# BriterEncoder.com

## Software User Manual

## For (RS485) Single-turn & Multi-turn

## Absolute Encoder

Version 1.0

# CONTENT

# 1 Software installation and connection configuration

## 1.1 Devices used

The operation of the system requires the following software and hardware:

| | |
|---|---|
| A Computer | Support System: Windows 2000/XP/7 /10 |
| A Data Cable | RS485 to USB communication line<br>(this manual uses the ZTEK USB to RS422/485 serial port line) |
| An absolute encoder | Briter single-turn absolute encoder (RS485 interface,<br>1024P/R) Model：BRT38-ROM1024-RT1 |
| A screwdriver | A Philips screwdriver |
| Software | 'BriterEncoder Software' acts as a connected host computer. |

1. A computer

   Support System： Windows 2000/XP/7/10.

2. A RS485 to USB communication line.

   Please note：The driver for RS485 to USB communication line needs to be installed in advance before use. The driver is on the CD in the RS485-to-USB communication cable kit.



DB9转6Pin端子台
配有可插拔接线端子台

3. An Encoder

This manual uses Briter multi-turn absolute encoder (RS485 interface, 1024P/R, 24turns). The software introduced in this manual is suitable for Briter single-turn and multi-turn RS485 encoders.
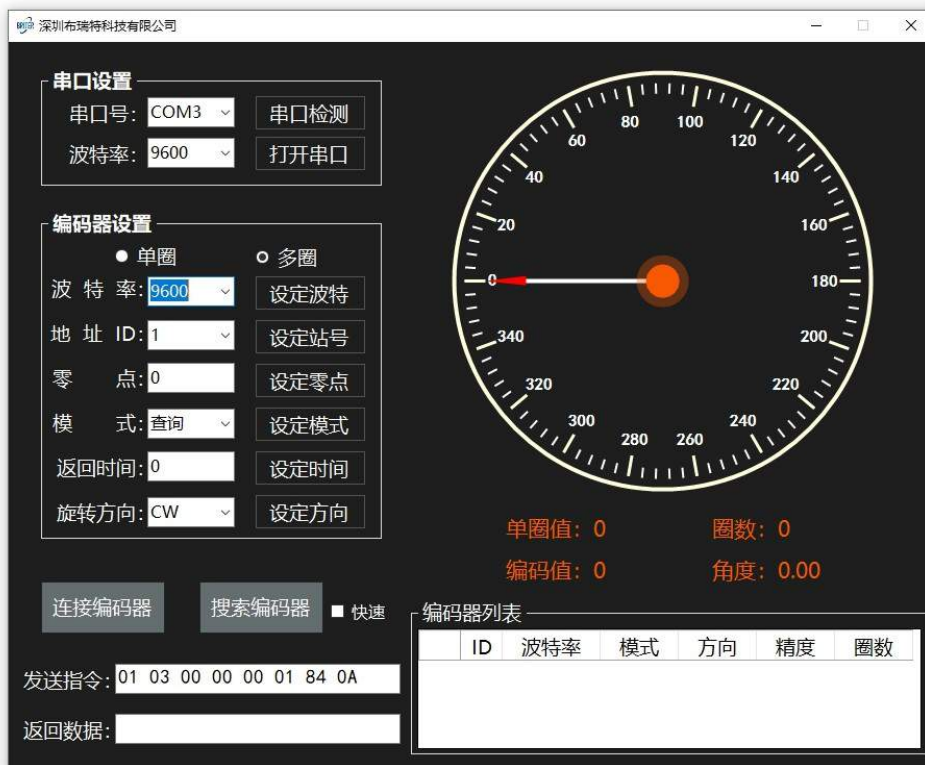


4.   A Phillips screwdriver.

5. Software

The "BriterEncoder Software" is used as the connecting host computer. Refer to the following Screen shoot.

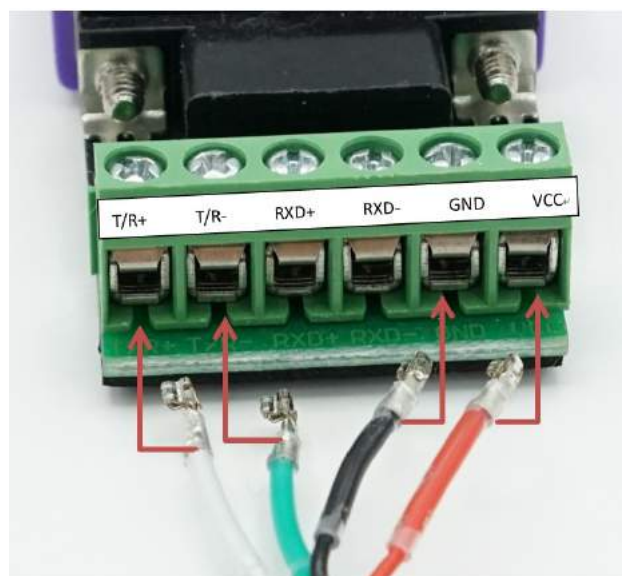It could be download from the website: www.briterencoder.com.

## 1.2 Absolute Encoder Wiring Connection

1.  Connect the absolute encoder to the RS485-to-USB communication line. Briter absolute encoder has five connection wires, and the color and function definitions are as below:
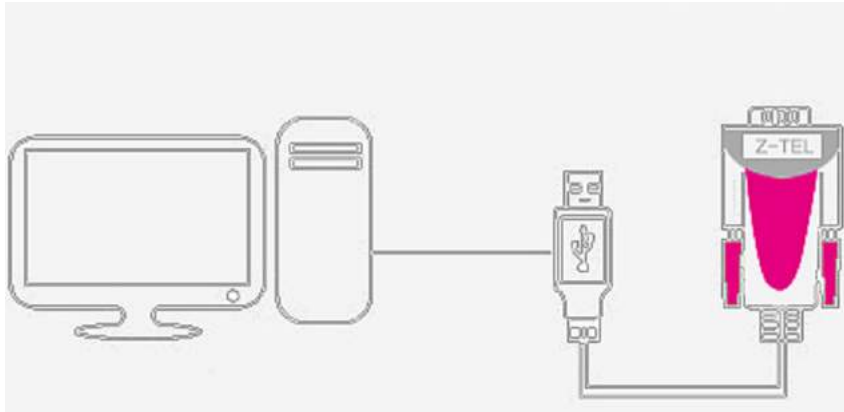
| | | | |
|---|---|---|---|
| | Red | Power supply (5V、9~30V) | Please pay attention to the voltage value on the encoder label before power on. |
| | Black | Ground（GND） | / |
| | Yellow | （ZR） | Function wire |
| | Green | RS485B | / |
| | White | RS485A | / |

1. Please pay attention to the voltage value (5V, 9~30V) on the encoder label before power on. Make sure to supply power accordingly.
2. Set zero position: connect yellow wire to ground (black wire) more than 100mS.
3. Please do not connect the yellow wire to anywhere during working except when it is needs to be set zero position.
4. Restore the factory setting function: after power off, connect the yellow wire to ground (the black wire). Power on again, hold for 2 minutes, it can be reset after 2 minutes, power off, remove the yellow wire.

Use a Phillips screwdriver to connect the encoder to the RS485–to–USB communication line as shown below:

2.  RS485 to USB communication cable to connect to the computer USD port.



# 1.3 Open the BriterEncoder software.

The 'BriterEncoder Software' does not need to be installed, Download it from the website: www.briterencoder.com.  just double-click to open it.

# 2 Software startup

## 2.1 Detect whether the encoder is connected successfully.

Click the serial port detection button on the software interface.



If the connection is not successful, the following interface reminder will appear. There are several possible reasons.

1. No encoder connected.

2. The driver for RS485 to USB communication line is not installed. How to install the driver will be described at the end of the manual.

If the connection is successful, the serial port number will appear.

## 2.2 Software connection encoder

The software can automatically recognize the number of turns of the absolute encoder, and only when the single-turn absolute encoder is used as an electronic multi-turn absolute encoder, it is necessary to select the multi-turn button.

Baud rate: the baud rate value can be reset, and the factory default value for all types of RS485 absolute encode is 9600.



Encoder Address ID： when multiple encoders are linked at the same time. The encoder address ID needs to be set to a different one.
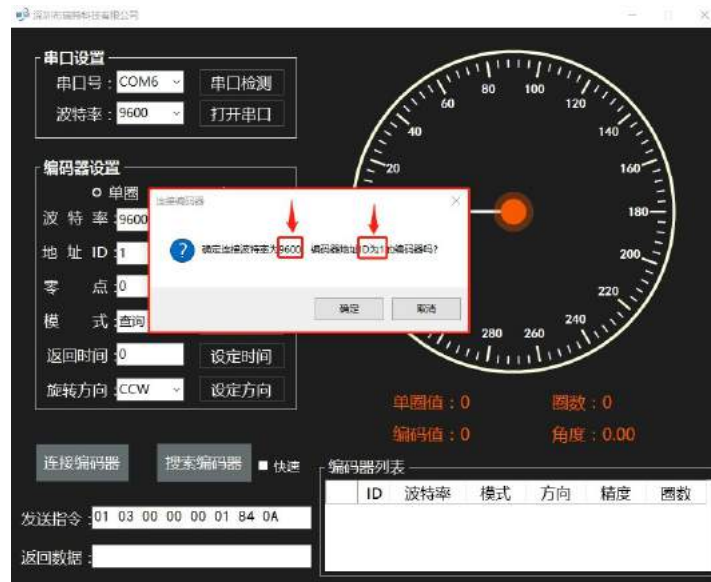
Click the Open serial port button.



Then click the connect encoder button, and the software will automatically search for connectable encoders and send corresponding instructions.

Pop-up prompt box, if the default baud rate and ID number, click the OK button. If multiple encoders are connected through the same RS485-to-USB communication line, you can go back to the main interface to select the corresponding ID encoder and baud rate. Click again to connect to the encoder.



After the software connection is successful, the encoder angle value, ID related information, sending instructions and other information will be displayed. The information will change with the rotation of the encoder.
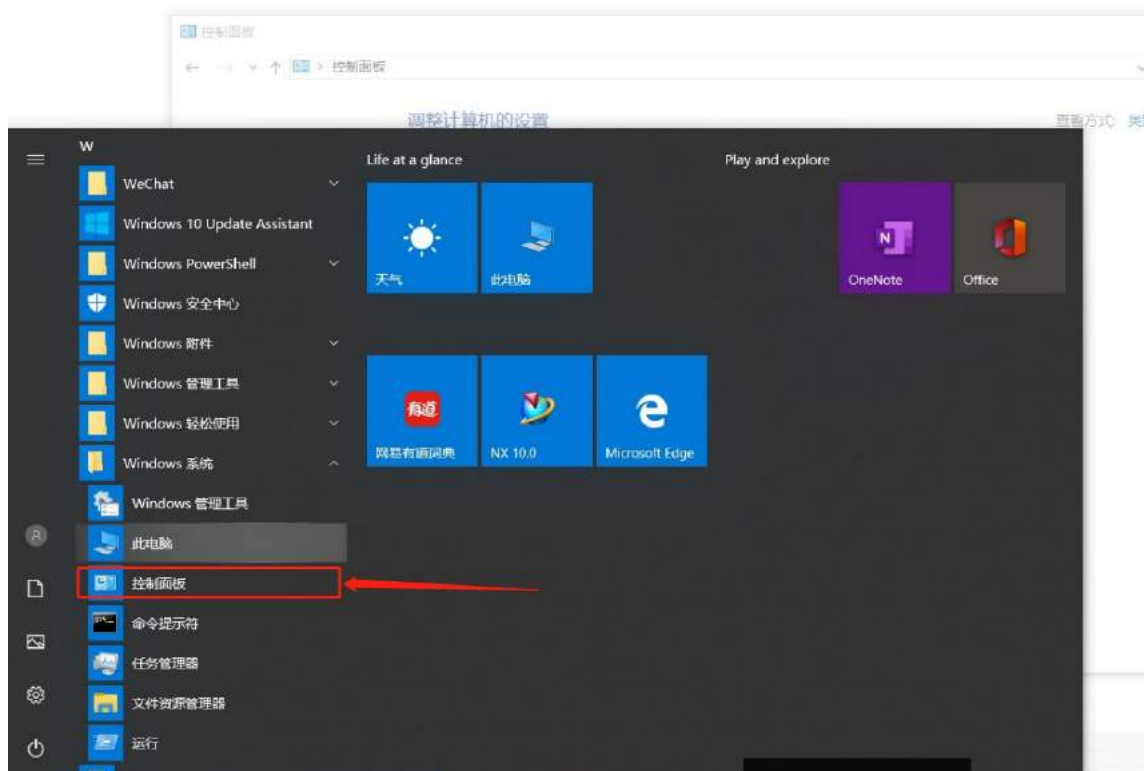


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# 3 Install RS485 Driver Software

## 3.1 Query whether the RS485 driver software is installed or not.

The RS485 driver is used to drive the RS485 to USB communication line to communicate with the computer.

Click the computer start menu and select the control panel command.
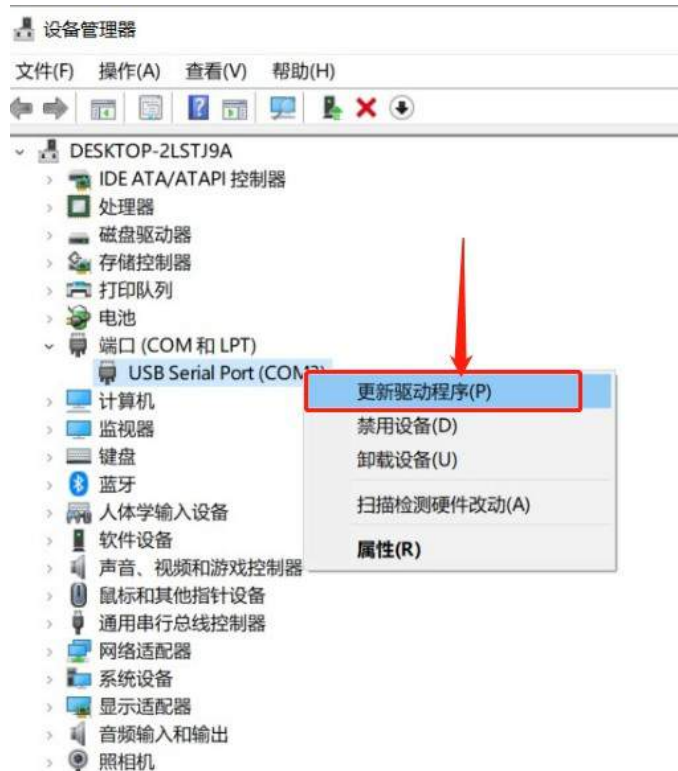


Click device and voice.



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Click device manager.



Click the port column in device manager, and if you have connected the connection encoder to the computer and have not successfully installed the RS485 driver software, this column will give an exclamation point warning.

The solution is as follows: right-click in the problematic port bar, update the driver bar appears, double-click.
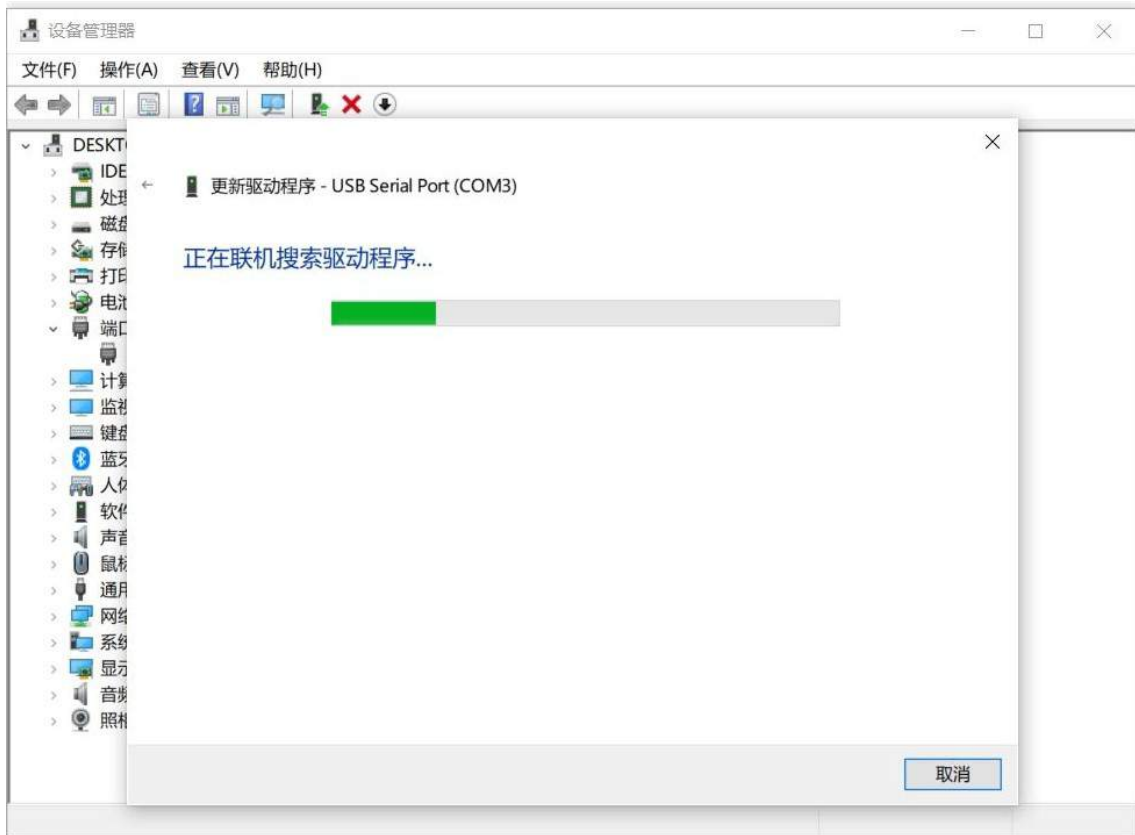


Select automatic search driver.



You can also select "Browse my computer for driver software (R)" to manually add drivers to your computer.

The following screen will appear.

If the installation is successful, the exclamation point warning will disappear. Appear as the below screen shoot.