

CBX Series Current Sensor Software Documentation

1. Introduction

This document aims to provide users with detailed information about the CBX series current sensor software and its features. Please read this user manual carefully before using the software to ensure proper installation and operation.

2. Software Preparation

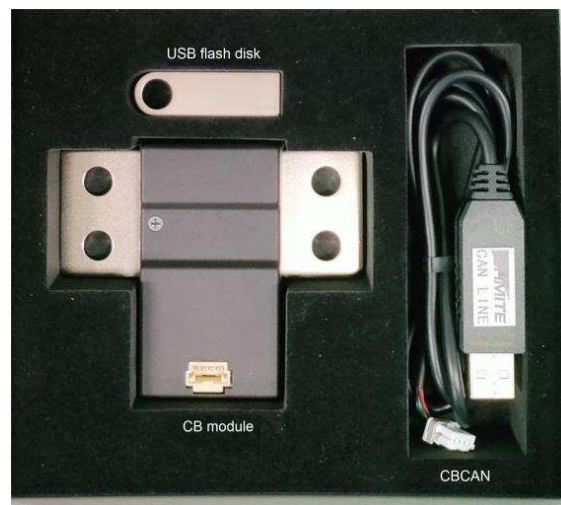


Figure 1: CBX series Current Sensor Product Sample

Step 1: Take out the CB module, CBCAN harness from the box.

Step 2: Connect devices and computers using CBCAN.



Figure 2: Schematic diagram: CB module connected to the computer via CBCAN

Step 3: Extract application "IsenMeasure_Customer_V3.5.exe" from the USB. Double click application.

3. Software Features

3.1 Switch Language

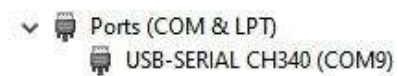
Double click the blue button at the bottom right to switch between Chinese and English.



Figure 3: software Interface

3.2 Connect to CB module.

Step 1: Find the com port in the "Device Manager" under the name "USB-SERIAL CH340."



Step 2: Go back to the application "IsenMeasure_Customer_V3.5.exe", select the COM port, and click the "Open" button.

Step 3: Set CBCAN rate(default rate is 500Kbps).



Figure 4: CBCAN Setting

3.3 Set Command ID

The Command IDs correspond to the internal protocol of the CBX series sensor. To accurately analyze the sensor data, it is imperative to correctly input all command IDs.

The specific meanings of the corresponding settings can be found in the diagram below:

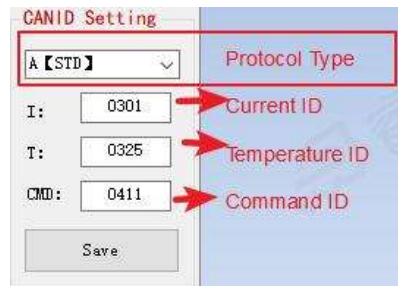


Figure 5: CANID Setting

The default value for protocol type is STD. The default value for current ID is 0301, for temperature ID is 0325, and for command ID is 0411.

Change the default ID and click the 'Save' button, the new setting will take effect and remain valid even after device is restarted.

We provide customized services for the internal protocol of the current sensor.

3.4 Auxiliary line

The auxiliary line determines the allowable error range, which serves to evaluate whether the current measured by the sensor exceeds the predetermined limit.

"The 'Ref Accuracy' stands for reference accuracy, and 'Ref Current' stands for reference current. To determine the allowable error range, multiply these two values and then add or subtract the result from the 'Ref Current'. For example, if the 'Ref Current' is set to 100A and the 'Ref Accuracy' is set to 10%, then two reference auxiliary lines will be generated at 90A and 110A. If the current value calculated by the sensor is greater than 110A or less than 90A, it indicates that the result has exceeded the accuracy range of 10%."

3.4.1 set reference current value

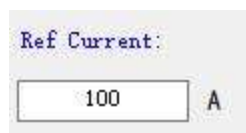


Figure 6: reference current value

Input current sources output current value.

3.4.2 Set reference accuracy

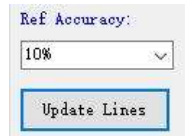


Figure 7: reference accuracy

This value can be select or input.

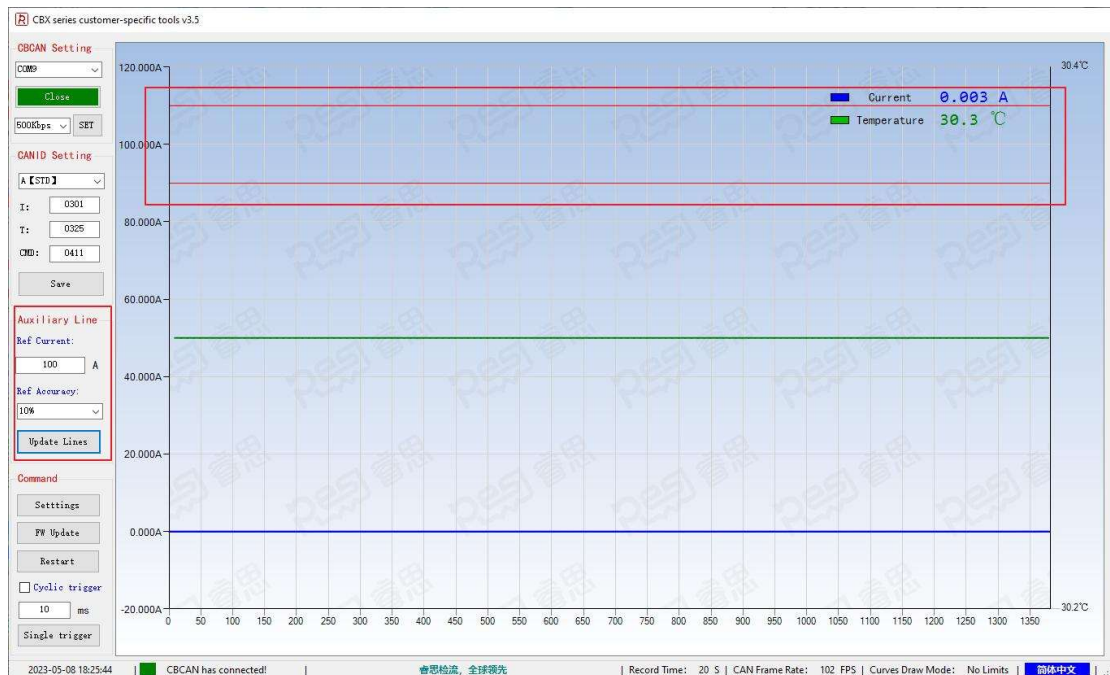


Figure 8: Reference line

3.5 Command

3.5.1 Settings

We provide customized services for the internal protocol of the CBX series current sensor. To accurately analyze the sensor data, it is imperative to correctly input all command IDs. Therefore, exercise caution while modifying parameters.

Module Parameters Setting

Normal Command

	CAN_ID:	Work Mode:	Bit Format:	Polarity:	Interval(ms):		
CH I:	-	Interval*Trigg	Big Ending[moto]	Positive	200	GET	SET
CH T:	-	Interval*Trigg	Big Ending[moto]	Positive	200	GET	SET

	CMD CAN_ID:	Default WorkMode:	Default Can Speed:	Protocol Type:
Settings:	-	Normal Mode	500kbps	A【STD】

CAN Frame Format:

Standard CAN frame format

GET SET

	Soft Version:	SerialNumber:	Special Marking Code:	
Prg Infor:	-	00000000	00 0.1% Automobile	GET

Figure 9: Normal Command

Click the “Get” Button to obtain configurations. Click the “Set” Button to modify configurations.

‘CHT’ stands for Temperature channel. ‘CHI’ stands for current channel. ‘Prg Infor’ stands for Internal software information of the device.

3.5.2 Firmware Update

This feature can upgrade the internal firmware of the device.

Download speed: Depending on the computer's configuration, various download speeds can be selected. It is advisable to opt for the median speed. If the download fails, the slower speed can be reconfigured.

After each update, if you need to update again, please reopen this interface.

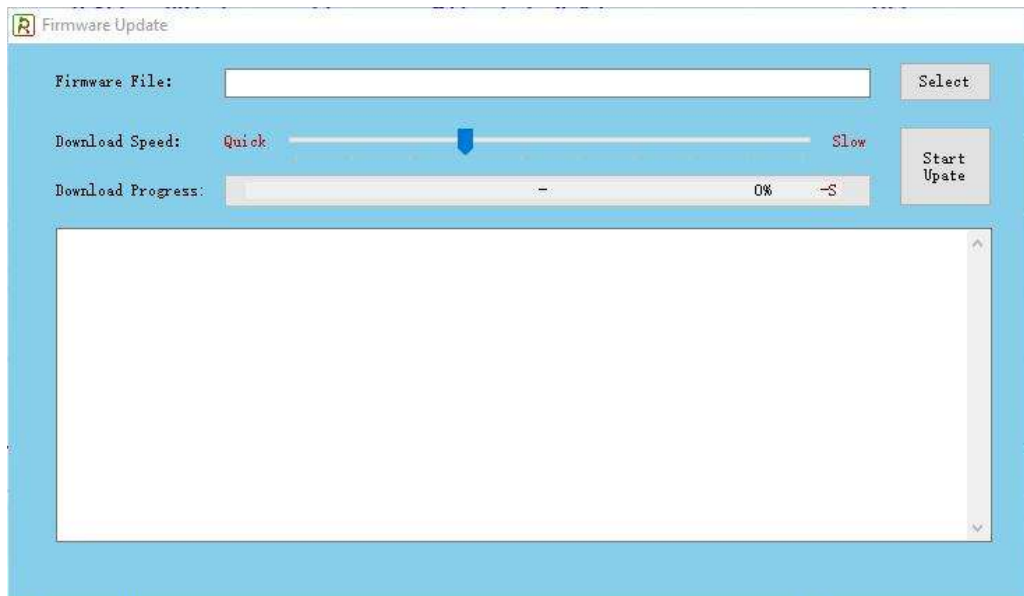


Figure 10: firmware Update

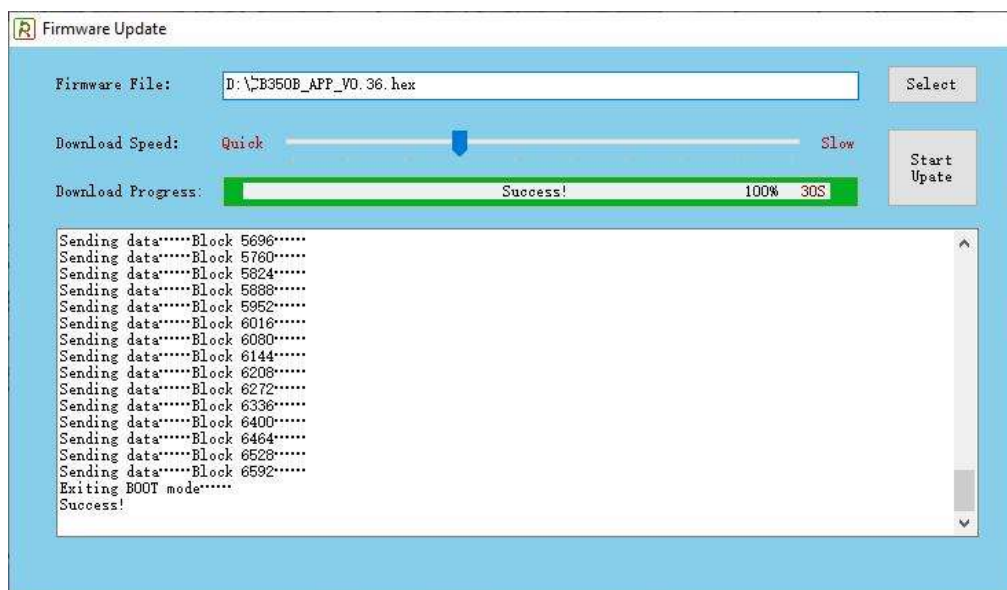


Figure 11: Firmware update completed successfully

3.5.3 Restart

Click 'Restart' button will restart the sensor .

3.5.4 Trigger

Cyclic trigger: Current sensor cycles back the current value based on the filled-in time.

Single trigger: Current sensor sends back a current value.

3.6 Data Acquisition

The right line graph displays real-time current and temperature values.

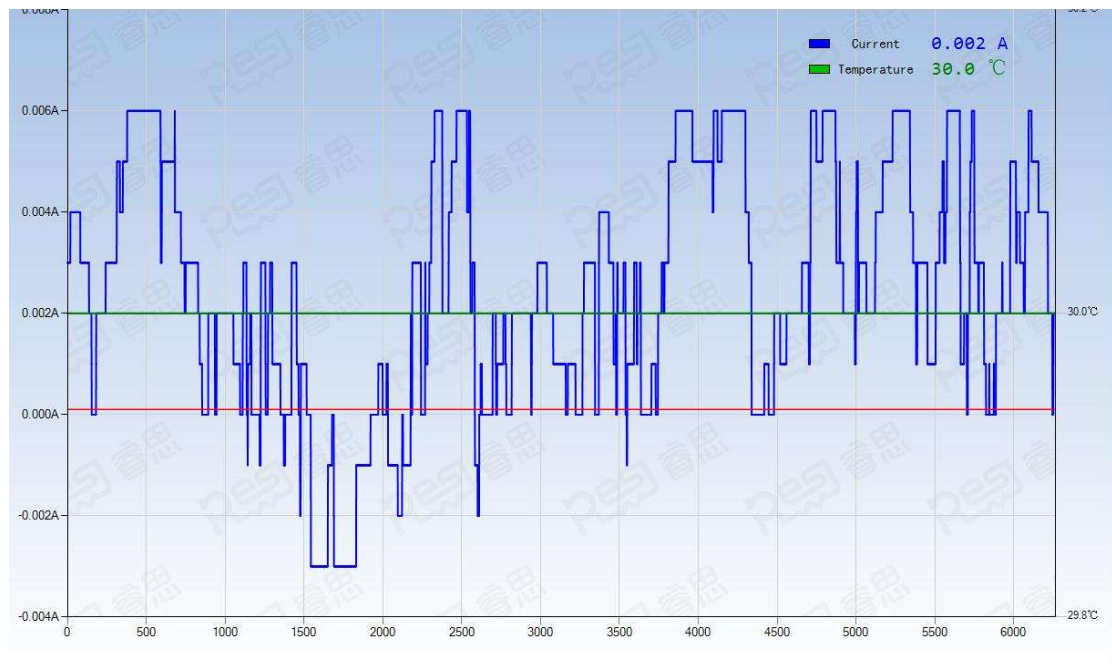


Figure 12:Real time data

4. Technical Support

If you encounter any problems during the installation or use of the current sensor software, please contact our technical support team.