

# FXD Control Agile View User Guide



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## 1. INTRODUCTION

The FXD Control is a modular, customizable, intelligent Control and can be upgraded, Agile View as its application software, provides a complete configuration and operating environment for the FXD. By Agile View, the user can be connected to the FXD Control through the network port, so as to achieve remote access configuration parameters, view real-time electric transmission line status, browse the fault records, and update firmware functions. At the same time, Agile View embedded industry standard communication protocol and customized module, can also be used in other micro processing based on intelligent control products.

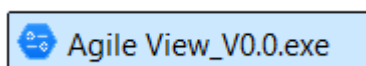
## 2. Login

### 2.1 Ready

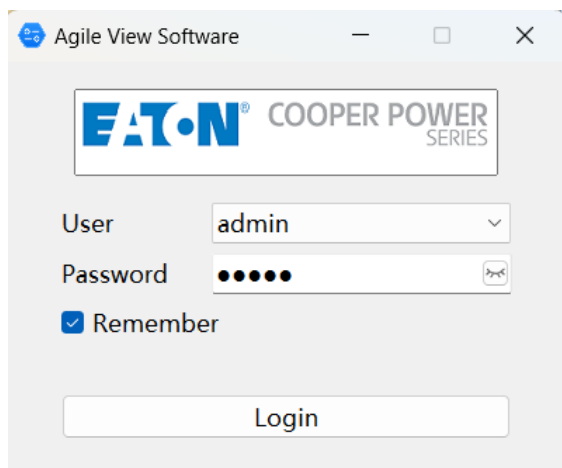
Use an ethernet cable to connect the computer and controller (front network port).  
The IP address of front network port is 192.168.4.100.  
Add the computer IP address :192.168.4. xx

### 2.2 Login

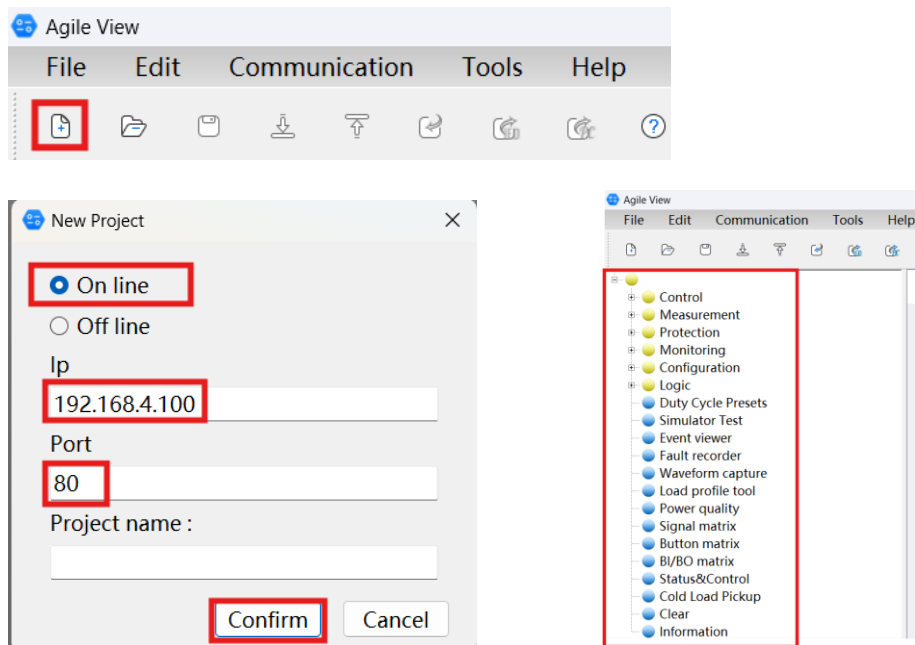
- a. Open the Agile View\_V0.0.exe.



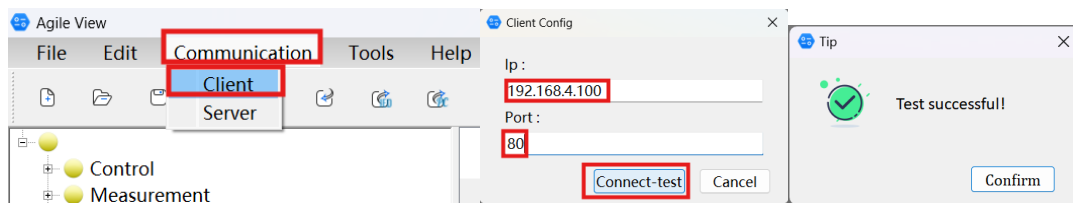
- b. Select user" admin" and password "admin", then Click "LOGIN".



- c. Click this icon -> select Online, input the IP address and port -> click Confirm, then will open the project .



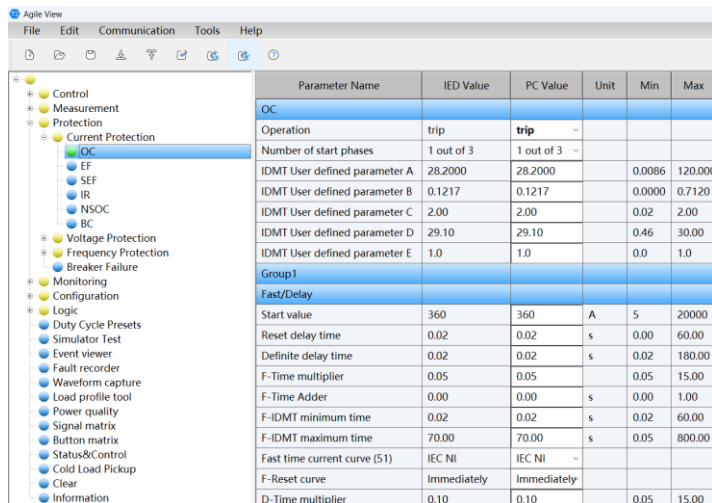
- d. Click "Communication"->"Client" -> input the correct IP address and port ->click "Connect-test" ,it will show Test successful. Then you can view and modify settings.



## 3. Settings

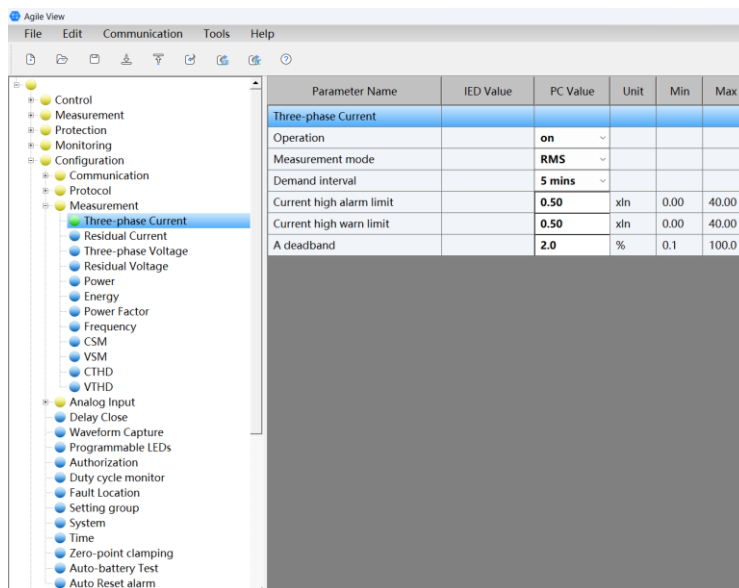
### 3.1 Protection Settings

- 1) Change the communication status from offline to online.
- 2) Find the "Protection" button in the menu tree.
- 3) Click the "Protection" and parameter settings window will popup where it is possible to edit.

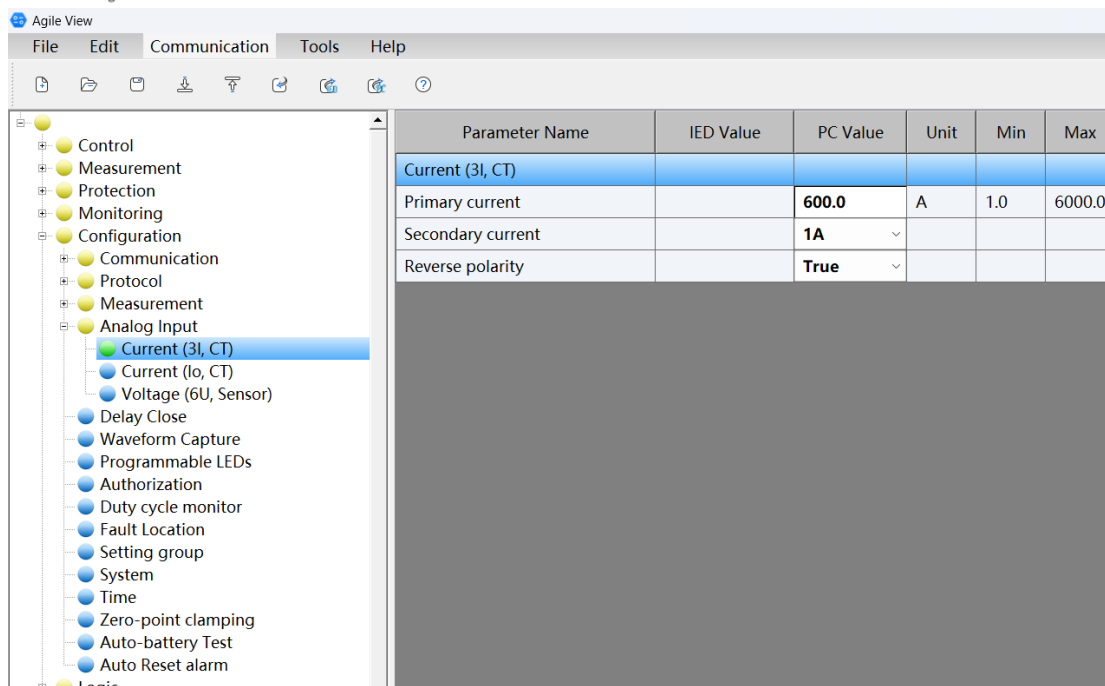


## 3.2 Measurement Settings

- 1) Find the “Configuration” button in the menu tree.
- 2) Click the “Measurement”.
- 3) Click the “Three-phase-current”, then can edit the measurement settings

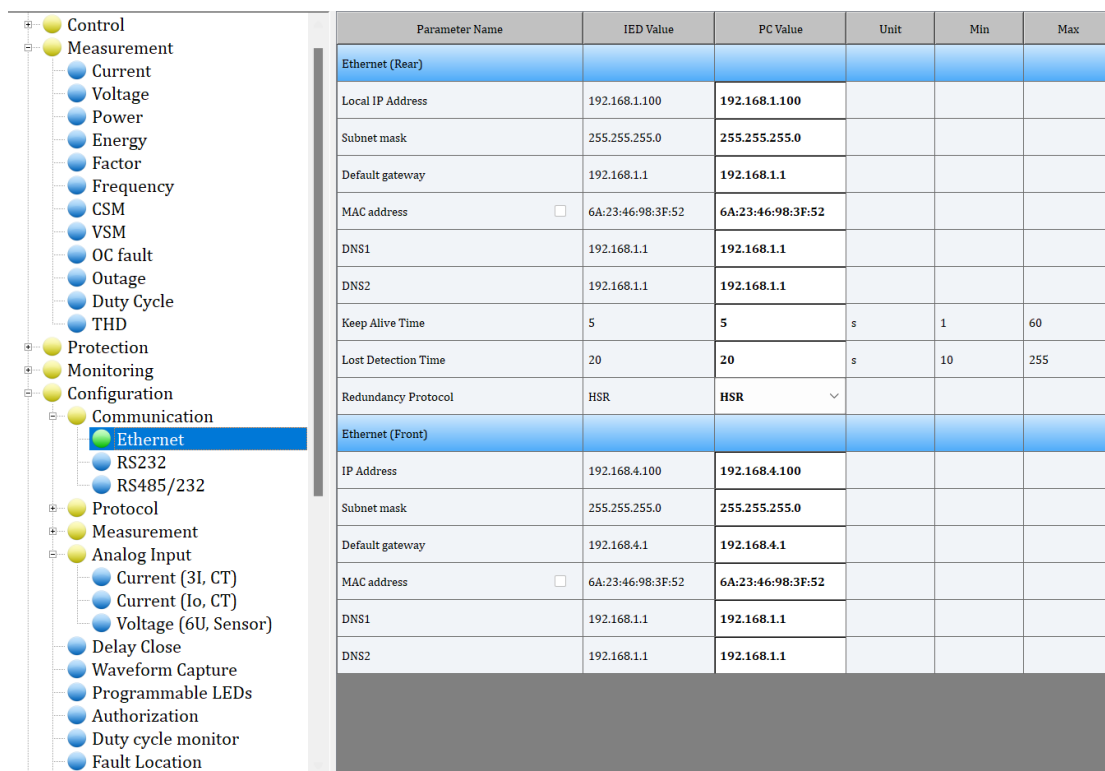


- 1) Click the “Analog input” and parameter settings window will popup where it is possible to edit.



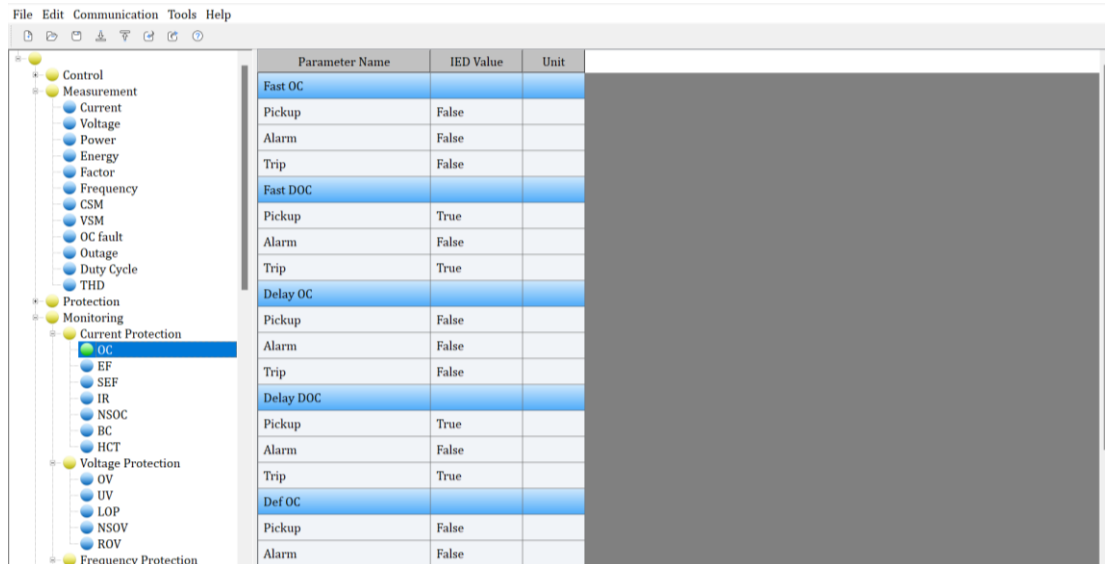
## 3.3 Communication settings

- 1) Find the “Configuration” button in the menu tree.
- 2) Click the “Communication” and parameter settings window will popup where it is possible to edit.



## 3.4 Monitoring Settings

- 1) Find the “Monitoring” button in the menu tree.
- 2) Click the “OC” and status window will popup.

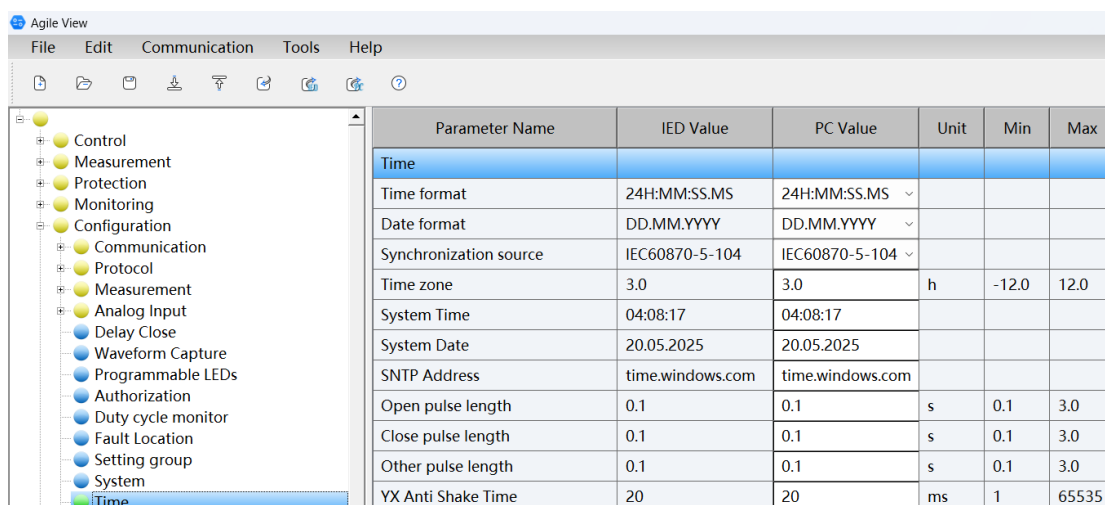


| Parameter Name | IED Value | Unit |
|----------------|-----------|------|
| Fast OC        |           |      |
| Pickup         | False     |      |
| Alarm          | False     |      |
| Trip           | False     |      |
| Fast DOC       |           |      |
| Pickup         | True      |      |
| Alarm          | False     |      |
| Trip           | True      |      |
| Delay OC       |           |      |
| Pickup         | False     |      |
| Alarm          | False     |      |
| Trip           | False     |      |
| Delay DOC      |           |      |
| Pickup         | True      |      |
| Alarm          | False     |      |
| Trip           | True      |      |
| Def OC         |           |      |
| Pickup         | False     |      |
| Alarm          | False     |      |

The status (True or false) of monitoring settings includes protection (pickup/alarm/trip), measurement (alarm/warn), control (local/remote/off), input, output, programmable led, internal fault.

## 3.5 Date and Time Settings

- 1) Find the “Configuration” button in the menu tree.
- 2) Click the “Time” and parameter settings window will popup where it is possible to edit.

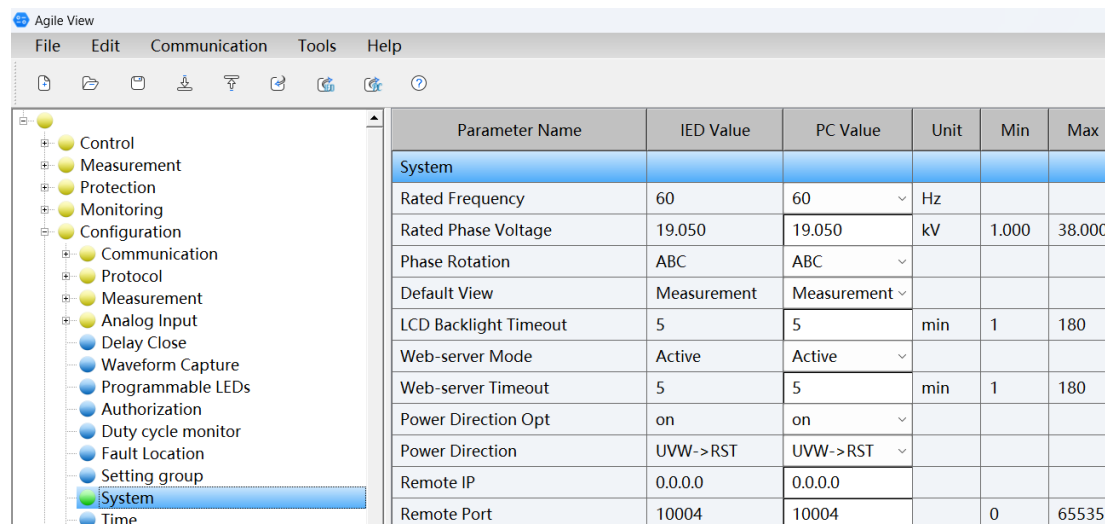


| Parameter Name         | IED Value        | PC Value         | Unit | Min   | Max   |
|------------------------|------------------|------------------|------|-------|-------|
| Time                   |                  |                  |      |       |       |
| Time format            | 24H:MM:SS.MS     | 24H:MM:SS.MS     |      |       |       |
| Date format            | DD.MM.YYYY       | DD.MM.YYYY       |      |       |       |
| Synchronization source | IEC60870-5-104   | IEC60870-5-104   |      |       |       |
| Time zone              | 3.0              | 3.0              | h    | -12.0 | 12.0  |
| System Time            | 04:08:17         | 04:08:17         |      |       |       |
| System Date            | 20.05.2025       | 20.05.2025       |      |       |       |
| SNTP Address           | time.windows.com | time.windows.com |      |       |       |
| Open pulse length      | 0.1              | 0.1              | s    | 0.1   | 3.0   |
| Close pulse length     | 0.1              | 0.1              | s    | 0.1   | 3.0   |
| Other pulse length     | 0.1              | 0.1              | s    | 0.1   | 3.0   |
| YX Anti Shake Time     | 20               | 20               | ms   | 1     | 65535 |

The user can select time and date format which shows on logs. And synchronization source can be selected between protocol and B code.

## 3.6 System Settings

- 1) Find the “Configuration” button in the menu tree.
- 2) Click the “system” and parameter settings window will popup where it is possible to edit.



There is rated frequency selection (50Hz or 60Hz) which defined “Fn” values.

The user can change phase rotation from ABC to ACB if required.

Default menu is used to defined the LCD menu on the front of panel.

There are two times on system settings, one is “LCD backlight timeout” which defined the duration of backlight if not used; another is “Web-server timeout” which defined duration of connection between PC and IED if not used.

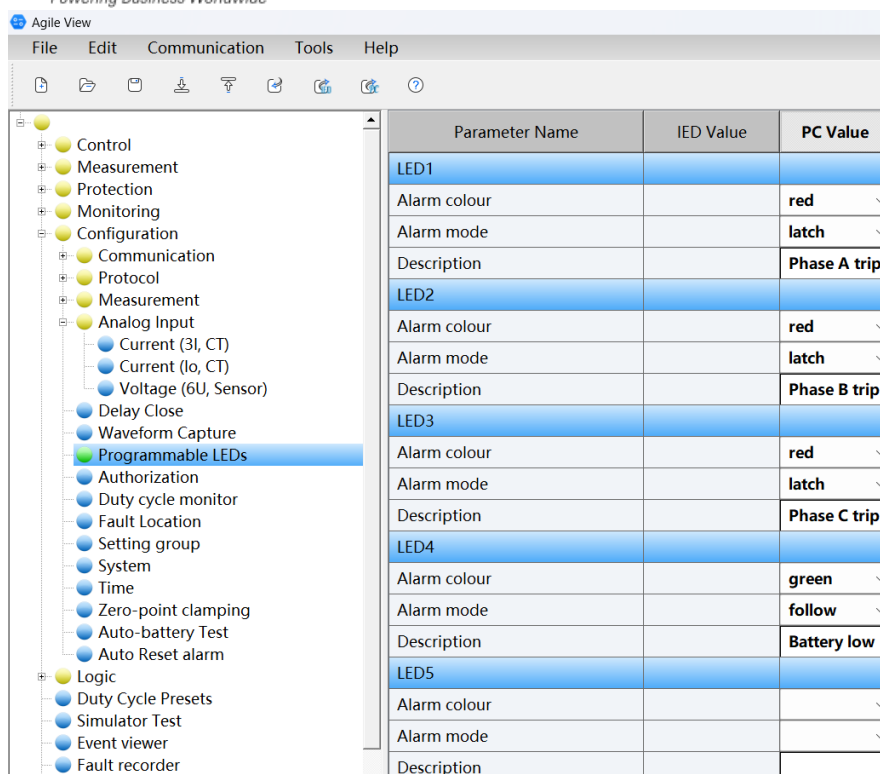
If user want to operate through web-server mode, should be changed “Web-server mode” to active at first (default setting is inactive)

## 4. Set LEDs and Buttons

### 4.1 Programmable LEDs

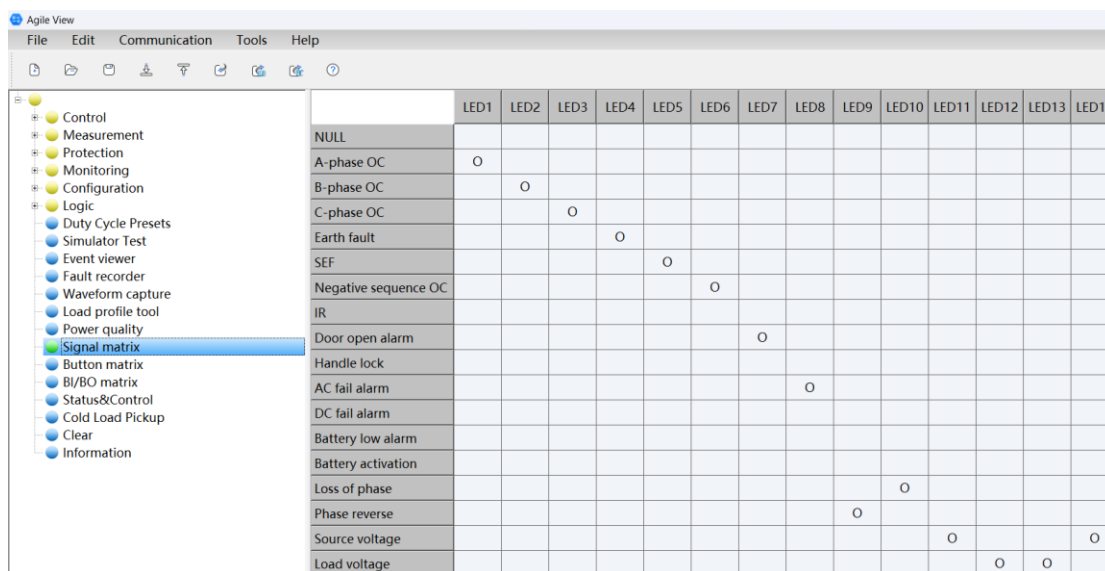
- 1) Find the “Configuration” button in the menu tree.
- 2) Click the “Programmable LEDs”, then you can edit the LED working mode, green or red, follow or latch.





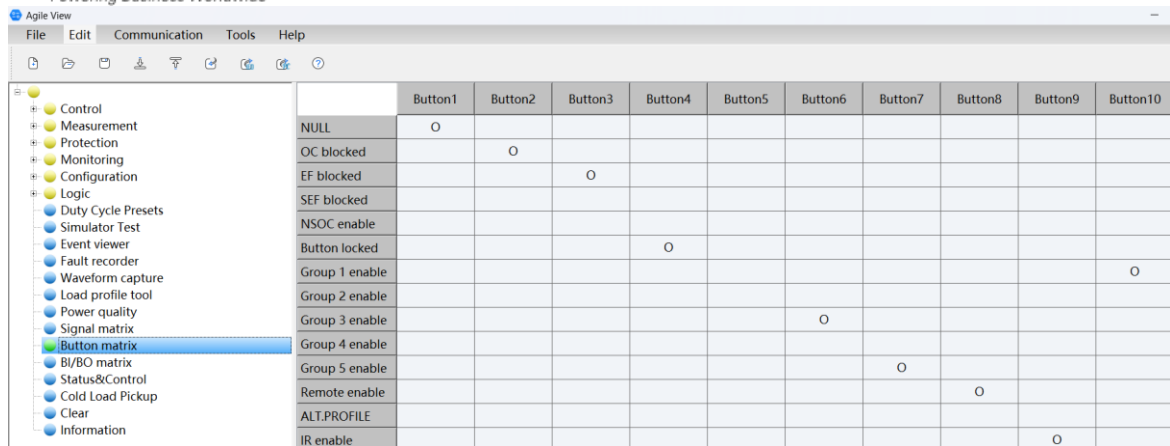
## 4.2 Associating LEDs and signals

1) Find the “Signal matrix” button in the menu tree, then you can associating LEDs and signal as you need.



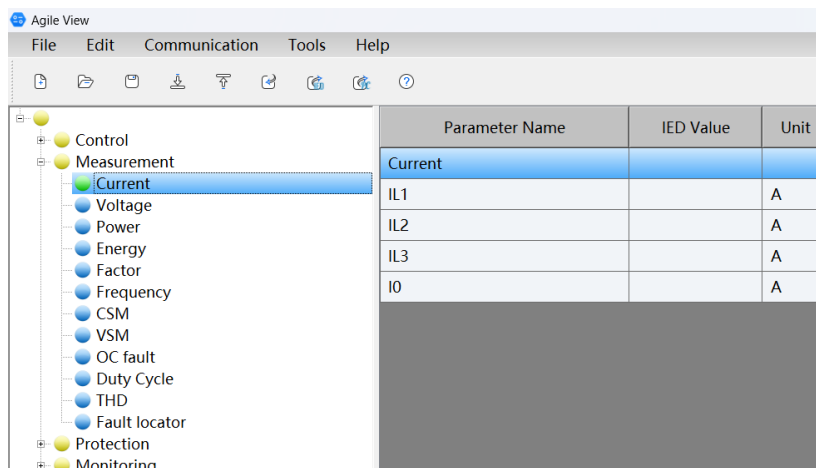
## 4.3 Setting button functions

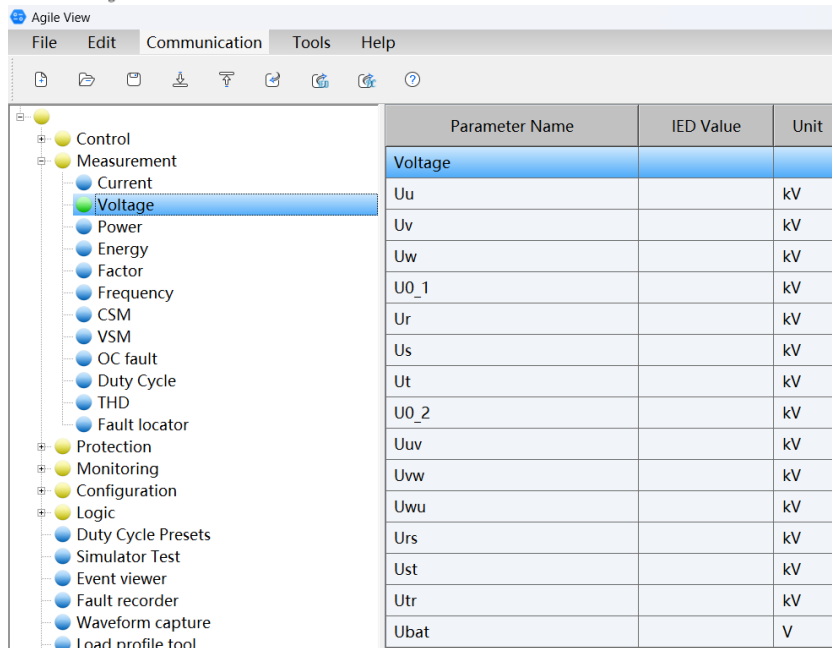
1) Find the “Button matrix” button in the menu tree, then you can set the button fuctions as you need



## 5. Monitoring

- 1) Find the “Measurement” button in the menu tree.
- 2) Click the “Current/Voltage/Power...” and can check the value.





Agile View

File Edit Communication Tools Help

Control

Measurement

Current

Voltage

Power

Energy

Factor

Frequency

CSM

VSM

OC fault

Duty Cycle

THD

Fault locator

Protection

Monitoring

Configuration

Logic

Duty Cycle Presets

Simulator Test

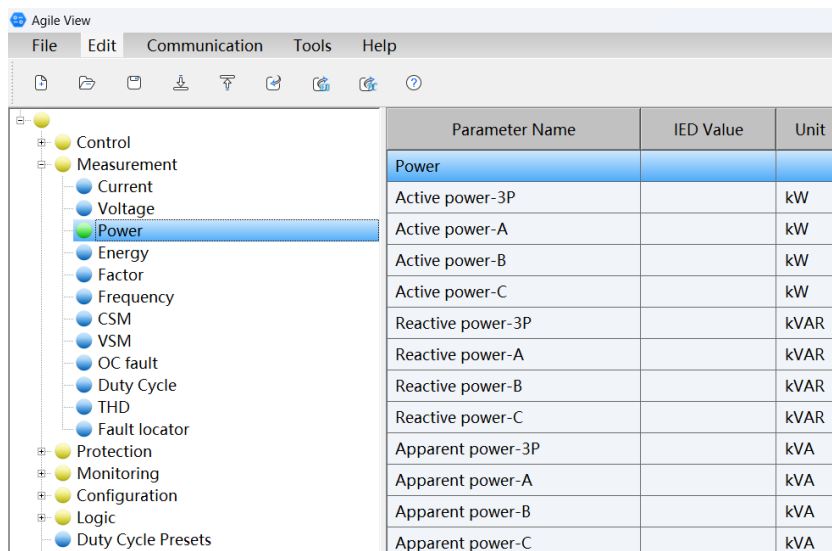
Event viewer

Fault recorder

Waveform capture

Load profile tool

| Parameter Name | IED Value | Unit |
|----------------|-----------|------|
| <b>Voltage</b> |           |      |
| Uu             |           | kV   |
| Uv             |           | kV   |
| Uw             |           | kV   |
| U0_1           |           | kV   |
| Ur             |           | kV   |
| Us             |           | kV   |
| Ut             |           | kV   |
| U0_2           |           | kV   |
| Uuv            |           | kV   |
| Uvw            |           | kV   |
| Uwu            |           | kV   |
| Urs            |           | kV   |
| Ust            |           | kV   |
| Utr            |           | kV   |
| Ubat           |           | V    |



Agile View

File Edit Communication Tools Help

Control

Measurement

Current

Voltage

Power

Energy

Factor

Frequency

CSM

VSM

OC fault

Duty Cycle

THD

Fault locator

Protection

Monitoring

Configuration

Logic

Duty Cycle Presets

Simulator Test

Event viewer

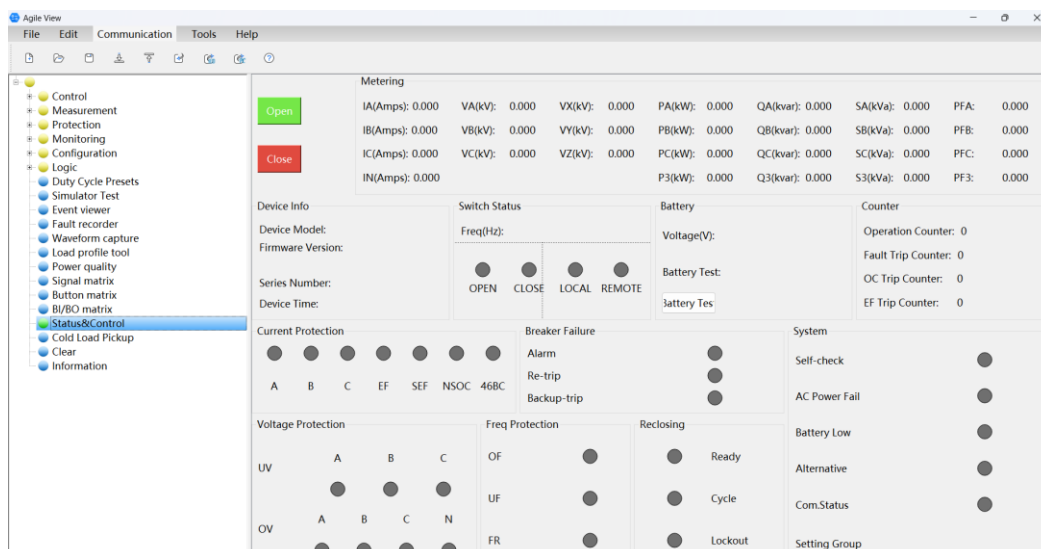
Fault recorder

Waveform capture

Load profile tool

| Parameter Name    | IED Value | Unit |
|-------------------|-----------|------|
| <b>Power</b>      |           |      |
| Active power-3P   |           | kW   |
| Active power-A    |           | kW   |
| Active power-B    |           | kW   |
| Active power-C    |           | kW   |
| Reactive power-3P |           | kVAR |
| Reactive power-A  |           | kVAR |
| Reactive power-B  |           | kVAR |
| Reactive power-C  |           | kVAR |
| Apparent power-3P |           | kVA  |
| Apparent power-A  |           | kVA  |
| Apparent power-B  |           | kVA  |
| Apparent power-C  |           | kVA  |

3) Find the “Status&control” button in the menu tree, then you can check the real-time data



Agile View

File Edit Communication Tools Help

Control

Measurement

Protection

Monitoring

Configuration

Logic

Duty Cycle Presets

Simulator Test

Event viewer

Fault recorder

Waveform capture

Load profile tool

Power quality

Signal matrix

Button matrix

BI/BO matrix

Status&Control

Cold Load Pickup

Clear

Information

Metering

Open

Close

Device Info

Device Model:

Firmware Version:

Series Number:

Device Time:

Switch Status

Freq(Hz):

OPEN

CLOSE

LOCAL

REMOTE

Battery

Voltage(V):

Battery Test:

Battery Tes

Counter

Operation Counter: 0

Fault Trip Counter: 0

OC Trip Counter: 0

EF Trip Counter: 0

Current Protection

A

B

C

EF

SEF

NSOC

46BC

Breaker Failure

Alarm

Re-trip

Backup-trip

Voltage Protection

UV

A

B

C

OV

A

B

C

N

Freq Protection

OF

UF

FR

Reclosing

Ready

Cycle

Lockout

System

Self-check

AC Power Fail

Battery Low

Alternative

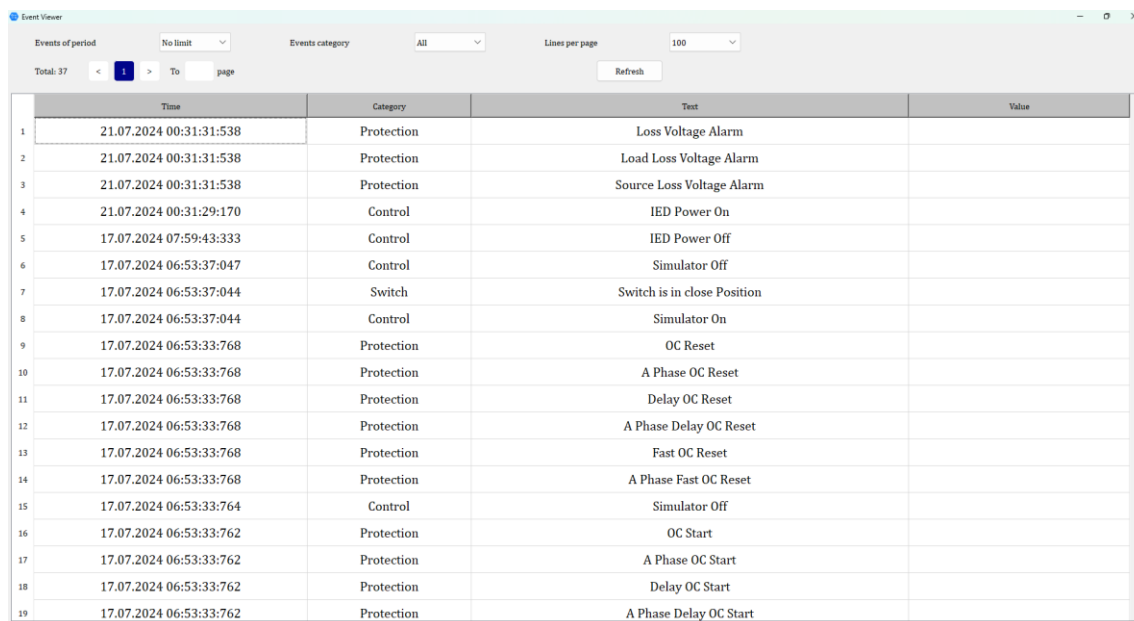
Com.Status

Setting Group

## 6. Data Handling

### 6.1 Event view

Click the “event view” and the SOE can be read:



|    | Time                    | Category   | Text                        | Value |
|----|-------------------------|------------|-----------------------------|-------|
| 1  | 21.07.2024 00:31:31:538 | Protection | Loss Voltage Alarm          |       |
| 2  | 21.07.2024 00:31:31:538 | Protection | Load Loss Voltage Alarm     |       |
| 3  | 21.07.2024 00:31:31:538 | Protection | Source Loss Voltage Alarm   |       |
| 4  | 21.07.2024 00:31:29:170 | Control    | IED Power On                |       |
| 5  | 17.07.2024 07:59:43:333 | Control    | IED Power Off               |       |
| 6  | 17.07.2024 06:53:37:047 | Control    | Simulator Off               |       |
| 7  | 17.07.2024 06:53:37:044 | Switch     | Switch is in close Position |       |
| 8  | 17.07.2024 06:53:37:044 | Control    | Simulator On                |       |
| 9  | 17.07.2024 06:53:33:768 | Protection | OC Reset                    |       |
| 10 | 17.07.2024 06:53:33:768 | Protection | A Phase OC Reset            |       |
| 11 | 17.07.2024 06:53:33:768 | Protection | Delay OC Reset              |       |
| 12 | 17.07.2024 06:53:33:768 | Protection | A Phase Delay OC Reset      |       |
| 13 | 17.07.2024 06:53:33:768 | Protection | Fast OC Reset               |       |
| 14 | 17.07.2024 06:53:33:768 | Protection | A Phase Fast OC Reset       |       |
| 15 | 17.07.2024 06:53:33:764 | Control    | Simulator Off               |       |
| 16 | 17.07.2024 06:53:33:762 | Protection | OC Start                    |       |
| 17 | 17.07.2024 06:53:33:762 | Protection | A Phase OC Start            |       |
| 18 | 17.07.2024 06:53:33:762 | Protection | Delay OC Start              |       |
| 19 | 17.07.2024 06:53:33:762 | Protection | A Phase Delay OC Start      |       |

The latest SOE is placed at the top of the list. Time and date of the SOE is displayed on the table.

There are many options for event scope: “1~100; 101~200; 201~300; 301~400; 401~500; 501~600; 601~700; 701~800; 801~900; 901~1000; all”.

There are many options for event period: “1 min; 15 mins; 30 mins; 1 hour; 2 hours; 4 hours; 8 hours; 12 hours; 1 day; 1 week; 1 month; 1 year; all”.

The types of SOE include “protection”, “measurement”, “control”, “settings”, “switch”, “communication” and “internal fault”.

The user can save SOE file as .txt and .csv format, and print as well.

The user can delete all SOE information by “Clear All” button

### 6.2 Fault recorder

Click the “Fault Recorder” and the fault recorder will display as below:

Powerline Business Worldwide

Fault Records

Fault of period: No limit Fault category: All Lines per page: 100

Total: 325 < 1 2 3 4 > To page Refresh

|   | Time                    | Category | Text         | Value                                     | DurationTime | Fault Phase | Reclose Trip Count | Location   |
|---|-------------------------|----------|--------------|-------------------------------------------|--------------|-------------|--------------------|------------|
| 1 | 19.05.2025 06:39:41-527 | Trip     | OC Trip      | Ia=720.179(A),Ib=720.517(A),Ic=720.120(A) | 0.499(s)     | ABC         |                    | 26.606(km) |
| 2 | 19.05.2025 06:39:41-527 | Trip     | Fast OC Trip | Ia=720.179(A),Ib=720.517(A),Ic=720.120(A) | 0.499(s)     | ABC         |                    | 26.606(km) |
| 3 | 17.05.2025 10:55:30-453 | Trip     | OC Trip      | Ia=720.044(A),Ib=720.381(A),Ic=720.368(A) | 0.499(s)     | ABC         |                    | 26.603(km) |
| 4 | 17.05.2025 10:55:30-453 | Trip     | Fast OC Trip | Ia=720.044(A),Ib=720.381(A),Ic=720.368(A) | 0.499(s)     | ABC         |                    | 26.603(km) |
| 5 | 17.05.2025 10:50:16-051 | Trip     | OC Trip      | Ia=720.154(A),Ib=720.321(A),Ic=720.146(A) | 0.499(s)     | ABC         |                    | 26.6(km)   |
| 6 | 17.05.2025 10:50:16-051 | Trip     | Fast OC Trip | Ia=720.154(A),Ib=720.321(A),Ic=720.146(A) | 0.499(s)     | ABC         |                    | 26.6(km)   |

The latest FR is placed at the top of the list. Time and date of the FR is displayed on the table.

There are many options for event scope: “10; 50; 100; 200; 300; all”.

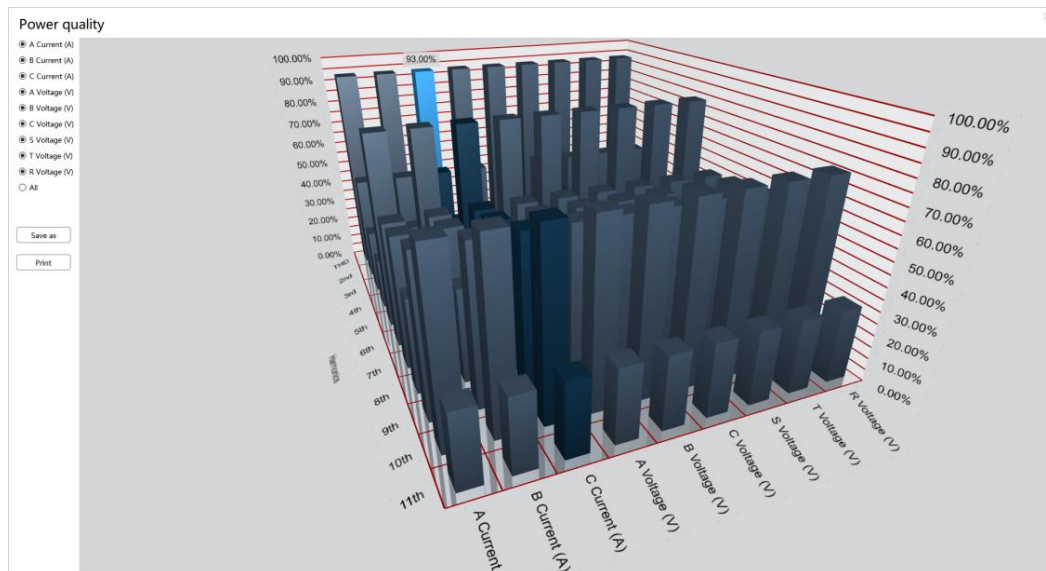
The types of FR include “start”, “alarm” and “trip”.

The user can save FR file as .txt and .csv format, and print as well.

The user can delete all FR information by “Clear All” button.

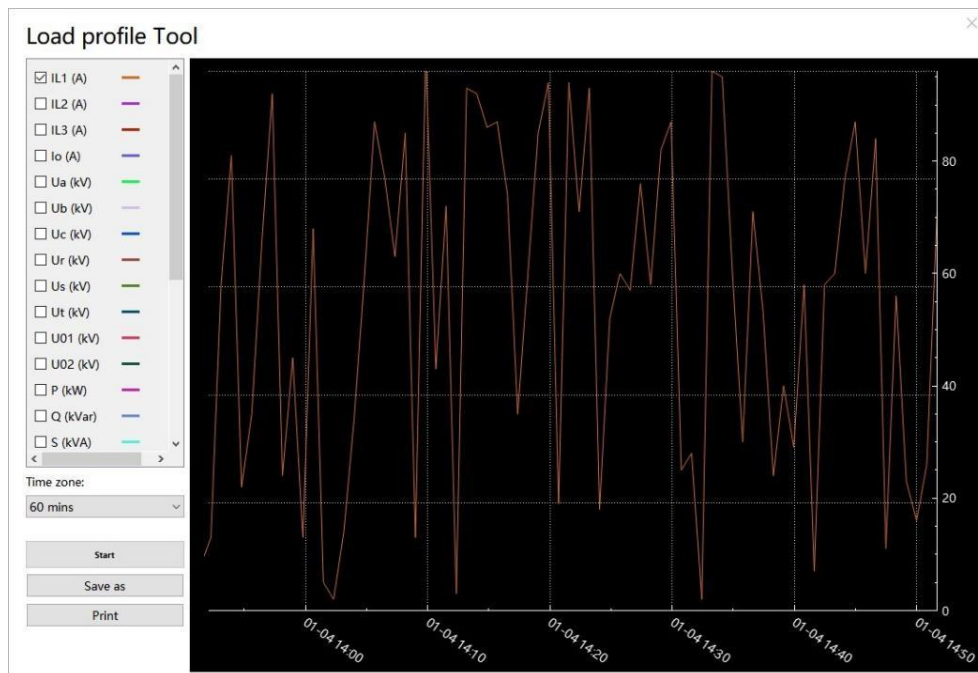
## 6.3 Power Quality Analysis

Find the “Power quality” button in the menu tree, then you can check the power quality data.



## 6.4 Load Profile

Find the “Load Profile” button in the menu tree, then you can check the Load Profile.

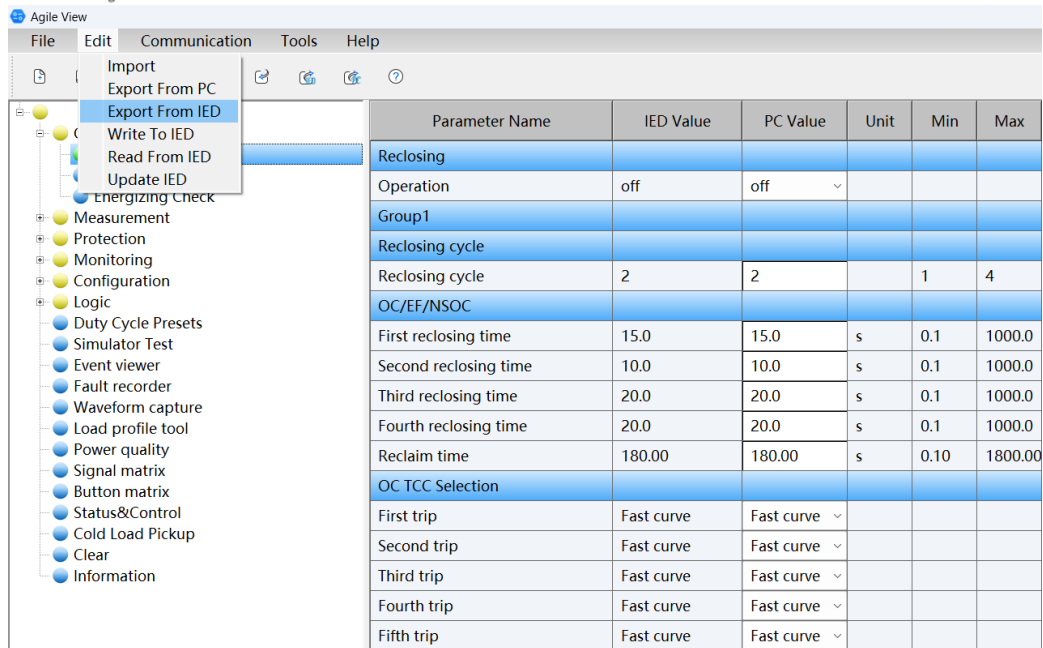


## 7. Download and Upload Settings

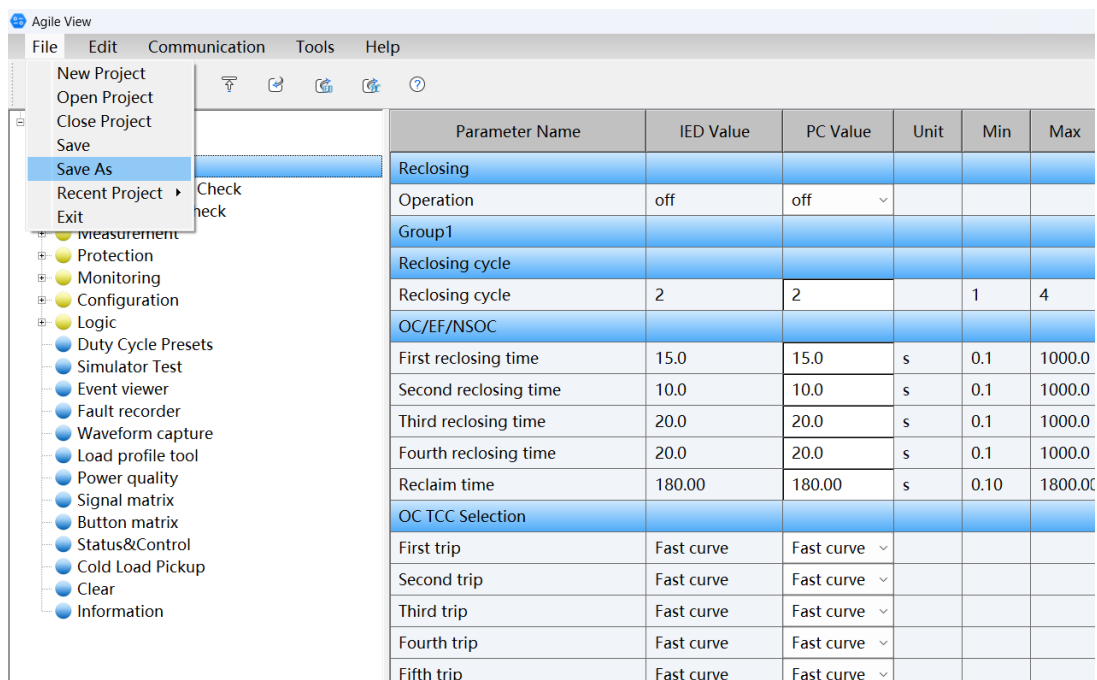
- click “write to IED” after configuration, and click “read from IED” to confirm the settings is successful or not.

| Parameter Name        | IED Value  | PC Value   | Unit | Min  | Max     |
|-----------------------|------------|------------|------|------|---------|
| Reclosing             |            |            |      |      |         |
| Operation             | off        | off        |      |      |         |
| Group1                |            |            |      |      |         |
| Reclosing cycle       |            |            |      |      |         |
| Reclosing cycle       | 2          | 2          |      | 1    | 4       |
| OC/EF/NSOC            |            |            |      |      |         |
| First reclosing time  | 15.0       | 15.0       | s    | 0.1  | 1000.0  |
| Second reclosing time | 10.0       | 10.0       | s    | 0.1  | 1000.0  |
| Third reclosing time  | 20.0       | 20.0       | s    | 0.1  | 1000.0  |
| Fourth reclosing time | 20.0       | 20.0       | s    | 0.1  | 1000.0  |
| Reclaim time          | 180.00     | 180.00     | s    | 0.10 | 1800.00 |
| OC TCC Selection      |            |            |      |      |         |
| First trip            | Fast curve | Fast curve |      |      |         |
| Second trip           | Fast curve | Fast curve |      |      |         |
| Third trip            | Fast curve | Fast curve |      |      |         |
| Fourth trip           | Fast curve | Fast curve |      |      |         |
| Fifth trip            | Fast curve | Fast curve |      |      |         |

- There are two kinds of files in configuration tool, one is parameter file, another is project file. For parameter file, the user can select current page or all parameter to download and upload by click “Export” and “Import” buttons.



- c. For project file, the user can download and upload by click “save as” and “open project” buttons.



- d. The user can update feeder protection relay through configuration tool only by click “Update IED” button on file menu.

Agile View

File Edit Communication Tools Help

Import  
Export From PC  
Export From IED  
Write To IED  
Read From IED  
Update IED  
Energizing Check

Measurement  
Protection  
Monitoring  
Configuration  
Logic  
Duty Cycle Presets  
Simulator Test  
Event viewer  
Fault recorder  
Waveform capture  
Load profile tool  
Power quality  
Signal matrix  
Button matrix  
Status&Control  
Cold Load Pickup  
Clear  
Information

| Parameter Name        | IED Value  | PC Value   | Unit | Min  | Max     |
|-----------------------|------------|------------|------|------|---------|
| Reclosing             |            |            |      |      |         |
| Operation             | off        | off        | ▼    |      |         |
| Group1                |            |            |      |      |         |
| Reclosing cycle       |            |            |      |      |         |
| Reclosing cycle       | 2          | 2          |      | 1    | 4       |
| OC/EF/NSOC            |            |            |      |      |         |
| First reclosing time  | 15.0       | 15.0       | s    | 0.1  | 1000.0  |
| Second reclosing time | 10.0       | 10.0       | s    | 0.1  | 1000.0  |
| Third reclosing time  | 20.0       | 20.0       | s    | 0.1  | 1000.0  |
| Fourth reclosing time | 20.0       | 20.0       | s    | 0.1  | 1000.0  |
| Reclaim time          | 180.00     | 180.00     | s    | 0.10 | 1800.00 |
| OC TCC Selection      |            |            |      |      |         |
| First trip            | Fast curve | Fast curve | ▼    |      |         |
| Second trip           | Fast curve | Fast curve | ▼    |      |         |
| Third trip            | Fast curve | Fast curve | ▼    |      |         |
| Fourth trip           | Fast curve | Fast curve | ▼    |      |         |
| Fifth trip            | Fast curve | Fast curve | ▼    |      |         |