Data sheet:

**Interface USB <> RS232/RS422/RS485 Industry**

1kV isolation with overvoltage protection

![Diagram](image-url)

Application:
PC controls RS485 bus system via USB

**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: RxA/B, TxA/B, CTS A/B, DTR A/B (RTS A/B)
RS485: RxA/B, TxA/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:**

<table>
<thead>
<tr>
<th>Prod. no.</th>
<th>Interface USB &lt;&gt; RS232/RS422/RS485 Industry</th>
<th>Unit price</th>
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<td>38211</td>
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**Power supplies (please order as needed as accessories)**

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<tr>
<th>Prod. no.</th>
<th>Switching Power Supply, 100-240V/50-60Hz - 5V/2A DC (D)</th>
<th>Unit price</th>
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**Cable and Connector Accessories**

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<tr>
<th>Prod. no.</th>
<th>PC/PC RS232 Cable, DB9F - DB9F, 2m</th>
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<th>Prod. no.</th>
<th>RS232 1:1-Cable, DB9F - DB9M, 2m</th>
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<th>Prod. no.</th>
<th>DB9F connection cable with open cable ends, right angled, 1,5m</th>
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<tr>
<th>Prod. no.</th>
<th>9-pol. SUB D socket with soldering terminals and shielded housing</th>
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<th>Prod. no.</th>
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<tr>
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<th>USB 2.0 replacement cable, USB A - USB B, with ferrite, 2m</th>
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**Mechanical Accessories**

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<th>Prod. no.</th>
<th>Mounting bracket for wall mounting</th>
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<th>Prod. no.</th>
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We are here for you personally!

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