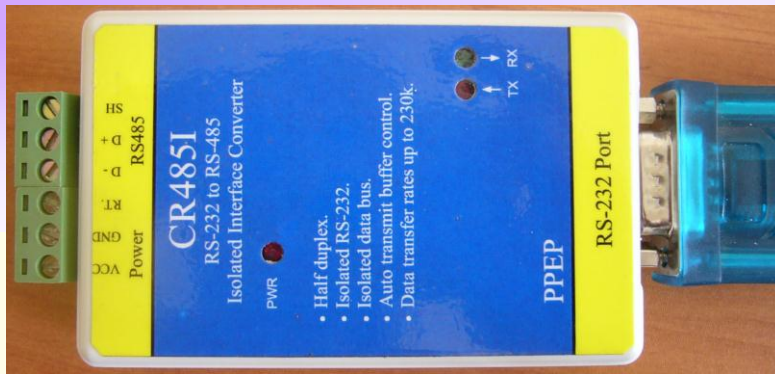# Interface Converter

Serial interface converters for industrial applications

⇨ **CR485I**
⇨ **CU485I**

CR485I – RS232/RS485

Interface converter,

For converting RS-232 (V.24) to RS-485 2-conductor.

Technical data

Serial Interface

Interface 1	RS-232 interface in acc. with EIA/TIA-232, DIN 66259-1
Serial transmission rate	115.2 kbps
Type of connection	D-SUB-9 male connector
Interface 2	RS-485 interface in acc. with EIA/TIA-485, DIN 66259-4
Data rate	115.2 kbps
Type of connection	Pluggable screw connection
Transmission length:	1200 m (twisted pair)
Conductor cross section stranded min.	0.2 mm^2
Conductor cross section stranded max.	2.5 mm^2
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max.	14
Data direction switching	Automatic control

Power supply

Nominal supply voltage	9…24 V DC
Typical current consumption	Approx. 30 mA
Isolation supply voltage	1000 Vdc
Data photo-coupler isolation	2500 Vrms

General data

Transmission channels	2(1/1), RxD, TxD, full duplex
Dimensions	100 x 58 x 23 mm
Ambient temperature (operation)	0 °C ... 60 °C
Electrical isolation	RS-232 // RS-485 // supply

CU485I – RS485/USB

Interface converter,
For converting USB to RS-485 2-conductor.

Technical data	
Interface 1	Computer interface USB V2.0 Plug and Play.
transmission rate	3 Mega baud
Operational system	virtual serial port driver supports Windows 98/ME/2000/XP/Vista/7
Interface 2	RS-485 interface in acc. with EIA/TIA-485, DIN 66259-4
Type of connection	Pluggable screw connection
Transmission length:	1200 m (twisted pair)
Number of transmitters on bus	32 devices in the RS485 network
Conductor cross section stranded min.	0.2 mm^2
Conductor cross section stranded max.	2.5 mm^2
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max.	14
Data direction switching	Automatic control

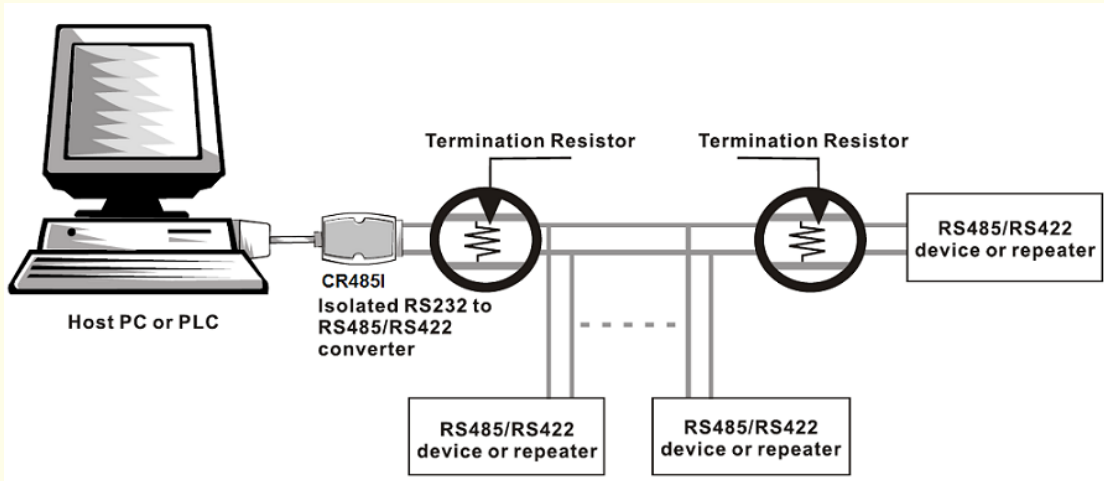| Power supply	
supply voltage	From the USB port with LED indicator
Typical current consumption	< 50 mA
Isolation supply voltage	1000 Vdc
Data photo-coupler isolation	2500 Vrms

General data	
Transmission channels	2(1/1), RxD, TxD, half duplex
Dimensions	100 x 58 x 23 mm
Ambient temperature (operation)	0 °C ... 60 °C
Indicators	LED for data transmission and reception

Principles of serial data interfaces

➢ RS-232 (V.24)

One of the most common serial interfaces is defined in the EIA-232 standard. The interface carries out data exchange between two devices in full duplex mode (point to point connection) up to a maximum of 15 m.
The simplest configuration for this connection requires three lines,TXD (Transmit data), RXD (Receive data) and GND (common signal ground).

If transmission wire of RS-485 is using AWG#24 twisted pair cable with1.2km, We recommend you to use 120 Ohm resistor.
But in CR485I there is enough connect "TR." terminal to "D-" terminal.

➢ RS-485 W2

This type of serial interface provides the possibility of multipoint connections with up to 32 devices in addition to the efficiency of the RS-422 interface. The signal levels and their logical assignment are identical to those of the RS-422 standard. Due to the 2-wire technique, data transmission can only take place half duplex mode. Only one device may transmit at any time. All the other device may are in "listening mode" during this time. The 2-wire bus line can be up to 1200 m long and. The transmission rate is max. 10 Mbps when twisted pair and shield data cable is used.

➪ Standards: TIA/EIA-485
ISO/IEC 8482/DIN 66 259-4

➪ Transmission rate: 10 Mbps

➪ Transmission length: max. 1200 m

➪ Procedure: voltage difference, twisted pair

➪ Principle: half duplex/ multipoint

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