

Application Note AN0415: Industrial USB to RS485 Interface (ISOLATED) for bentrup controllers

1.) General Informations

Most bentrup controllers are available with a data interface. This allows accessing configuration, firing data and programmes from a Windows PC. See free bentrup WinConfig or WinControl light software or WinControl full version for details. To run own applications see details published in Application Note AN0902 (available on www.bentrup.de -> service). TC-S2 and M2 are fitted with RS485 interface by default, for TC20xx controllers RS485 as well as USB interface is available as an option. A Bluetooth interface is available for TC500 controllers.



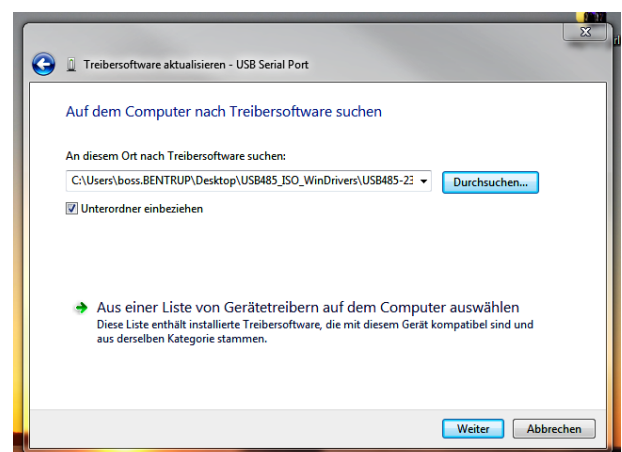
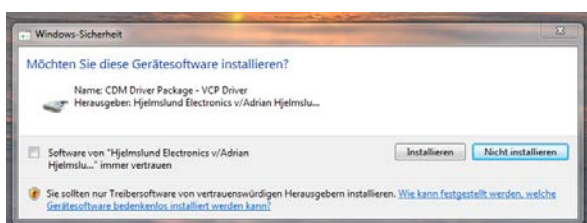
Since most PCs do not provide a RS485 interface on board a USB to RS485 interface is required to establish the electrical link. This Application Note describes how to install the bentrup Industrial USB to RS485 interface which provides electrical isolation. This interface is designed setup RS485 networks to connect 1 to 32 bentrup controller to a PC (although the interface is wired to connect one controller only to a PC when shipped).

To configure a single controller or temporarily log data a simple and less costly RS485 to USB cable is available too (see Application Note AN0115). However it does not provide electrical isolation as well as data flow indicators; both is definitely recommended in industrial environments or fixed installation of multipoint RS485 networks.

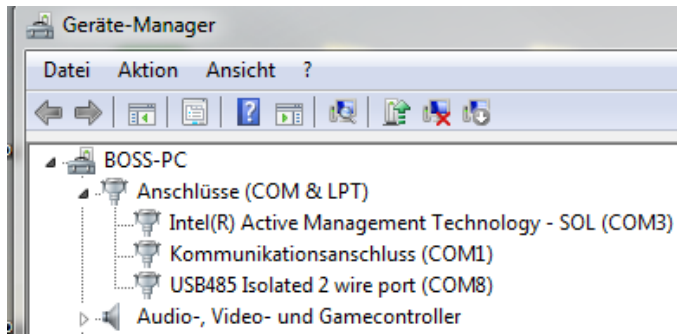
2.) Installation

Plug in the USB485 Stick into an USB Port. If the drivers are installed automatically download them from www.bentrup.de/downloads/software/USB485_ISO_WinDrivers.zip or navigate to the service section of www.bentrup.com . Save and extract the zip file to any location.

When asked for the driver specify the location used before. A Windows warning pops up, confirm to install the Driver package.



Open the device manager of Windows and locate the “USB485 Isolated 2 wire port” under COM & LPT ports. Get the port number assigned (COM8 in this example)

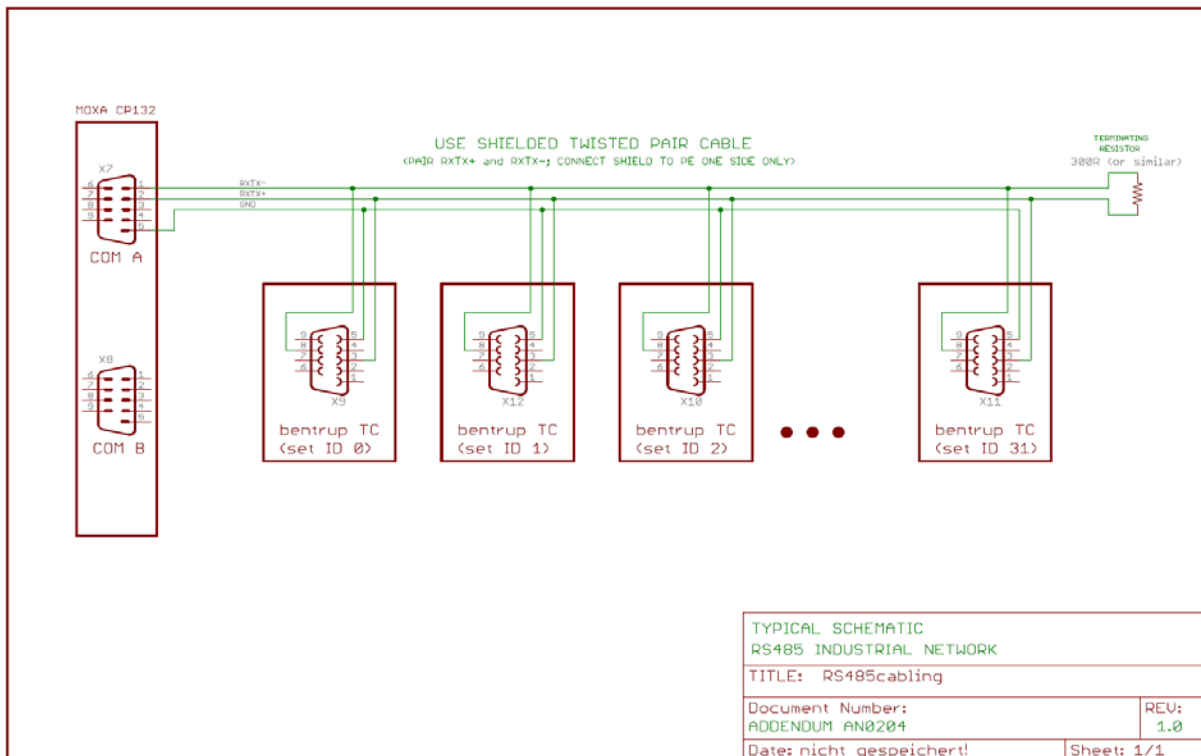


3.) Applications

Select this port number (e.g. COM8) in WinControl server etc. Note most bentrup devices operate on 115200 baud (some legacy devices 38400). For further details see corresponding documentation.

Appendix: RS485 multipoint wiring

NB: MOXA PCI Card shown, for USB485 connect D+/- to RXTX+/- and GND to GND



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