

USB - RS485 Communication Adapter – virtual serial port ELO E218



Characteristics

- Easy installation
- Short USB cable – increased resistance against disturbs
- Cygnal chip
- Dust-free housing
- Custom variants and pinouts of RS485 connector

Introduction

The USB interface is preferred to the COM port with RS-232 interface in personal computer technology. To connect the peripheral devices of the RS485 interface, the USB/RS485 adapters along with the driver are applied to create so-called virtual COM on the PC.

ELO E218 is a device which converts virtual COM to the asynchronous line of the symmetric signal via the USB interface. The signals transmission to the half-duplex RS-485 interface allows the range, communication partners' number and the transmission interference immunity to increase.

Use of the adapter

The adapter allows to connect a half-duplex device with RS485 interface to USB device. At that increases a resistance of transfer against the electromagnetic disturbances, too. It is intended to be used in the environments where lightning over-voltage is not necessary to be considered.

The adapter is assumed that it will be mainly used to interconnect two devices, one with USB and second with RS485 interface.

The adapter allows the transmission rate up to 1 Mbps. This maximum attainable rate decreases due to the RS485 line length and/or its impedance growth. Recommended maximum line length is 1200 m at the rate of 9600 bps.

The E218 adapter may be applied on the PC computers under the MS Windows 98/Me/2000/XP, Vista or Linux operating systems.

Operation principles

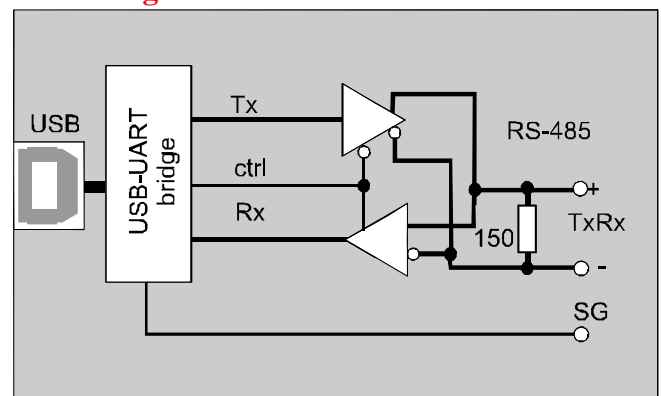
The adapter converts the RS485 interface to the USB interface, transmits TxD and RxD signals. The RS485 connector is RS45 or DB9.

RS-485 interface is used to the communication of up to 32 partners in one twisted pair. The transmission is half-duplex that means switching on the RS-485 transmitter only during its own transmitting to allow other communication partners to transmit.

The proper installation of the drivers is indicated via the lit READY indicator

Transferred data are indicated via the two-colored LED.

Block diagram



Specification

Parameters

USB interface	USB 2.0 full-speed (12Mb/s)
USB connector	B type
RS-485 connector	RJ45 or DB9
Communication mode	half-duplex
Transmission mode	asynchronous, half-duplex
Maximum data rate	1 Mbps

Other

Supply	from USB interface
Power take-off	to 100mA (Low power)
Dimension: Width	55 mm
Length	65 mm
Height	20 mm
Stocking temperature	- 10° to +55 °C
Working temperature	+ 0° to +50 °C
Humidity	0 – 85% (non-condensing)