

BASSO-1010UC

User Manual



Revision History

Revision Date	Document Ver.	Pages Revised	Revised/Added/Removed	Details of Revision
2020.12.02	1.0	All	-	New

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Please be sure to read this manual before using and use the product safely and accurately.

- Pictures and photos in the manual may be different from the physical, and the document is subject to change without notice to improve performance. For the last information, please visit our website (www.sysbas.com).
- To view frequently asked questions and answers, please visit our website and find Support –Technical Support – FAQ section.
- Documents can be downloaded from the product page or Download section.
- Sellers or users should be aware of the fact that this device is intended for industrial use(Class A), not for residential use.
- Warranty policy is included in the product packaging.
- The exchange/return of the device can be handled by the procedure described in the Warranty Policy.

1. USB to Serial Converter

Converter

Function of equipment doubles when connected to other equipment, devices, computers and so on. Therefore, communication of equipment is an important factor of both users at industrial sites and end users. In order for the incoming and outgoing data to be transmitted without any problems, each device participating in the communication must be able to recognize the data sent by each other.

However, the communication is often impossible because different equipment uses different communication specifications and protocols. This is similar to what happens when two people who use different words. An interpreter that translates them between different words is required. Likewise, the communication of equipment requires something that transforms between different communication specifications and protocols: converter.

The converter allows both sides to communicate without any variation in existing communication specifications and protocols. Because there are so many different types of communication specifications and protocols, there are also many different types of converters.

USB

USB is a combination of "Universal," which means all peripherals use the same connector, and "Serial," meaning peripheral devices are connected via serial transmission.

USB is an interface for solving inconveniences caused by slow speed and limited device connections of existing external expansion ports(serial, parallel), a kind of serial port. Compared to external expansion ports that were used to connect devices such as modems, printers, scanners and so on, USB has the advantage of connecting basic peripherals which were connected in all different ways such as keyboards, monitors, mouce, printers, modems, etc., all at once.

It is easy to install as PnP is fully supported, and no additional devices are required as most mainboard chip-set includes USB controller.

The USB converter supports type A, which can be connected to a USB port on a PC or USB hub. Also, this product operates without any external power supply by receiving power from USB.

Serial

RS232 is the most simple and common equipment communication standard established by the EIA(Electronic Industries Association). As it only supports 1:1 communication and is mainly used for communication within 100m(vary on the speed of communication), it has been used in many industrial sites up to now due to its simplicity and affordability.

RS422 and RS485 are complementary standards to RS232 shortcomings. As compared to RS232 with only 1:1 communication and limited to short distance communication, RS422 and RS485 uses four or two signal lines, supporting long distance communication up to 1.2km with a stronger response to noise. RS422/485 also supports multi-drop mode, enabling communication in a more complex and wider environment.

2. Components



Components	Ordering Information
BASSO-1010UC	BASSO-1010UC

3. Product



LED



TXD (Green): Illuminates when BASSO-1010UC transmits RS422/485 data
RXD (Red): Illuminates when BASSO-1010UC receives RS422/485 data

Connector



USB(Latching USB Type A)



Serial Port(RS422/RS485)

- Serial Port(RS422/RS485): The serial port that can communicate.
(Please refer to APPENDIX for pin specifications)

4. Function

BASSO-1010UC converts wired USB signal to RS422 or RS485 signal and performs the following functions:

1) Converts USB to RS422 or RS485

Converts short distance communication USB to long distance communication RS422/485.

2) Latching USB Type A

Latching USB Type A is applied to prevent accidental removal of the USB connector.



[Tip] USB latching functionality may be restricted according to some manufacturers.

A 'click' sound may be heard during normal plugging.

Press the spring button and 'slightly' shake it for easy plugging and unplugging.

3) Terminating Resistance

The built-in terminating resistance allows users to set the terminating resistance(120Ω) to solve the problem if noise on track causes a communication failure.

(Please refer to 6. Settings for terminating resistance setting method)

4) Slew Rate Limit

This function enables error-free communication by activating slew-rate driver to reduce the occurrence of reflected waves at the end of the communication cable and inhibit the generation of EMI electromagnetic waves. However, the communication speed will be restricted when this function is enabled.

(Please refer to 7. Settings for slew rate limit setting)

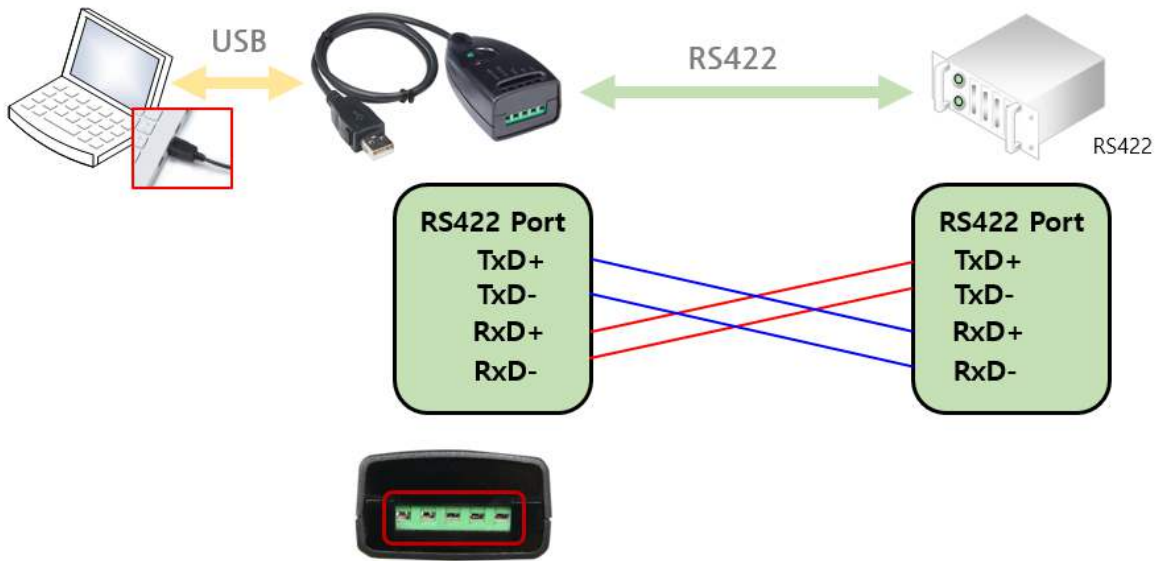
5. Connection

PC – Device#1 Connection(RS422/485)

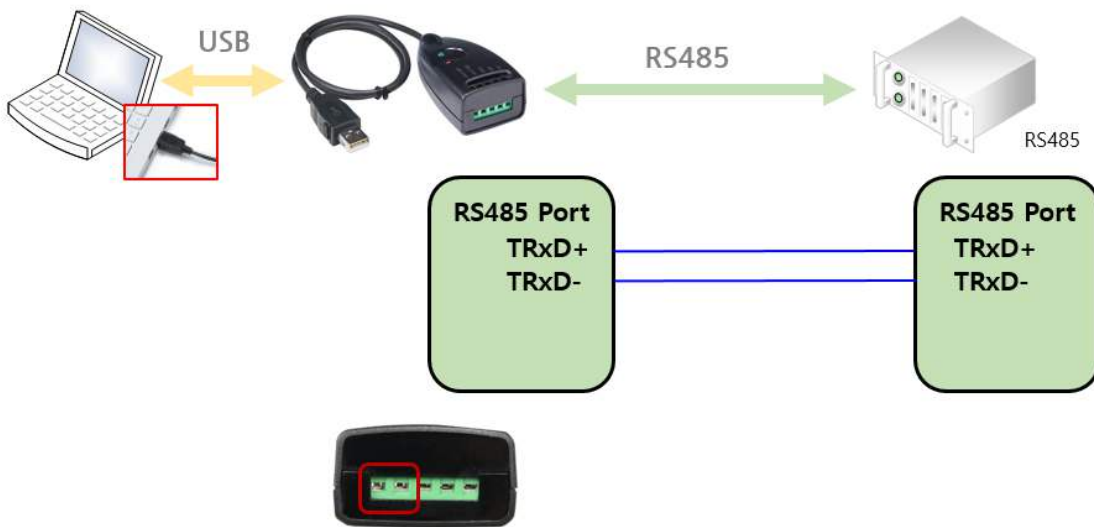


The device-to-device connection is performed by converting USB to RS422/485.

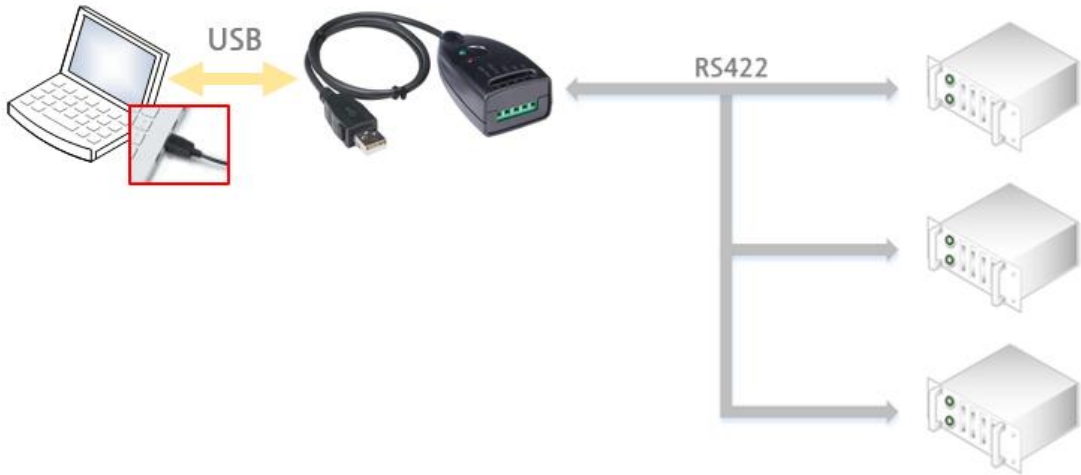
Wiring1. PC – Device#1 (RS422)



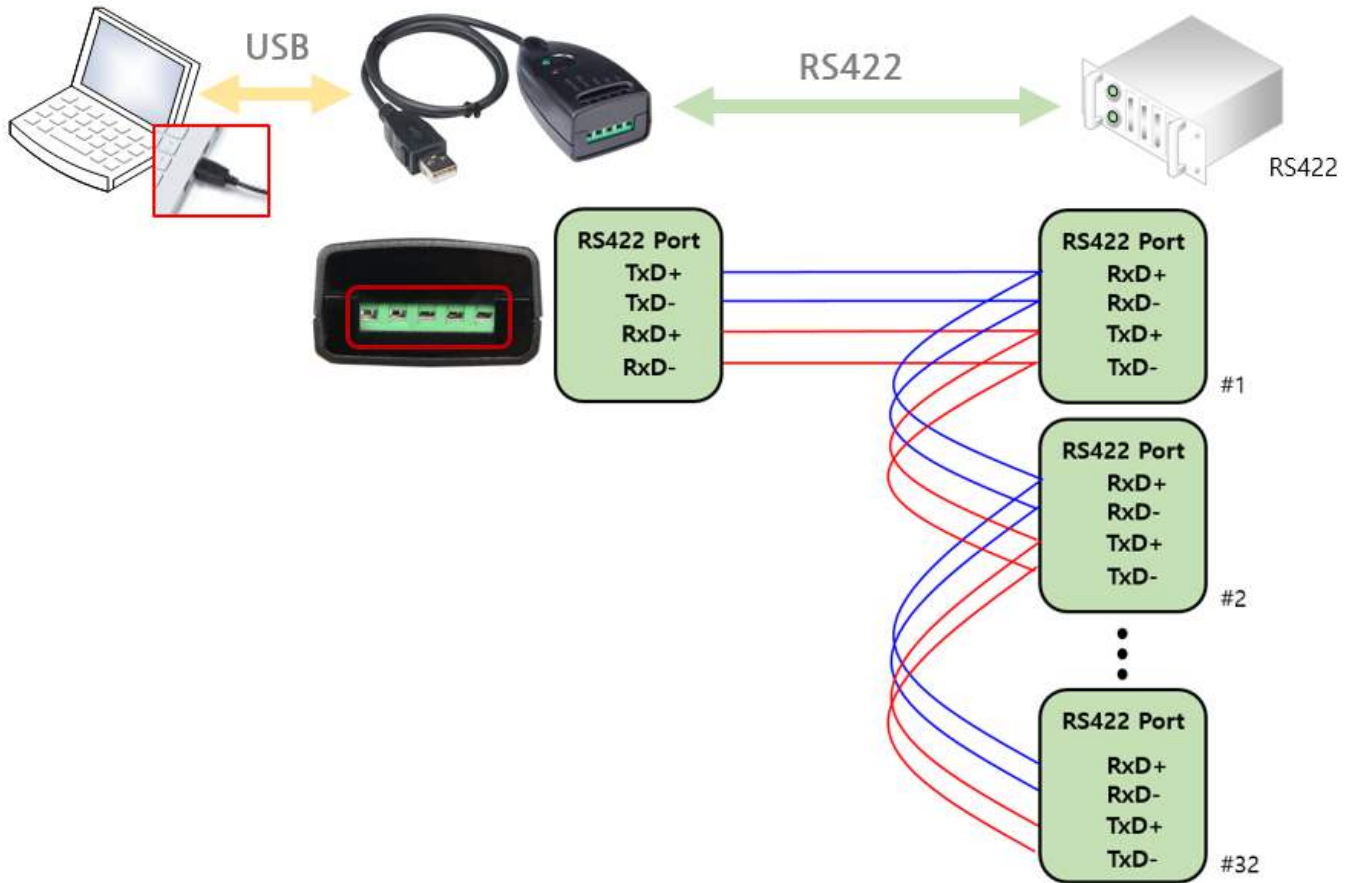
Wiring1. PC – Device#1 (RS485)

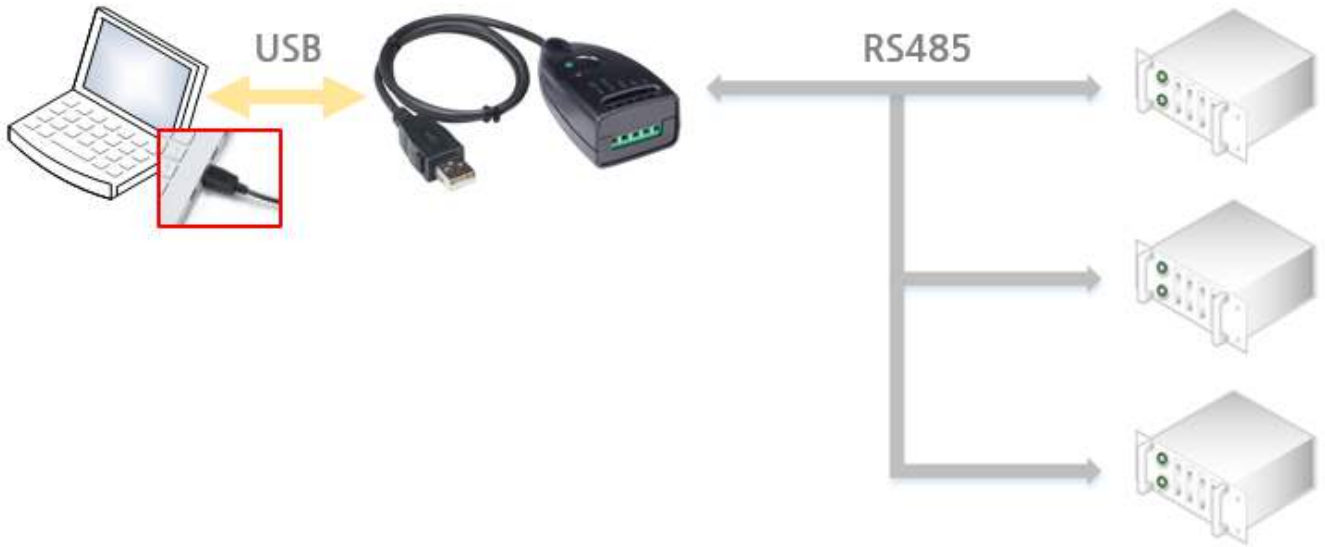


PC – Device#2 Connection(RS422 Multi-Drop)

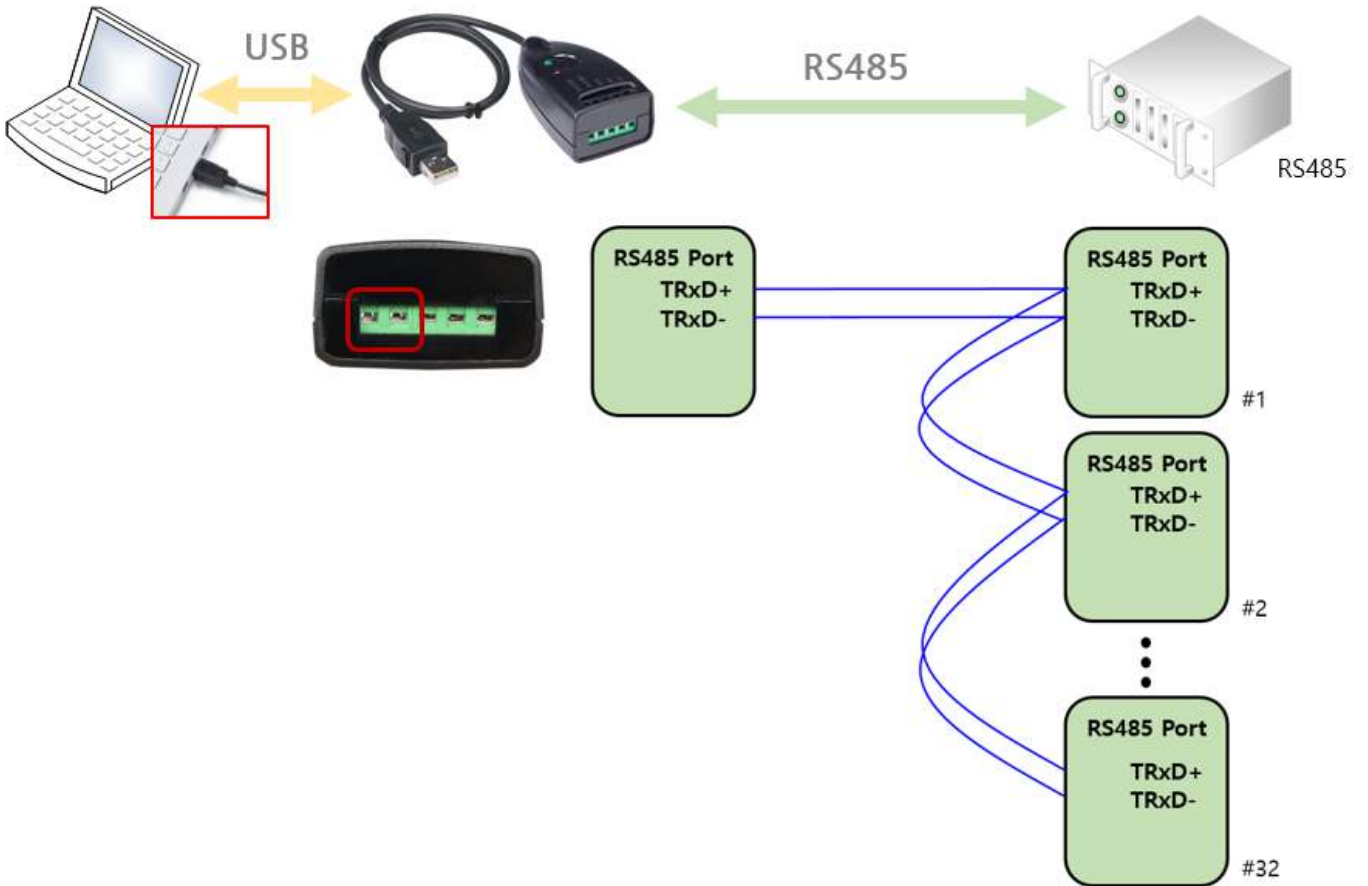


Wiring1. Device – Device#2 (RS422)





Wiring2. Device – Device#2 (RS485)



6. Automatic Installation/Uninstallation of Windows Driver

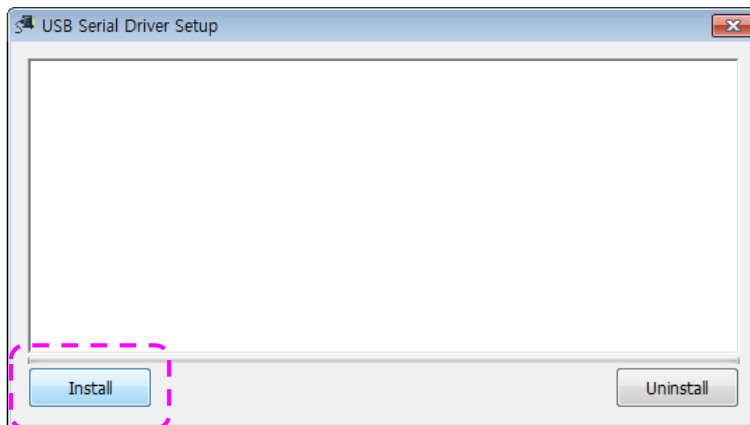
1. Automatic Installation

Boot the PC and connect the BASSO-1010UC to the USB connector.

Download and unzip the driver from SystemBase website(www.sysbas.com): Products – BASSO-1010UC – Download tab.

Run **USB_Serial_Driver_Setup** located in the 32bit or 64bit folder in the driver folder.

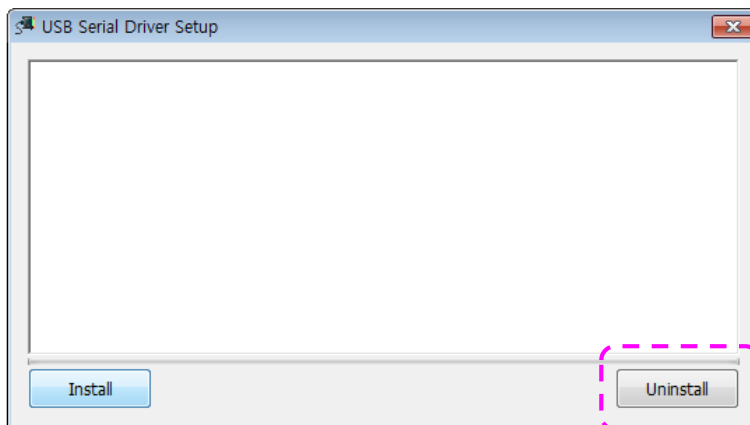
Click **Install** when the following window appears:



2. Automatic Uninstallation

Run **USB_Serial_Driver_Setup**.

Click **Uninstall** when the following window appears:



7. Settings

Set the setting switch on bottom of BASSO-1010UC to the desired mode.



Switch No	ON	OFF
1	RS485(Non-echo)	RS422
2	Slew Rate Limit	
3	RS422/485 Termination	
4	Not Used	

Turn switch 1 ON to operate as RS485, OFF to operate as RS422. (Default: RS422)

Turn switch 2 ON to activate Slew Rate Limit. (Default: Slew Rate Limit OFF)

Turn switch 3 ON to activate RS422/485 termination resistor. (Default: Terminating Resistance OFF)

Class A equipment

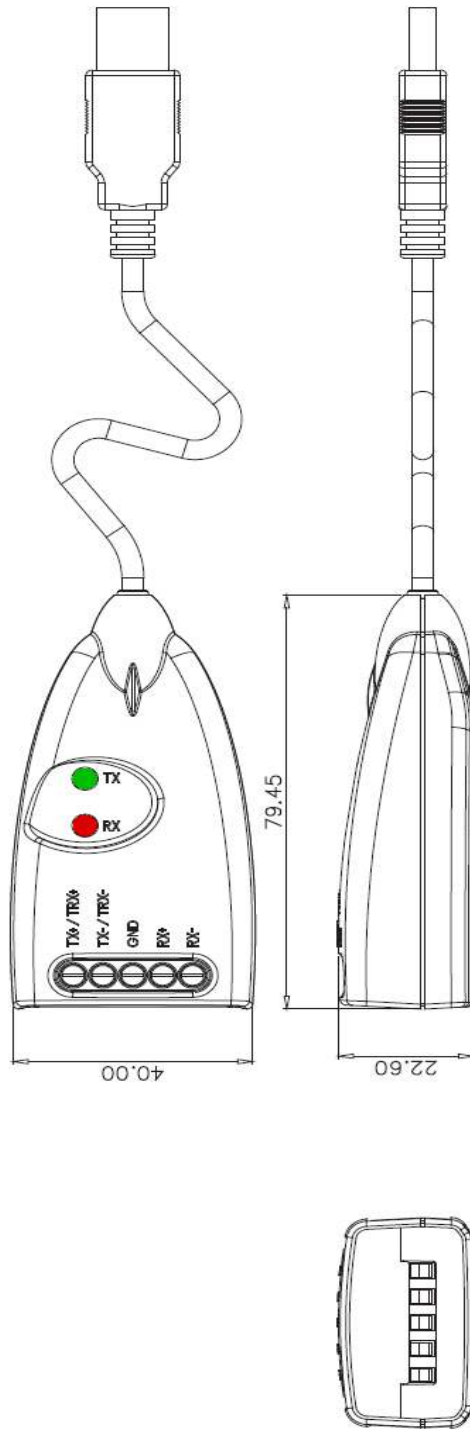
Sellers or users should be aware of the fact that this device is intended for industrial use(Class A), not for residential use.

-----APPENDIX-----

1. Specifications

USB	USB I/F	USB 2.0
	Cable	USB A Type(Latching) Connector, Length 0.6m(1.96ft)
Serial	Standards	RS422/485(5 Pin Terminal Block)
	Maximum Speed	921.6Kbps
	Signal Lines	RS422: TXD+, TXD-, RXD+, RXD- RS485: TRXD+, TRXD-
	RS422 Mode	Point to Point, Multi-Drop
	RS485 Mode	Non-Echo
	Parity bit	None, Even, Odd
	Dip Switch	RS422/485 Selectable Termination Resistor Selectable Slew Rate Selectable
	Protection	400W Pulse Surge Protection (10/1000μs) 15kV ESD Protection
Hardware & Environment	LED	TXD, RXD
	Dimension (W x L x H)	59.2 x 30.8 x 17.65mm 2.33 x 1.21 x 0.69in
	Weight	21g (0.74oz)
	Operating Temperature	-40 ~ 85°C (-40 ~ 185°F)
	Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
	Humidity	5~90% Non-condensing
	Certification	CE, FCC, RoHS
Software	OS Support(Driver)	Windows 7 or above (32/64bit) Automatically detects Linux 2.6 or above
Ordering information		BASSO-1010UC V1.0

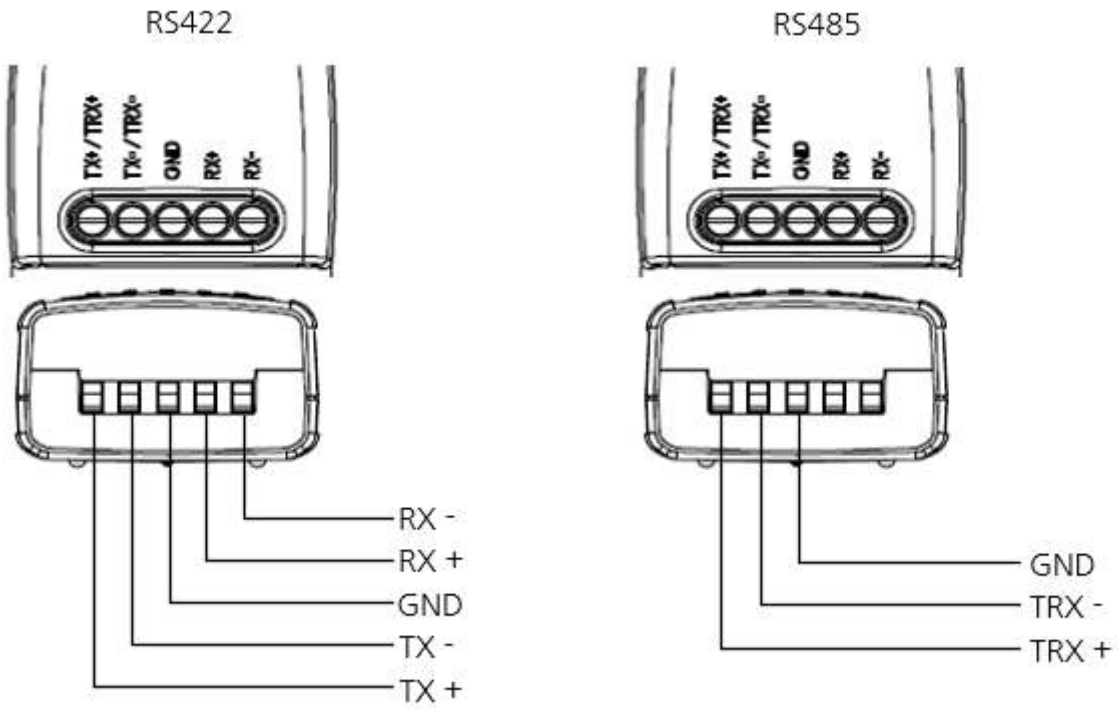
2. Dimension



unit: mm

*Cable Length 0.6m(1.96ft)

3. Serial Port Pin Specification



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Working Hour

MON ~ FRI 9:00 ~ 18:00