400

AMC16Z series precision power distribution system

Installation Manual V1.0

ACREL CO., Ltd.

Declaration

The company reserves the right to modify the specifications described in this manual without prior notice.Before ordering,please consult your local agent for new specifications.

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DC part

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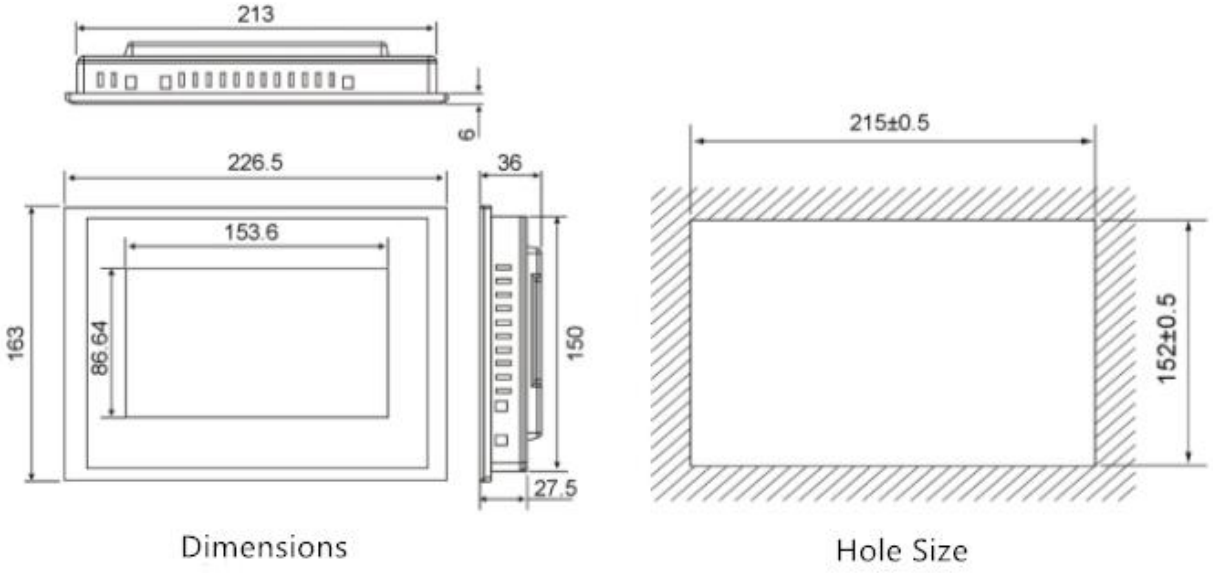
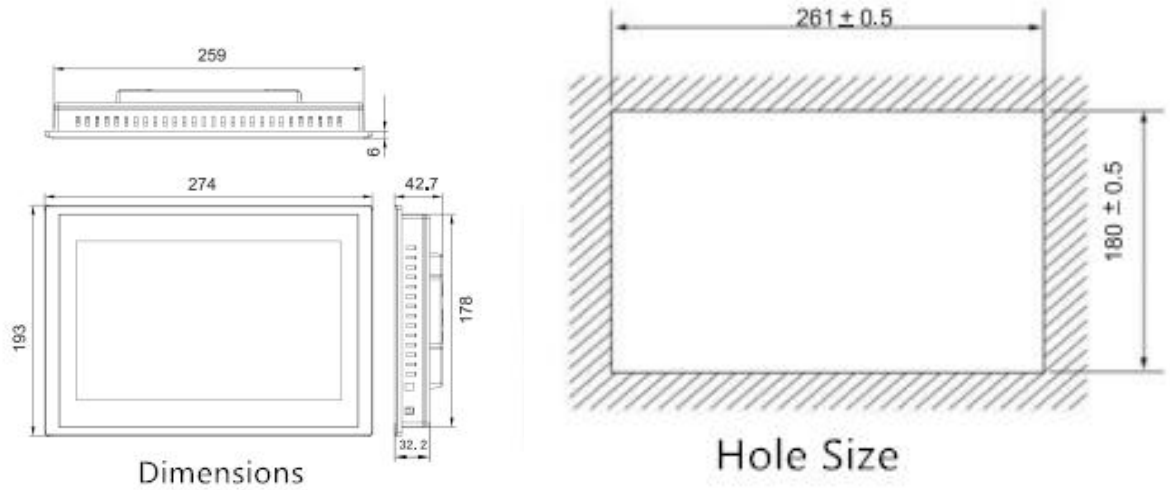
1.1 7-inch touch screen appearance and installation

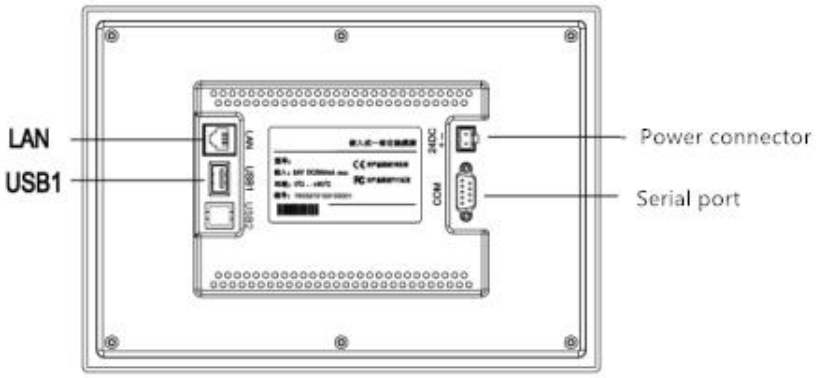


1.2 10 inch touch screen appearance and installation



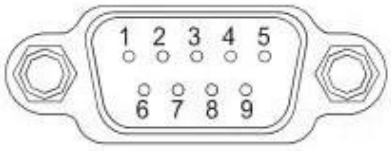
Second、touch screen interface description

Serial port (DB9) pin definition



Serial port（DB9）	2×RS485
USB1	Main port, compatible with USB2.0 standard
LAN（RJ45）	Ethernet interface
Power connector	24V DC ±20%

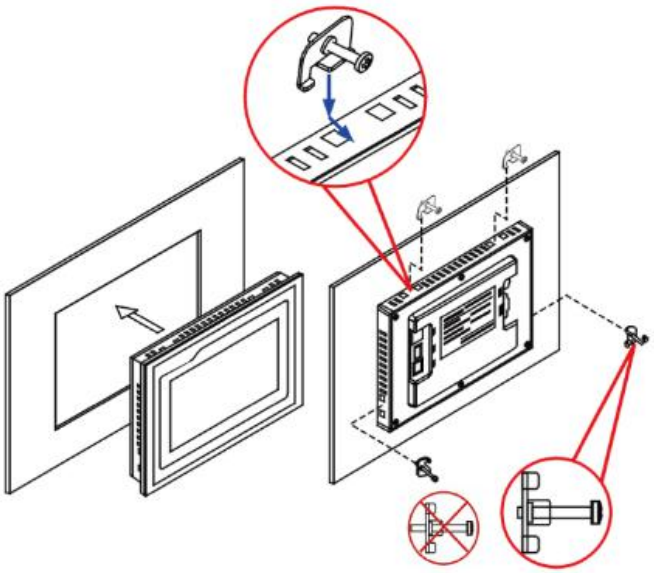
Serial port pin definition



Serial port pin definition

interface	PIN	pin definition
COM1	2	RS232 RXD
	3	RS232 TXD
	5	GND
COM2	7	RS485 +
	8	RS485 —
COM3	4	RS485 +
	9	RS485 —

Third 、Installation



Fourth、Wiring

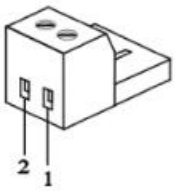
4.1Power wiring

Step 1: Strip the 24V power cord and insert it into the power plug terminal

Step 2: Use a flat-blade screwdriver to tighten the power plug screws

Step 3: Insert the power plug into the power socket of the product

schematic diagram and pin definition of the power plug are as follows

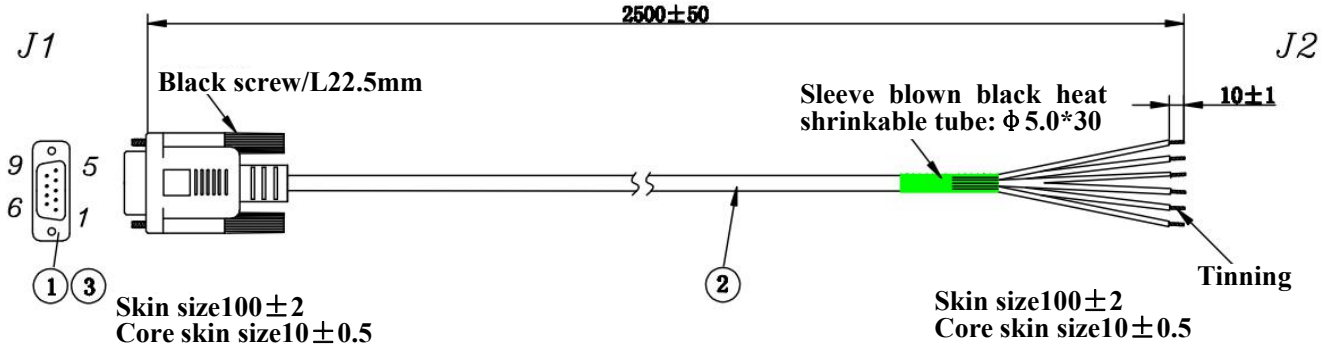


PIN	definition
1	+
2	–

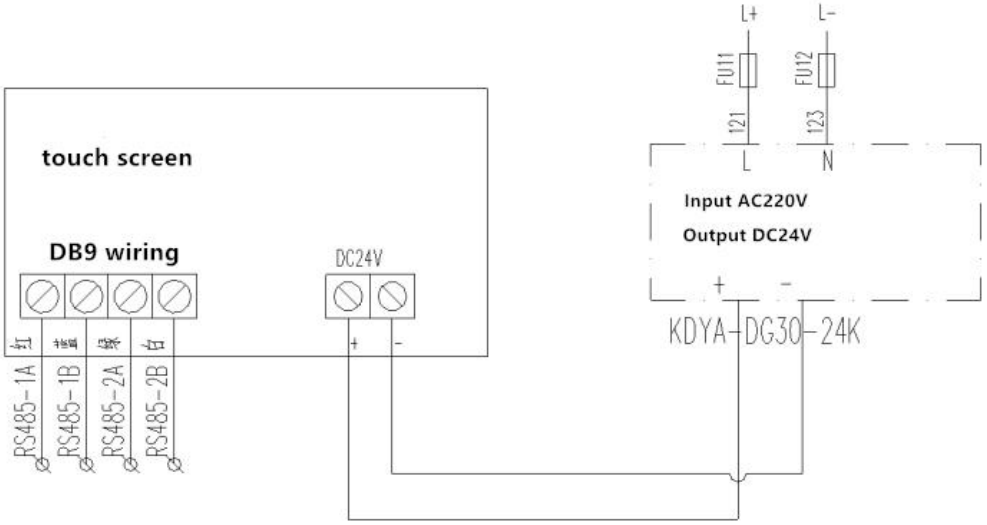
24V DC only, independent power supply and the power supply is 15W

4.2 Communication wiring

There is a patch cord in the factory configuration, among which the red and blue (7-8) are downstream, which are connected to the 485 of the module, and the green and white (4-9) are upstream, and are used for rotating the ring.



Green	4	RS485+
White	9	RS485-
Red	7	RS485+
Blue	8	RS485-



Fifth、Installation of the touch screen program

1、After the application is decompressed, copy the tpcbackup folder inside to the root directory of the U disk (note that it must be the root directory).

2、Power on the touch screen, and after the touch screen is started, insert the U disk into the USB port of the touch screen.

3、Click "Yes".

4、After clicking "Yes", click "User Project Update".

5、Then a dialog box will appear, click "Start Download".

6、After clicking to start downloading, the program will start to download. After it is completed, it will prompt that the download is successful. Please pull out the U disk and restart the touch screen. The program update was successful.

Sixth、Precautions

1、The output power of the switching power supply for the touch screen should be redundant. It is recommended that the output power of DC24 be above 15W;

2、Separate the upstream and downstream of the communication wiring adapter;

3、When users update the touch screen program by themselves, they must strictly follow the operation steps and don't mess around;

4、After the program is downloaded, unplug the U disk containing the update package in time;

5、The format of the U disk used by the update program must be FAT32.

Touch screen program instruction manual

AC part

1. parameters, functions, and operations

1.1Main circuit parameters

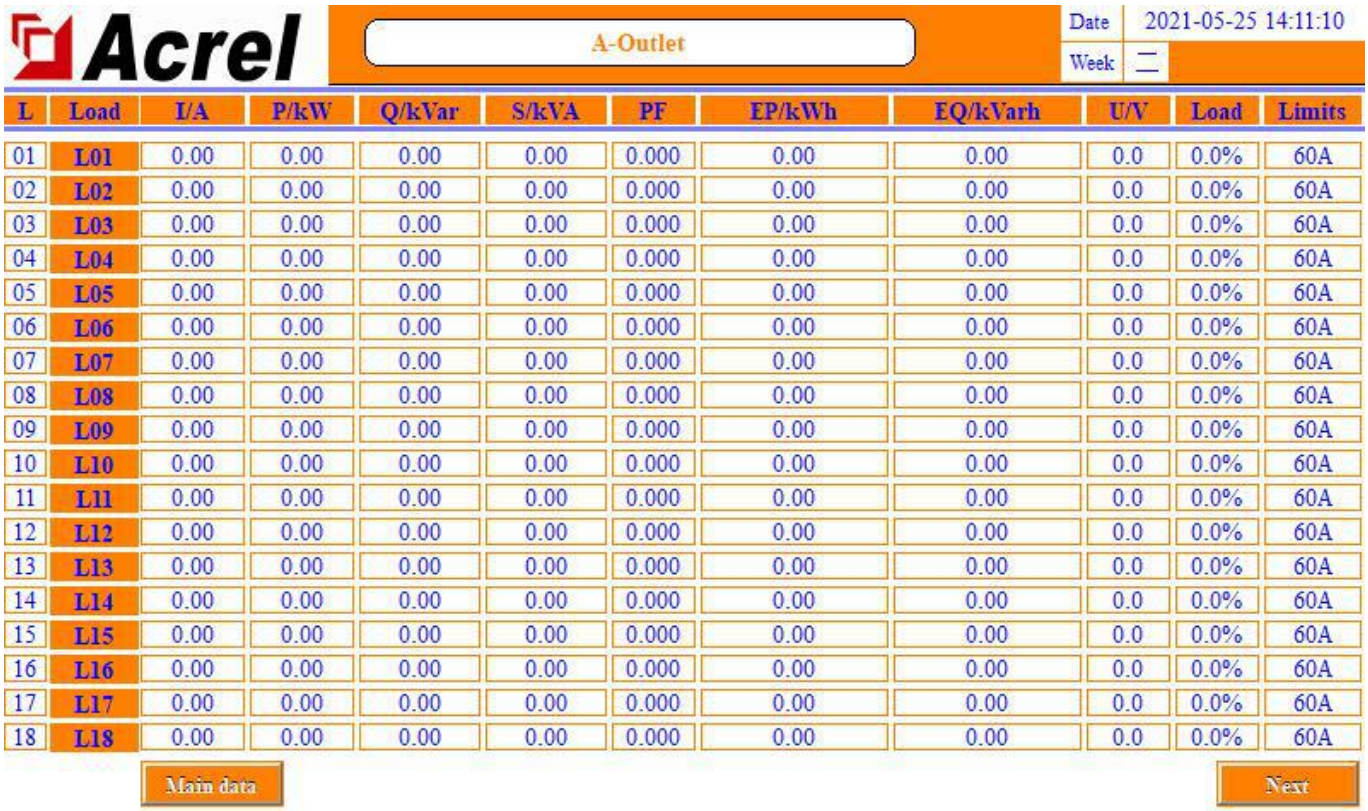
Parameter	Phase A/AB	Phase B/BC	Phase C/CA	All/Imbalance%
PhaseU/V	0.0	0.0	0.0	----
LineU/V	0.0	0.0	0.0	nan
Phase I/A	0.0	0.0	0.0	nan
Load Percentage/%	0	0	0	----
ActiveP/kW	0.00	0.00	0.00	0.00
ReactiveP/kVar	0.00	0.00	0.00	0.00
Apparent P/kVA	0.00	0.00	0.00	0.00
Power Factor/φ	0.000	0.000	0.000	0.000
ActiveE/kWh	0.00	0.00	0.00	0.00
ReactiveE/kVarh	0.00	0.00	0.00	0.00
Fre/Hz	0.00	Leakage I/mA	0	----
Zero to Ground U/V	0.0	Temperature/°C	0.0	----
Zero Sequence I/A	0.0	Humidity	0.0	----
Fundamental P/kW	0.00	0.00	0.00	0.00
Harmonic P/kW	0.00	0.00	0.00	0.00
Fundamental Ep/kWh	0.00	0.00	0.00	0.00

As shown in the figure, the first interface after the touch screen is turned on is the main line parameter interface. If there are multiple incoming lines, you can click the button in the lower right corner to switch to view other incoming line parameters.

1.2 Branch parameters

In the main road parameter interface, click "branch road parameter" to enter.

If there are multiple discharge lines, first enter the corresponding main circuit in the main circuit parameter interface, and then click "branch parameter".



The meaning of the title from left to right are:

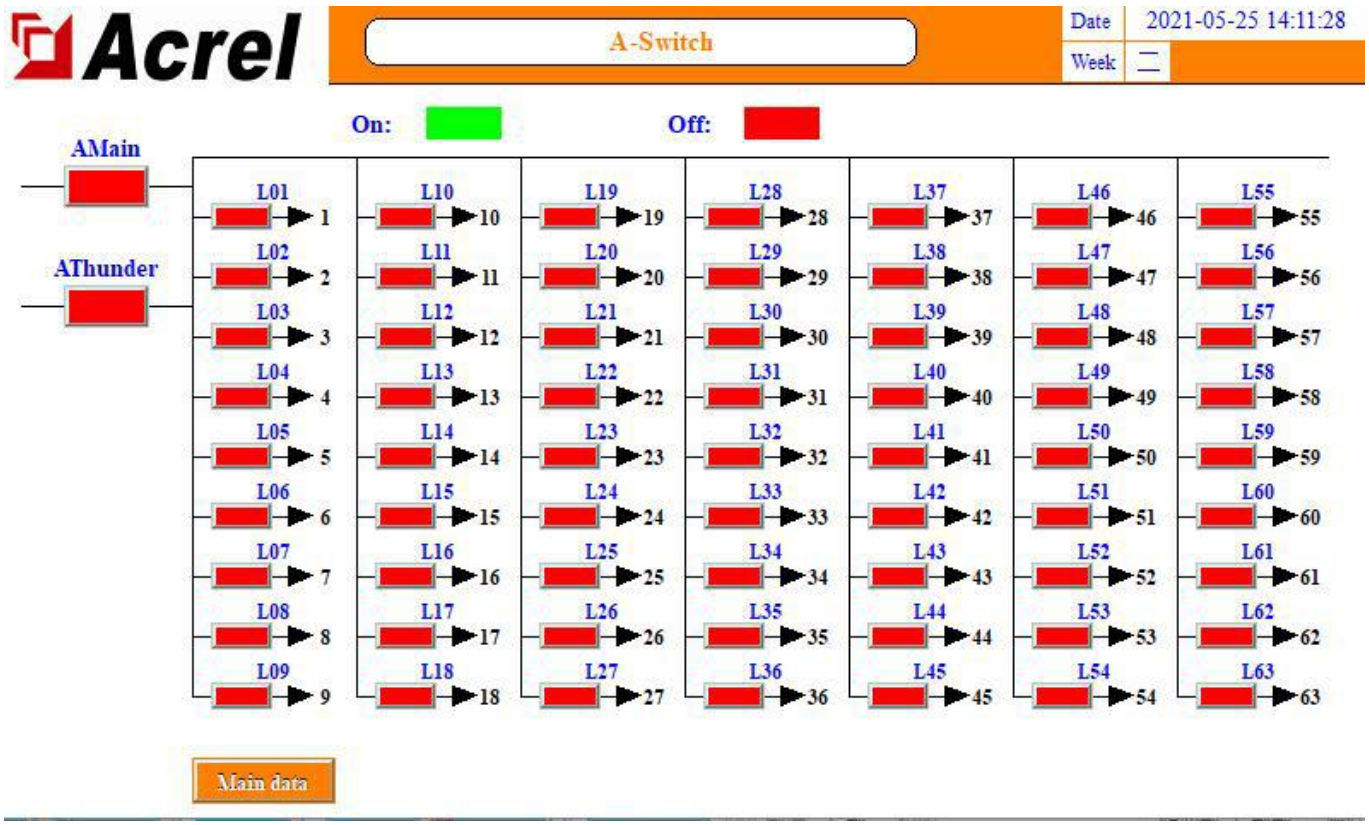
Branch number, circuit name/load name, current, active power, reactive power, apparent power, power factor, active energy, reactive energy, voltage, load rate, a section of overload current alarm limit value.

Among them, a section of the overload current alarm limit value can be modified by the user according to their own needs. For the modification method, please refer to the "parameter setting" section below.

1.3 switch status

The switch status interface is the intuitive switch display system diagram of the main branch. Click "Switch Status" on the main circuit parameter interface to enter.

If there are multiple discharge lines, first enter the corresponding main circuit in the main circuit parameter interface, and then click "Switch Status".



1.3.1 Main circuit switch status

The leftmost column is the main circuit switch status. The main circuit switch status is collected by the main module (AMC16Z-ZA). The ones with the words "main circuit" and "standby circuit" are OF+SD points, the auxiliary contacts of the main circuit. The word "lightning protection" is the switch state of the lightning protection device. SD/switch opening status is not displayed.

The different user field wiring will cause the required fault status to correspond to the different module acquisition status. The main switch status displayed on this interface is unified as "fault display is red, normal display is green". If the user does not meet the test results, you need to check whether the switch alarm settings are set correctly according to the needs based on the alarm information.

1.3.2 Branch switch status

The switch status of the main circuit is the branch switch status, which is collected by AMC16Z-FAK. Green means closed, and red means separated.

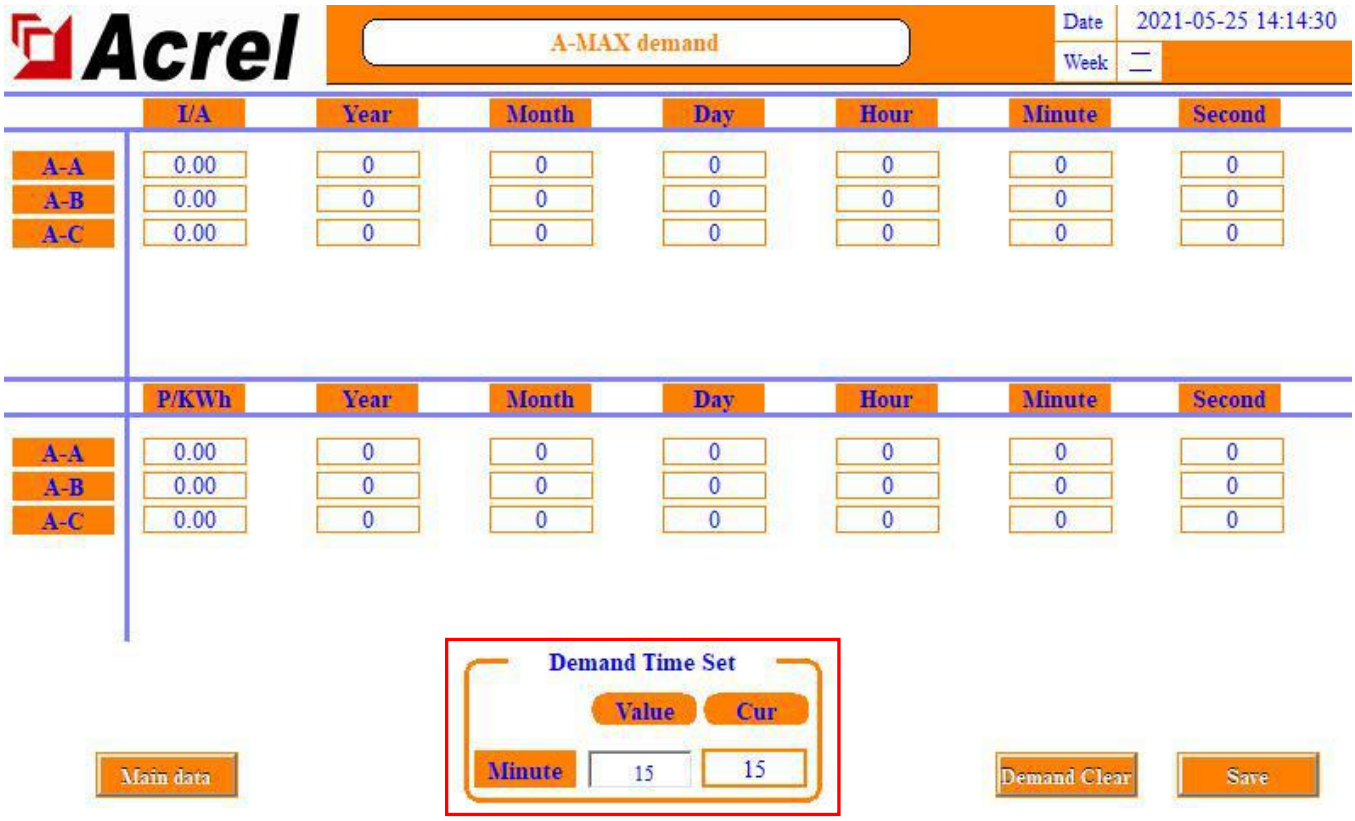
1.4 User login

Some functions require different permissions. If you need to set alarm parameters, you can log in to the person in charge or Admin;

If you need to view the content management interface to view order information such as the software number, you need to log in to Admin. The login method is as shown below.

1.5 Maximum demand

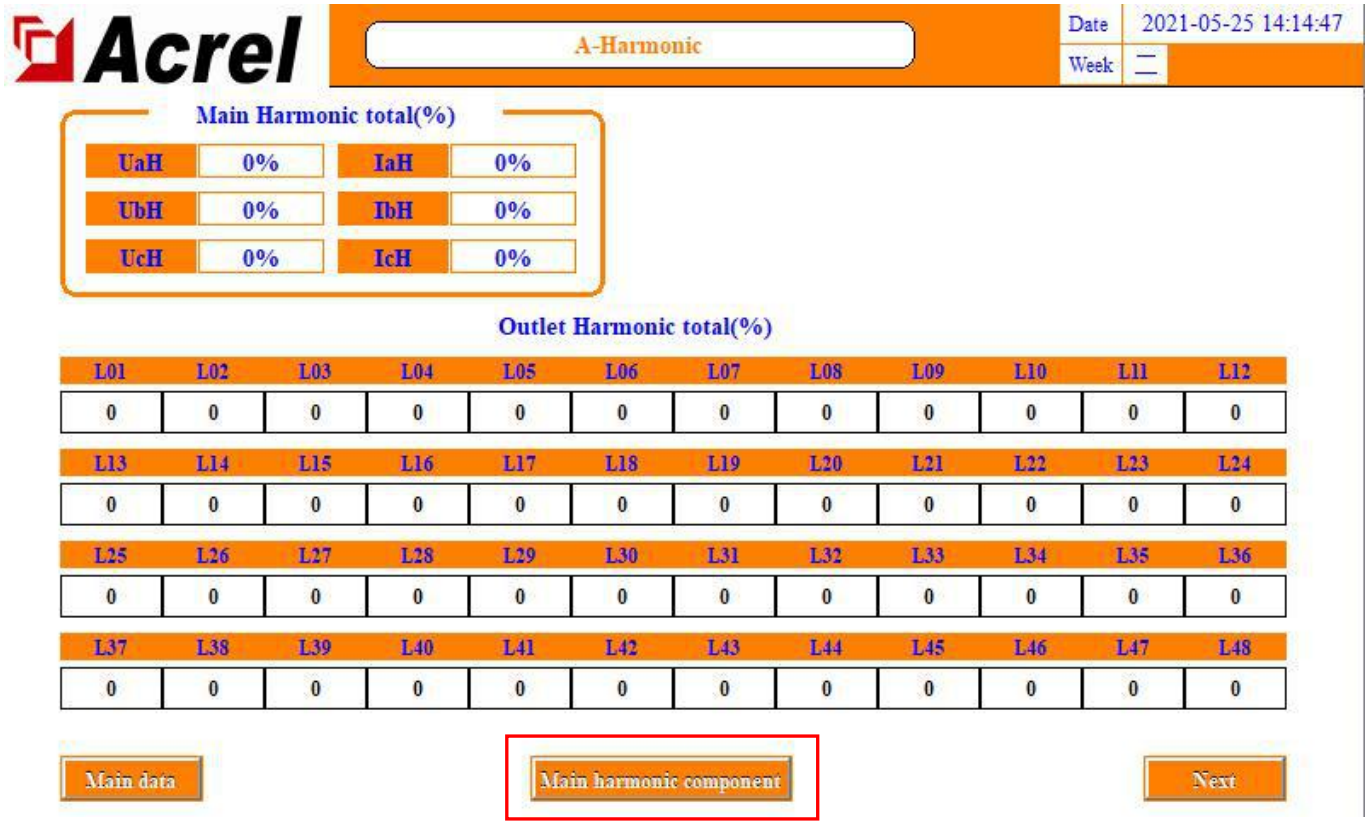
The maximum demand is the maximum value of the historical average value of the incoming current and power.



You can set the "demand time setting" to adjust the frequency of average statistics.

1.6 Harmonic parameters

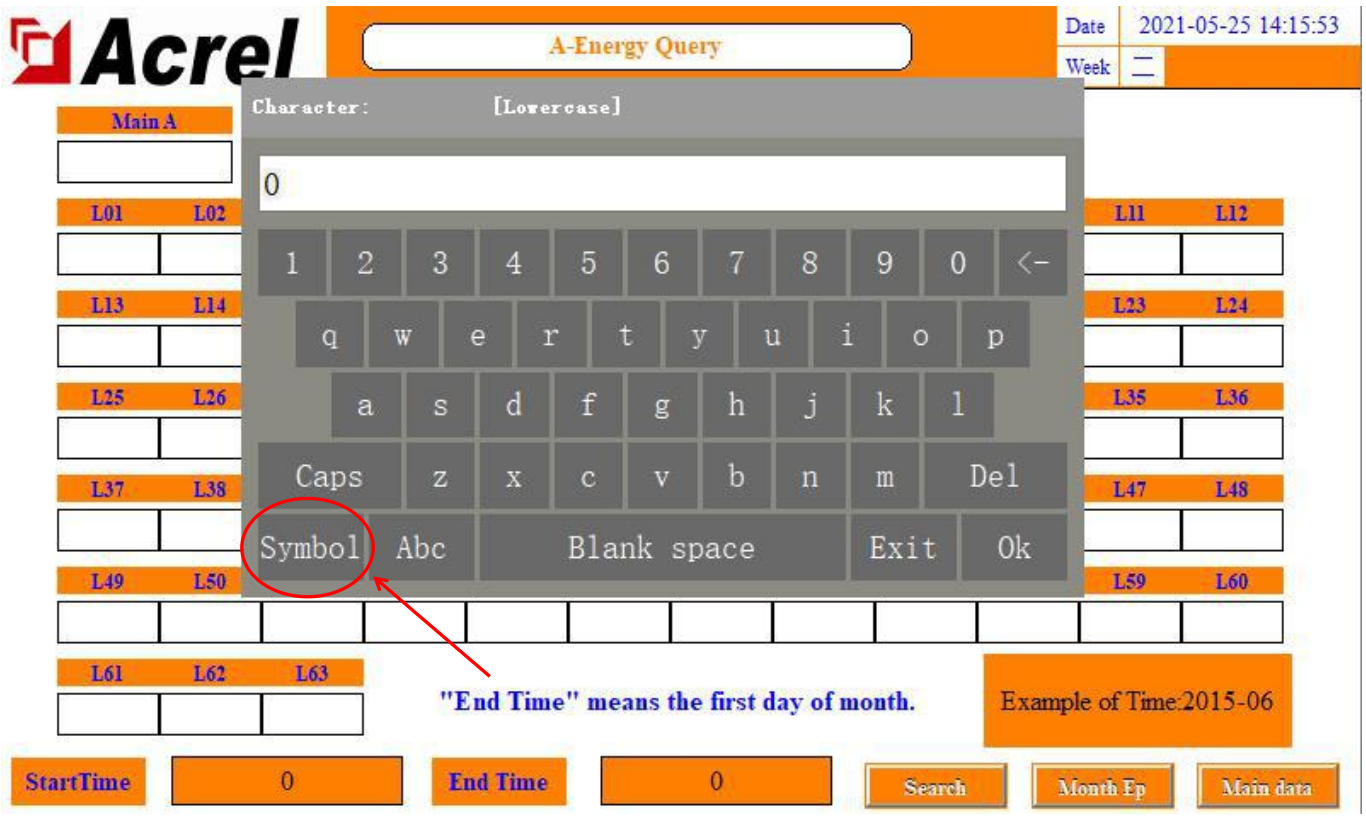
Click "Harmonic Parameters" on the main circuit parameter interface to enter. You can view the main circuit voltage, current total harmonics, and each branch current total harmonics. Click "Incoming Harmonic Components" to view the voltage and current subharmonics of the main circuit up to 2~63 times.



1.7 Monthly electric energy

Click "Monthly Energy" in the main circuit parameter interface to enter. You can view the monthly energy of each phase and branch of the main circuit. Drag the progress bar or click "Previous" or "Next" to view further. The displayed electrical energy is the electrical energy of the previous month. For example, 2015-05 represents the electrical energy before May 1, 2015, that is, the electrical energy in April.

To query the electric energy for a period of time, you can click the "Energy Query" button on this interface, enter the beginning and ending months according to the format example, and enter the "-" in the symbol.



It should be noted that the end time refers to the first day of the input month. For example, inputting 2015-05 means May 1, 2015, that is, the energy statistics in April and before.

1.8 parameter settings

Click "Parameter Setting" to enter from the main road parameter interface.

1.8.1 Main circuit parameter setting

If there are multiple incoming lines, you can click the button in the lower right corner to switch and set the parameters of other incoming lines. The parameters common to multiple incoming lines can only be set in the first interface.

You can selectively use the alarm function according to your own needs. If an unnecessary alarm is triggered, you can modify the alarm value to make the alarm disappear. The specific modification method can refer to the following description.

After the parameter setting is completed, you must click "Save Settings" before normal use and power-off save.

1.8.1.1 Voltage alarm setting

This part can set the voltage alarm value of each phase of the main line incoming line. The system has default values, which can be modified according to your own needs.

Phase loss means that when the phase voltage is lower than the set parameter, the phase loss alarm will be triggered.

Undervoltage means that when the voltage of this phase is higher than the parameter set by the lack of phase, and lower than the parameter set by the undervoltage, the phase voltage undervoltage alarm will be triggered.

Overvoltage means that when the phase voltage is higher than the set parameter, the phase voltage overvoltage alarm will be triggered.

1.8.1.2 Incoming line overload alarm setting

This part can set the load alarm value of each phase of the main line incoming line, divided into one and two levels.

The rated value has been preset according to the drawing when leaving the factory. The first-stage alarm value and the second-stage alarm value have been preset by the rated value algorithm. The first-stage alarm value=rated value*60%, and the second-stage alarm value=rated value*80%. If the drawing is not clear or the actual application changes, you can modify it yourself.

When the current of this phase is greater than the set value, it will trigger the first/second stage overload alarm. It should be noted that when the second stage overload is triggered, the first stage alarm will not be triggered.

1.8.1.3 Current ratio setting

In this part, the CT value of the current transformation ratio can be set. Set the parameters of this part according to the value of the transformer. Take the 50A/5A transformer as the standard value and set the value to 10. If it is a 400A/5A transformer, the set value is 80 (5A on the outlet side).

It has been preset according to the drawings when leaving the factory, and there should be changes in the actual, you can modify it according to the above rules.

1.8.1.4 Power overload setting

This part can set the power alarm value. The system will get a default value according to the preset load and voltage, which can be modified according to its own needs.

When the power of this phase is greater than the set parameter, it will trigger the frequency overrun alarm.

1.8.1.5 Three-phase unbalanced setting

This part can set the incoming line current and voltage three-phase unbalance alarm value.

When the current/voltage unbalance is greater than the set parameters, the current/voltage three-phase unbalance alarm will be triggered

1.8.1.6 Frequency alarm setting

This part can set the frequency alarm value. The system has default values, which can be modified according to your own needs.

Under frequency means that when the frequency is less than the set parameter, the under frequency alarm will be triggered.

Over frequency means that when the frequency is greater than the set parameter, it will trigger the frequency over limit alarm.

1.8.1.7 Zero-ground voltage

In this part of the setting, when the zero-ground voltage is greater than the set parameter, the zero-ground voltage over-limit alarm will be triggered.

1.8.1.8 Zero sequence current

In this part of the setting, when the zero sequence current is greater than the set parameter, the zero sequence current over limit alarm will be triggered.

1.8.1.9 temperature

This part of the setting, when the cabinet temperature is greater than the set parameters, it will trigger the temperature over-limit alarm.

1.8.1.10 humidity

This part of the settings, when the humidity is greater than the set parameters, it will trigger the humidity over-limit alarm.

1.8.1.11 Leakage

In this part of the setting, when the leakage current is greater than the set parameter, the leakage current over-limit alarm will be triggered.

1.8.1.12 Outgoing overload alarm setting

This part is set as the load alarm percentage on the outgoing side, and it is classified into one and two stages, similar to 1.8.1.2. The default is 60% and 80%, and the overload alarm value is calculated with the outgoing load rating, that is, the overload of the first stage of the outgoing line = the rated value of the outgoing load * 60%, the overload of the second stage of the outgoing line = the rated value of the outgoing load * 80%, according to your needs modify.

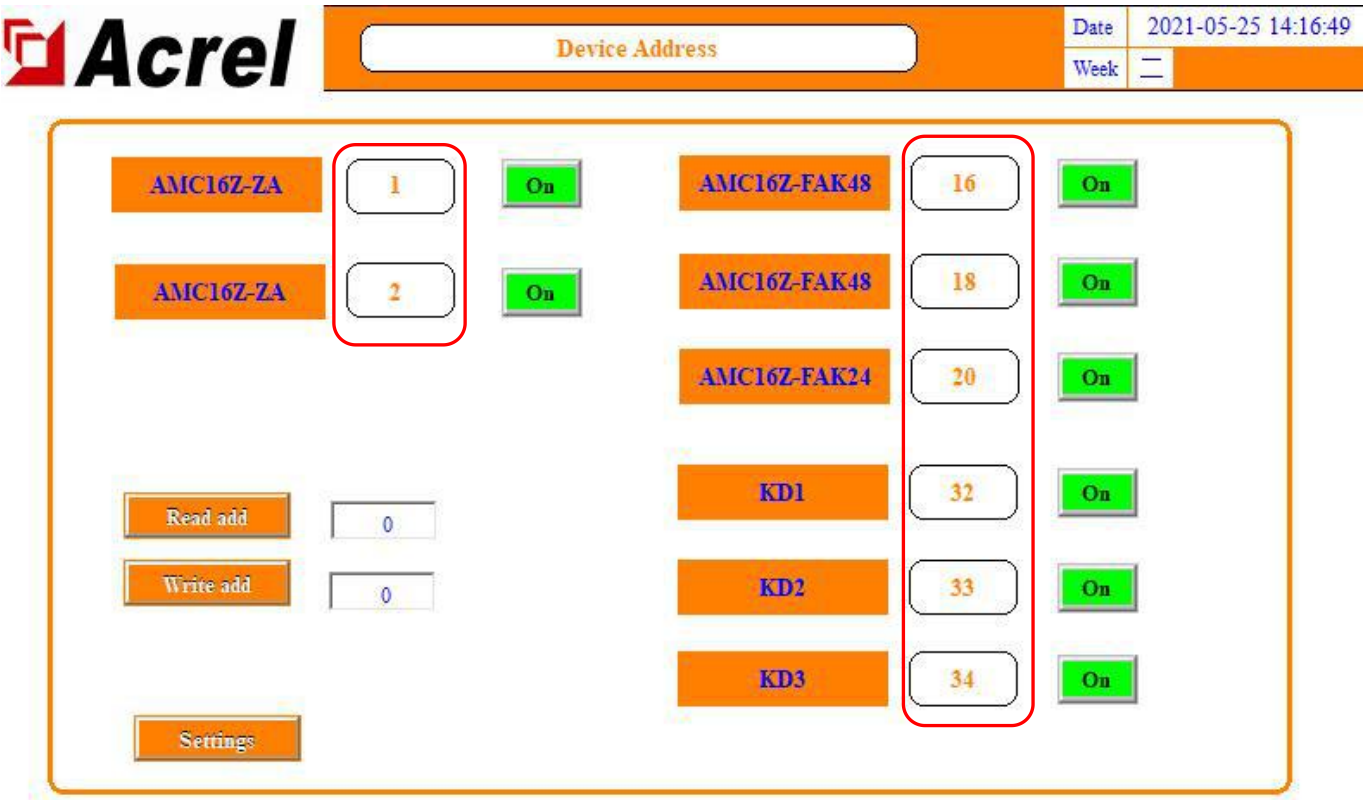
1.8.1.13 Forwarding data address

This part involves data forwarding, you can modify the forwarding data address by yourself, please refer to the following for details.

1.8.2 Instrument address

The internal address of the instrument has been defaulted before leaving the factory. If there is a problem that cannot communicate, and the reason for the connection is eliminated, this function can be used to view and modify the address of the instrument.

Click "Instrument Address" in the parameter setting interface to enter.



As shown in the figure, this part is the correct address of the instrument. If the address of the instrument is not the address marked, or if the address of the instrument is repeated, it will cause an error.

View the actual instrument address: first disconnect all module communications, connect only the target instrument that needs to view the address, click "read address", and the address of the instrument is displayed on the right. (If it is not possible to read the address of the instrument under the premise that all module communications have been disconnected and there is no problem with the wiring, further investigation is required.)

Modify the actual instrument address: Disconnect the communication of all modules, connect only the target instrument that needs to view the address, enter the communication address of the instrument on the right side, and click "write address" to complete.

If there is a module in the actual application that does not need to be used but cannot shield the communication alarm, you can click the green switch button on this interface to stop the module. If you want to put it into use later, you can click again to enable the module.

1.8.3 Circuit of outgoing lines

Click "Number of Outgoing Lines" in the parameter setting interface to enter. (If there are multiple outgoing lines, you need to go to the corresponding incoming line parameter setting interface and click "outgoing lines" to enter.)

The function of this part is to adjust the number of lines, the number of switches, the name of the switch, and the name of the load.

1.8.3.1 Adjust the circuit of lines and switches.

In the lower right corner of this interface, there is "load circuit number", enter the number in the input box below, and the corresponding circuit number will be displayed in the "branch circuit parameter" interface. After modification, you need to go back to the "Parameter Settings" interface and click "Save Settings" to save after power-off.

Click the "switch name" in the lower right corner to modify the number of switches, and the corresponding number of switches will be displayed in the "switch status" interface after modification. After modification, you need to go back to the "Parameter Settings" interface and click "Save Settings" to save after power-off.

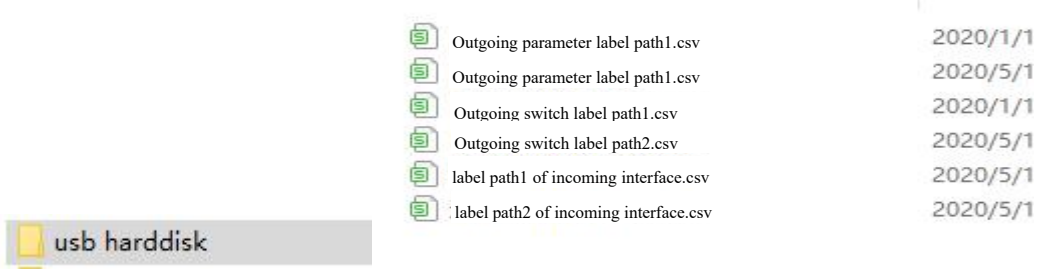
1.8.3.2 Modify the switch name and load name.

There are two ways to modify: you can directly click on the label to modify, or you can use a U disk to modify in batches.

Batch Edit:

First insert the U disk behind the touch screen and click "Export Switch Name".

Open the U disk information on the computer and find the usb harddisk folder in the root directory. Find the content you want to change, and open the name corresponding to the modified serial number.



Then insert the U disk into the back of the touch screen and click "Import Switch Name". At this time, the names of each channel displayed on the "Branch Parameters" and "Switch Status" interfaces are already the modified names.

1.8.4 Power zero

In the "Parameter Setting" interface, click "Energy Clear", the energy of ZA and FAK will be cleared. Note that the modules that do not need to be cleared are disconnected from the communication line.

1.8.5 Set time

Click "Set Time" in the "Parameter Setting" interface to modify the current time.

1.8.6 Load rating

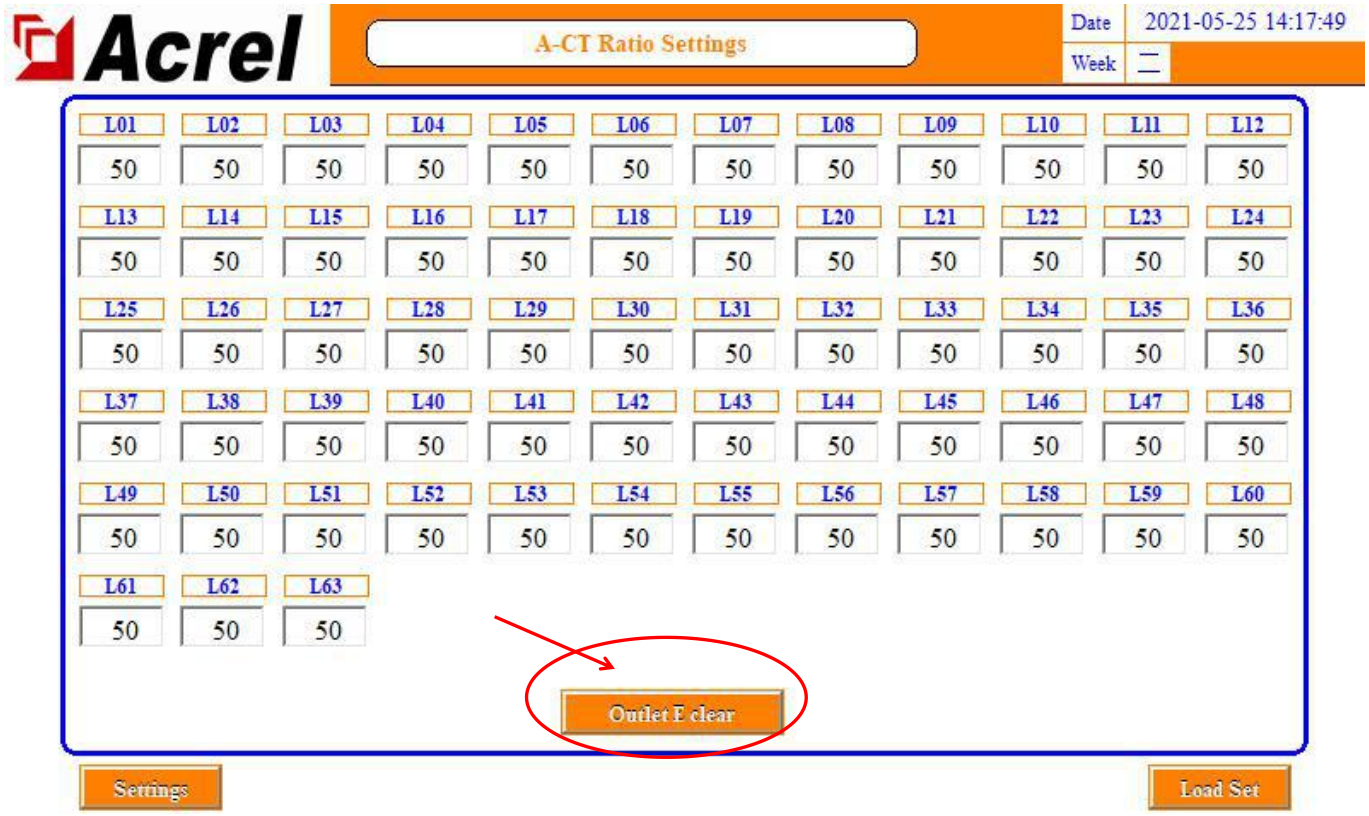
Click "Load Rating" in the "Parameter Setting" interface to modify the load rating of each line of the outgoing line. It has been preset according to the drawing when it leaves the factory. If there are changes in the actual application, you can modify it by yourself. After modification, you need to go back to the "Parameter Settings" interface and click "Save Settings".

This data is used to calculate the alarm value with the percentage of the load alarm value of the first-stage and second-stage load on the "Parameter Setting" interface. A segment of alarm value will be displayed in the "branch parameter" interface.

1.8.7 CT rating

Click "CT Rated" in the "Parameter Setting" interface to modify the CT ratio of each channel of the outgoing line, and set it according to the primary value of the configured sensor. If the configured sensor is 100A/50mA, it should be set to 100. If the outlet value is 20mA, the primary value should be multiplied by 2.5.

It has been preset according to the drawings when leaving the factory, and there should be changes in the actual, you can modify it according to the above rules.



On the "CT Rated" interface, the branch electrical energy is cleared. Click to reset the energy data of each branch with one key.

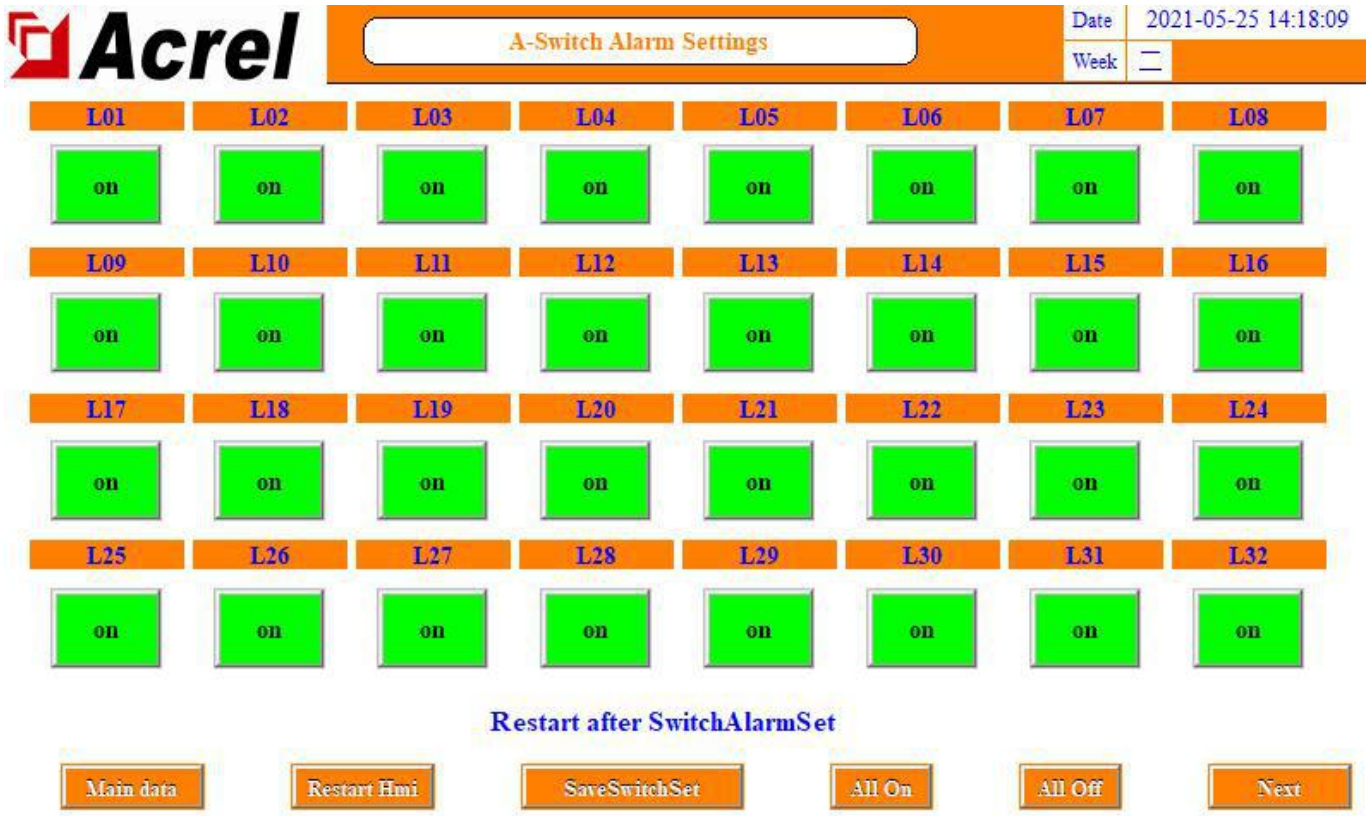
1.8.8 English version

Click "English" in the "Parameter Setting" interface to switch the interface to the English version, and then click "Chinese" to switch back to the Chinese version.

1.8.9 Switch alarm setting

Regarding the switch alarm, you can click "Switch alarm setting" in the "Parameter setting" interface to go to the switch alarm setting interface.

1.8.9.1 Branch switch alarm setting (active)



This part refers to the active detection switch status collected by AMC16Z-FAK, which is a jump alarm, that is, it needs to detect that the switch is normal and then disconnect to trigger the alarm. If there is a switch that is not enabled but there is an alarm, you can click on that channel The switch alarm setting of the switch, make "open" change to "close", and then if you need to enable it, you can click to open it again.

Click "Save Switch Settings" after setting.

1.8.9.2 Branch SD alarm setting (passive)

Click the next page in the "switch alarm setting" interface, to the last page, you can set "normally open" and "normally closed" for "outgoing SD".

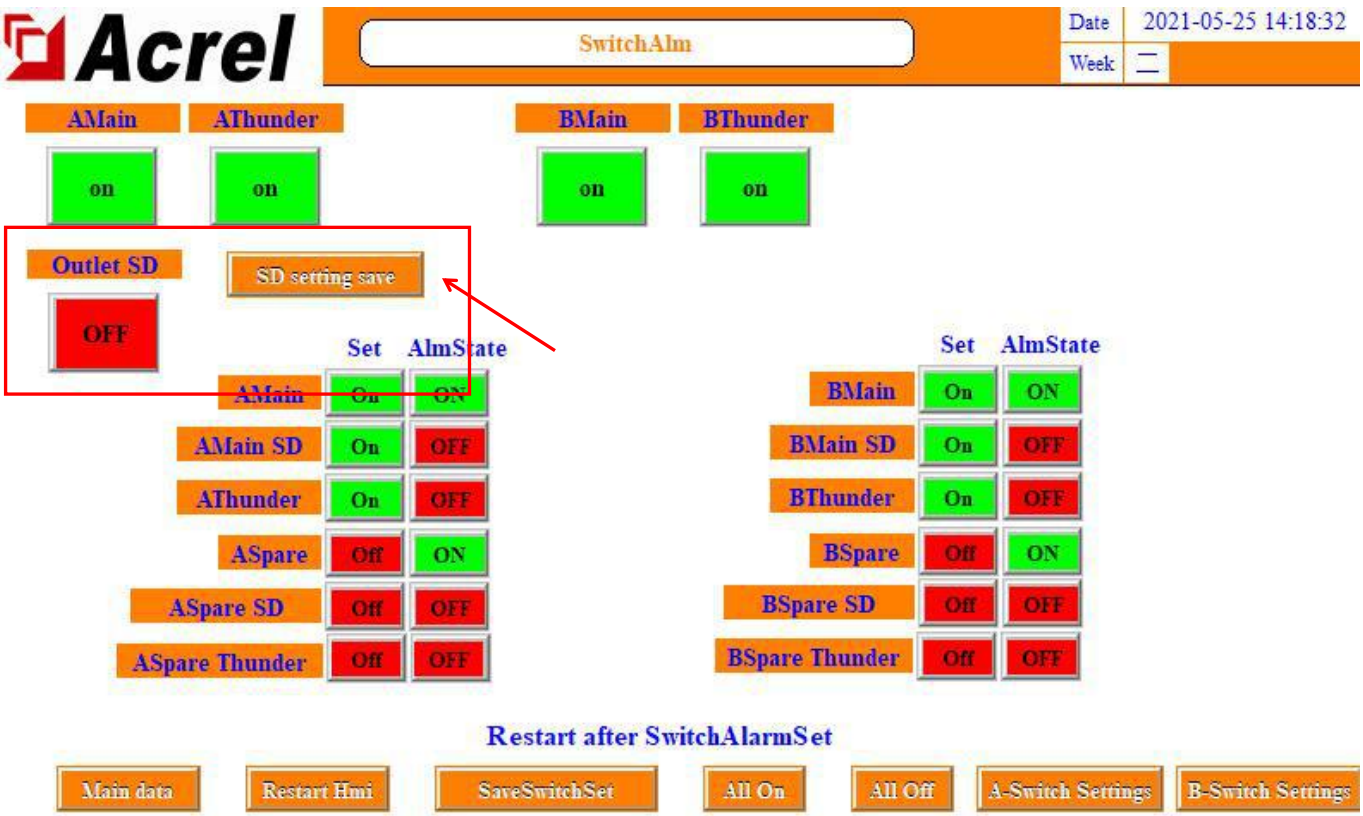
This part refers to the passive detection switch status collected by AMC16Z-KD, which is a jump alarm. The SD of the branch can be controlled by this button.

Normally closed: alarm when the loop changes from a path to an open circuit.

Normally open: alarm when the loop changes from open to open.

The user selects normally open or normally closed according to the actual application, and the factory defaults to normally closed. If the user does not need to use the SD alarm, the default is normally closed and no alarm is required.

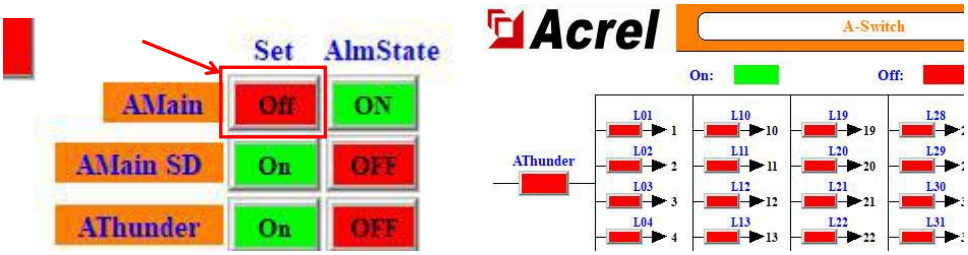
If there is any change, click "SD dedicated save settings" on the right after setting, or click "Save settings" on the "Parameter Settings" interface.



1.8.9.3 Main circuit switch alarm setting (passive)

Click the next page in the "switch alarm setting" interface, to the last page, you can set the switch point of ZA collection.

Labels with the words "main circuit" and "standby circuit" are generally used as auxiliary contacts, and the rest are as shown on the label. "Main Road", "Backup Road", "Main Road Lightning Protection" and "Backup Road Lightning Protection" involve the display of the "Switch Status" interface.



The column of buttons under "Use" controls whether the switch is in use and displays. If it is "Off", no alarm will be triggered and the "Switch Status" interface will shield the display of the switch status. (The number of incoming lines required by the user is all turned on by factory default)

The button at the top of the interface controls whether the switch enables the alarm. If you need to display only the switch status, but not enable the switch alarm, you can click here to turn off the alarm function.

A column of buttons under "Alarm Status" control the alarm logic as normally open or normally closed. "Main circuit" and "Alternate circuit" are generally used as auxiliary contacts. "Normally closed" means that the circuit changes from open to open and alarms. "Normally open" "When the loop changes from a path to an open circuit, it will alarm. The logic of SD "trip" and "lightning protection" is opposite to the logic of the main circuit switch. "Normally open" means that the circuit changes from open to open and alarms, and "normally closed" means that the circuit changes from open to open and alarms. The setting of normally open and normally closed involves the color identification displayed on the "switch status" interface.

The factory setting defaults that all switch points are: an alarm occurs when the loop changes from open to open. The user can change the logic used according to the actual situation. After the change is complete, click "Save Switch Settings" to save.

1.8.10 Internal management

In the internal management interface, the module information, order information, software number, user information, etc. of the current system can be queried. At the same time related to the forwarding content, please refer to the forwarding section below.

Follow the steps in 1.4 to log in to Admin. Click "Parameter Setting" and click "Internal Management" on the parameter setting interface to enter.

If there is a problem during use, you need to provide the information on this page when contacting.

1.9 Alarm information

1.9.1 Current alarm information

Click "Alarm Information" on the "Main Road Parameters" interface to view the current alarms. Click "Alarm Silence" to confirm the current alarm to stop the buzzer, and the alarm message will not disappear. If a new alarm is generated at this time, even if the new alarm disappears, as long as there are alarm entries in the current alarm information, the buzzer will not stop.

When an alarm is generated and all repairs disappear afterwards, the system will automatically mute the sound.

1.9.2 Historical alarm information

Click "History Alarm" on the "Current Alarm" interface to view historical alarms. Click "Clear Alarm" to clear all historical alarm entries. "Clear Alarms" has permission restrictions, and you need to log in to the person in charge or Admin to clear historical alarms.

DC part

1 Parameters, functions, and operations

1.1Main road parameters

As shown in the figure (the figure shows 2 lines in), the first interface after the touch screen is turned on is the main line parameter interface. If there is 1 line out, the incoming line is greater than 1 line, you can click the button in the lower right corner to switch to view other The parameters of the incoming line. If there are 2 routes out, the incoming route is greater than 2 routes, you can click the button in the lower right corner to switch to view the parameters of other incoming routes.

1.2 Branch parameters

In the main circuit parameter interface, click the button with the word "branch parameter" to enter. If there are 2 outgoing lines, it corresponds to "branch parameter A" and "branch parameter B".

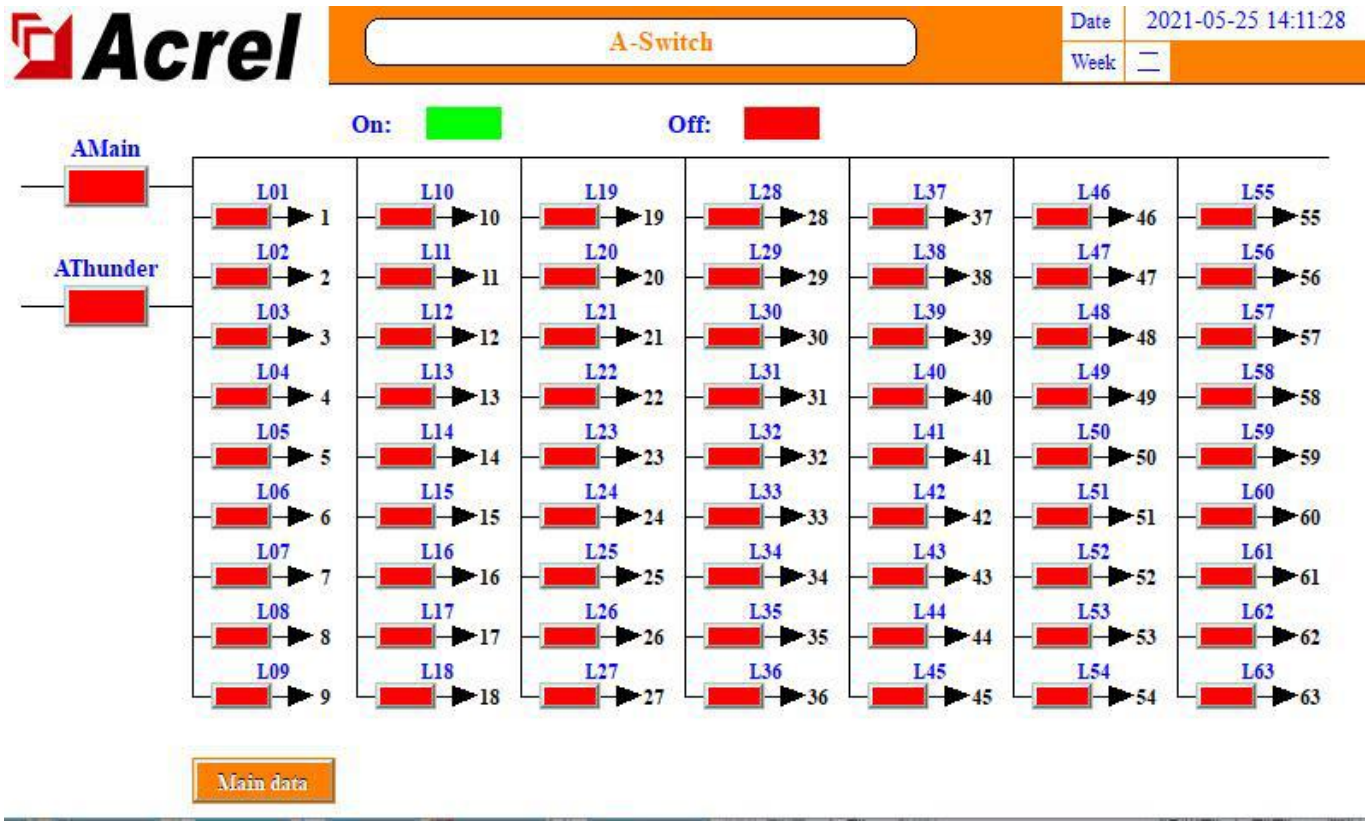
The meaning of the title from left to right are:

Branch number, circuit name/load name, current, power, electric energy, voltage, load rate, a section of overload current alarm limit value. Positive-to-ground insulation and negative-to-ground insulation are displayed after the insulation function is turned on. If the insulation function is stopped, it will not be displayed.

Among them, a section of the overload current alarm limit value can be modified by the user according to their own needs. For the modification method, please refer to the "parameter setting" section below.

1.3 switch status

The switch status interface is the intuitive switch display system diagram of the main branch. Click the button with the word "switch status" in the main circuit parameter interface to enter. If there are 2 outlets, it corresponds to "switch state A" and "switch state B".



1.3.1 Main circuit switch status

The leftmost column is the main circuit switch status. The main circuit switch status is collected by the main module (AMC16Z-ZD). The ones with the words "main circuit" and "standby circuit" are OF+SD points, the auxiliary contacts of the main circuit. The word "lightning protection" is the switch state of the lightning protection device. SD/switch opening status is not displayed.

Different user field wiring will cause the required fault status to correspond to different module acquisition status. The main switch status displayed on this interface is unified as "fault display is red, normal display is green". If the user does not meet the test results, you need to check whether the switch alarm settings are set correctly according to the needs based on the alarm information.

1.3.2 Branch switch status

The switch status of the main circuit is the branch switch status, which is collected by AMC16Z-FDK. Green means closed, and red means separated.

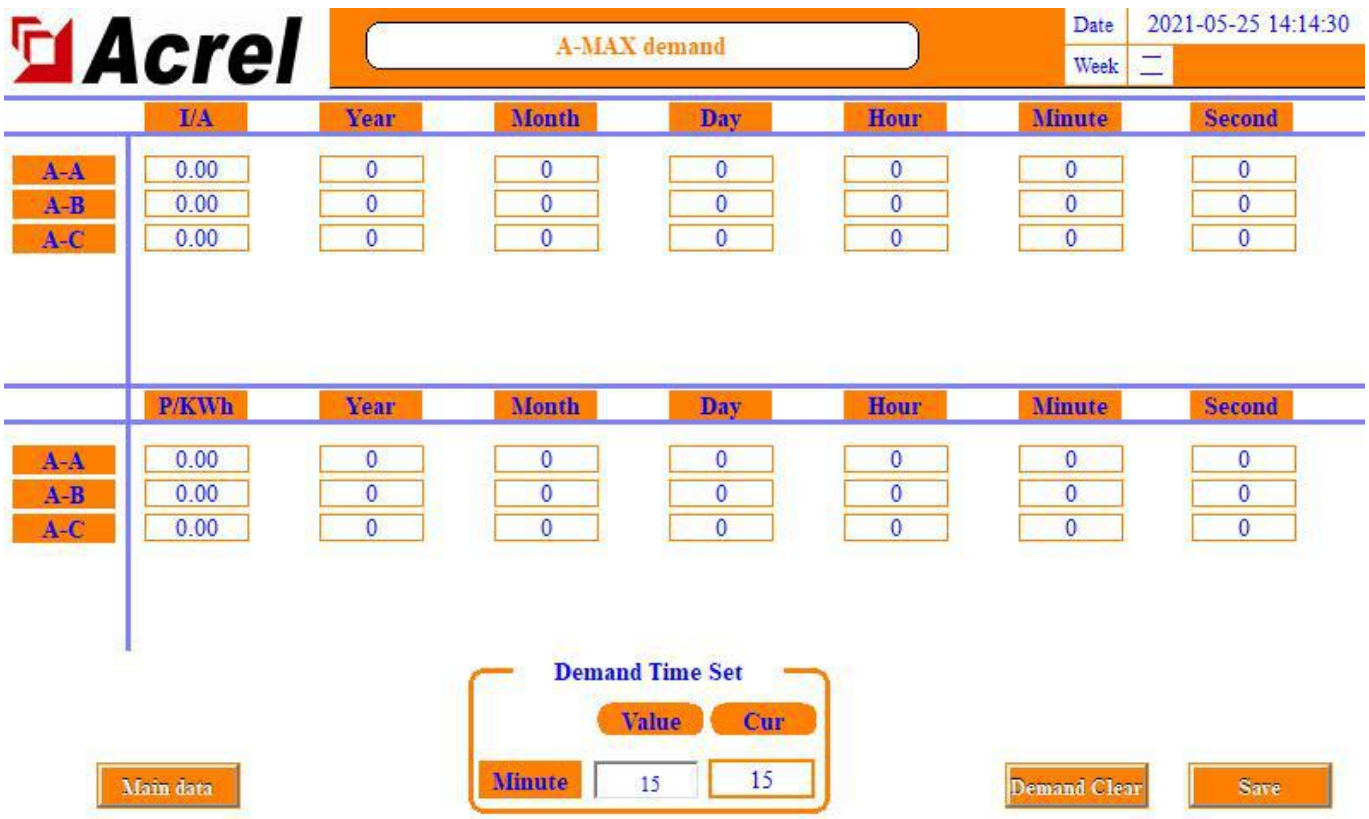
1.4 User login

Some functions require different permissions. If you need to set alarm parameters, you can log in to the person in charge or Admin;

If you need to view the content management interface to view order information such as the software number, you need to log in to Admin. The login method is as shown below.

1.5 Maximum demand

The maximum demand is the maximum value of the historical average value of the incoming current and power.



You can set the "demand time setting" to adjust the frequency of average statistics. You can click on the bottom left to view other incoming lines.

1.6 Monthly electric energy

Click "Monthly Energy" in the main circuit parameter interface to enter. You can view the monthly electrical energy of the main and branch circuits. Drag the progress bar or click "Previous" or "Next" to view further. The displayed electrical energy is the electrical energy of the previous month. For example, 2015-05 represents the electrical energy before May 1, 2015, that is, the electrical energy in April.

To query the electric energy for a period of time, you can click the "Energy Query" button on this interface, enter the beginning and ending months according to the format example, and enter the "-" in the symbol.

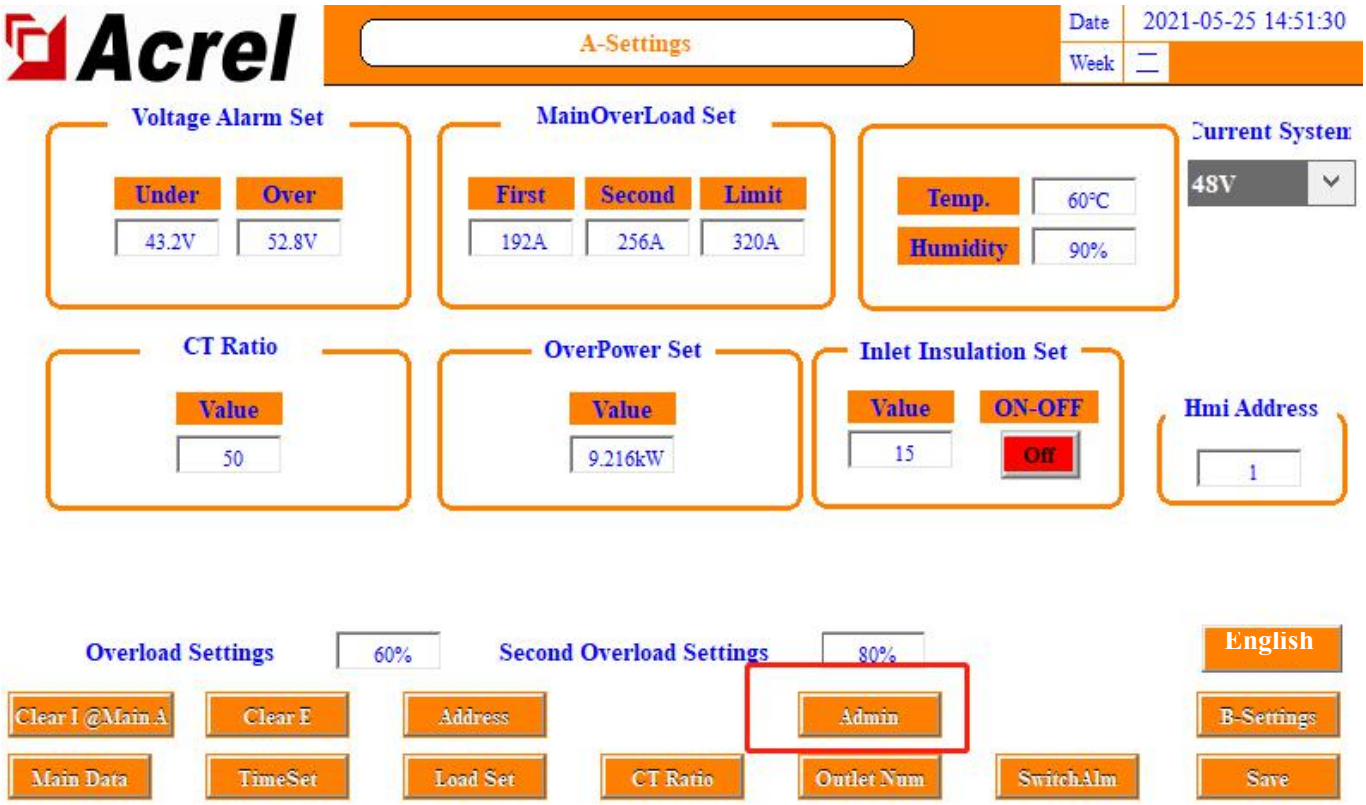
It should be noted that the end time refers to the first day of the input month. For example, inputting 2015-05 means May 1, 2015, that is, the energy statistics in April and before.

1.7 parameter settings

Click "Parameter Setting" to enter from the main road parameter interface. (Login is required, refer to the permissions described in the "User Login" section above.)

1.7.1 Main road parameter setting

If there are multiple incoming lines, you can click the button in the lower right corner to switch and set the parameters of other incoming lines. The parameters common to multiple incoming lines can only be set in the first interface.



You can selectively use the alarm function according to your own needs. If an unnecessary alarm is triggered, you can modify the alarm value to make the alarm disappear. The specific modification method can refer to the following description.

After the parameter setting is completed, you must click "Save Settings" before normal use and power-off save.

1.7.1.1 Voltage alarm setting

This part can set the voltage alarm value of each phase of the main line incoming line. The system has default values, which can be modified according to your own needs.

Undervoltage means that when the incoming line voltage of this route is lower than the parameter set by undervoltage, the voltage undervoltage alarm of this route will be triggered.

Overvoltage means that when the incoming line voltage of this road is higher than the set parameter, the voltage overvoltage alarm of this road will be triggered.

1.7.1.2 Incoming line overload alarm setting

This part can set the load alarm value of the incoming line of the main road, divided into one and two levels.

The rated value has been preset according to the drawing when leaving the factory. The first-stage alarm value and the second-stage alarm value have been preset by the rated value algorithm. The first-stage alarm value=rated value*60%, and the second-stage alarm value=rated value*80%. If the drawing is not clear or the actual application changes, you can modify it yourself.

When the current of this circuit is greater than the set value, it will trigger the first/second stage overload alarm. It should be noted that when the second stage overload is triggered, the first stage alarm will not be triggered.

1.7.1.3 Current ratio setting

This part can set the CT value of the current transformation ratio. Set the parameters of this part according to the value of the transformer. Take the 50A/5V Hall sensor as the standard value and set it to 1. If it is a 400A/5V Hall sensor, the setting value is 8. (The outlet side must be 5V).

It has been preset according to the drawings when leaving the factory, and there should be changes in the actual, you can modify it according to the above rules.

1.7.1.4 Power overload setting

This part can set the power alarm value. The system will get a default value according to the preset load and voltage, which can be modified according to its own needs.

When the power is greater than the set parameter, the frequency limit alarm will be triggered.

1.7.1.5 temperature

This part of the setting, when the cabinet temperature is greater than the set parameters, it will trigger the temperature over-limit alarm.

1.7.1.6 humidity

This part of the settings, when the humidity is greater than the set parameters, it will trigger the humidity over-limit alarm.

1.7.1.7 Insulation

This part sets the start and stop of the insulation function, and set the start and stop according to site needs. After the insulation function is activated, the insulation related content will be displayed. For this part, please refer to the section "Insulation" below.

1.7.1.8 Outgoing overload alarm setting

This part is set as the load alarm percentage on the outgoing side, and it is classified into 1st and 2nd stages, similar to 1.8.1.2. The default is 60% and 80%, and the overload alarm value is calculated with the outgoing load rating, that is, the overload of the first stage of the outgoing line = the rated value of the outgoing load * 60%, the overload of the second stage of the outgoing line = the rated value of the outgoing load * 80%, according to your needs modify.

1.7.1.9 System selection

Due to the various types of DC voltage systems, the voltage level can be selected under "Current System". It mainly involves the alarm limit values of incoming line voltage and power. There are 4 options in total, 336V, 240V, 48V, -48V.

Note that the voltage and power alarm values can be automatically modified synchronously and automatically when the system type is modified after 2 minutes of startup.

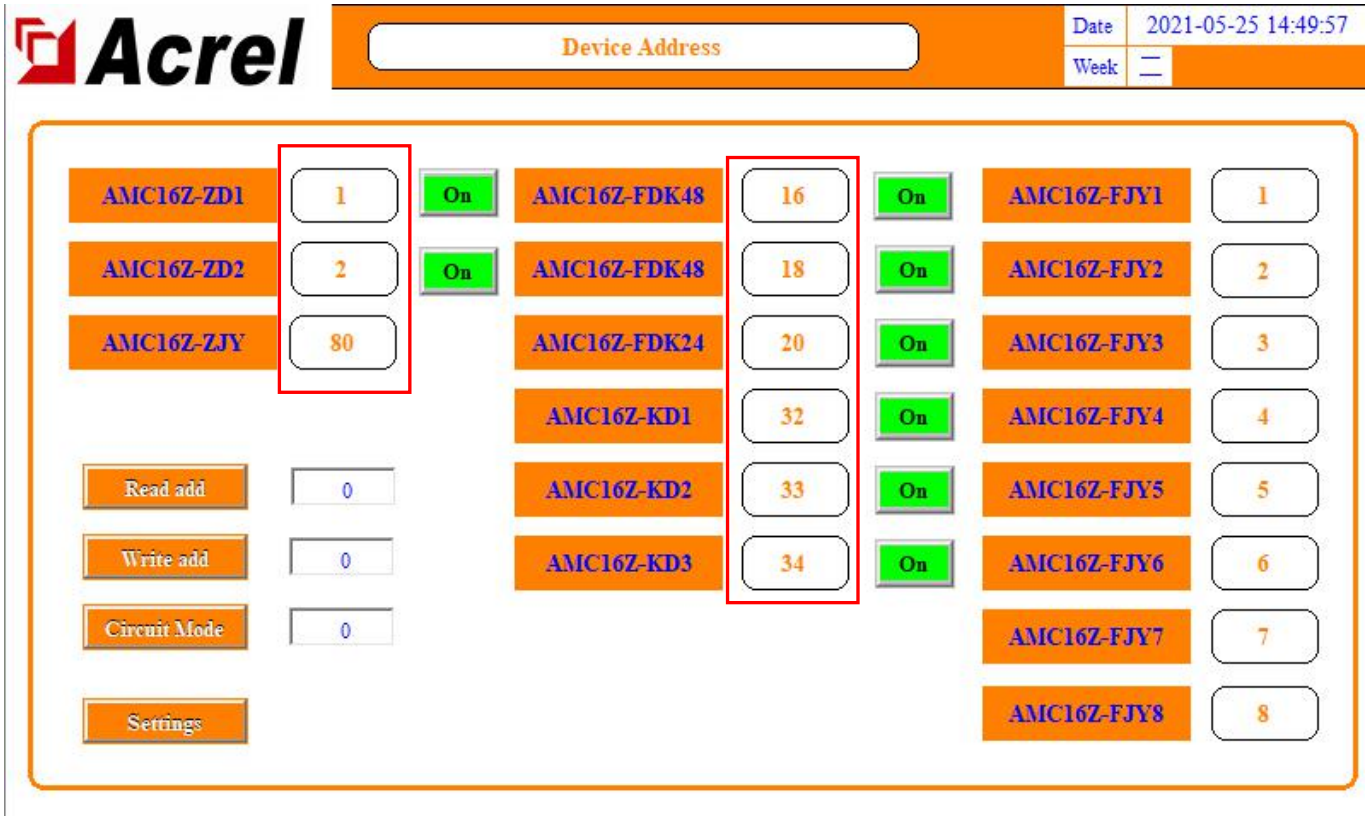
1.7.1.10 Forwarding data address

This part involves data forwarding, you can modify the forwarding data address by yourself, please refer to the following for details.

1.7.2 Instrument address

The internal address of the instrument has been defaulted before leaving the factory. If there is a problem that cannot communicate, and the reason for the connection is eliminated, this function can be used to view and modify the address of the instrument.

Click "Instrument Address" in the parameter setting interface to enter.



As shown in the figure, the figure shows all the modules, and the labels of the modules not used at the factory will not be displayed. This part is the correct address of the instrument. If the address of the instrument is not the address marked, or if the address of the instrument is repeated, it will cause an error.

View the actual instrument address: first disconnect all module communications, connect only the target instrument that needs to view the address, click "read address", and the address of the instrument is displayed on the right. (If it is not possible to read the address of the instrument under the premise that all module communications have been disconnected and there is no problem with the wiring, further investigation is required.)

Modify the actual instrument address: Disconnect the communication of all modules, connect only the target instrument that needs to view the address, enter the communication address of the instrument on the right side, and click "write address" to complete.

If there is a module in the actual application that does not need to be used but cannot shield the communication alarm, you can click the green switch button on this interface to stop the module. If you want to put it into use later, you can click again to enable the module.

1.7.3 Circuit of outgoing lines

Click "Number of Outgoing Lines" in the parameter setting interface to enter. (If there are multiple outgoing lines, you need to go to the corresponding incoming line parameter setting interface and click "outgoing lines" to enter.)

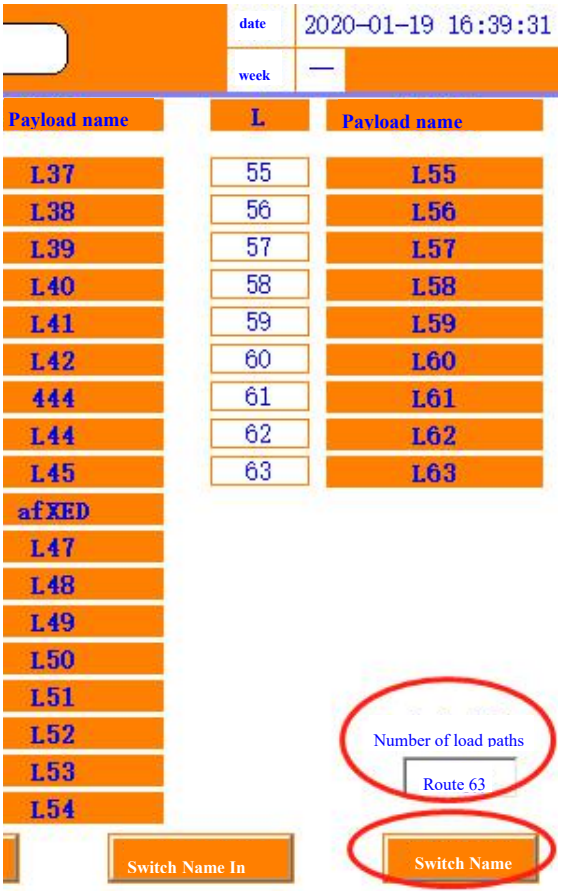
The function of this part is to adjust the number of lines, the number of switches, the name of the switch, and the name of the load.

1.7.3.1 Adjust the number of lines and switches.

In the lower right corner of this interface, there is "load circuit number", enter the number in the input box below, and the corresponding circuit number will be displayed in the "branch circuit parameter"

interface. After modification, you need to go back to the "Parameter Settings" interface and click "Save Settings" to save after power-off.

Click the "switch name" in the lower right corner to modify the number of switches, and the corresponding number of switches will be displayed in the "switch status" interface after modification. After modification, you need to go back to the "Parameter Settings" interface and click "Save Settings" to save after power off.



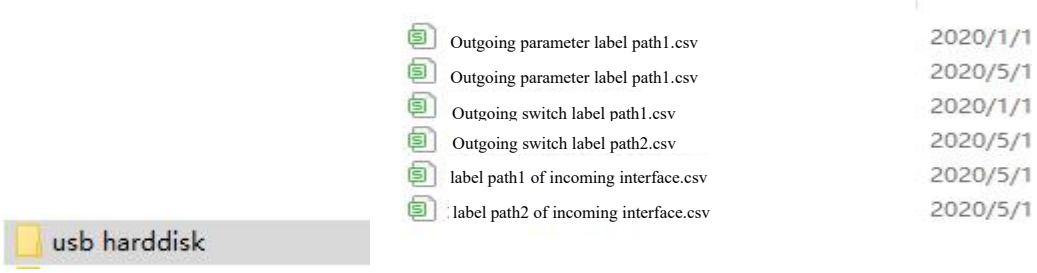
1.7.3.2 Modify the switch name and load name.

There are two ways to modify: you can directly click on the label to modify, or you can use a U disk to modify in batches.

Batch Edit:

First insert the U disk behind the touch screen and click "Export Switch Name".

Open the U disk information on the computer and find the usb harddisk folder in the root directory. Find the content you want to change, and open the name corresponding to the modified serial number.



Then insert the U disk into the back of the touch screen and click "Import Switch Name". At this time, the names of each channel displayed on the "Branch Parameters" and "Switch Status" interfaces are already the modified names.

1.7.4 Power zero

In the "Parameter Setting" interface, click "Energy Clear", the energy measured by all modules connected to the communication line will be cleared. Note that the modules that do not need to be cleared are disconnected from the communication line.

1.7.5 Main circuit current cleared

Since the Hall transformer has zero drift, this key is used to clear and calibrate the main circuit current. Click "Clear Main Circuit Current" when there is no load, and the current will return to zero after a period of time. There are multiple incoming lines, you need to enter the corresponding incoming line setting interface in the lower right corner of the "parameter setting" interface and then click the button of the corresponding circuit.

1.7.6 Set time

Click "Set Time" in the "Parameter Setting" interface to modify the current time.

1.7.7 Load rating

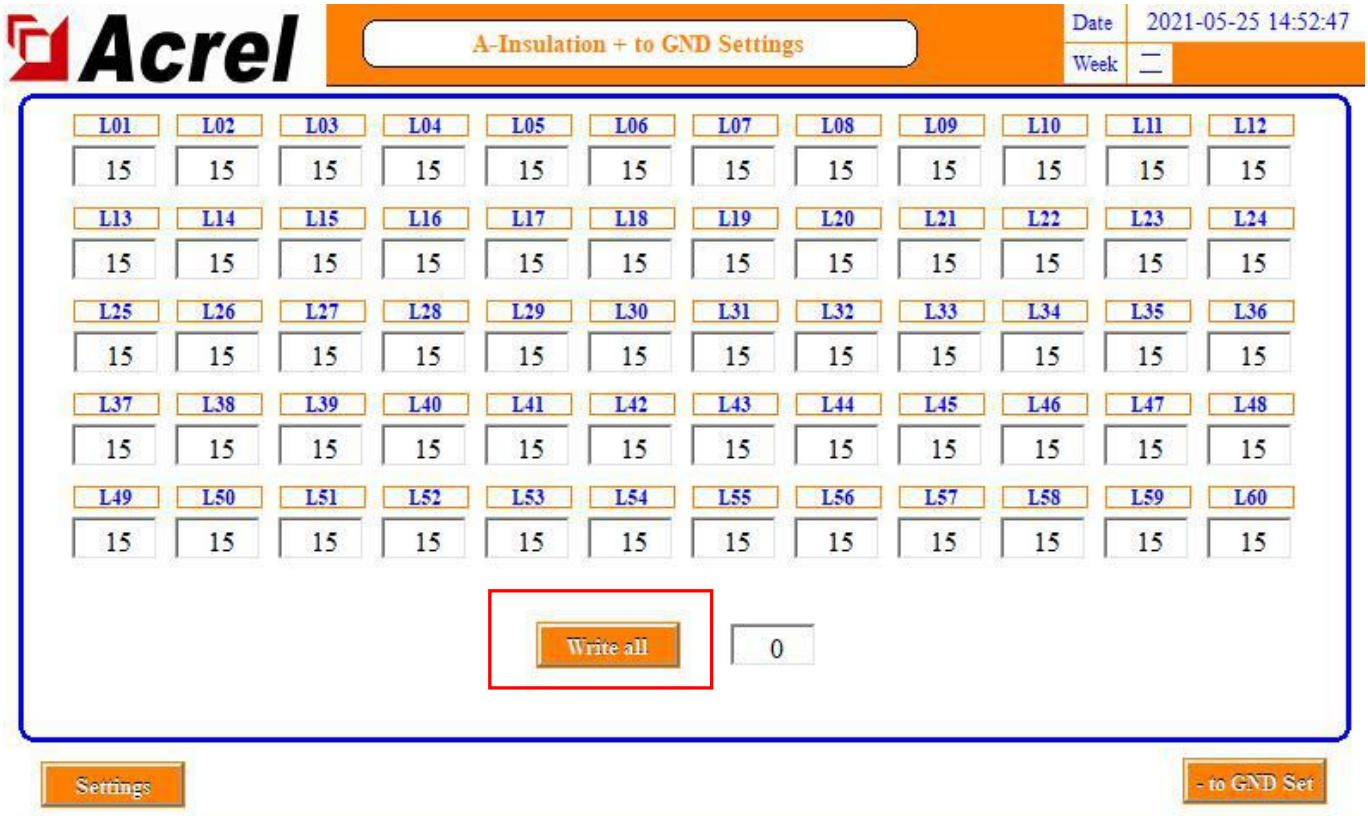
Click "Load Rating" in the "Parameter Setting" interface to modify the load rating of each line of the outgoing line. It has been preset according to the drawing at the factory. If there are changes in the actual application, you can modify it by yourself. After modification, you need to go back to the "Parameter Settings" interface and click "Save Settings".

This data is used to calculate the alarm value with the percentage of the load alarm value of the first-stage and second-stage load on the "Parameter Setting" interface. A segment of alarm value will be displayed in the "branch parameter" interface.

1.7.8 CT rating

Click "CT Rated" in the "Parameter Setting" interface to modify the CT ratio of each line of outlet. If there are 2 outlets, it needs to be set according to the primary value of the configured Hall sensor (note that the secondary input signal should be 5V) . If the configured Hall sensor is 100A/5V, it should be set to 100. If the configured Hall sensor is 100A/4V, it should be set to 125.

It has been preset according to the drawings when leaving the factory, and there should be changes in the actual, you can modify it according to the above rules.



The branch current is cleared on the "CT Rated" interface. Click to reset and calibrate the current of each branch with one key.

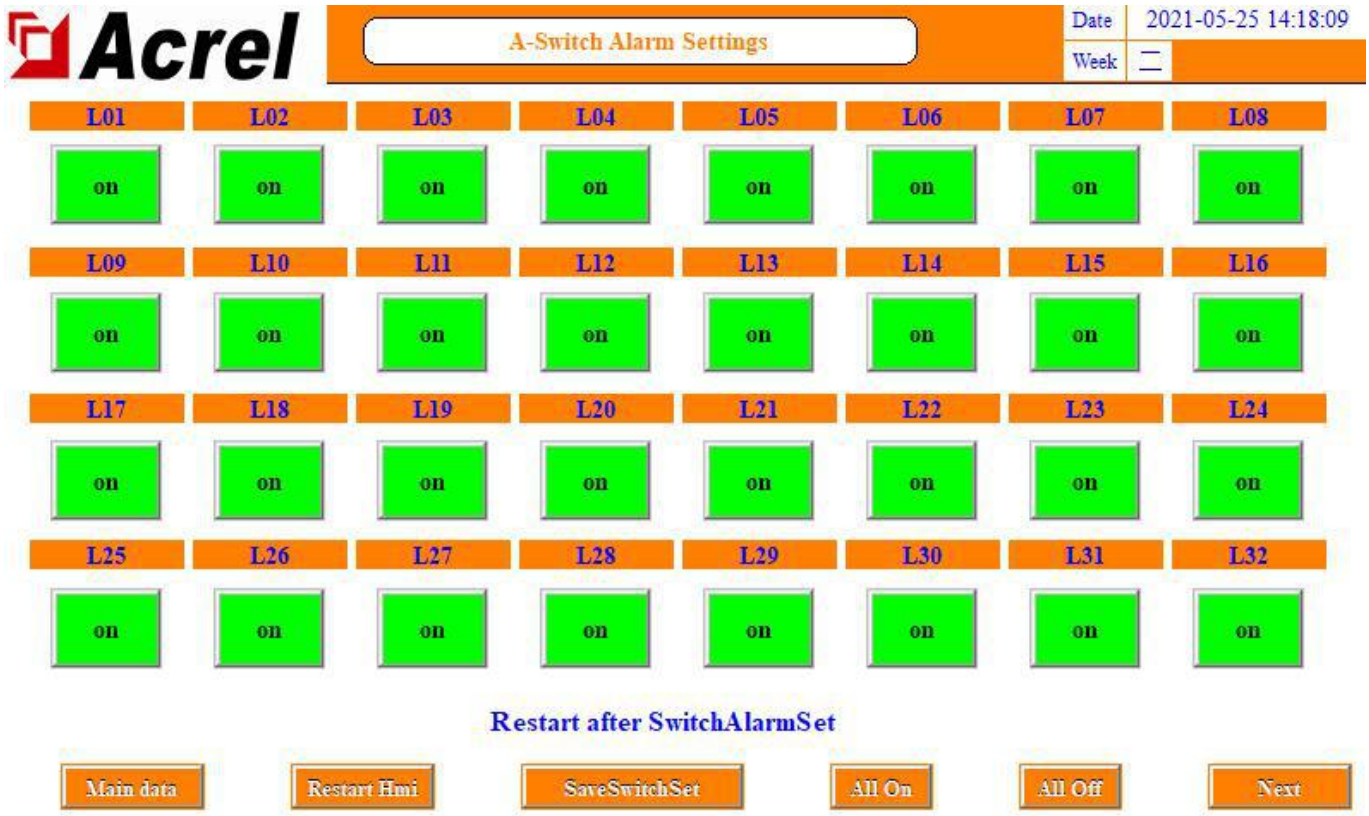
1.7.9 English version

Click "English" in the "Parameter Setting" interface to switch the interface to the English version, and then click "Chinese" to switch back to the Chinese version.

1.7.10 Switch alarm setting

Regarding the switch alarm, you can click "Switch alarm setting" in the "Parameter setting" interface to go to the switch alarm setting interface.

1.7.10.1 Branch switch alarm setting (active)



This part refers to the state of the active detection switch collected by AMC16Z-FDK. It is a jump alarm, that is, it needs to detect that the switch is normal before it is disconnected to trigger the alarm. If there is a switch that is not enabled but there is an alarm, you can click on that channel The switch alarm setting of the switch, make the "on" change to "off", and then if you need to enable it, you can click to turn it on again.

Click "Save Switch Settings" after setting.

1.7.10.2 Branch SD alarm setting (passive)

Click the next page in the "switch alarm setting" interface, to the last page, you can set "normally open" and "normally closed" for "outgoing SD".

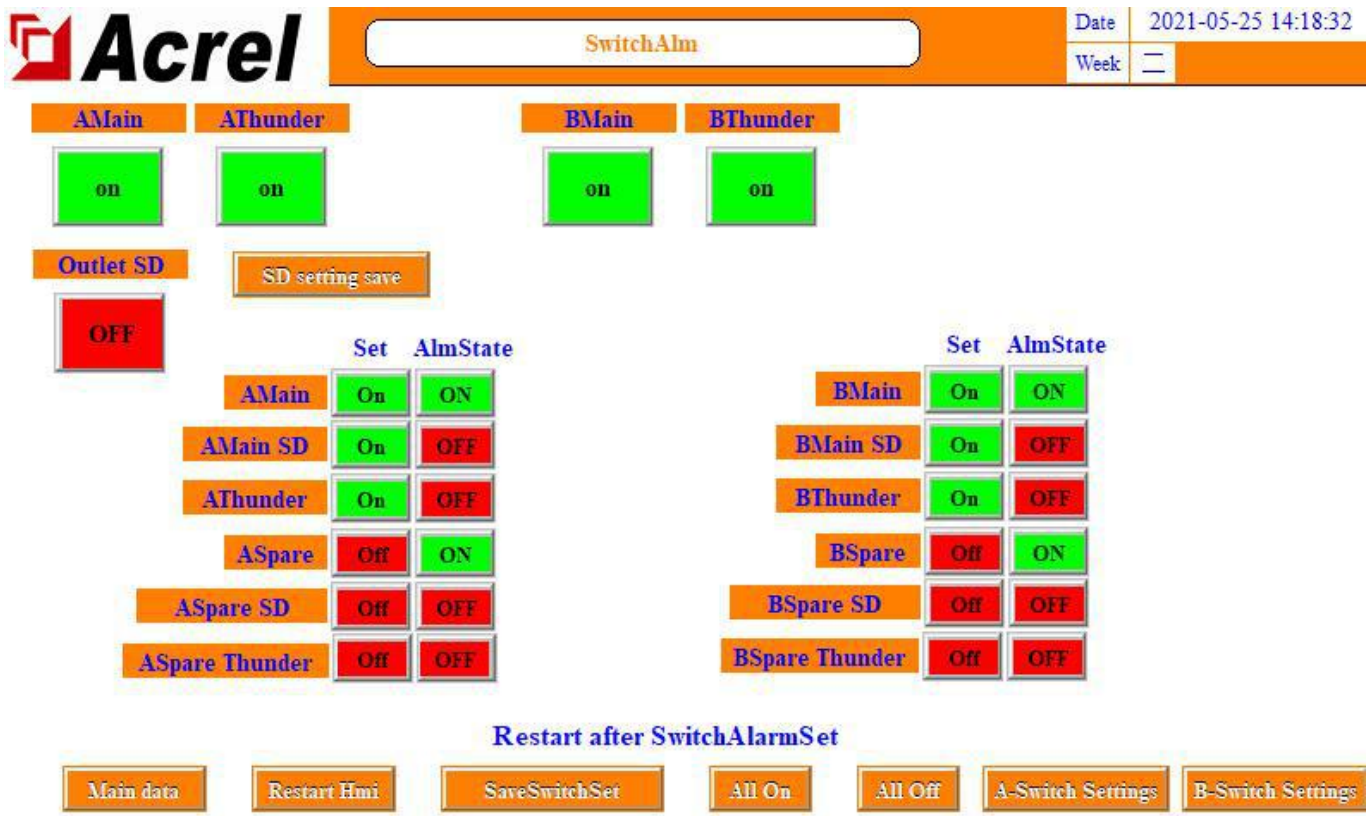
This part refers to the passive detection switch status collected by AMC16Z-KD, which is a jump alarm. The SD of the branch can be controlled by this button.

Normally closed: the loop changes from a path to an open circuit and an alarm occurs.

Normally open: alarm when the loop changes from open to open.

The user selects normally open or normally closed according to the actual application, and the factory defaults to normally closed. If the user does not need to use the SD alarm, the default is normally closed and no alarm is required.

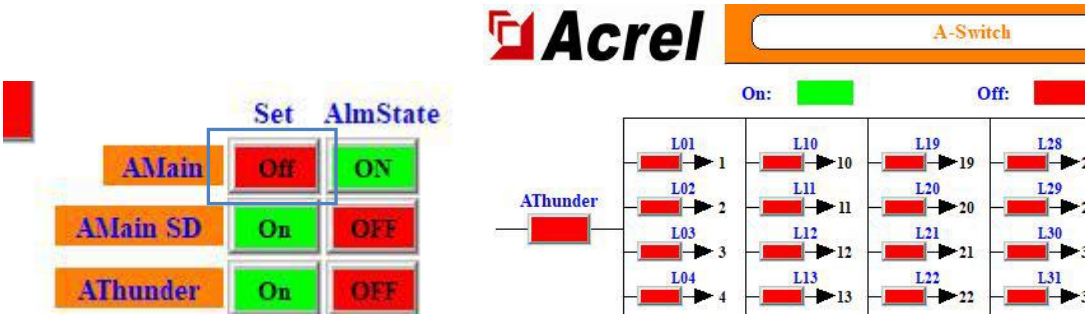
If there is any change, click "SD dedicated save settings" on the right after setting, or click "Save settings" on the "Parameter Settings" interface.



1.7.10.3 Main circuit switch alarm setting (passive)

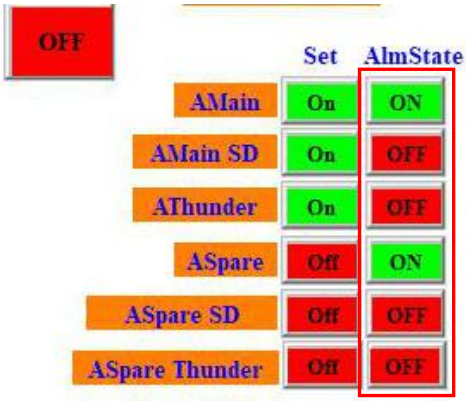
Click the next page in the "switch alarm setting" interface, to the last page, you can set the switch point of ZD collection.

Labels with the words "main circuit" and "standby circuit" are generally used as auxiliary contacts, and the rest are as shown on the label. "Main Road", "Backup Road", "Main Road Lightning Protection" and "Backup Road Lightning Protection" involve the display of the "Switch Status" interface.



The column of buttons under "Use" controls whether the switch is in use and displays. If it is "Off", no alarm will be triggered and the "Switch Status" interface will shield the display of the switch status. (All incoming lines used by the user are turned on by default)

The button at the top of the interface controls whether the switch enables the alarm. If you need to display only the switch status, but do not enable the switch alarm, you can click here to turn off the alarm function.



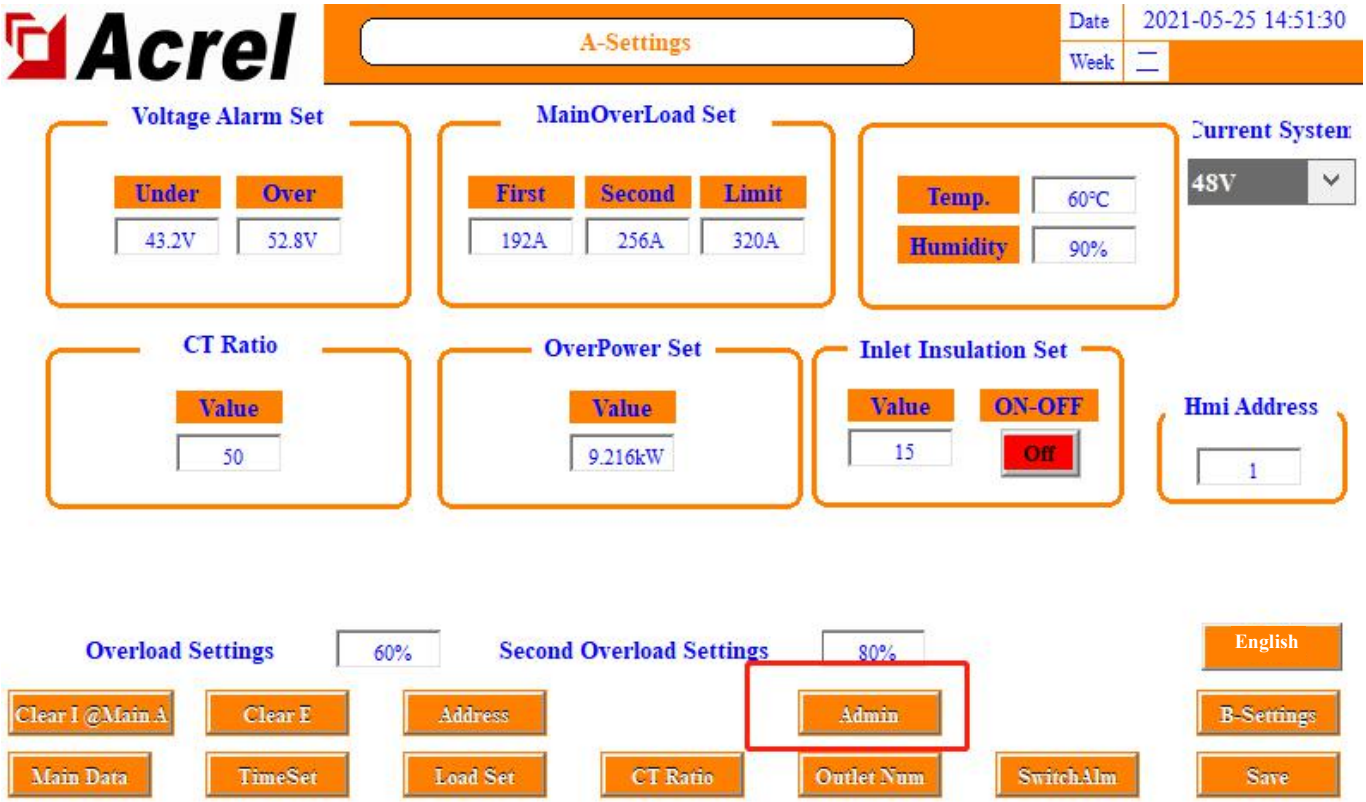
A column of buttons under "Alarm Status" control the alarm logic as normally open or normally closed. "Main circuit" and "Alternate circuit" are generally used as auxiliary contacts. "Normally closed" means that the circuit changes from open to open and alarms. "Normally open" "When the loop changes from a path to an open circuit, it will alarm. The logic of SD "trip" and "lightning protection" is opposite to the logic of the main circuit switch. "Normally open" means that the circuit changes from open to open and alarms, and "normally closed" means that the circuit changes from open to open and alarms.

The factory setting defaults that all switch points are: an alarm occurs when the loop changes from open to open. The user can change the logic used according to the actual situation. After the change is complete, click "Save Switch Settings" to save.

1.7.11 Internal management

In the internal management interface, the module information, order information, software number, user information, etc. of the current system can be queried. At the same time related to the forwarding content, please refer to the forwarding section below.

Follow the steps in 1.4 to log in to Admin. Click "Parameter Setting" and click "Internal Management" on the parameter setting interface to enter.



If there is a problem during use, you need to provide the information on this page when contacting.

1.8 Alarm information

1.8.1Current alarm information

Click "Alarm Information" on the "Main Road Parameters" interface to view the current alarms. Click "Alarm Silence" to confirm the current alarm to stop the buzzer, and the alarm message will not disappear. If a new alarm is generated at this time, even if the new alarm disappears, as long as there are alarm entries in the current alarm information, the buzzer will not stop.

When an alarm is generated and all repairs disappear afterwards, the system will automatically mute the sound.

1.8.2 Historical alarm information

Click "History Alarm" on the "Current Alarm" interface to view historical alarms. Click "Clear Alarm" to clear all historical alarm entries. "Clear Alarms" has permission restrictions, and you need to log in to the person in charge or Admin to clear historical alarms.

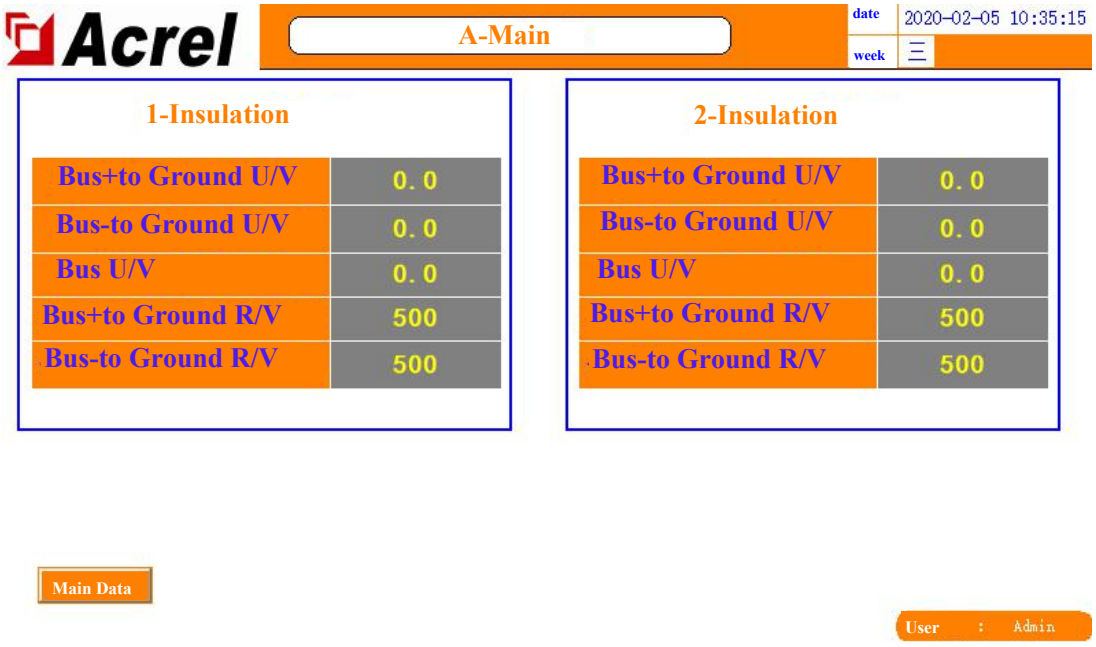
1.9 Insulation function

Note: When leaving the factory, all the following parameters have been set according to the drawings, and the function is open to modify by yourself.

In the insulation start-stop part of the "Parameter Setting" interface, click to enable the insulation function.

1.9.1 Main circuit insulation information

After the insulation function is activated, there will be an additional "Insulation Information" button on the "Main circuit parameters" interface, click to view the main circuit incoming insulation parameters.

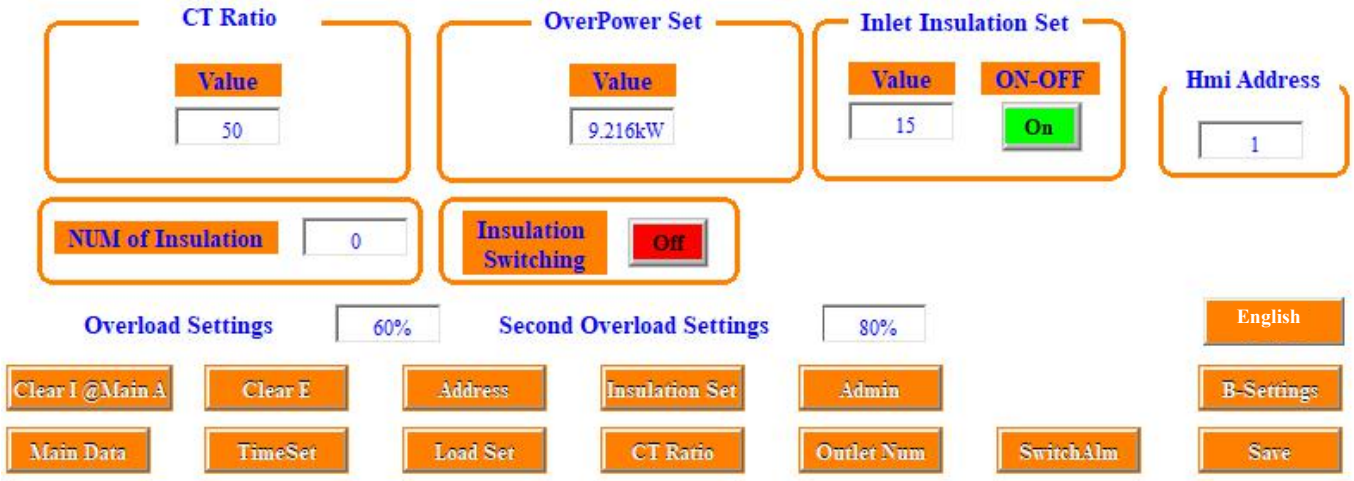


1.9.2 Branch circuit insulation information

After the insulation function is activated, the insulation parameters collected by the AMC16Z-FJY module will be displayed on the "branch parameter" interface.

1.9.3 Insulation related alarm settings

If there is any modification, you must click "Save Settings" after the modification to be able to alarm normally and save after power-off.



1.9.3.1 Incoming wire insulation resistance rating

In the "Parameter Setting" interface, set the alarm limit values of the main line incoming positive-to-earth and negative-to-earth resistance. When the bus-bar positive-to-ground resistance and bus-bar negative-to-ground resistance are less than the set value, an alarm is triggered.

1.9.3.2 Number of insulation sub-modules

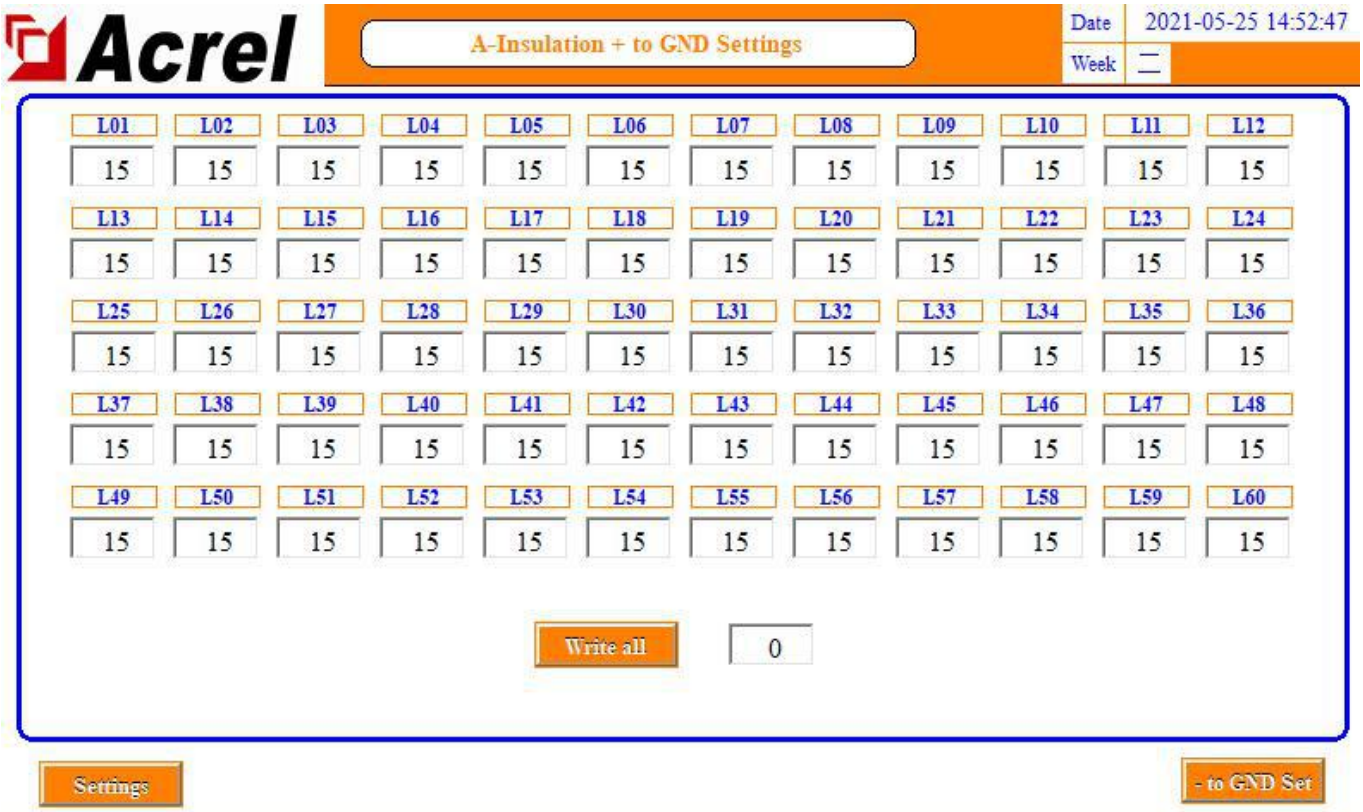
In this part, set the access quantity of the insulation sub-module AMC16Z-FJY. If the setting here is inconsistent with the actual situation, it will cause FJY communication alarm or communication failure.

1.9.3.3 Cast and cut

This part can be switched on and off.

1.9.3.4 Outgoing wire insulation resistance rating

Click "Insulation Alarm" on the "Parameter Setting" interface to enter the insulation resistance alarm setting on the outlet side. If there are 2 outgoing sides, switch to the corresponding interface in the lower right corner of the "Parameter Setting" interface and click "Insulation Alarm" to enter.



In this part, set the alarm limit value of the branch circuit's positive-to-ground and negative-to-ground resistance. When a branch circuit's positive-to-ground insulation resistance and negative-to-ground insulation resistance are less than the set value, the alarm of this road will be triggered.

2、Data forwarding

2.1 RS485 communication

To connect data to the background monitoring system through the RS485 communication interface of the touch screen, the correct communication address must be set. The default communication address is 1, and the baud rate is 9600 (not changeable). The communication address is set in the parameter setting interface. In the "forwarding data address" input box, modify it to the corresponding address, and then click to save the settings, otherwise it will be restored to the default address 1 after power failure. Note that the communication data format is 9600.n.8.1.

2.2 Ethernet communication (optional)

To connect data to the background monitoring system through the Ethernet port communication interface of the touch screen, the network address and port number must be set correctly. Note that the network address setting of the touch screen can be set in the internal management interface of the touch screen software. The port number for network communication is 502, which cannot be changed.

It is recommended that the background software collect the touch screen interval more than 500ms.

Note: The software interface and setting parameters will be adjusted according to different items, please operate according to the actual situation.

Attachment 1: Address table (double-click to open the attachment to view)

Single side exchange forwarding address table.csv

Two side exchange forwarding address table.csv

Single side DC forwarding address table.csv

Two side DC forwarding address table.csv

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