USB/RS485 Serial Multi-Functional

Programmable USB Cable TSXCUSB485C

User Manual

2013-04-09

Overview:

TSXCUSB485C is a multi-functional programmable cable providing serial connection and RS485 signal conversion through USB interface, whose power supply is from USB port, instead of the TER port of PLC. Therefore, this cable can communicate with TER of PLC or HIM or AUX port. TSXCUSB485C can be used for Schneider Modicon TSX series PLC or HMI to communicate with the computer. It can also be connected to the computer directly to communicate with Premium, Micro, Nano, Naza, Twido and other PLC, or connected to the computer to communicate with OTB, XBTN/R/S and TSXSCA62 after changing the different adapter cables.

TSXCUSB485C programmable cable is the upgraded product of TSXPCX3030.

TSXCUSB485C is equipped with a toggle switch on the switching box to select different working mode. It abandons the mode of controlling RS485 data in/out by PLC but adopts the auto flow control which can be used for multipoint and point to point application.

The TER port of Schneider TSX series PLC has a PMC (mode control) signal pin to determine the working mode of this terminal port. When PMC has high level, the TER port always works in Uni-Telway Master (master station) mode, which should be used on PLC programming. When PMC has low level, the working mode of TER port is determined by PLC configuration, generally the slave station mode.

Product configuration:

This product includes TSXCUSB485C adapter and TSXCRJMD25 adapter cable which can be connected directly to PLC. By selecting different adapter cables, it can connect the device like touch screen for communication. These cables are straight-through cables and the user can refer to the relevant wiring diagram to make it by yourself.
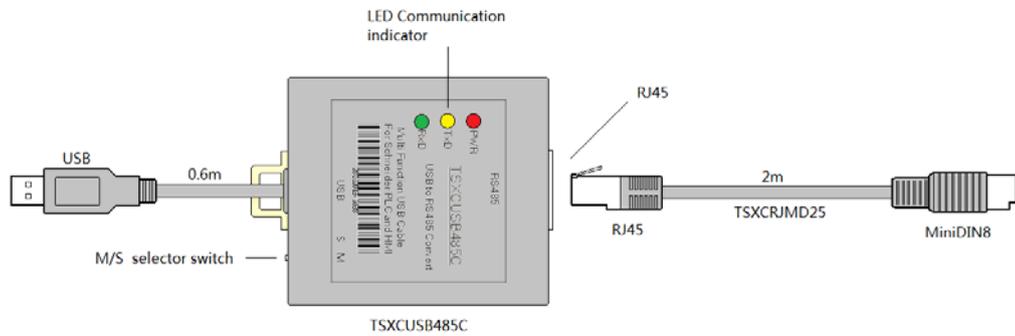
Working mode corresponding to switch M/S

Switch position	Function	PMC level	Data flow control
M	For programming or multi-point communication, use as Uni-Telway Master	1	Auto
S	For other multi-point communication	0	Auto

Definition of RJ45 socket pin signal

RJ45			
	1	NC	Not used
	2	NC	Not used
	3	PMC	Mode control signal
	4	B	RS485 signal positive
	5	A	RS485 signal negative
	6	NC (note)	Not used
	7	Vcc (output)	Voltage output DC5V，500mA max.
	8	GND	Signal and ground

Note: the 6th pin of RJ45 socket is RS485 drive enabled control signal NDE (input) defined by Schneider. There is no need to use this control signal as TSXCUSB485C adopts automatic data flow control.
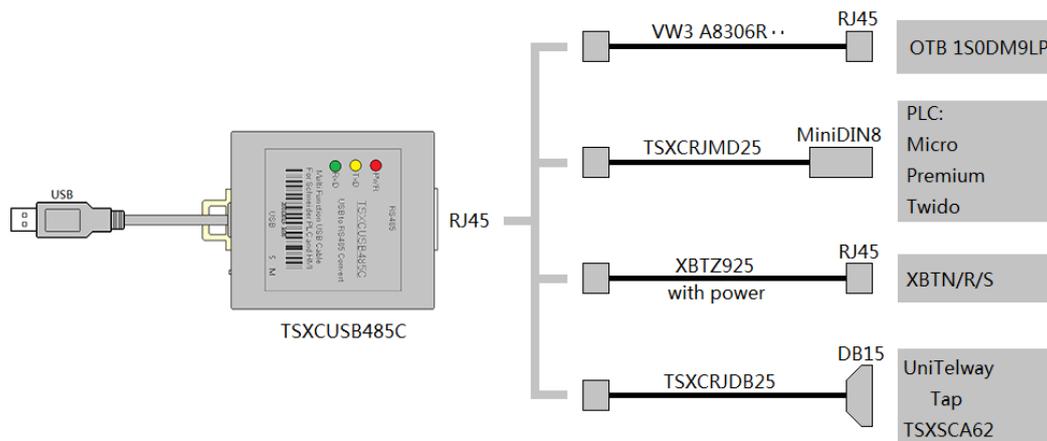
Select different adapter cables to connect different devices

Features and technical parameters:

● Supported operating system: Windows2000/XP/Vista/Win7

● Fully compatible with USB V1.1 and USB   V2.0

● USB bus-powered with current consumption of approx. 50mA and maximum output current of 500mA.

● Baud rate: 300bps～1Mbps auto-adaptation

● Power indicator and data in/out indicator

● Applicable in Premium, Micro, Naza, Nano, Twido, OTB, XBTN/R/S and TSXSCA62.

● Each set of product includes TSXCUSB485C adapter and TSXCRJMD25 cable.

● Overall length: 2.5m. Color: black.

● The adapter can be installed in DIN35mm standard rail.

● Operating temperature: -40~+85℃

Application method:

Two drivers are required before putting TSXCUSB485C into use:

1. USB driver.

2. Schneider Uni-Telway driver or MODBUS driver.

All of these drivers are included in the CD supplied with the product. The user can also download the latest driver on the official website of the Schneider. The installation method is very simple and not explained here.

Until March 2013, Schneider has not yet released the driver supporting 64-bit operating system.

After installing the driver, connect the computer and PLC with TSXCUSB485C cable and the TSXCUSB485 device and its corresponding serial number will appear on the Windows device manager as shown in the figure below. The serial number of the cable in this case is COM6.
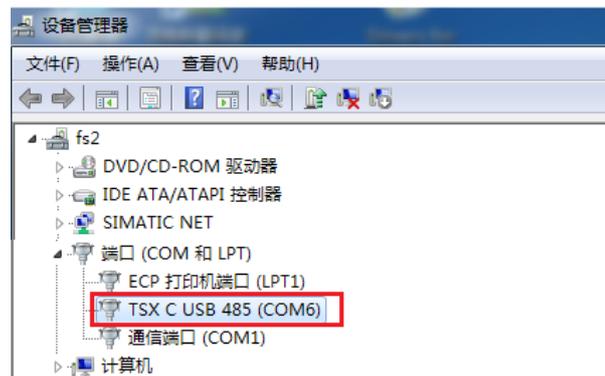
Open Windows control panel and double-click the Drivers Manager icon in the red frame:

Select UNITELWAY and click Configuration button to set the programmable cable:
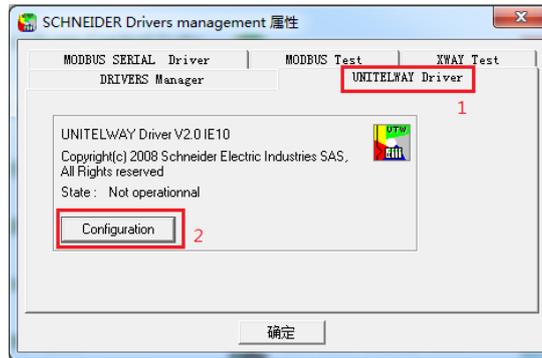
Click Edit… button to set COM Port as the corresponding serial port of TSXCUSB485C (it's COM6 in this case):
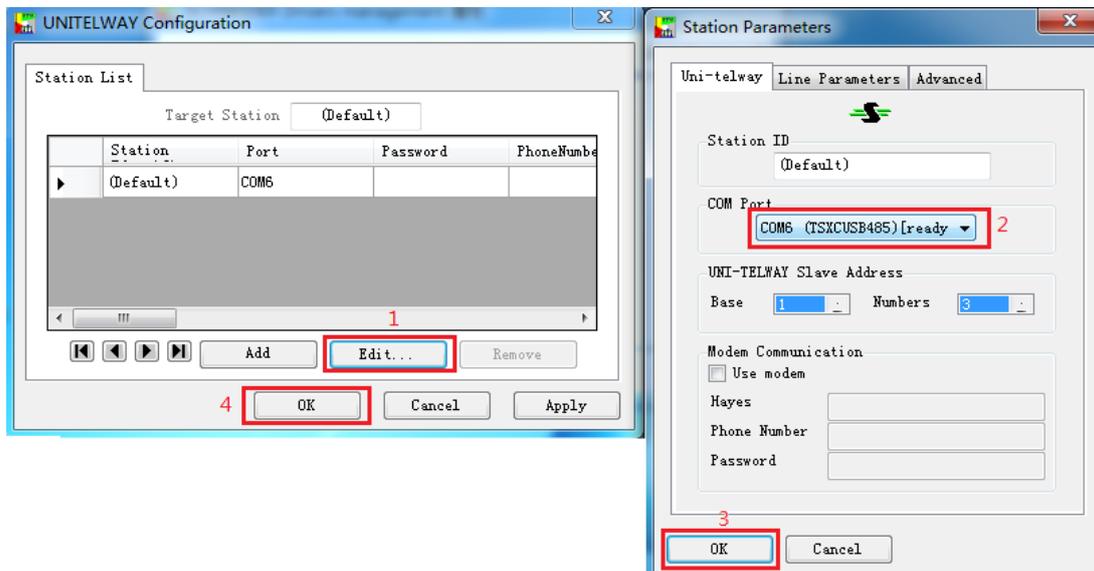
Click XWAY Test tab to test TSXCUSB485C, click Connect button (here the cable should connect the computer and PLC) and click Start button, and you'll see Request: followed by increasing number, it indicates that TSXCUSB485C is working normally.
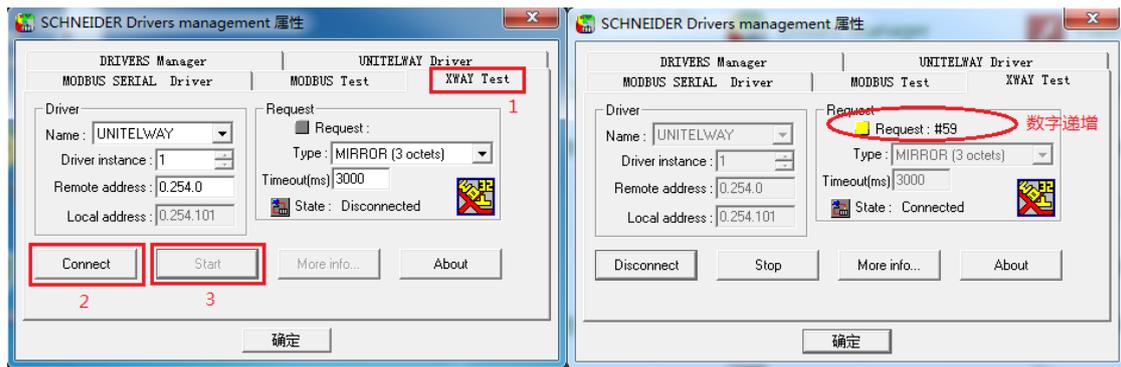
Click Stop button and Disconnect button to disconnect the communication connection and click "OK" to exit.

So far, the TSXCUSB485C programmable cable has been set and passed the test. You can run PLC programming software to upload and download programs and data, monitor and debug PLC. Different series of PLC or touch screen use different programming software. Please select correct programming software according to your PLC or touch screen models.

Appendix: applicable cables

The following adapter cables are the cables of TSXCUSB485C to connect RJ45 port to PLC or the touch screen.

Cable Model : TSXCRJMD25

Cable Model : XBT-Z925(A)

TSXCUSB485 ⇐ RJ45

	18	
D(B)	4 ————◄►———— 5	D(B)
	6	
D(A)	5 ————◄►———— 4	D(A)
GND	8 ——————————— 7	GND
	8	
	13	

DB25M ⇒ 带SUB-D25插口的XBTN/R

屏蔽 --------------------------- 屏蔽

DB25(针)

RJ45 L=2米

1 8 RJ45

Cable Model : XBT-Z925(B)