

# Application Note AN0115: USB to RS485 Interface 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](http://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.



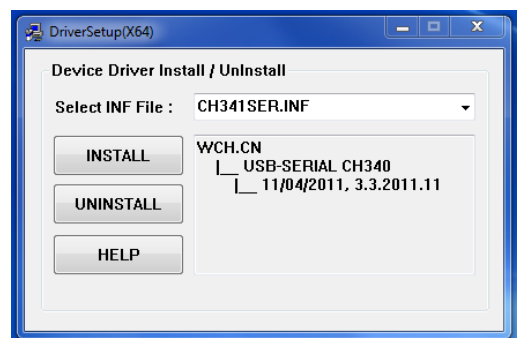
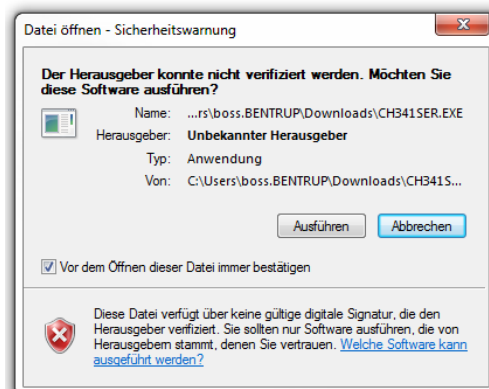
Since most PCs do not provide a RS485 interface on board a USB to RS485 interface is required to establish the electrical link. This Application Note describes how to install the bentrup USB to RS485 interface. This interface is designed to connect a single controller to a PC.

Although technically possible we do not recommend using this interface to set up multipoint RS485 networks (RS485 is an industrial network allowing to connect up to 32 units and almost unlimited cable length, 1000m). For such applications we recommend bentrup USB to RS485 INDUSTRIAL interface (see Appendix) ) which provides optical signal isolation (refer to Application Note AN0415).

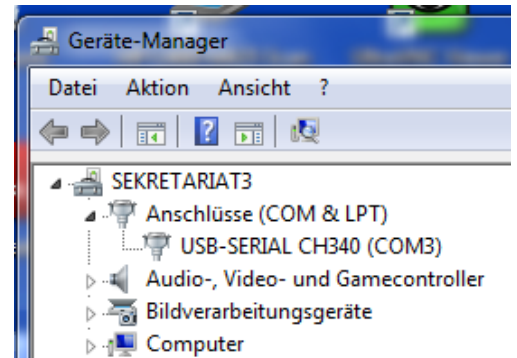
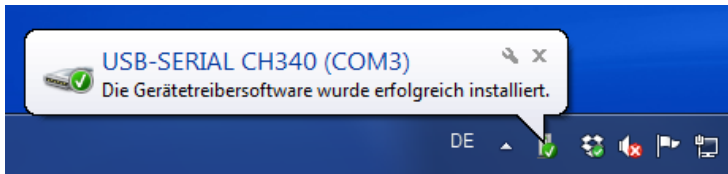
## 2.) Installation

After plugging in cable into a USB port driver installation usually proceeds automatically. After some minutes the Prolific-Drivers are installed automatically (can be found at [www.bentrup.de/downloads/software/PL2303\\_Prolific\\_DriverInstaller.exe](http://www.bentrup.de/downloads/software/PL2303_Prolific_DriverInstaller.exe) for manual installation).

Older version (2014) use different chipset – drivers need to be downloaded from [www.bentrup.de/downloads/software/CH341SER.EXE](http://www.bentrup.de/downloads/software/CH341SER.EXE). After launching the EXE Windows might come up with a warning message, confirm. A second warning message might come up (Chipset manufacturer Jiangsu Qinsheng Co., Ltd.) which needs also confirmation Press INSTALL once the windows pops up to complete installation.



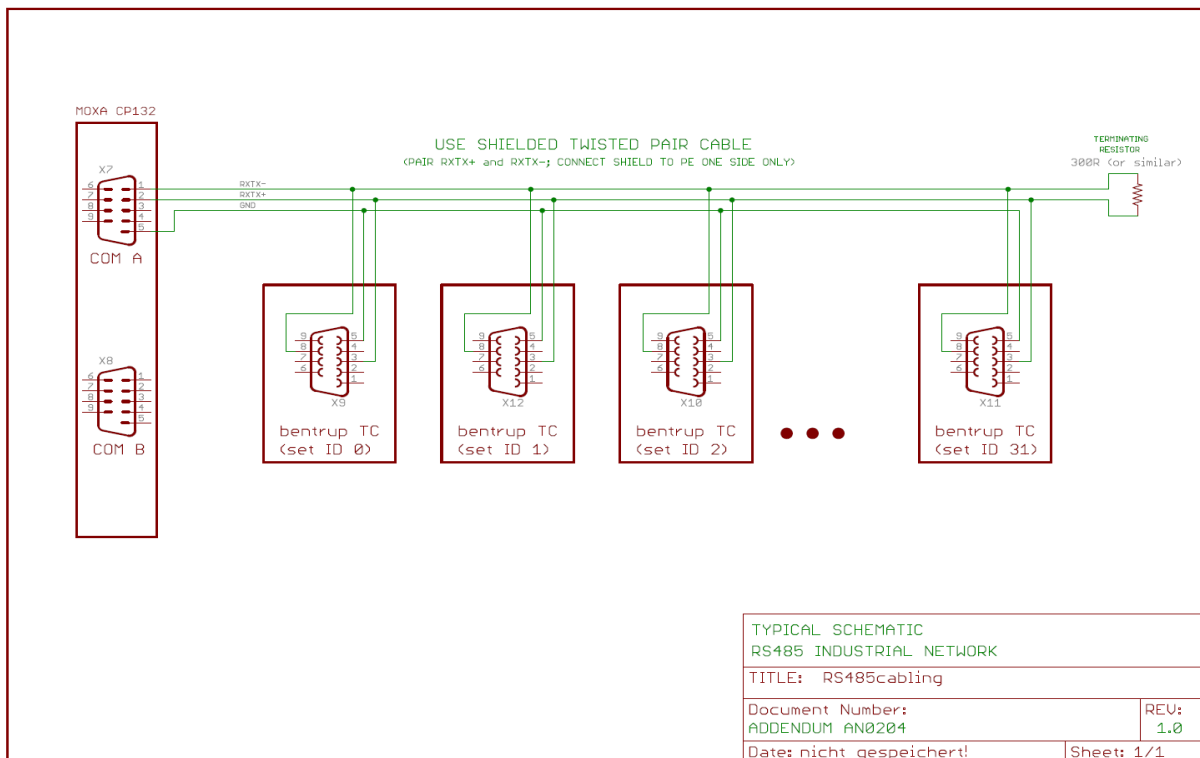
Now plug in the USB side of the USB to RS485 adapter. After a couple of minutes Windows will confirm successful installation of the USB as shown. Note the COM port number which the USB appears for Windows is also shown (COM3 in this example). If you have missed the COM port number look up in the Windows device manager



### 3.) Applications

Select this port number (e.g. COM3) 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



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Initial Issue	JAN 15 <sup>th</sup> 2015	Be
Added Prolific chipset	MAR 24 <sup>th</sup> 2016	Be

