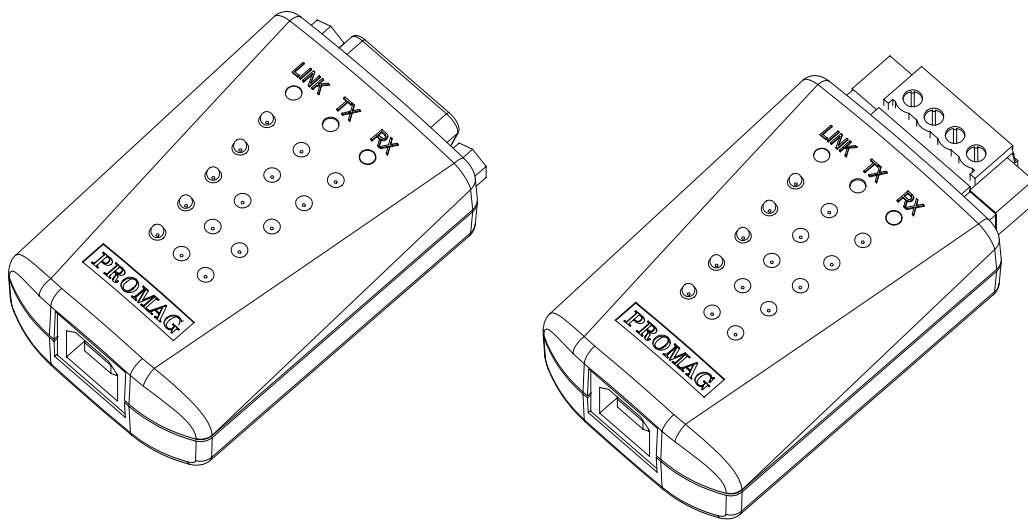


USB232/422/485 Series —



RS232/422/485 USB Converter User's Manual

TM951006

Information	1
Installation	3
Remove Driver Software	7
Technical And Operational Description	9
Connections	11
Specifications	14
Note	15

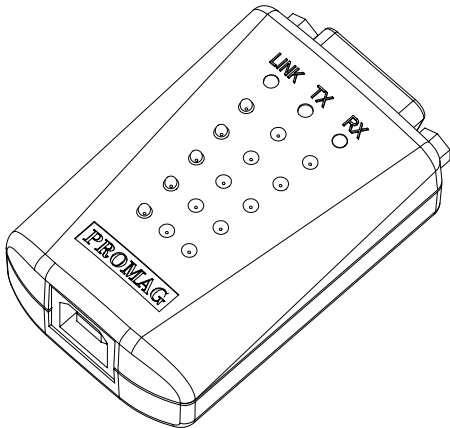

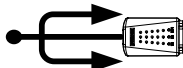


FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication.

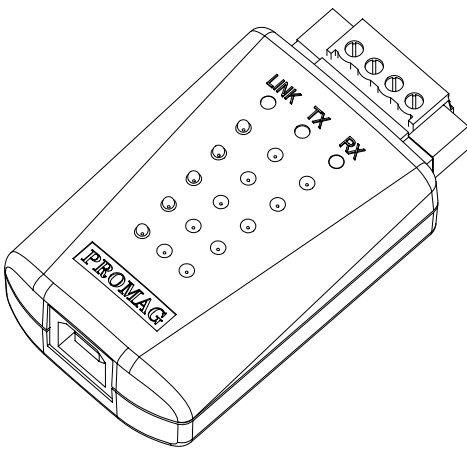

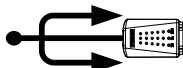


Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Information

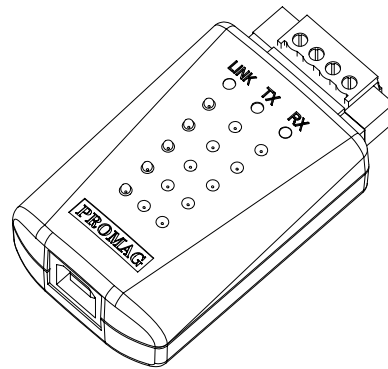
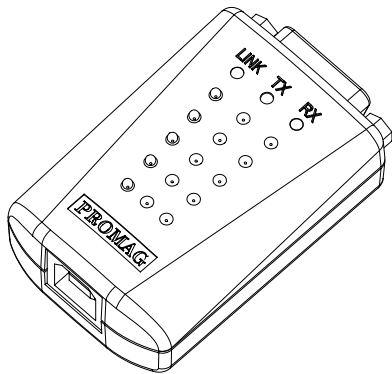
■ USB-232 Converter

MACHINE TYPE	FUNCTION
 <p>USB-232</p>	<div> <div> USB Ver 1.1  </div> <div> Multiple Port  </div> </div> <div> <div> LED STATUS  </div> <div> RS232  </div> </div>

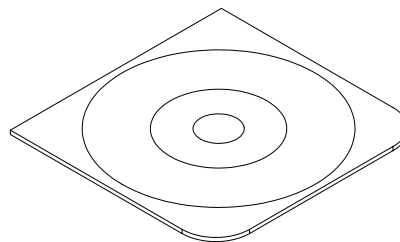
■ USB-422/485 Converter

MACHINE TYPE	FUNCTION
 <p>USB-422/485</p>	<div> <div> USB Ver 1.1  </div> <div> Multiple Port  </div> </div> <div> <div> LED STATUS  </div> <div> RS-422/485  </div> </div>

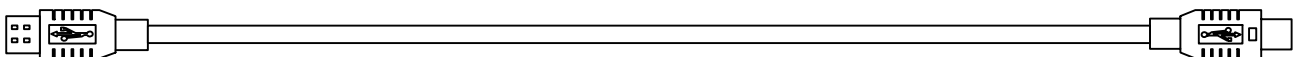
■ Standard Package



**Main Unit
(USB232/422/485-00)**



**Driver Disk and User manual
(DISK5088)**



**USB Cable
(WAS-1487)**

Installation

Driver Software Installation -

1. Connect **USB232/422/485** converter into the USB PORT of your Computer first.
2. Under Windows **98/2000/Me/XP**, put **DISK5088** into the CD-ROM drive, it will automatically install the USB232/422/485 Driver Software into your Computer by following the steps as below:

1. This wizard searches for new drivers for USB Device



2. What do you want Windows to do ?



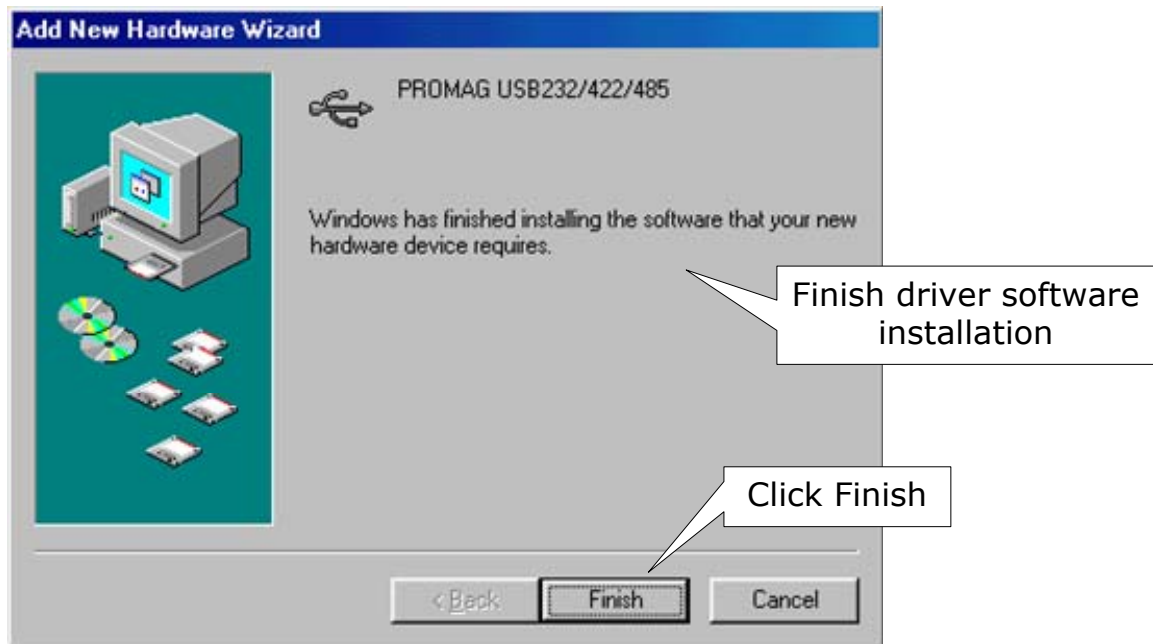
3. Select Searching locations for new driver



4. Windows is now ready to install the best driver

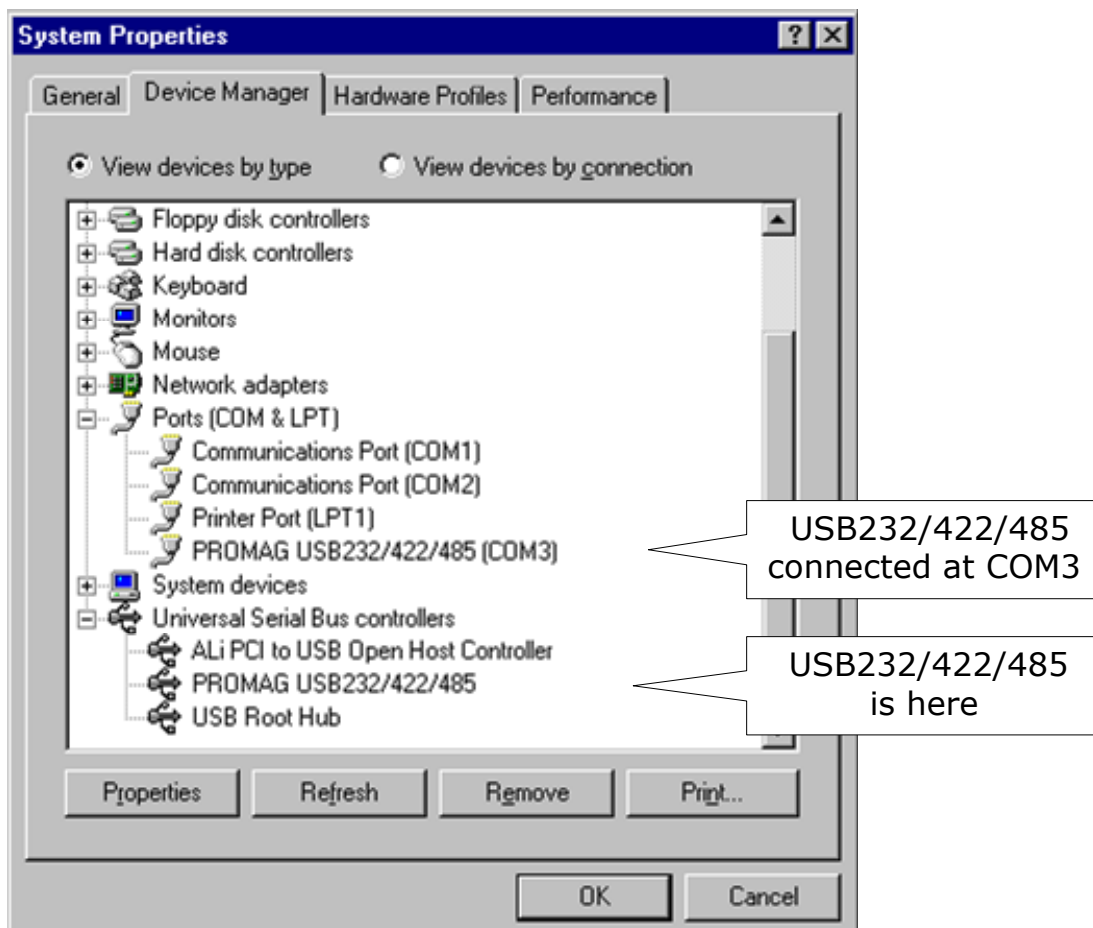


5. Windows has finished installing the software



6. Make sure if the driver software installation is finished

Connect USB232/422/485 unit into the USB port of the computer and then Click " Start " -> " Settings " -> " Control Panel " -> " System " -> " Device Manager " to see if there are " PROMAG USB232/422/485(COM3)" at Ports (COM & LPT) and "PROMAG USB232/422/485 "at Universal Serial Bus controllers.

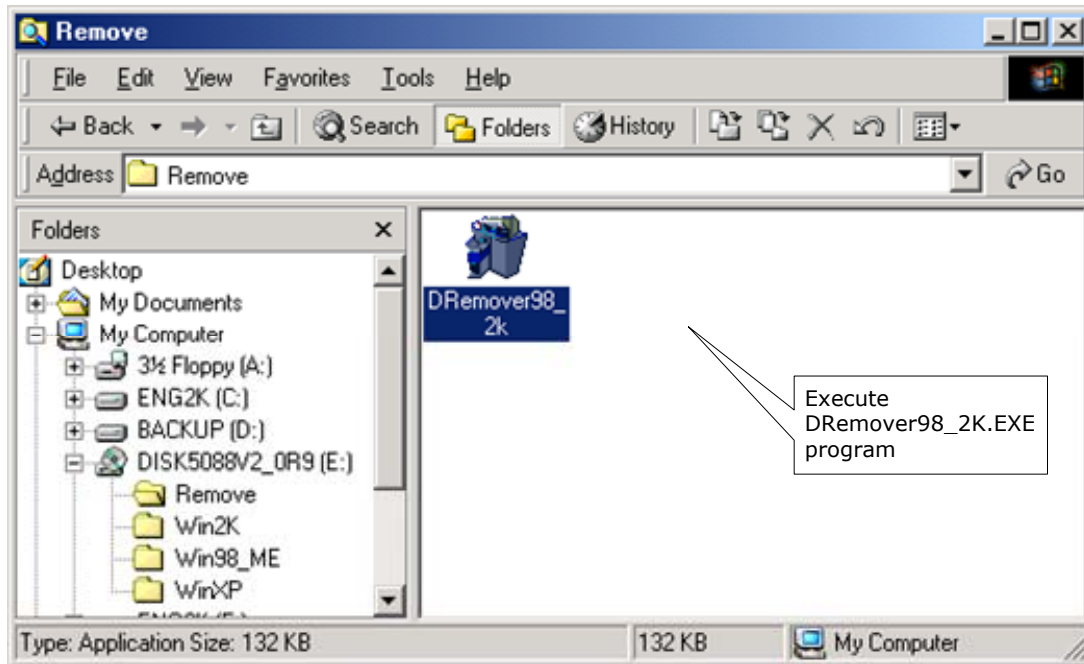


Remove Driver Software

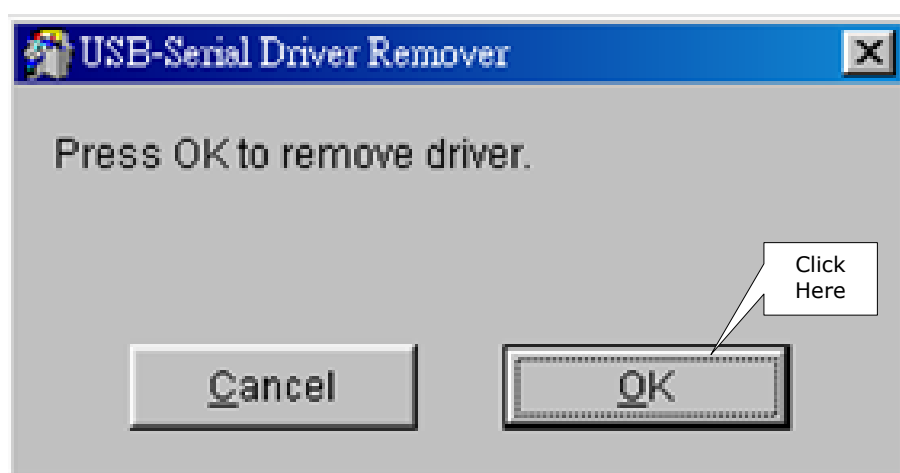
How to remove USB232/422/485 Driver Software from your computer-

Put DISK5088 into the CD-ROM drive of the computer and then find and execute DRemover98_2K.EXE by following the steps as below:

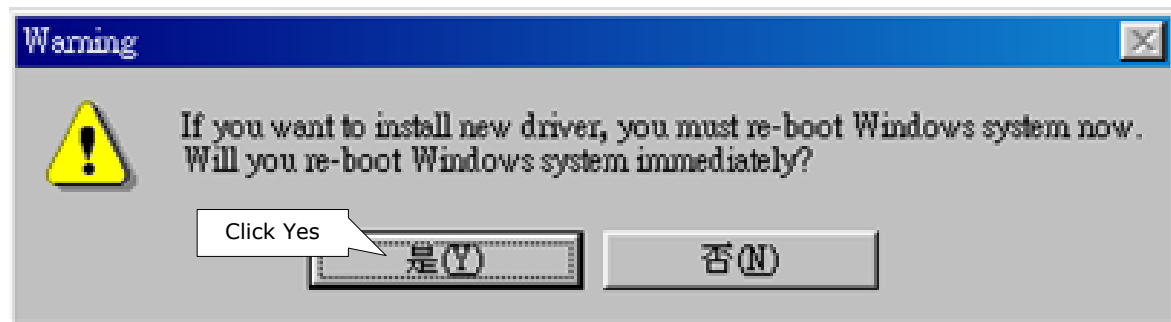
1. Execute DRemover98_2K.EXE program



2. Confirm to execute Remove program



3. Re-boot the Computer after remove program is done

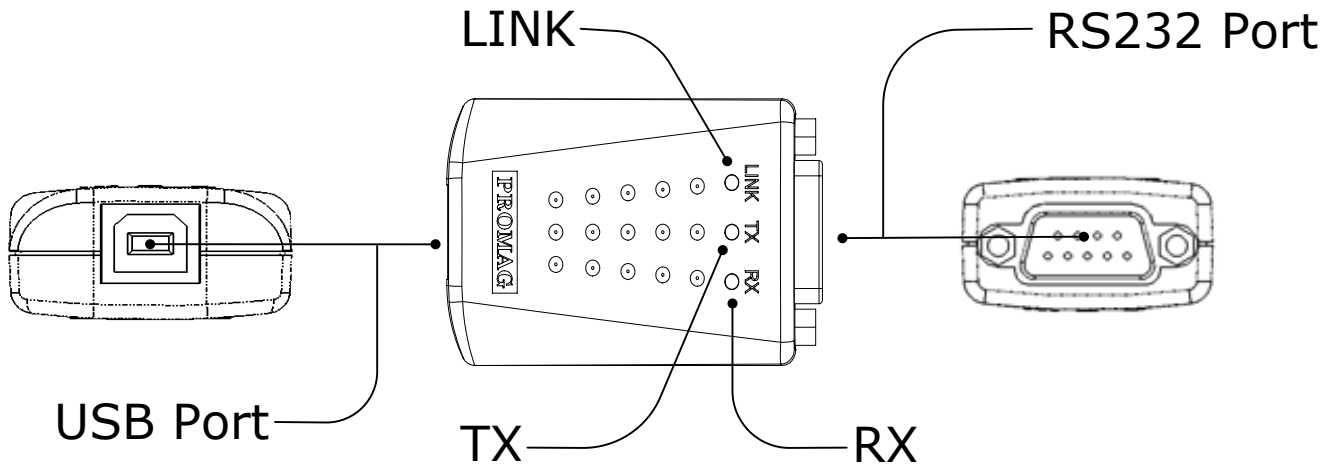


or click "No" button for show as below :

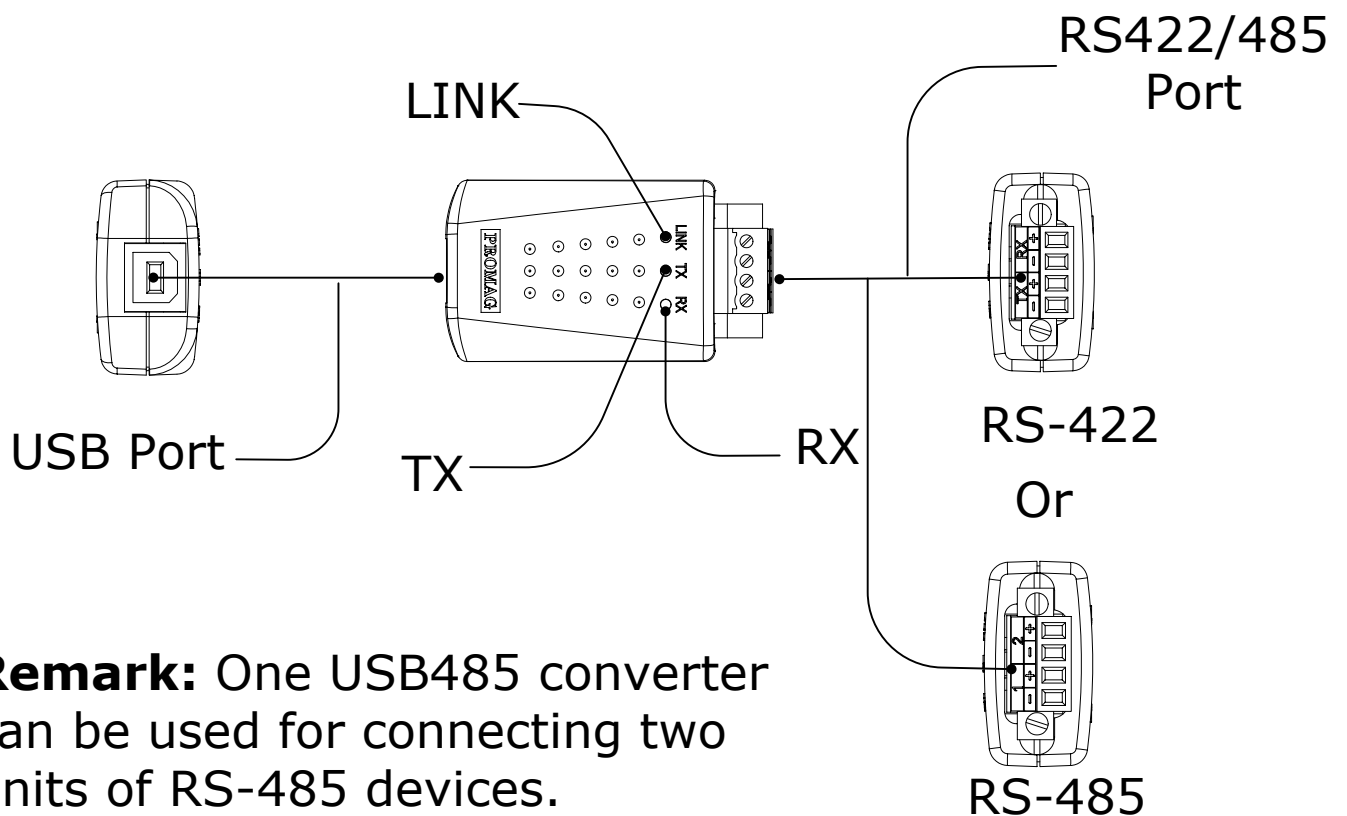


Technical And Operational Description

■ Front Panel of USB232-00



■ Front Panel of USB422/485-00



■ Operation of USB232/422/485 Converters

RS232/422/485 connector

Connecting with the terminal device, which is equipped with RS232/422/485 interface.

USB connector

Connecting with the Computer USB port or Hub.

LINK

LINK LED turns on when the USB232/422/485 unit is ready for use.

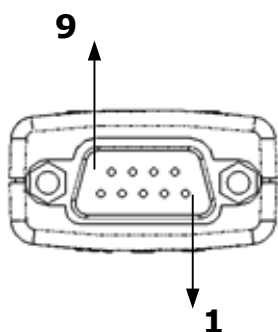
TX

TX LED turns on when the data is sending from USB port to RS232/422/485 device.

RX

RX LED turns on when the data is sending from RS232/422/485 device to USB port .

RS232 PIN FUNCTION



PIN No.	I/O	DESCRIPTION
1	I	Data Carrier Detect
2	I	Received Data
3	O	Transmitted Data
4	O	Data Terminal Ready
5	X	Signal Ground
6	I	Data carrier
7	O	Request To Send
8	I	Clear To Send
9	I	Positive dc TEST

RS422



PIN		DESCRIPTION
TX	-	RS422 TX -
	+	RS422 TX +
RX	-	RS422 RX -
	+	RS422 RX +

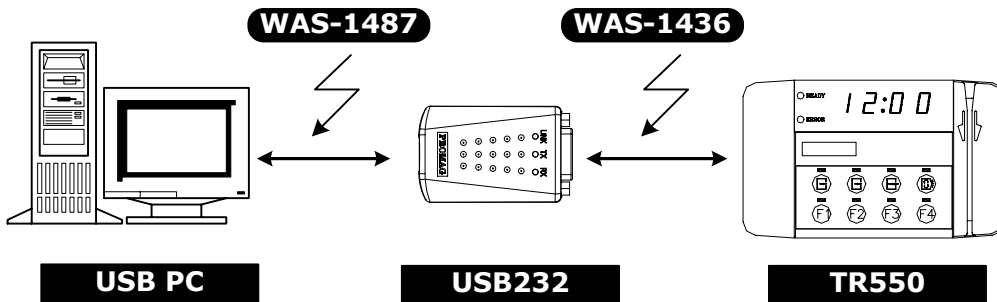
RS485



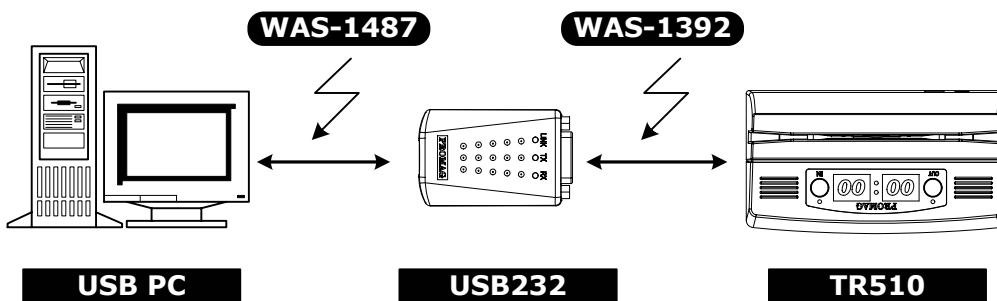
PIN		DESCRIPTION
1	-	RS485 -
	+	RS485 +
2	-	RS485 -
	+	RS485 +

Connection

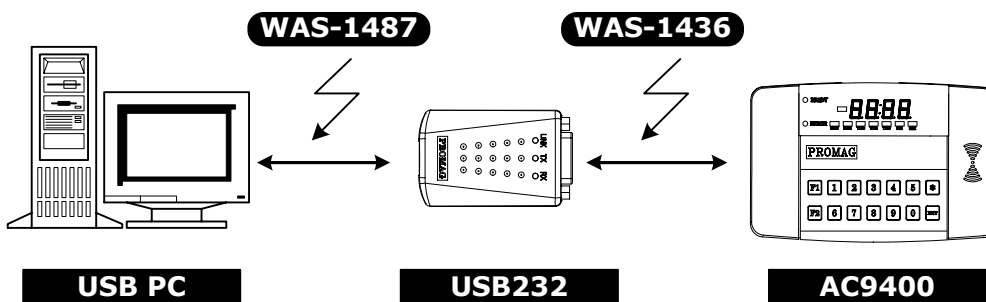
1. Communication between TR550 RS-232 Device and USB Port



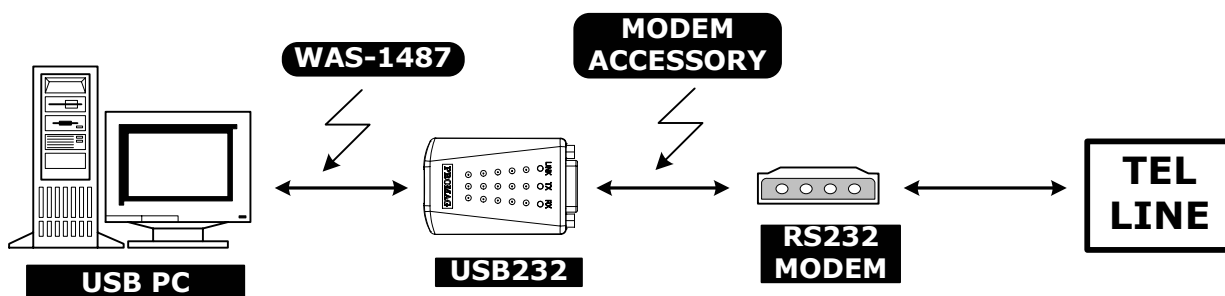
2. Communication between TR510 RS-232 Device and USB Port



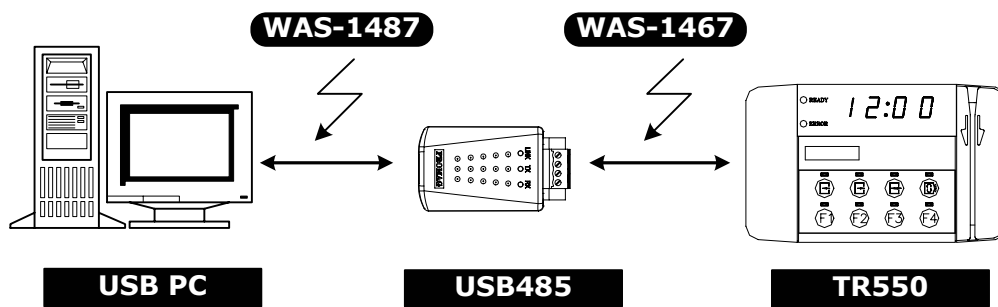
3. Communication between AC9400 RS-232 Device and USB Port



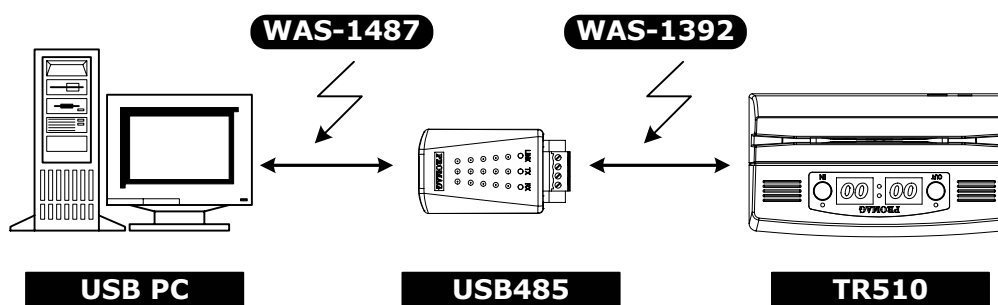
4. Communication between RS-232 MODEM and USB Port



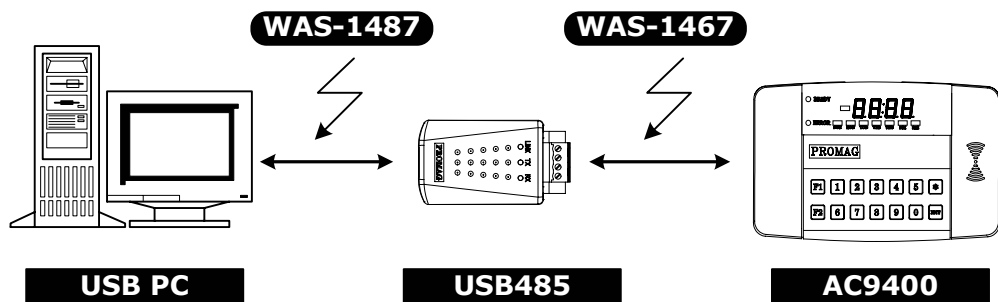
5. Communication between TR550 RS-485 Device and USB Port



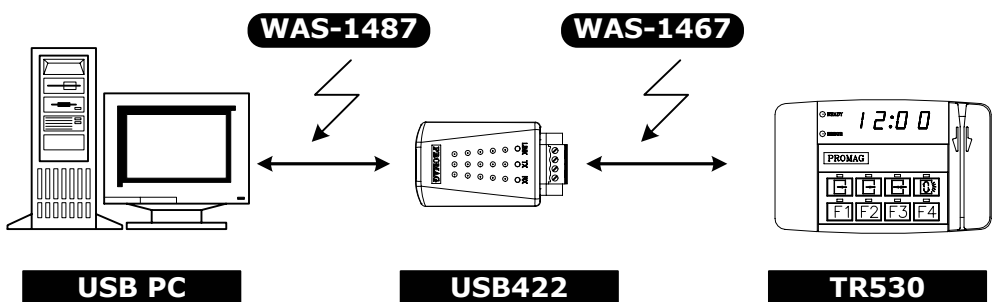
6. Communication between TR510 RS-485 Device and USB Prot



7. Communication between AC9400 RS-485 Device and USB Port



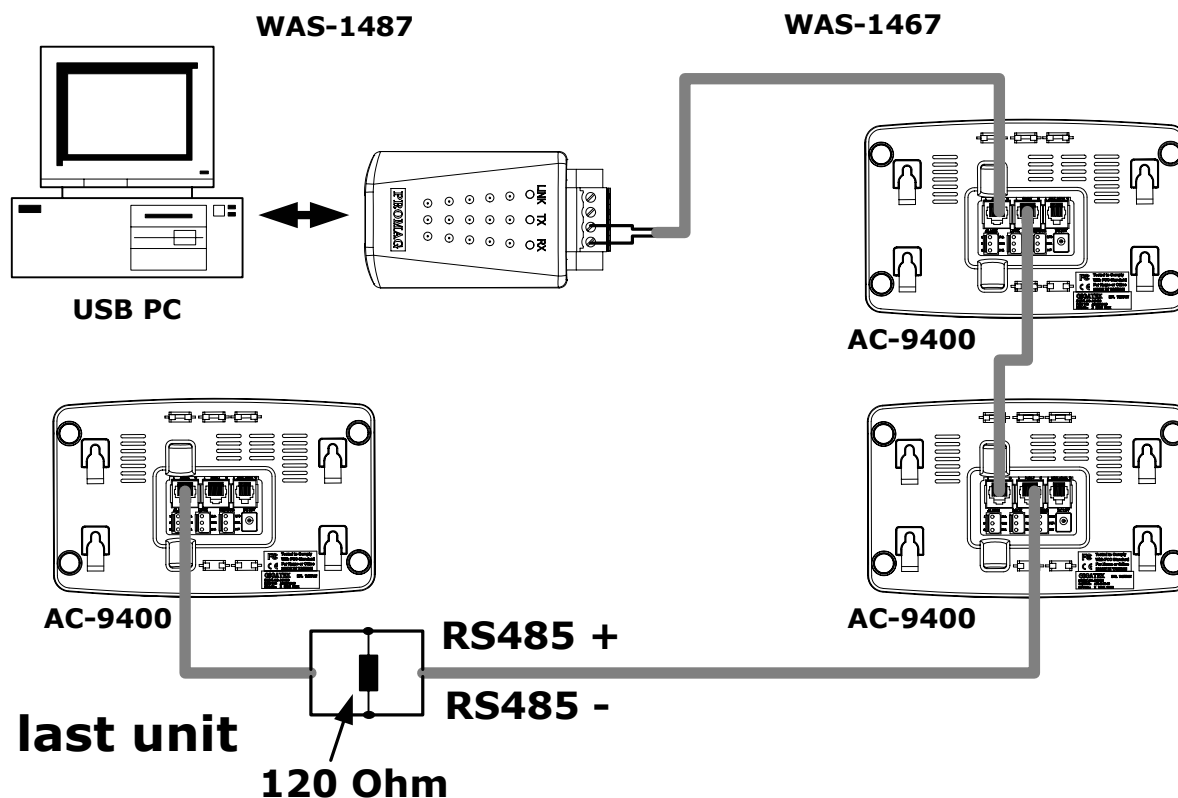
8. Communication between TR530 RS-422 Device and USB Port



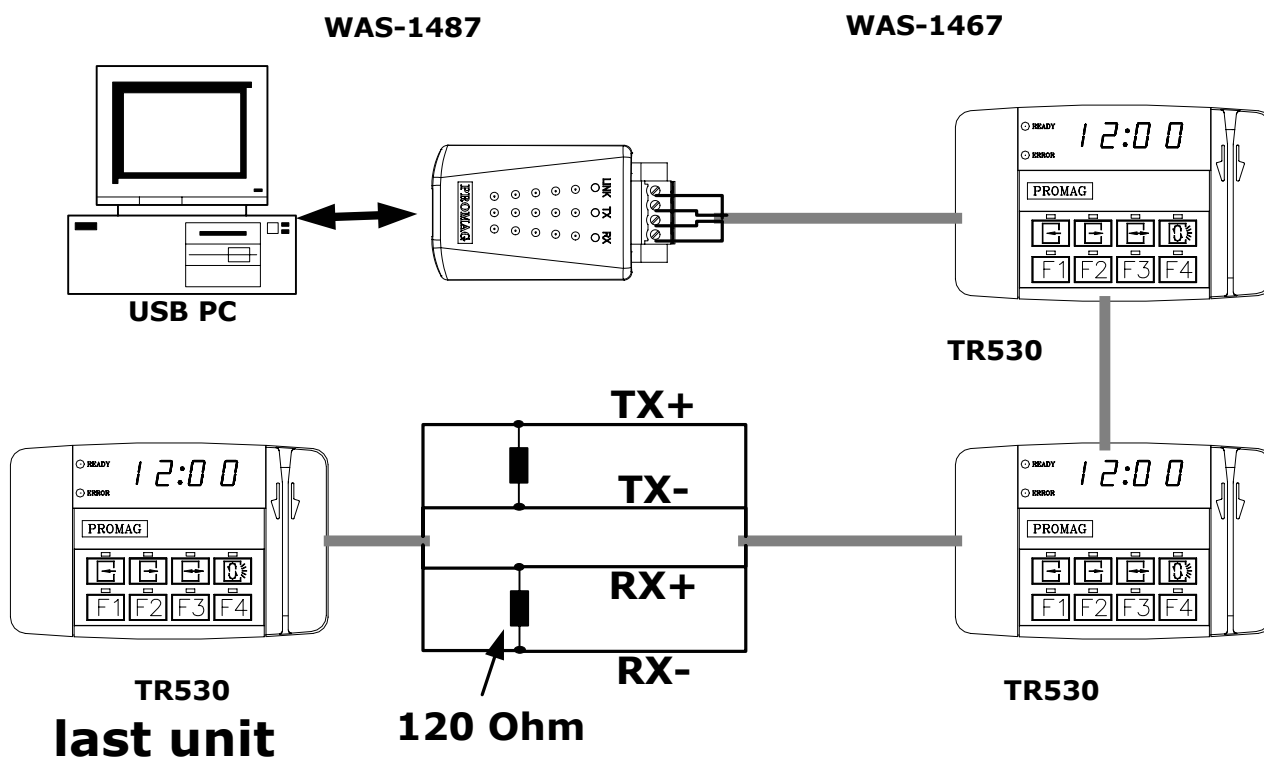
NOTE : It is not always necessary to have the termination resistor. It really depends on the actual wiring and connection circumstances.

See the figure below:

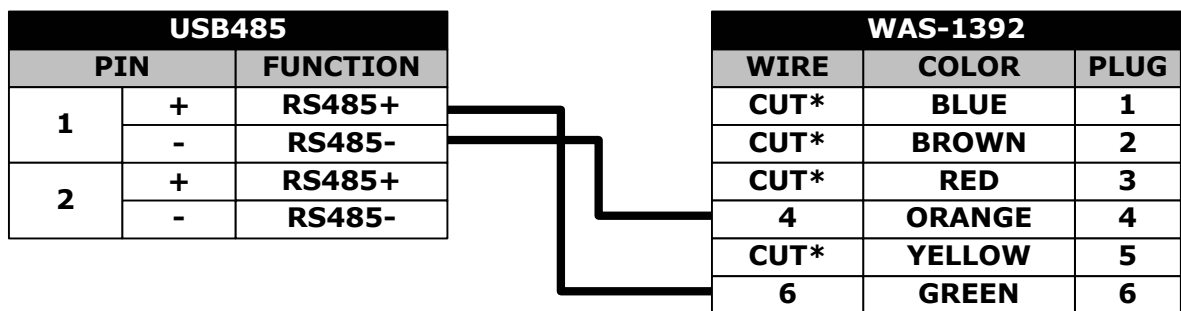
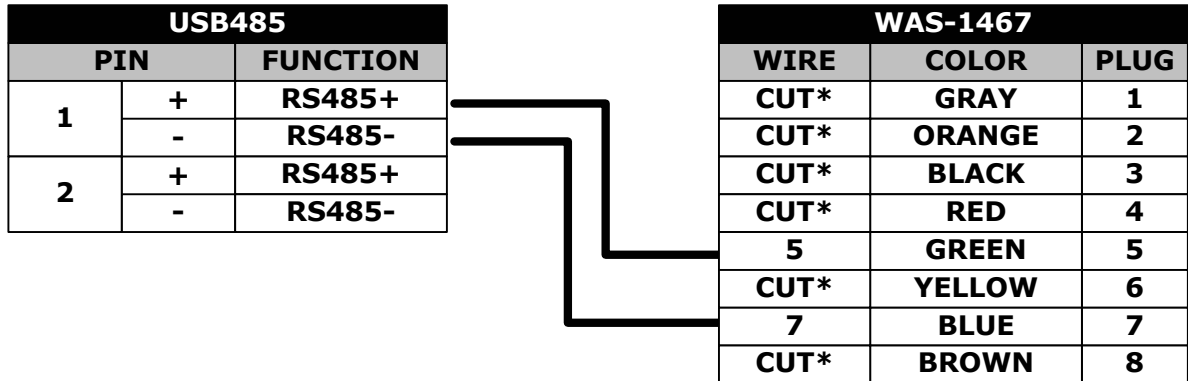
RS485:



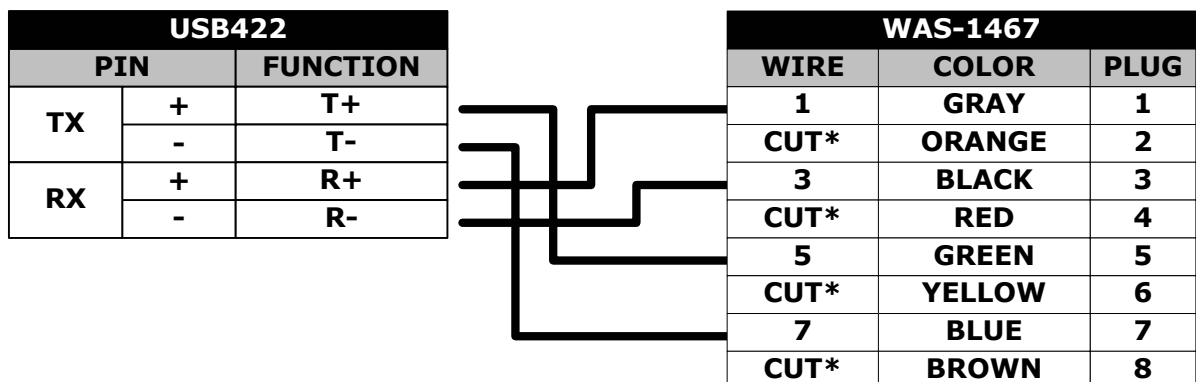
RS422:



9. Wire connection between RS485 Device and USB485 Converter



10. Wire connection between RS422 Device and USB422 Converter



Specifications

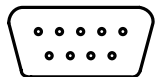
USB



USB Interface:

Full compliance with the USB Specification V 1.1

RS232



RS232 Interface :

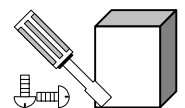
RS232 , Full , 8N1 , max 120K bps, ± 10 KV ESD

RS-422/485



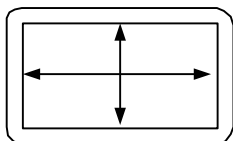
RS422/485 Interface :

RS422/485 , Full , 8N1 , max 250K bps, ± 10 KV ESD



Mounting :

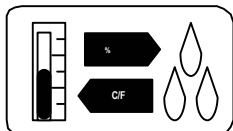
Any surface



Dimensions :

USB232: D 18.8 x W 35 x H 56 mm

USB422/485: D 18.8 x W 35 x H 63 mm



Environment :

Operating Temp : 0 ~ 55 Deg.C

Storage Temp : -10 ~ 55 Deg.C

Humidity : 10 ~ 90 % relative

Note

1. Do not disconnect the USB-xxx converter during running your application program to avoid any unexpected problem.
2. USB-xxx Driver software provides maximum 8 pcs of USB-xxx converters to be used for multiple device communication. The addresses of the multiple devices are according to the COM PORT addresses of the PC or the addresses of the HUB USB PORT where the devices are connected. You should insert the USBxxx into the COM PORT or HUB PORT one by one in order with the addresses indicated.
3. USB-xxx does not work with DOS. Only Win98/2000/Me/XP support USB.
4. You must connect USB-xxx Converter into the USB port of your computer before you start USB-xxx Driver software installation.
5. After USB-xxx Converter is connected into USB port of the computer which is with USB-xxx Driver software installed, LINK LED will turn on to be ready for use, otherwise unplug USBxxx converter and try again after 5 seconds or longer.
6. After unplug USB-xxx converter from the computer, you must wait for minimum 5 seconds and then plug USB-xxx converter into the computer again, otherwise Windows may not detect USB-xxx converter.
7. In the Application Software, the handshaking property must be set to "None" when you use USB485.
8. If you are using RS485 interface for long distance transmission, we suggest you use a 24AWG or bigger range one shielded cable for connection, in order to have better performance.