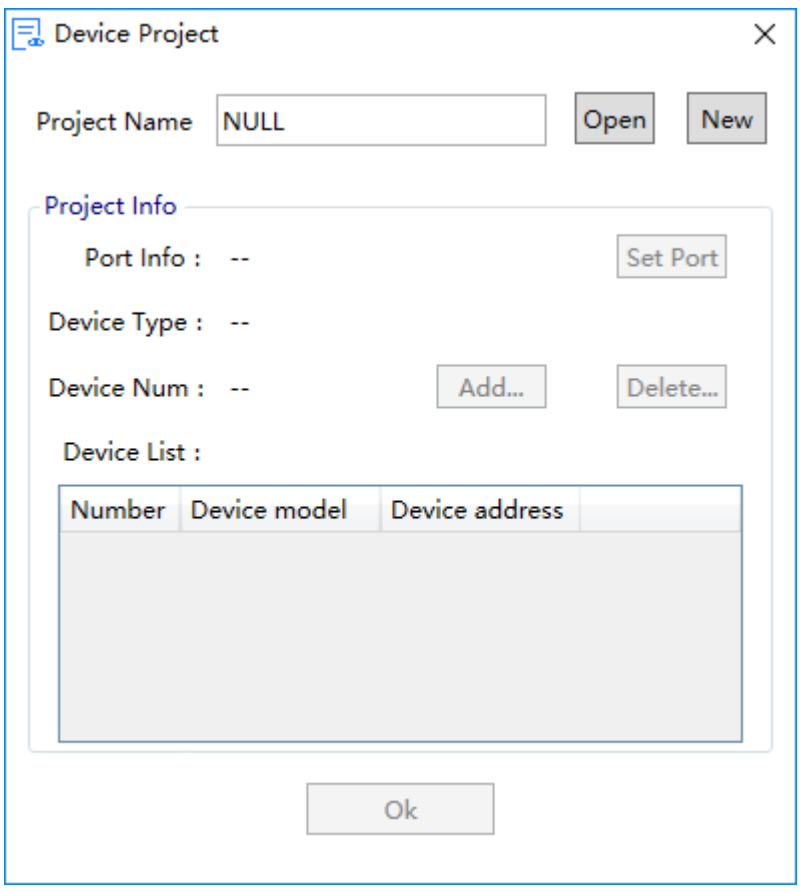
ENC Monitor Software User Manual

Part I: Program startup and serial port connection

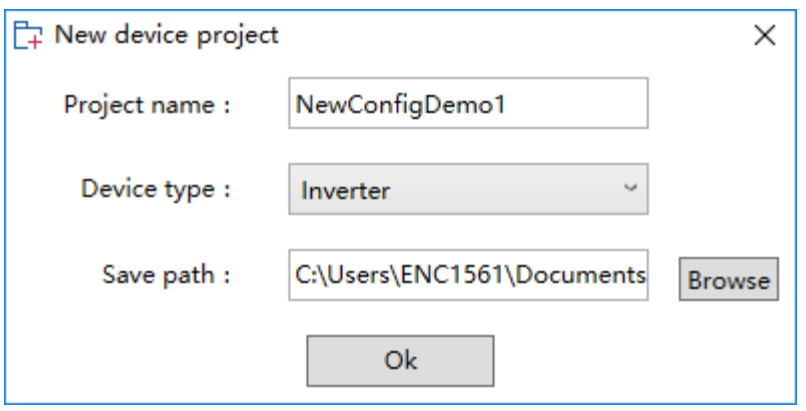
(1) When the program is started for the first time or the project file does not exist:

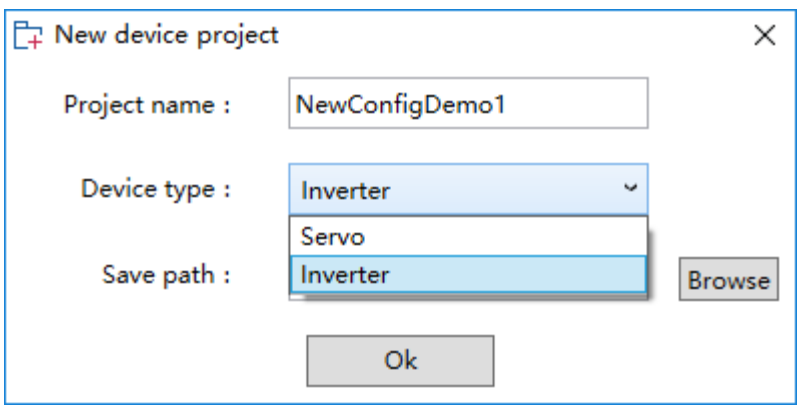
User can choose to open or create a new project.



Open: Select to open an existing project from the file browser.

New:

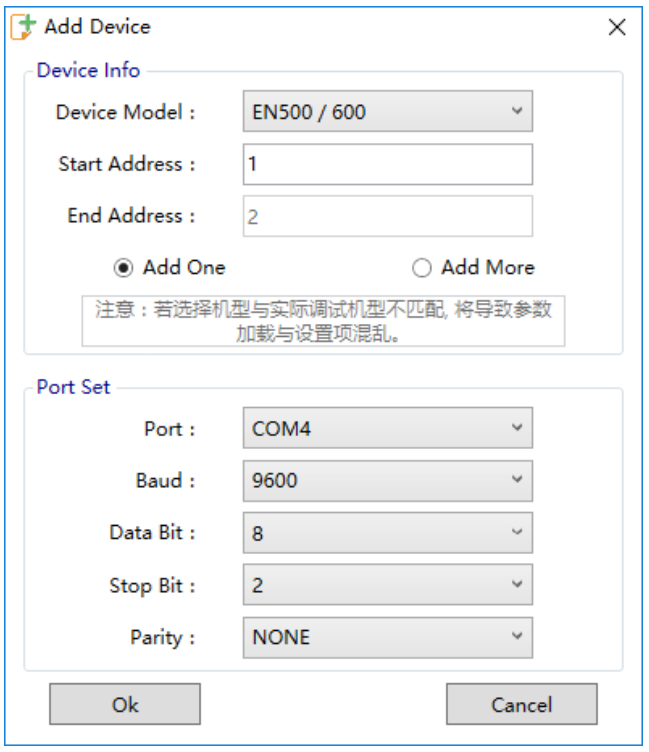




User sets the project name, device type and project save path, and then enters the next step after OK.

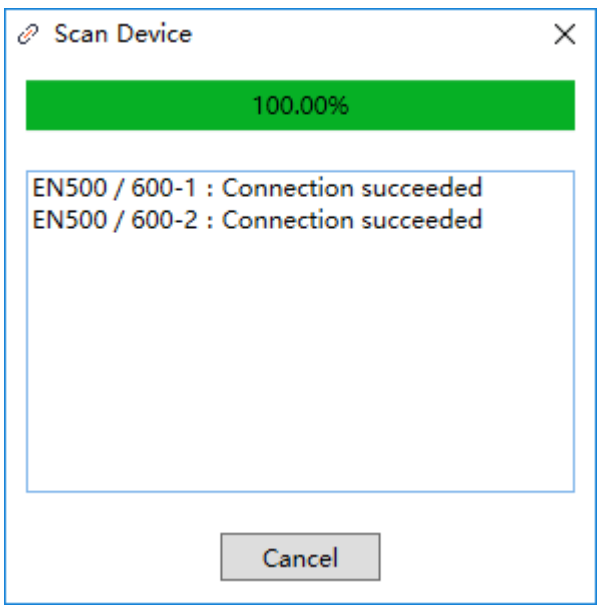
Note: ENC Monitor support the debugging and networking of the two major categories of servo drives and inverters.

Add Device:



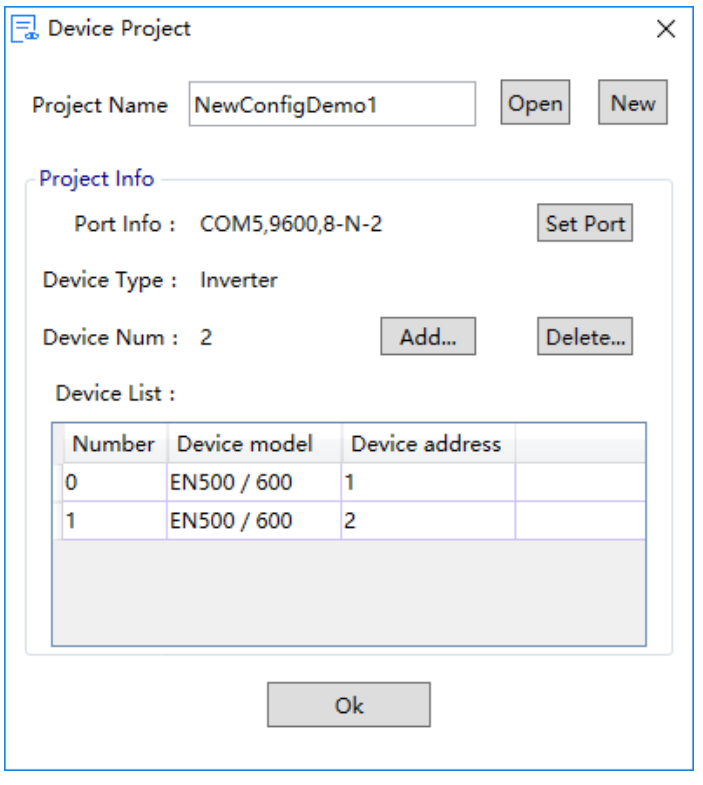
User can select the actual device model and the corresponding device address, support single and multiple add(multiple add devices with a continuous unique address), and the communication port configuration can also be performed on this page.

Scan Device:



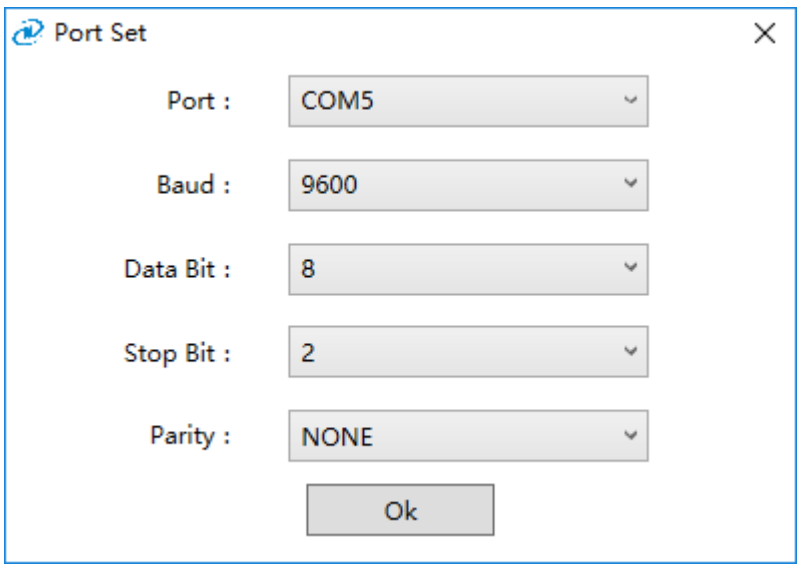
After scanning the device, enter the main interface.

(2)When the project file already exists:

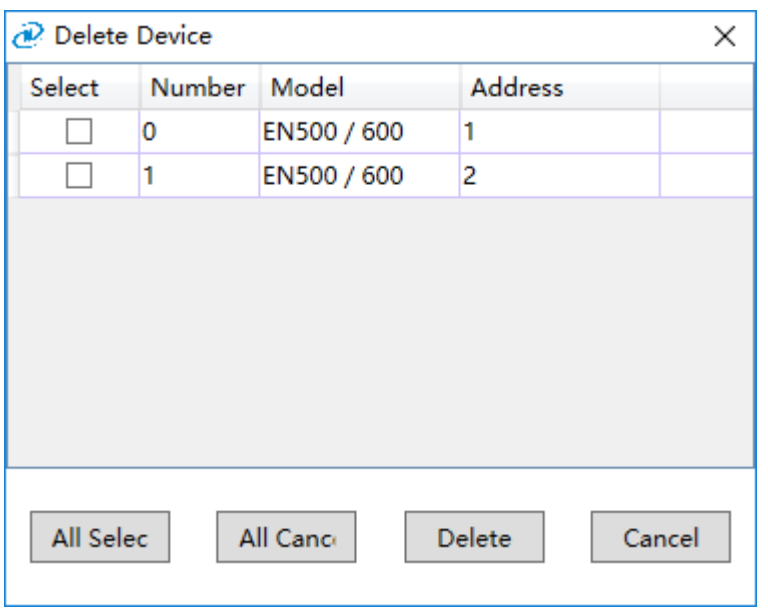


The device project when the software was closed last time is displayed by default. The user can configure the project at the beginning of startup, such as port configuration, add device, delete device, and enter device scan after confirming.

port configuration:



Delete Device:

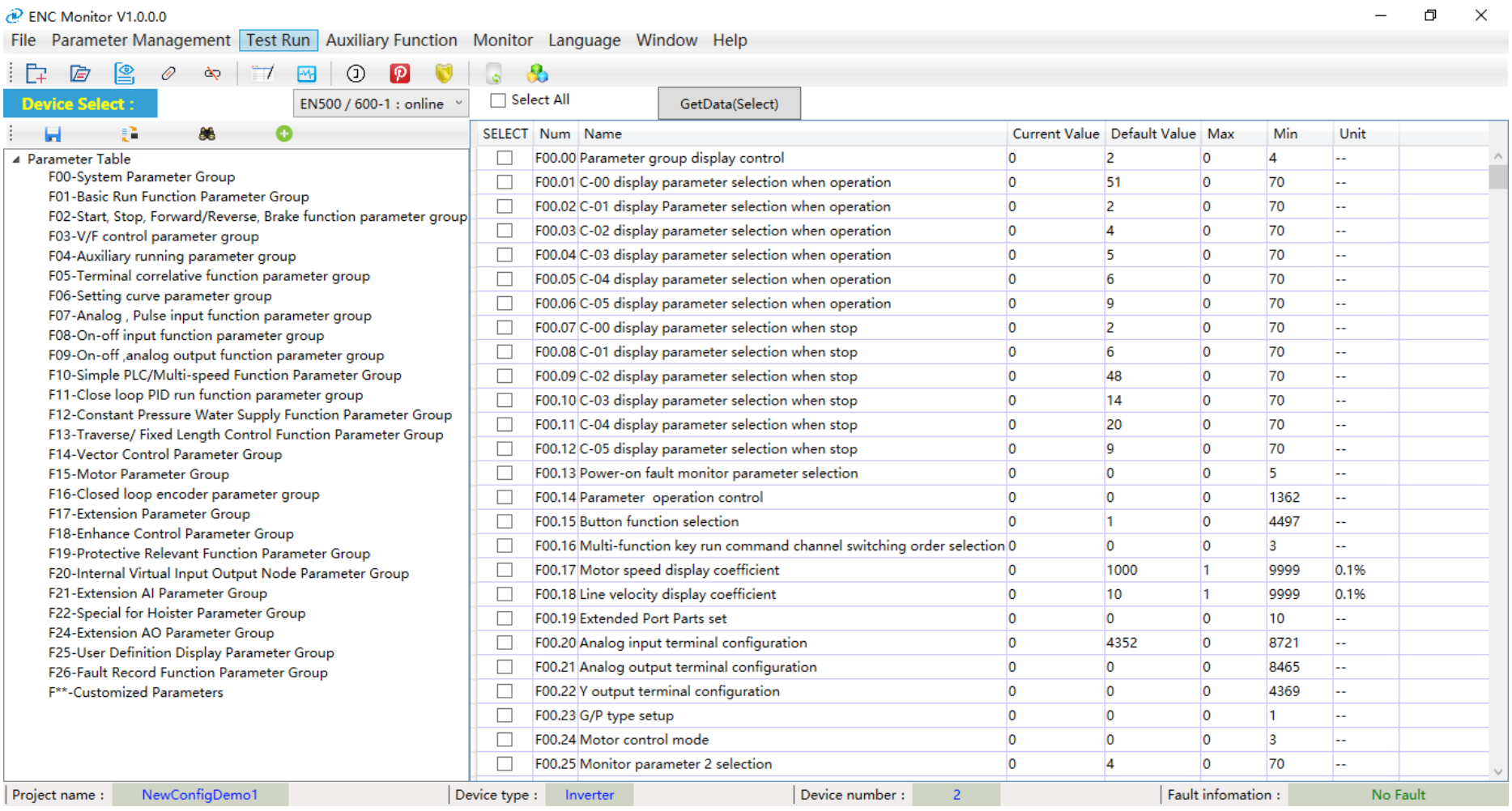


Select the device to be deleted, delete it, support single and all deletion.

Part II: Main window of the program

(1) Main interface

After the program enters the main window, default loadingthe parameter editing page.



(2) The toolbar of main window

- Connect to inverter series machines:

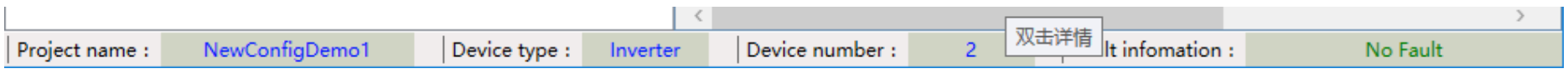
The corresponding functions of the toolbar: new project, open project, review and modify project, connect all device, disconnect all device, parameter editing, virtual oscilloscope, |, JOG operation, DI/DO setting, warning message, |, factory reset, fault reset

- Connect to a servo series machine:

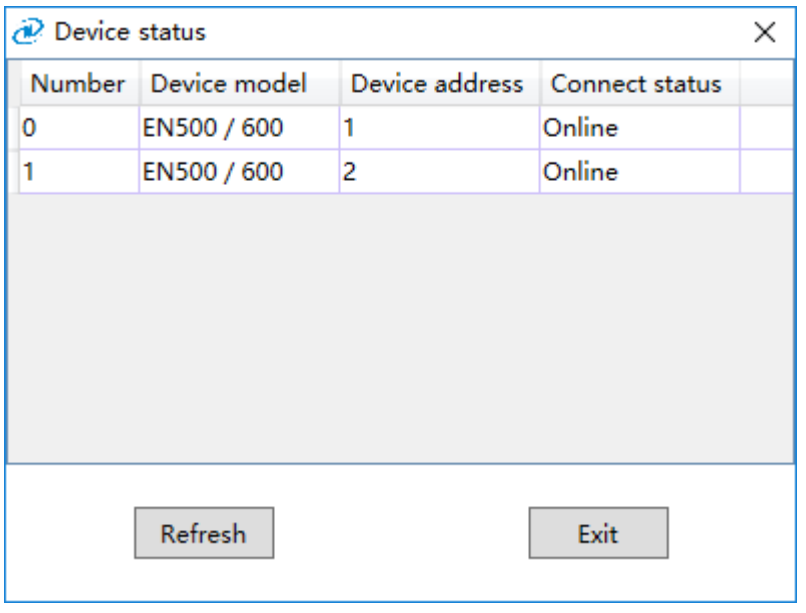
The corresponding functions of the toolbar: new project, open project, review and modify project, connect all device, disconnect all device, parameter editing, virtual oscilloscope, |, inertia identification, JOG operation, DI/DO setting, warning message, |, emergency stop, factory reset, fault reset

(3) The Satus bar of main window

The status bar displays: project name, device type, device number, fault information.



Double-click the device number area to display the connection status of each device in the current project.


Device status
Number
Device model
Device address
Connect status
0
EN500 / 600
1
Online
1
EN500 / 600
2
Online
Refresh
Exit

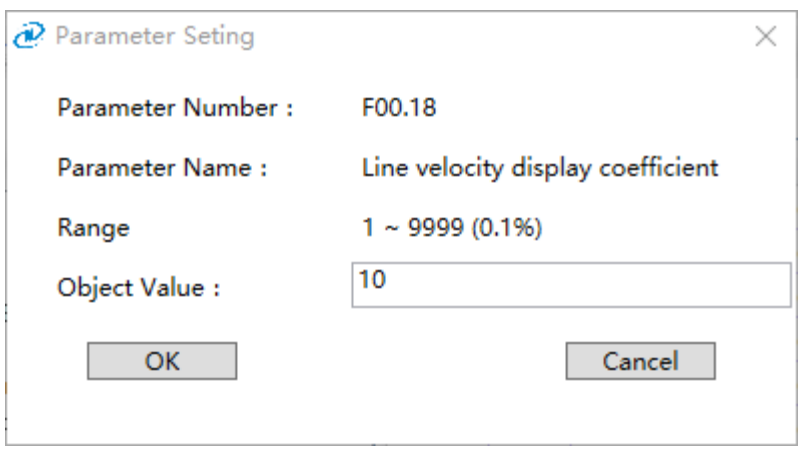
Part III: Parameter editing

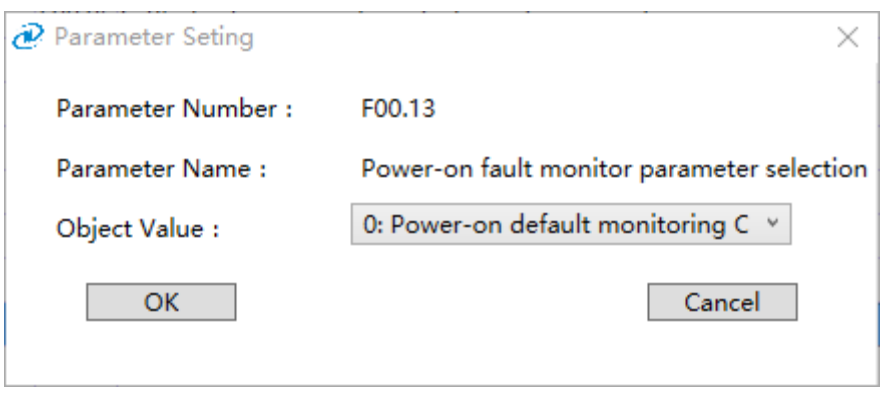
(1) Device select

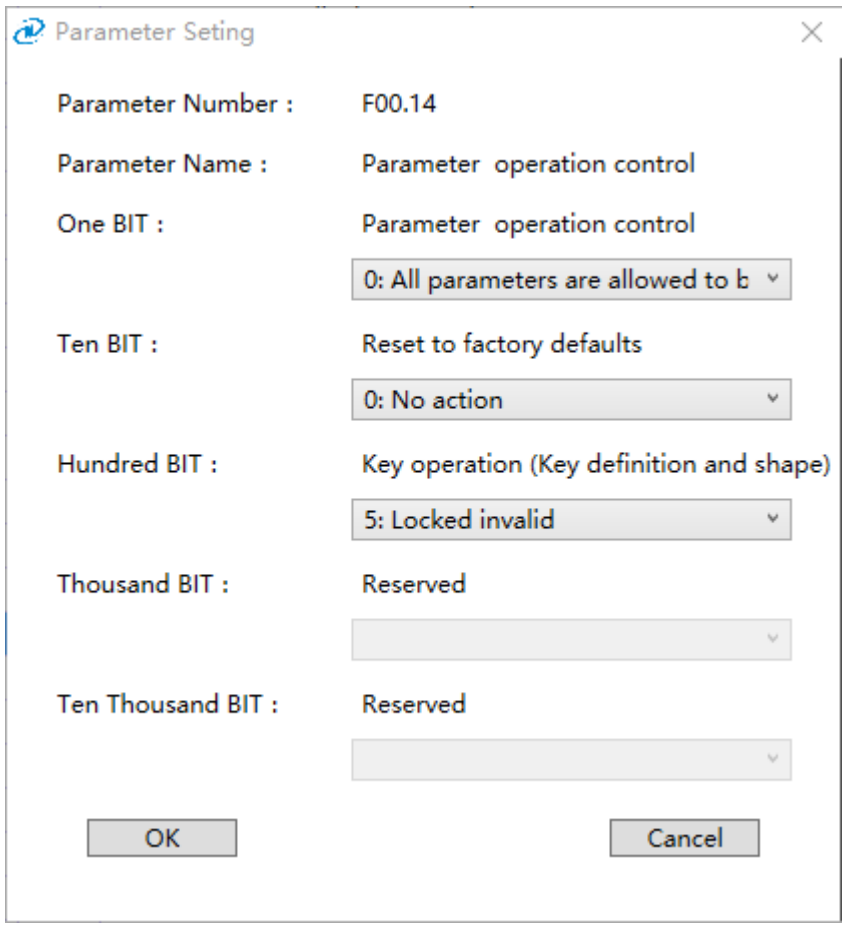
Select the device in the project for parameter editing operation

(2) Parameter settings

Double-click the corresponding item in the parameter table to set the parameter value of the corresponding item.



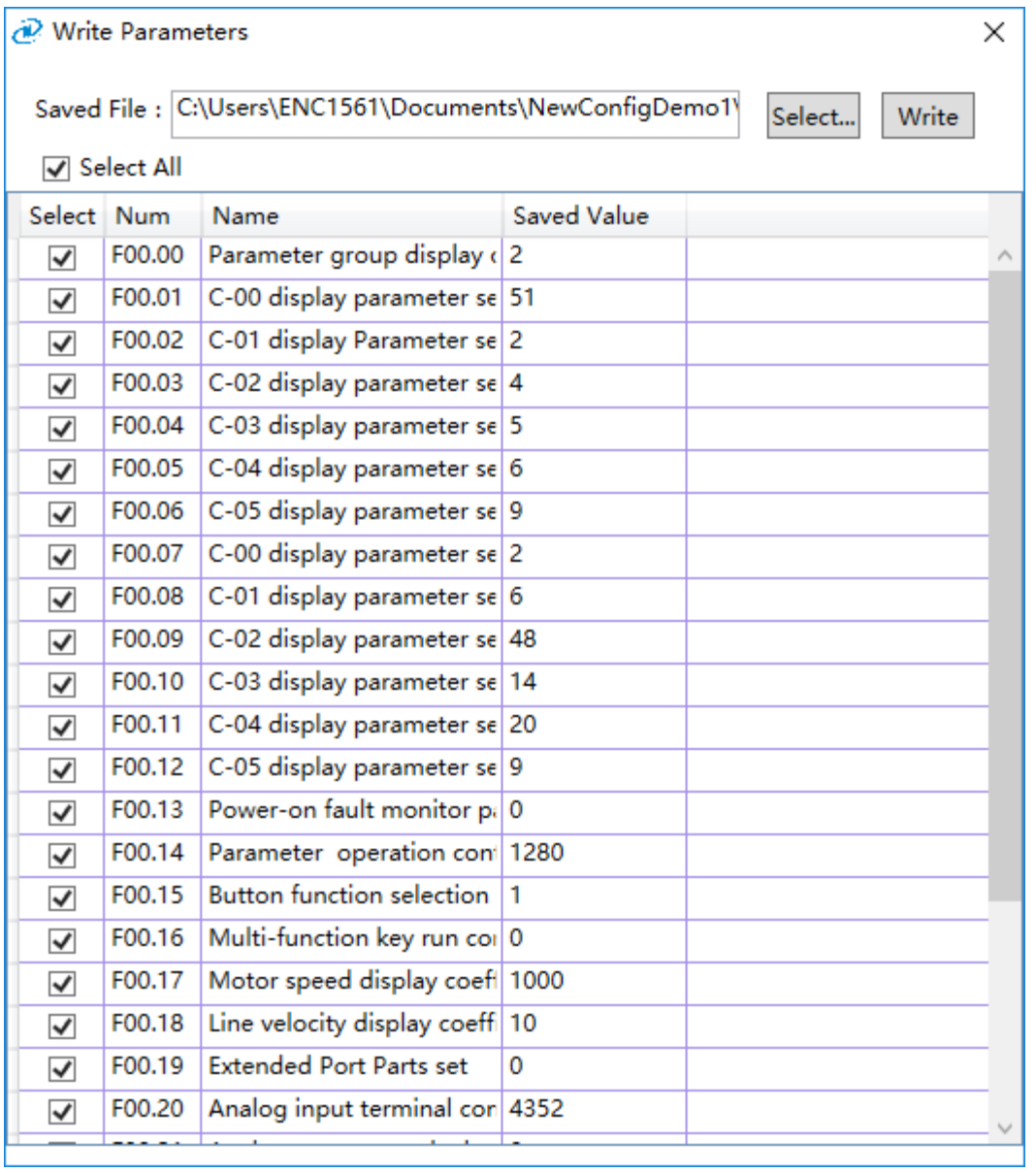




(3) Parameter editing page toolbar

The parameter editing toolbar corresponds to the functions: save parameter file, parameter writing, parameter comparison, custom parameter table.

- Save parameter file: save the selected parameter in txt format.
- Parameter writing: write the parameters saved in txt format to the machine.

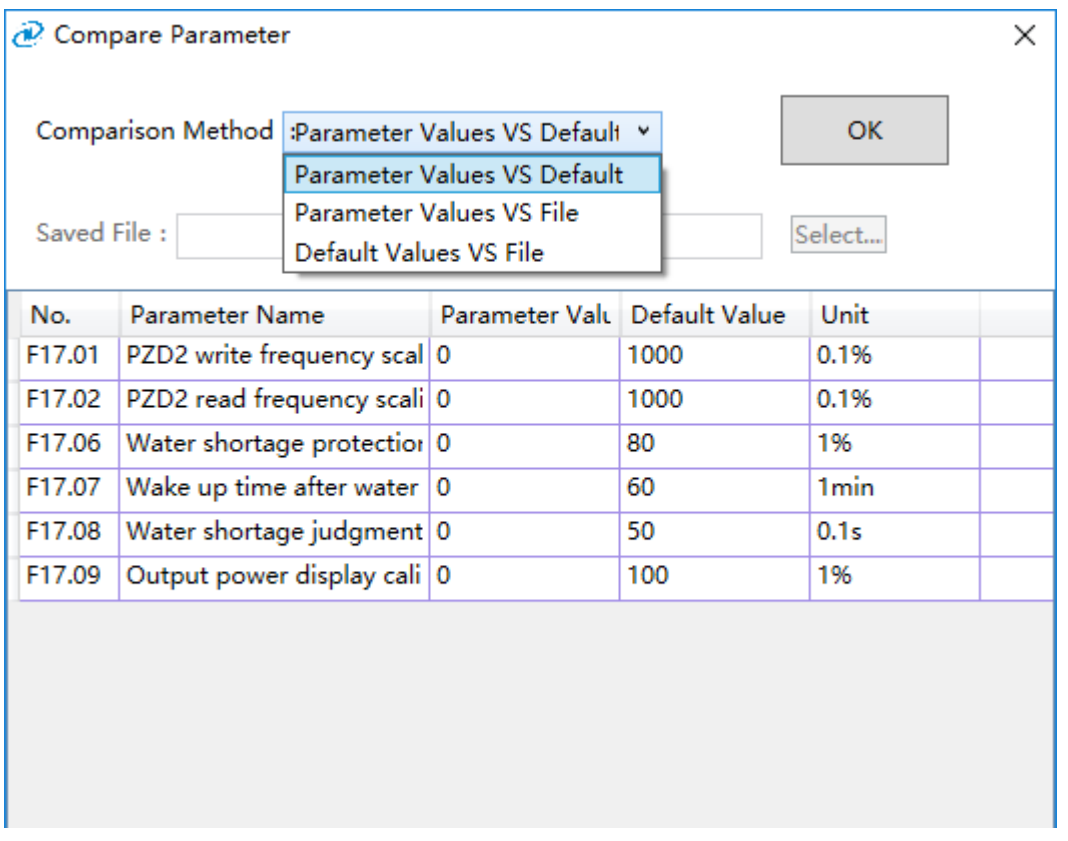


- Parameter comparison

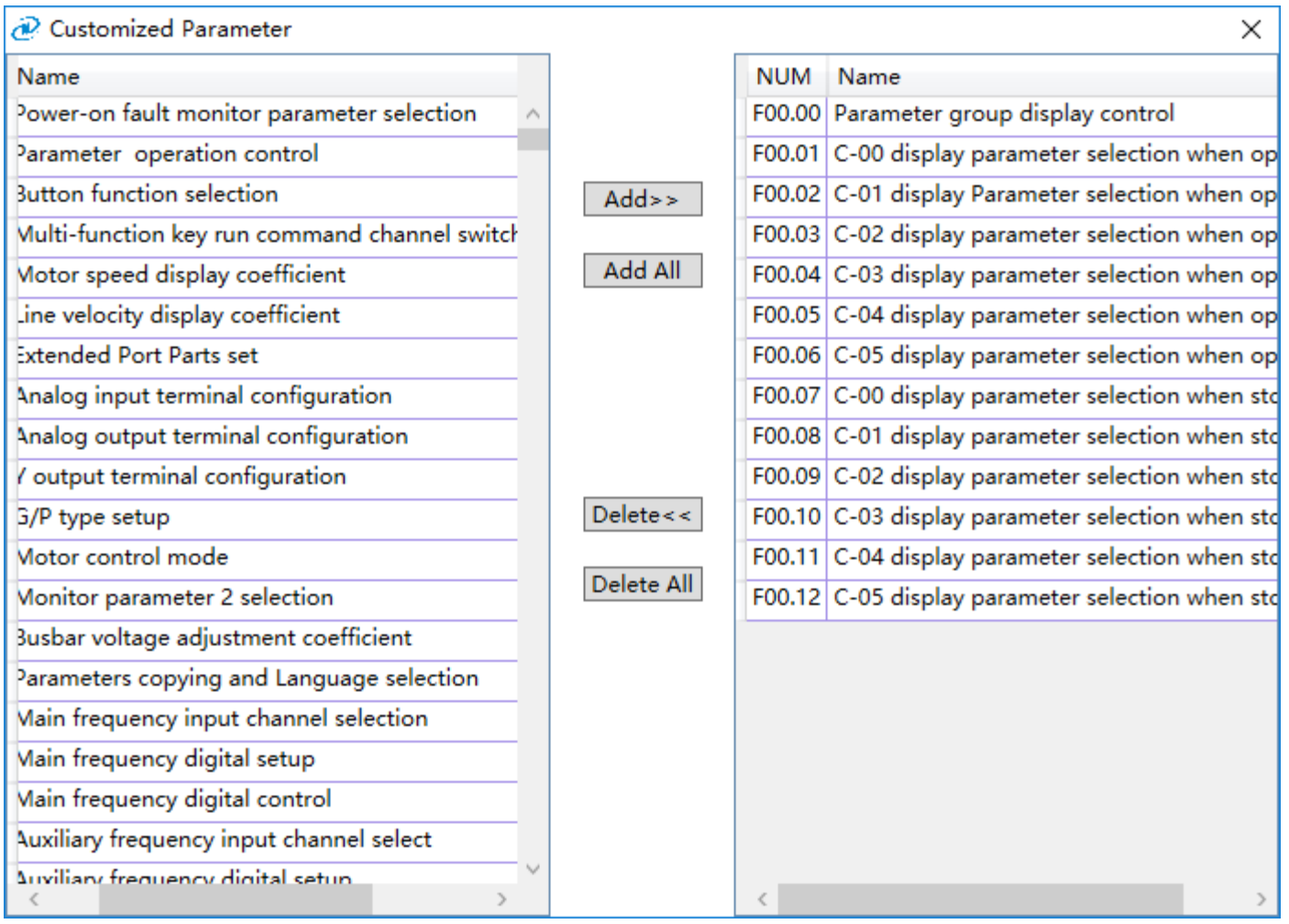
There are three comparison methods: parameter value VS factory value, parameter value VS file, and factory value VS file.

After selecting the comparison method, select the comparison file and click the OK button to compare the parameters.

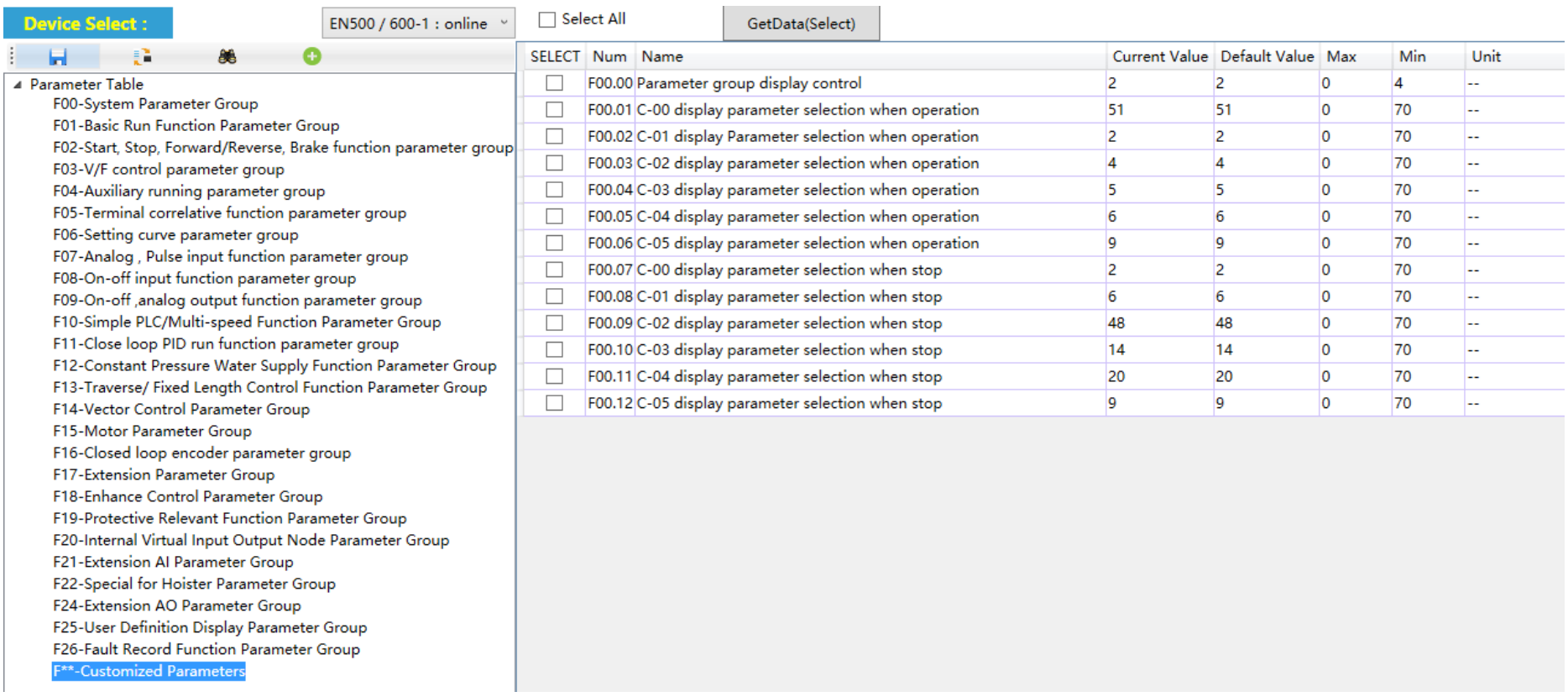
The list only display items with different comparison values.



- Custom parameter table



Add the corresponding parameter, after closing the window, click on the F**-custom item in the parameter list to display the detailed information of the customized parameter.



Part IV: Virtual oscilloscope

(1) Oscilloscope page

(2) Device select

Select the device in the project for Virtual oscilloscope

(3) Oscilloscope page toolbar

Corresponding respectively: open waveform, save waveform, waveform comparison, cancel waveform comparison, |, zoom in, pan, zoom, vernier caliper, coordinate prompt 1, coordinate prompt 2, |, FFT, trigger setting

- Open the waveform: select the CSV file in the user directory and convert the table data into a waveform.
- Save Waveform: Save the waveform in the waveform diagram as a CSV file.
- Waveform comparison: as shown in the figure, the original waveform is in color, and the contrasted waveform is grayish white.

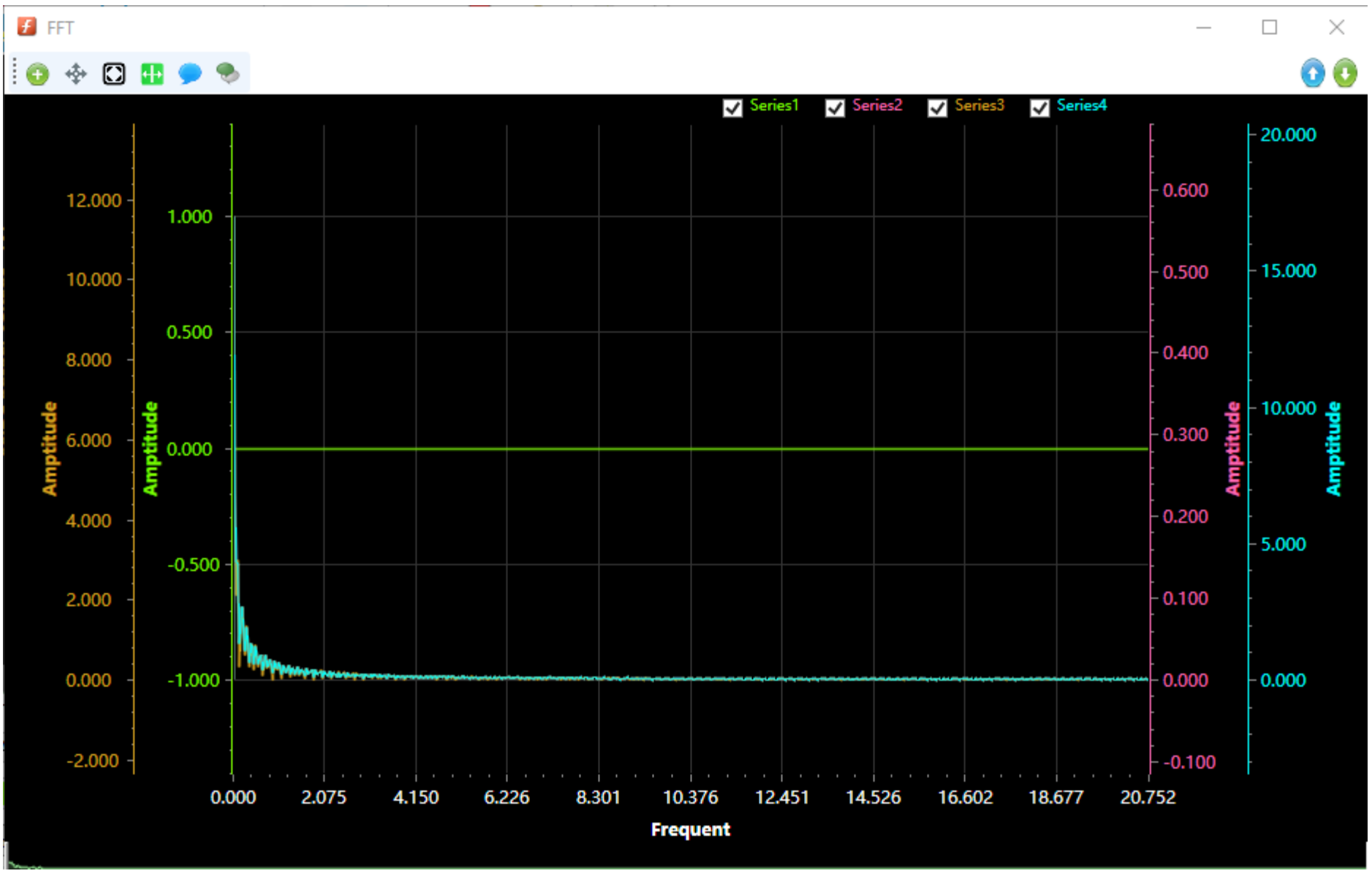
- Cancel waveform comparison: After clicking the button, the grayish white waveform will be deleted and disappeared.
- Zoom in: Click the zoom button, press and hold the left mouse button on the waveform, and slide the mouse position to get a rectangular box; release the left mouse button, and the waveform in the rectangular box can be enlarged to the entire waveform.
- Pan: Click the pan button, hold the left mouse button on the waveform graph, and slide the mouse position to pan all the waveforms.
- Zoom: Click the zoom button. When the waveform stops sampling, all the waveform points will be zoomed to the entire waveform; when the waveform is sampling, only the Y axis will be zoomed.
- Vernier caliper: Click the button for the first time to display the vernier caliper and window; click the button again to hide the vernier caliper.

- FFT(Fast Fourier Transform):

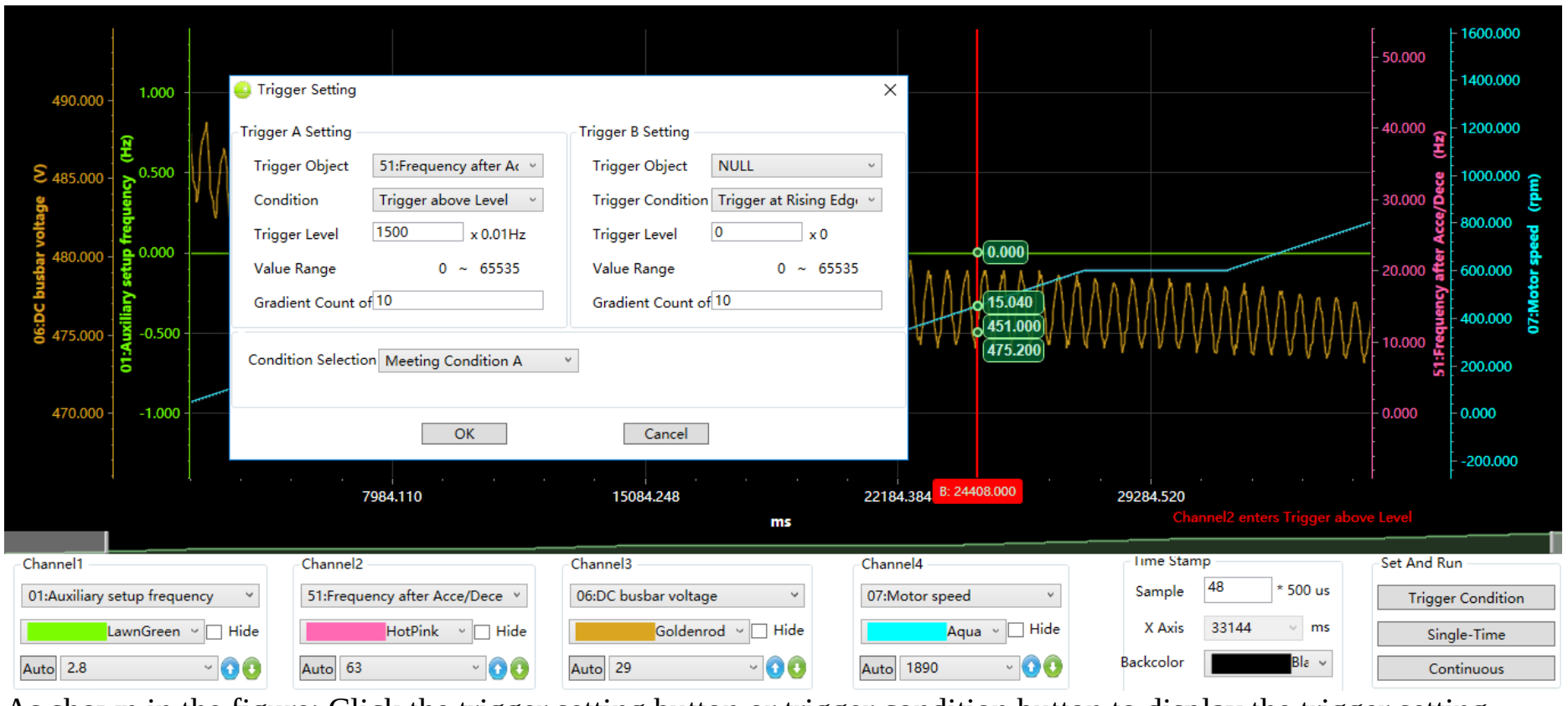
Usage steps: The first time click the FFT button to display two vernier calipers; The second time click the FFT button to display the FFT waveform window (the waveform in the FFT is calculated from the waveform point data between the two vernier calipers).

When the FFT window is closed, two vernier calipers will be left; at this moment, the right-click of the mouse click the FFT button to hide the two vernier calipers.

(Note: When applying this function, it should be set to single sampling, and sampling should be set to 3 * 125us.)



- Trigger settings:



As shown in the figure: Click the trigger setting button or trigger condition button to display the trigger setting window.

Only when you click the "OK" button in the trigger settings window, after the set value is saved, the trigger can be performed when sampling.

Trigger object: The drop-down box displays the 4 channel parameters selected in the waveform graph of the main window.

Trigger conditions: rising edge trigger, trigger above the set value level,trigger below the set value level.

Trigger level: Set the trigger condition value.

Value range: The value range of the trigger object.

Slope counting point: According to the number of slope counting points, the slope is calculated from these points to determine the rising or falling edge of the waveform, so as to avoid the interference of the waveform sawtooth.

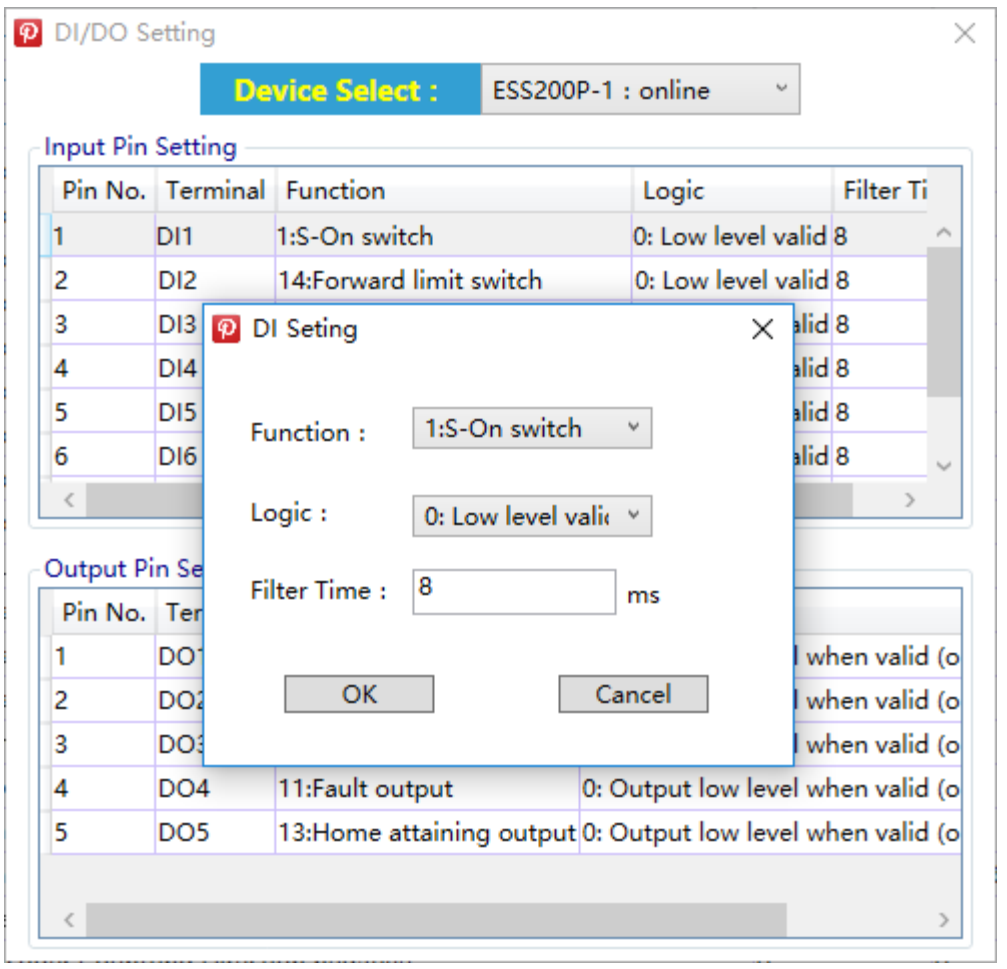
Trigger condition selection: four logic trigger conditions.

Part V: Trial Run

(1) DI/DO settings

Servo

Double-click the corresponding item in the table to set its parameters.



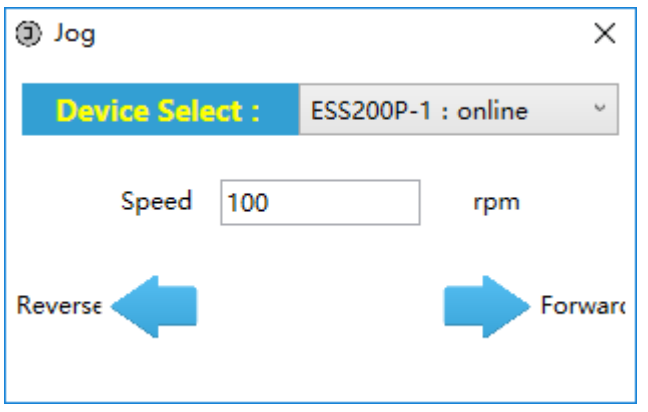
Inverter

Double-click the corresponding item in the table to set its parameters.

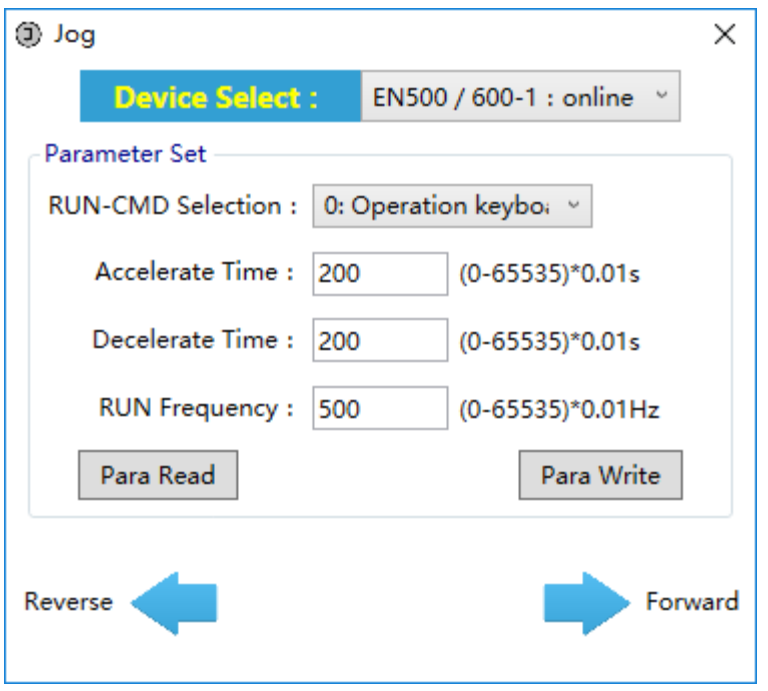
(2) Jog run

After connecting the serial port and inputting the motor speed, the motor direction button can make the motor run. When the motor rotates, release the mouse or leave the Jog window, and the motor will stop rotating.

Servo

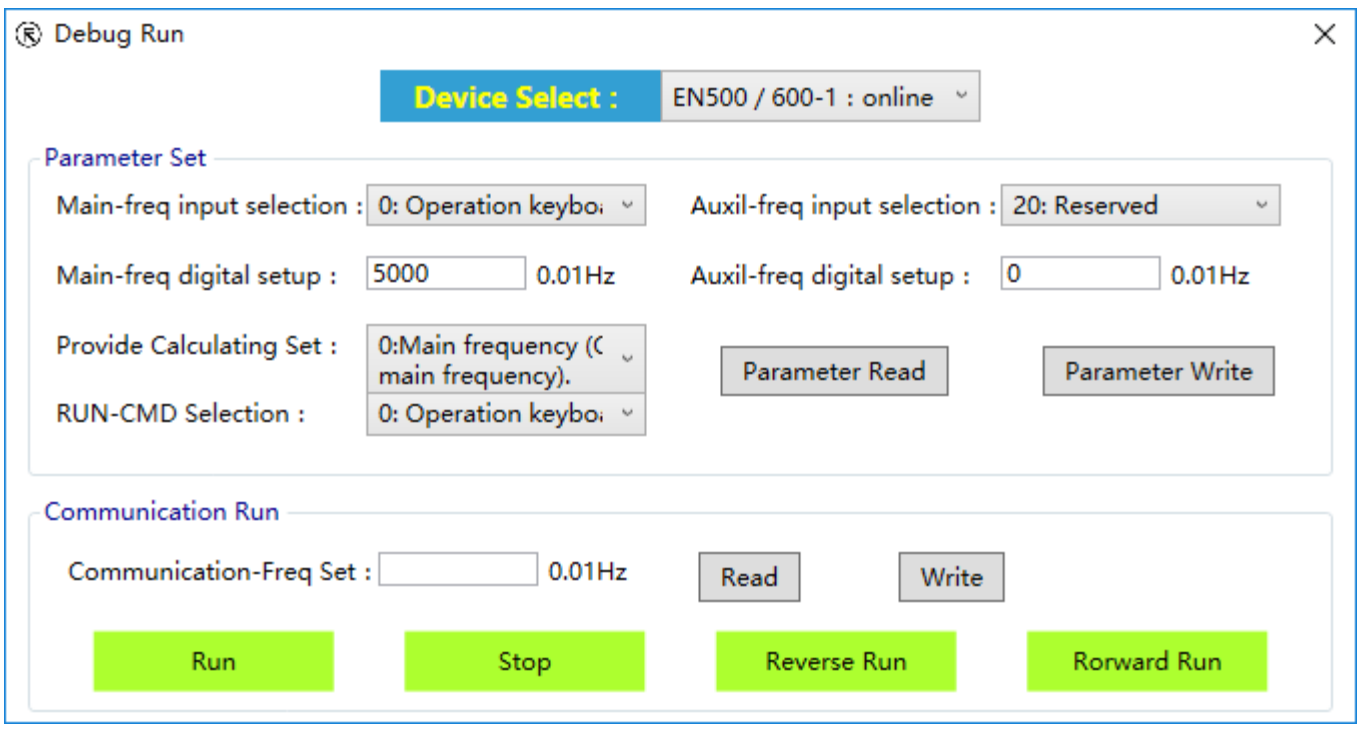


Inverter



(3) Debugging

Inverter function, servo is invisible



(4) Emergency stop

Servo function, the inverter is invisible

When the motor is running, click Emergency Stop, the motor will stop running.

Click the emergency stop button again to release the emergency stop state.

(5) Fault reset

When the servo is faulty, click fault reset.

(6) Software reset

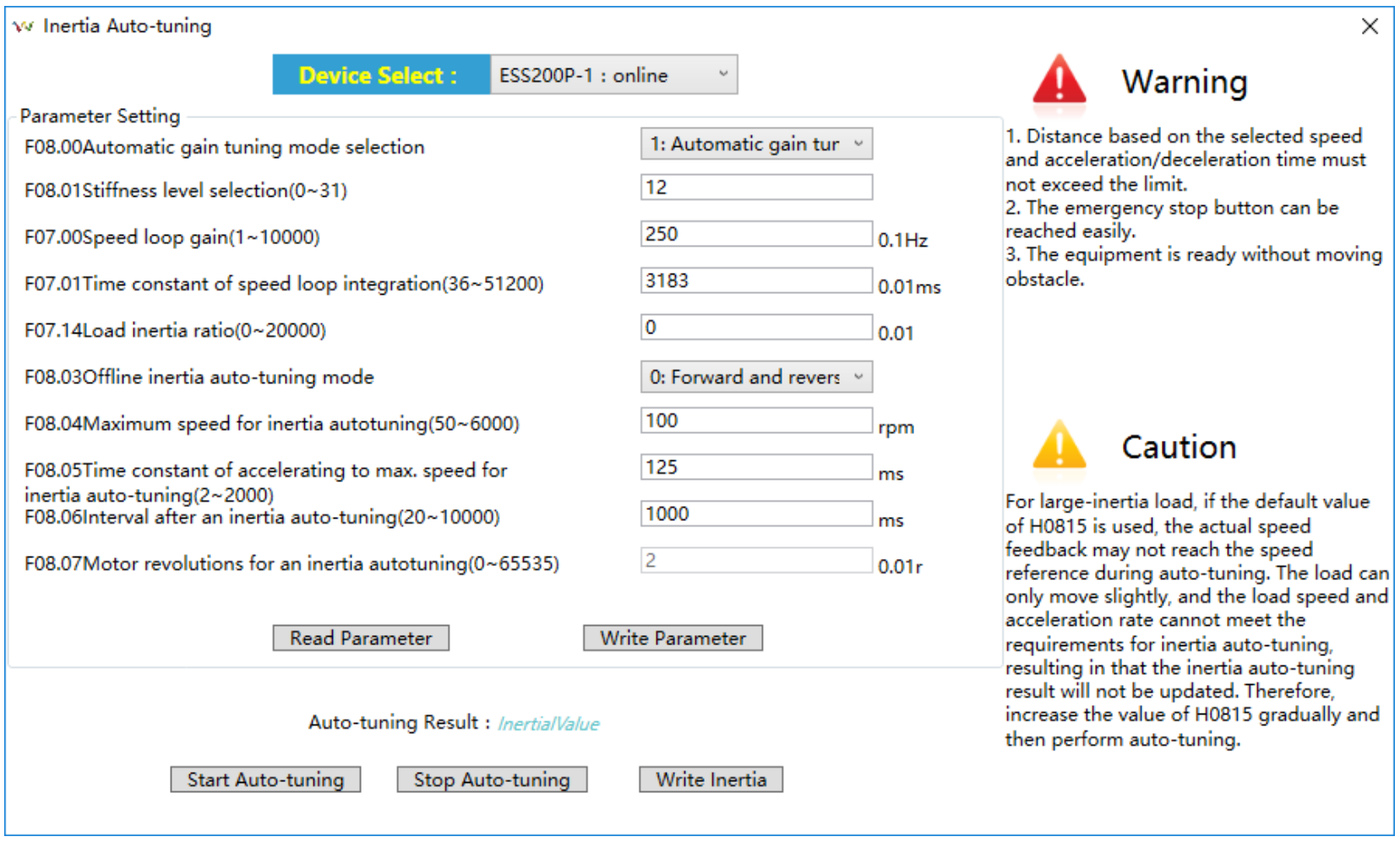
Servo function, the inverter is invisible

After clicking software reset, the software reset parameter value is set to 1.

Part VI: Auxiliary

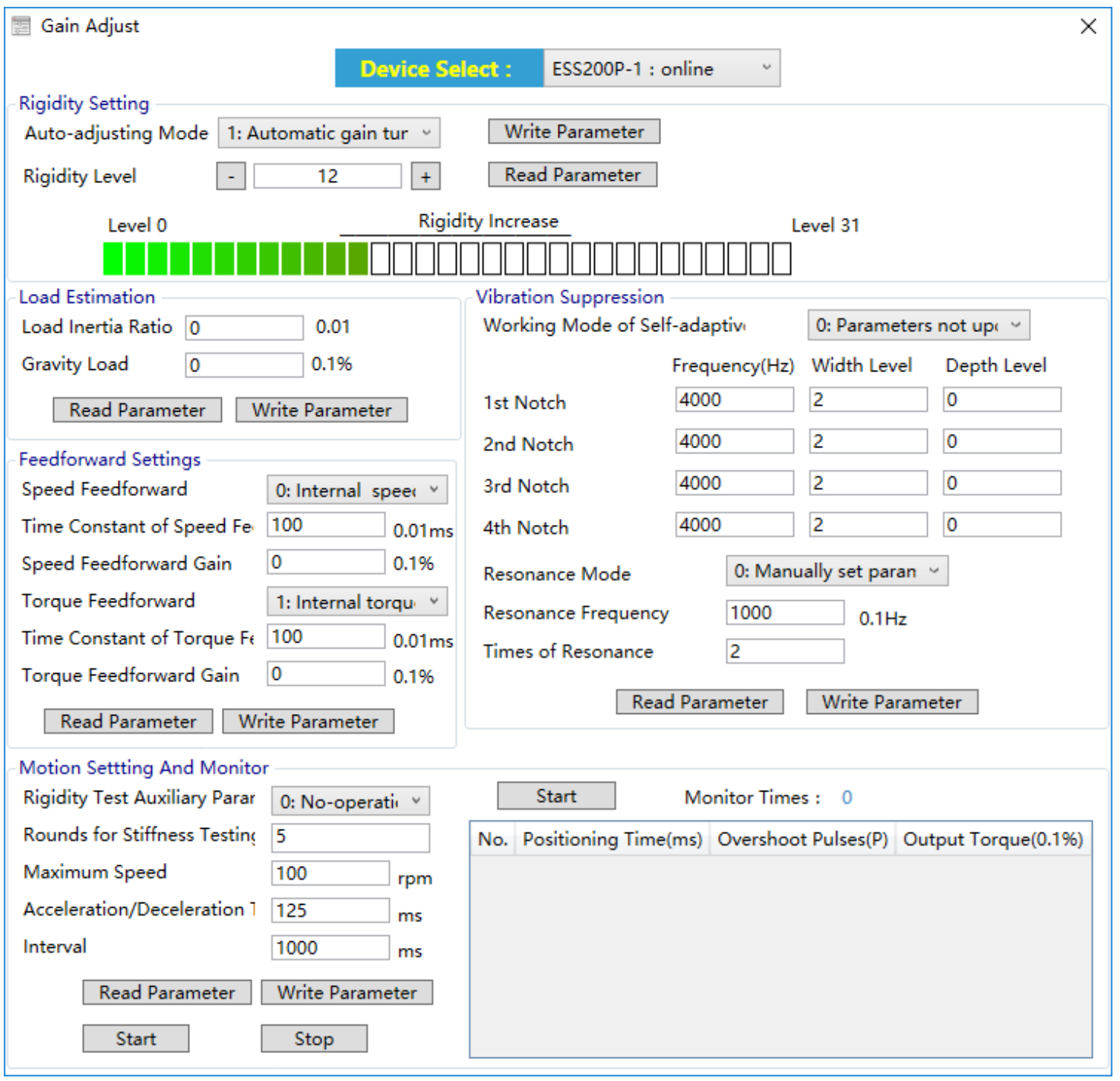
(1) Inertia recognition

Servo function, the inverter is invisible



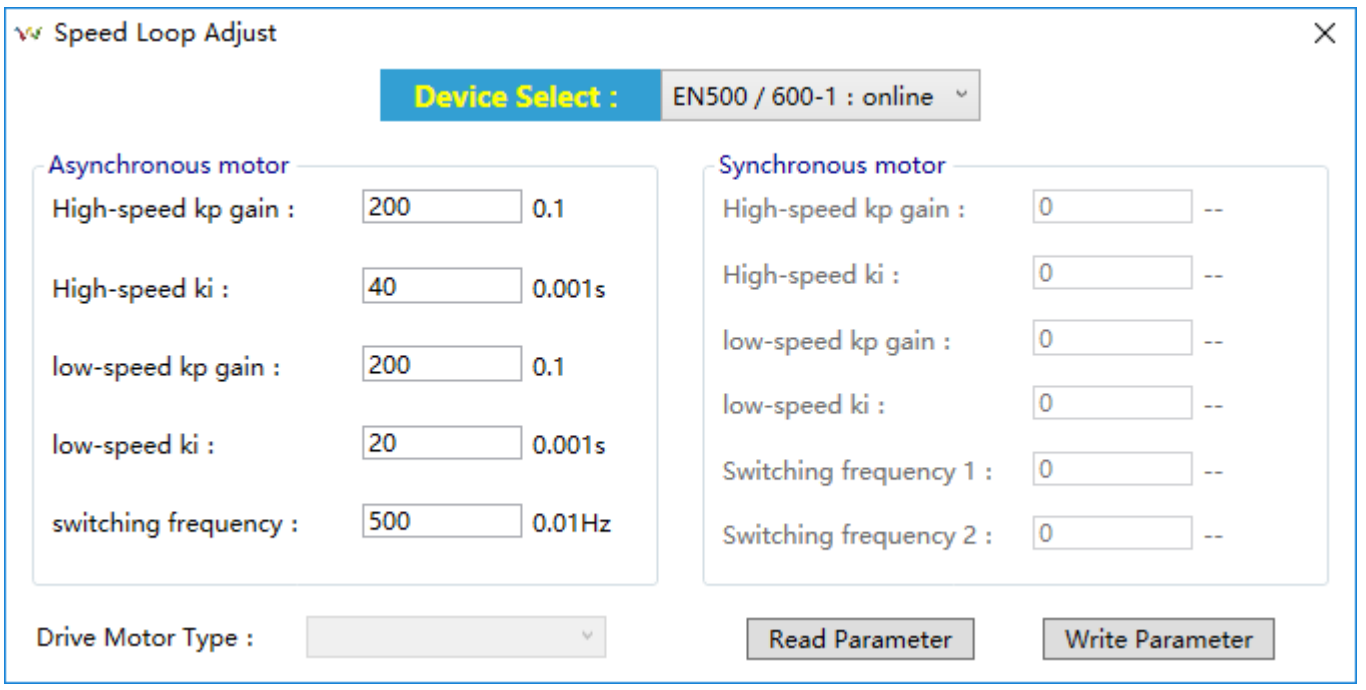
(2) Gain adjustment

Servo function, the inverter is invisible



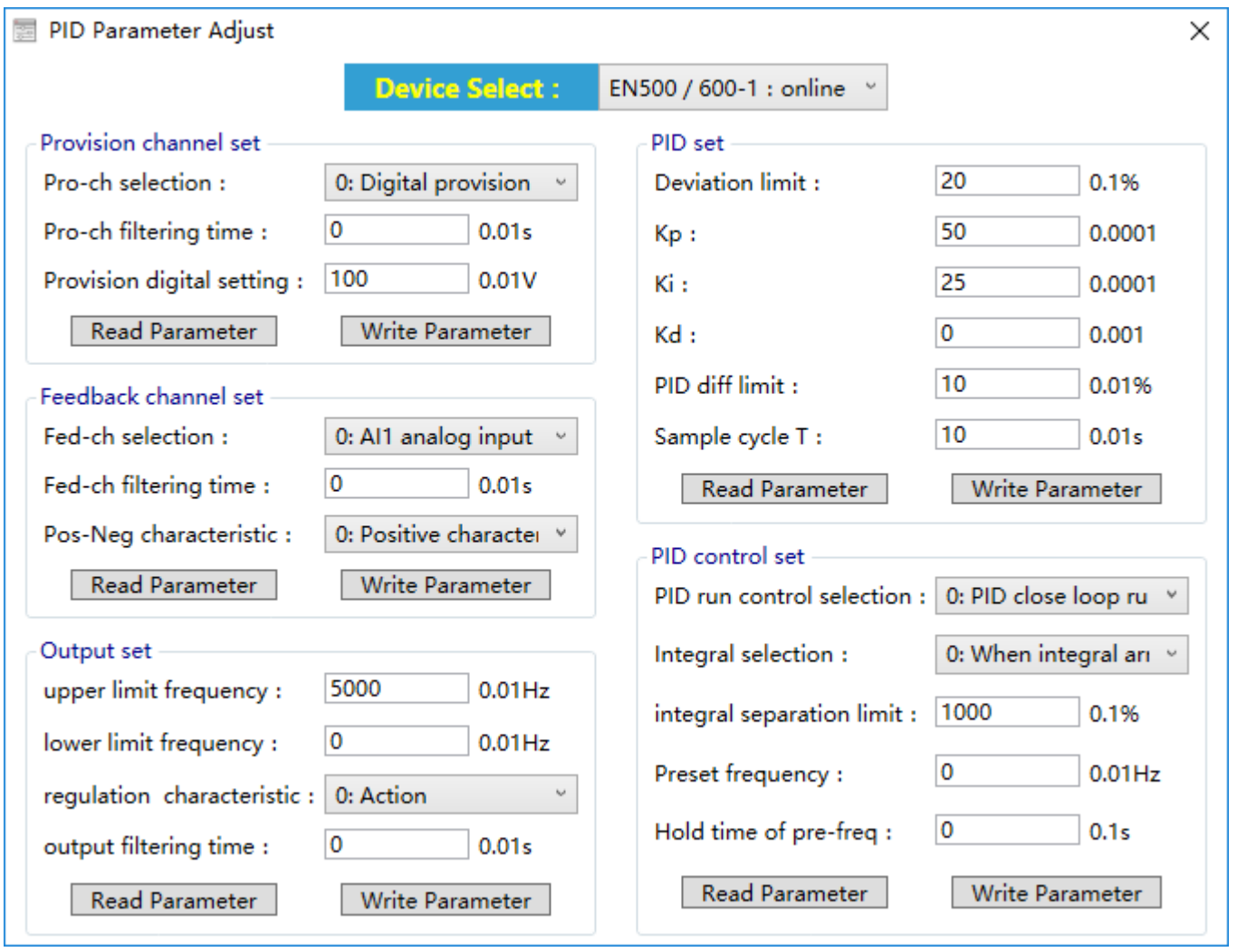
(3) Speed loop adjust

Inverter function, servo is invisible



(4) PID Parameter Adjust

Inverter function, servo is invisible



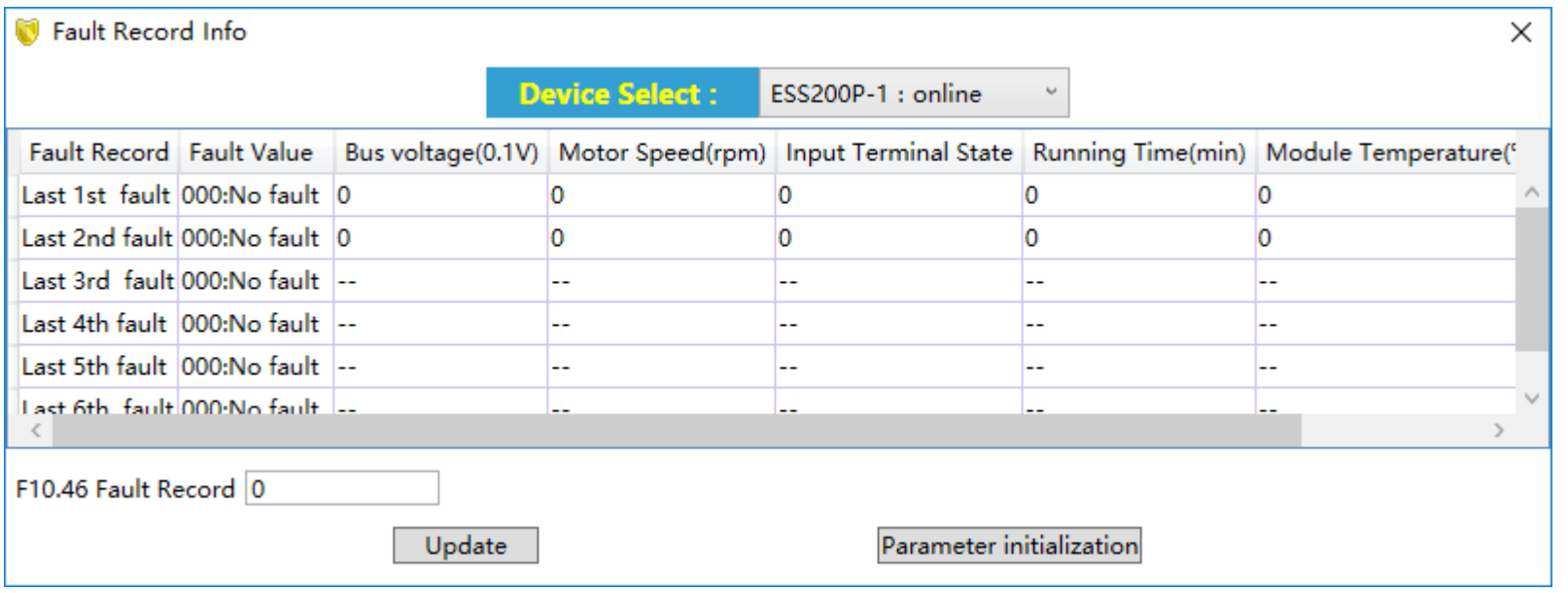
Part VII: Monitoring

(1) Virtual oscilloscope

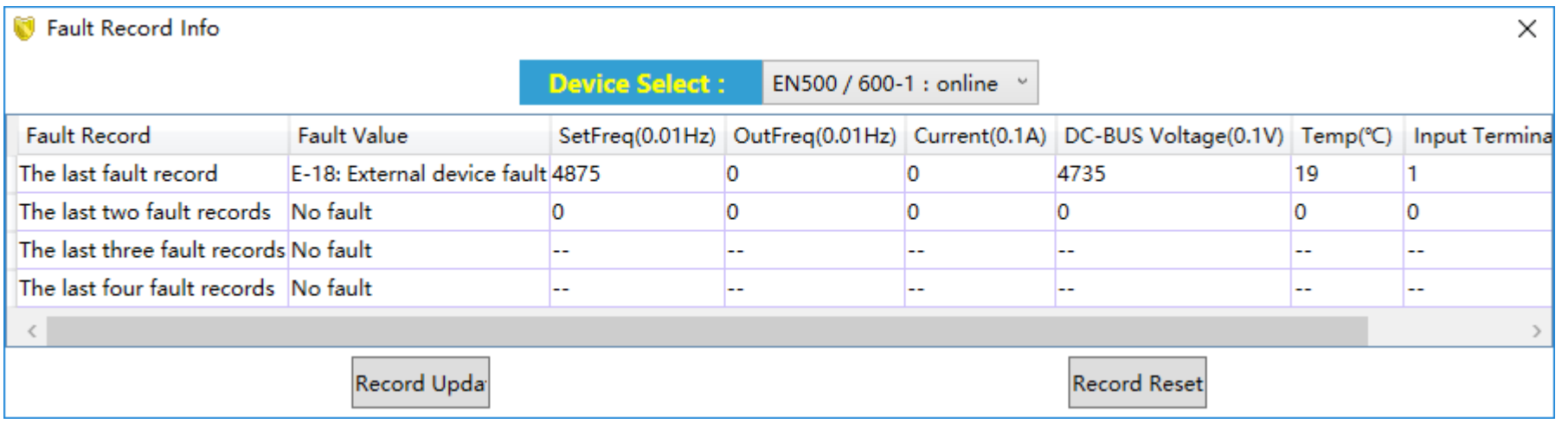
See part IV .

(2) Warning message

Servo



Inverter



(3) Real-time data display: