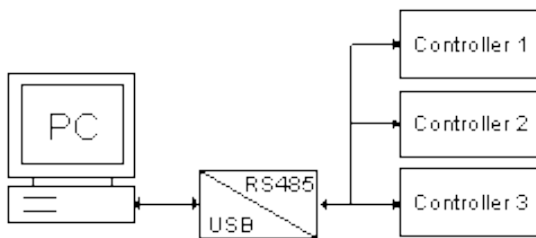


Data sheet:

## Interface USB <> RS232/RS422/RS485 Industry 1kV isolation with overvoltage protection



Application:  
PC controls RS485 bus system via USB



Interface USB <> RS232/RS422/RS485 Industry  
1kV isolation with overvoltage protection

### Product properties:

- Industry-compatible design on account of
  - ◆ noise immunity in accordance with EN 61000-6-2
  - ◆ Galvanic isolation with an insulation voltage of min. 1 kV
  - ◆ Integrated overvoltage protection for the serial port
  - ◆ Power supply via USB
  - ◆ Housing for top-hat-rail installation in accordance with DIN EN 50022-35
- Common solution for the Windows, Linux and Mac world:
  - ◆ Addressable as virtual COM interface under Windows 98 / Me / 2000 / XP / Server 2003 / Vista / Server 2008 (x86 and x64)
  - ◆ Supports Mac OS 8, OS 9 and OS X
  - ◆ Direct Linux support without additional driver from kernel version 2.4.0
- USB 2.0 Full Speed Device (12 Mbit/s)

- Selectable operating modes:
  - ◆ RS232
  - ◆ RS422
  - ◆ RS485 2-wire with automatic control, selectable with and without echo suppression
  - ◆ RS485 4-wire with automatic control
- Suitable as "non-intelligent" converter for RS485 field busses
- **Conforms to standards both in office and industrial environments:**
  - ◆ Increased noise immunity for industrial areas
  - ◆ Stricter noise emission for residential and commercial areas



Wish for something!

Your suggestions for improvement and additions

### **Background knowledge: Overvoltage protection for serial interfaces**

The permissible voltages allowed to have an effect on serial ports in case of an error are limited to rather low values according to the data sheet specifications for the interface components. Voltages which exceed these values even for a short time will inevitably result in damage to or even destruction of the integrated circuits.

To prevent such effects, the USB Interface 38211 includes integrated overvoltage protection which limits the maximum occurring signal voltage in a variety of applications to harmless values by using Transil diodes.

### **Technical data:**

USB-UART:	FTDI FT232R
Operating modes:	RS232 RS422 RS485 2-wire with automatic control, with and without echo RS485 4-wire with automatic control
Standard baud rates:	300..115200 baud
Possible baud rates:	Depending on application and operating system up to 1 Mbaud (RS232), up to 3 Mbaud (RS422, RS485)
Data format:	Data bit: 7,8 Stop bit: 1,2 Parity: odd, even, no, mark, space
Signal lines:	RS232: RxD, TxD, RTS, CTS, DTR, DSR, DCD, RI RS422: RxD A/B, TxD A/B, CTS A/B, DTR A/B (RTS A/B) RS485: RxD A/B, TxD A/B
RS485 switching time:	1 bit duration for switching between send and receive
Termination:	Connectable termination network for RS485 operation
Overvoltage protection:	Transil diodes for limiting signal voltages
USB connection:	"B"-type plug connector
Serial connection:	9-pin SUB-D adapter
Galvanic isolation:	Isolation voltage min. 1 KV DC between USB and serial connection
Power supply:	5V DC over USB, optional

Supply from external 5V power supply  
 Maximum current draw: 200mA  
 No-load current draw: RS232: typ. 70mA  
 RS422, RS485: typ. 90mA  
 Ambient temperature: Storage: -40..+70°C  
 Operating in non-rowed installation: 0..+60°C  
 Operating in rowed installation 0..+50°C  
 Permissible relative humidity: 0..95% RH (non-condensing)  
 Housing: Plastic compact housing, 105x75x22mm  
 Weight: approx. 170 g  
 Delivery: 1x Interface, USB <> RS232/RS422/RS485  
 Industry  
 1x USB cable with ferrite bead  
 1x product-CD with driver and manual



Wish for something!  
Your suggestions for improvement and additions

## Order now:

## Prod. no.

Interface USB <> RS232/RS422/RS485 Industry

38211

### Power supplies (please order as needed as accessories)

Switching Power Supply, 100-240V/50-60Hz - 5V/2A DC (D)

11053

### Cable and Connector Accessories

PC/PC RS232 Cable, DB9F - DB9F, 2m

11992

RS232 1:1-Cable, DB9F - DB9M, 2m

11952

DB9F connection cable with open cable ends, right angled, 1,5m

11903

9-pol. SUB D socket with soldering terminals and shielded housing

11904

9-pol. SUB D socket with screwing terminal and shielded housing

11905

USB 2.0 replacement cable, USB A - USB B, with ferrite, 2m

11332

### Mechanical Accessories

Mounting bracket for wall mounting

58812

19" DIN rail

58813