EN

USB / RS485 ASYNCHRONOUS SERIAL CONVERTER

GENERAL DESCRIPTION

The USB / RS485 CONVERTER, represent an interface able to implement an asynchronous RS485 serial port, by using an USB port present on the PC.
Thanks to the provided driver, the serial interface is considered by the operating system as a standard serial port; so the use of the product is directly allowed through any software able to communicate with the standard serial ports of the operating system (COM1, COM2, etc).
The electrical insulation between the RS485 and the USB ports, allows to remove many problems of electrical noise which may occur when the connected equipment is very far from the PC.

GENERAL FEATURES

- Usable in Windows 98, 2000 and XP Environments.
- Usable in Linux Environment with Kernel 2.4.20 or later, for which the direct support exists.
- Compatible with 1.1 and 2.0 USB standard port.
- Insulation between USB and RS485: 1500 V.
- Max Consumption: 60 mA.
- Power Supply provided from the USB port of the PC.
- Terminator of RS485 line, settable through an external bridge.
- Baudrate: 1200 bps÷115200 bps.
- RS485 Serial communication through MODBUS RTU protocol, 32 nodes max.
- Possibility of multiple connection of more USB / RS485 CONVERTER to the same PC.
- Three leds to view the status of the module's activity.
- Accessories: Download driver: www.camillebauer.com
  USB connection cable: USB A and MINI USB B connectors.
- RS485 Connections: removable 5-way screw terminals.

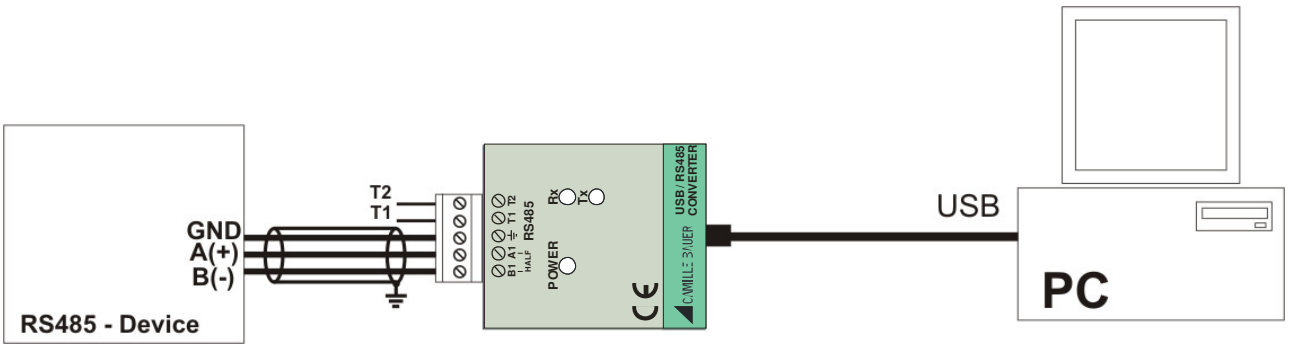
TECHNICAL SPECIFICATIONS

Environmental conditions:	Temperature: -20..65 °C. Humidity: 10%..90% non-condensing. Installation Category: II. Pollution Degree 2.
Storage Temperature:	-40..85 °C
Protection Index:	IP20
Weight, Dimensions:	24 g , 40 x 48 x 20,17 mm
Standards: CE	EN61000-6-4/2002 (electromagnetic emission, industrial environment) EN61000-6-2/2005 (electromagnetic immunity, industrial environment) EN61010-1/2001 (safety).

INSTALLATION RULES

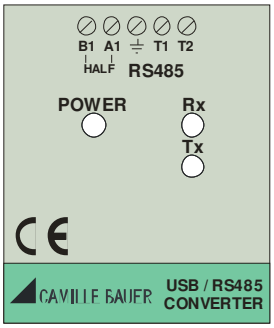
For USB / RS485 CONVERTER there are not particular warnigs, we only advise to use screened cables for the RS485 line in case of long connections or noisy environments (refer to ***Electrical Connections*** section) .

ELECTRICAL CONNECTIONS



By inserting an external bridge between T1 and T2 terminals, the terminator of the RS485 line is inserted.
In case of long connections or noisy environments, it is advisable to use screened cables for the RS485 line.

LEDS SIGNALLING



NAME	COLOUR	MEANING
POWER	Yellow	If it is lighted, it indicates that the instrument is correctly supplied.
Rx	Red	It lights when the module receives data through the RS485 port.
Tx	Red	It lights when the module transmits data through the RS485 port.

PROBLEMS SOLVING

For any problems with the converter, verify the following points:

PROBLEM	VERIFY
The “POWER” Led does not light	Verify that the USB port of the PC provides the 5 V which are necessary to supply the module.
The “Rx” Led is steady on	Verify that the RS485 cables have not been swapped.
The received data are not correct	Verify the communication speed.

In this section the installation procedure of the driver will be briefly described.
It is necessary to specify that the installation in **Linux** (with Kernel 2.4.20 or later) environments is automatic and **does not need** the CD with the driver. The standard serial port of the PC which identifies the device is the following: **/dev/ttyUSB0**.
As regards **Windows** operating systems, it is important to underline that the procedure is divided into two phases which are both fundamental for the final use of the instrument. On the first phase, the driver of the out-and-out serial converter is installed. By the second phase instead the virtual driver will be installed: this will allow to use the peripheral as a standard serial port of the operating system.
If case of use of **Windows 2000**, these two phases are identical and are performed step by step: the user has only to follow the guided procedure; instead in **Windows 1998** the second phase is automatically managed by the operating system without any further dialogue with the user. For the correct installation it is important to download the driver and connect the device to the PC already turned on, so that the operating system may automatically detect the presence of the device.
At this point the the user has only to follow the guided installation.

VISUALIZATION OF THE VIRTUAL COM PORT

At the end of the installation, it is possibile to view the name which has been assigned to the virtual serial port associated to the used device.
For example on the following Device Manager panel, it has been identified as COM7: