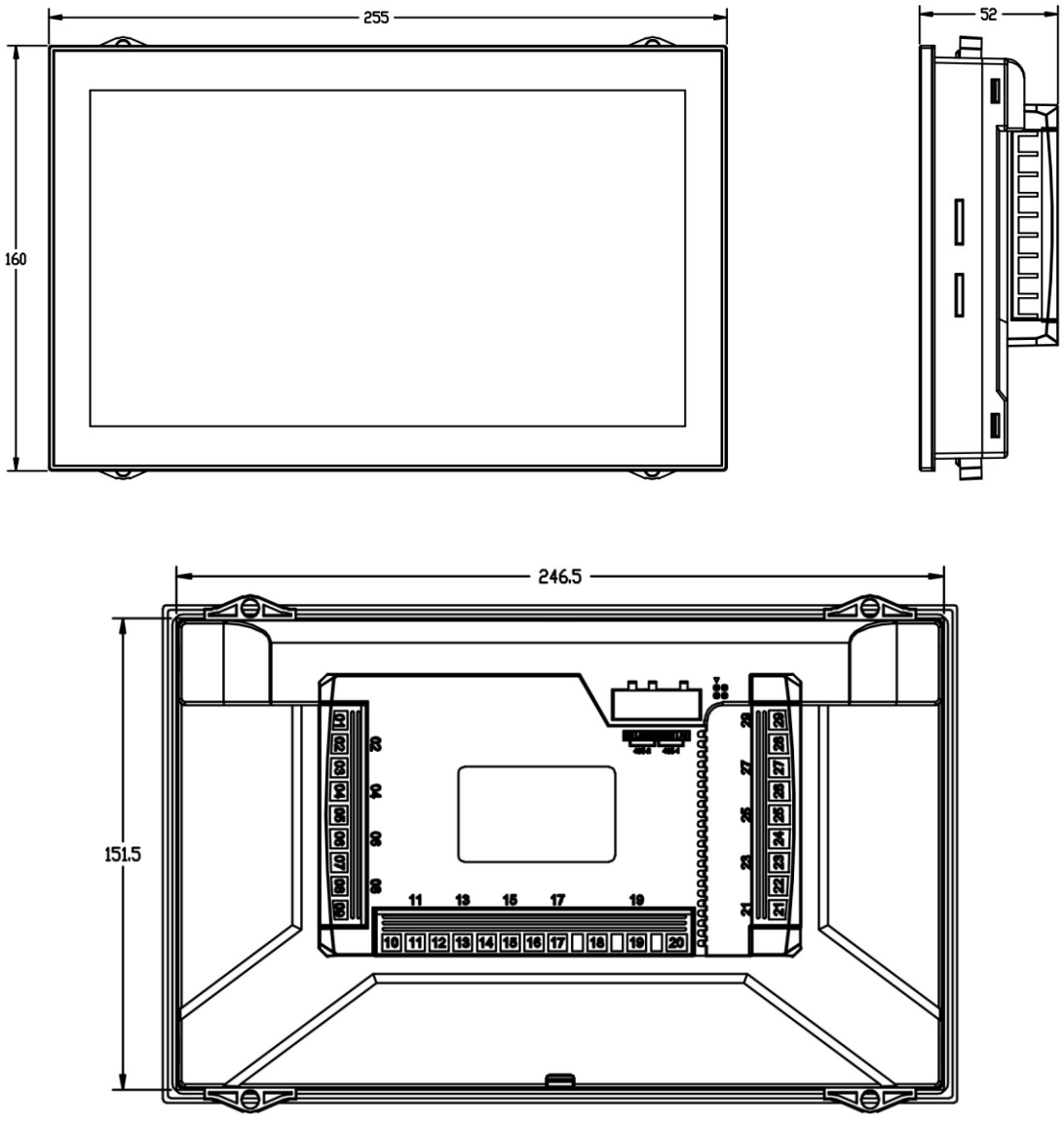
Air Compressor Control System HMI-8080 Interface User's Manual V1.1

The HMI-8080 air compressor control system developed by our company is rich in interface display, powerful and easy to use, which can easily realize the human-computer interaction function of air compressor control system, thank you for your choice!

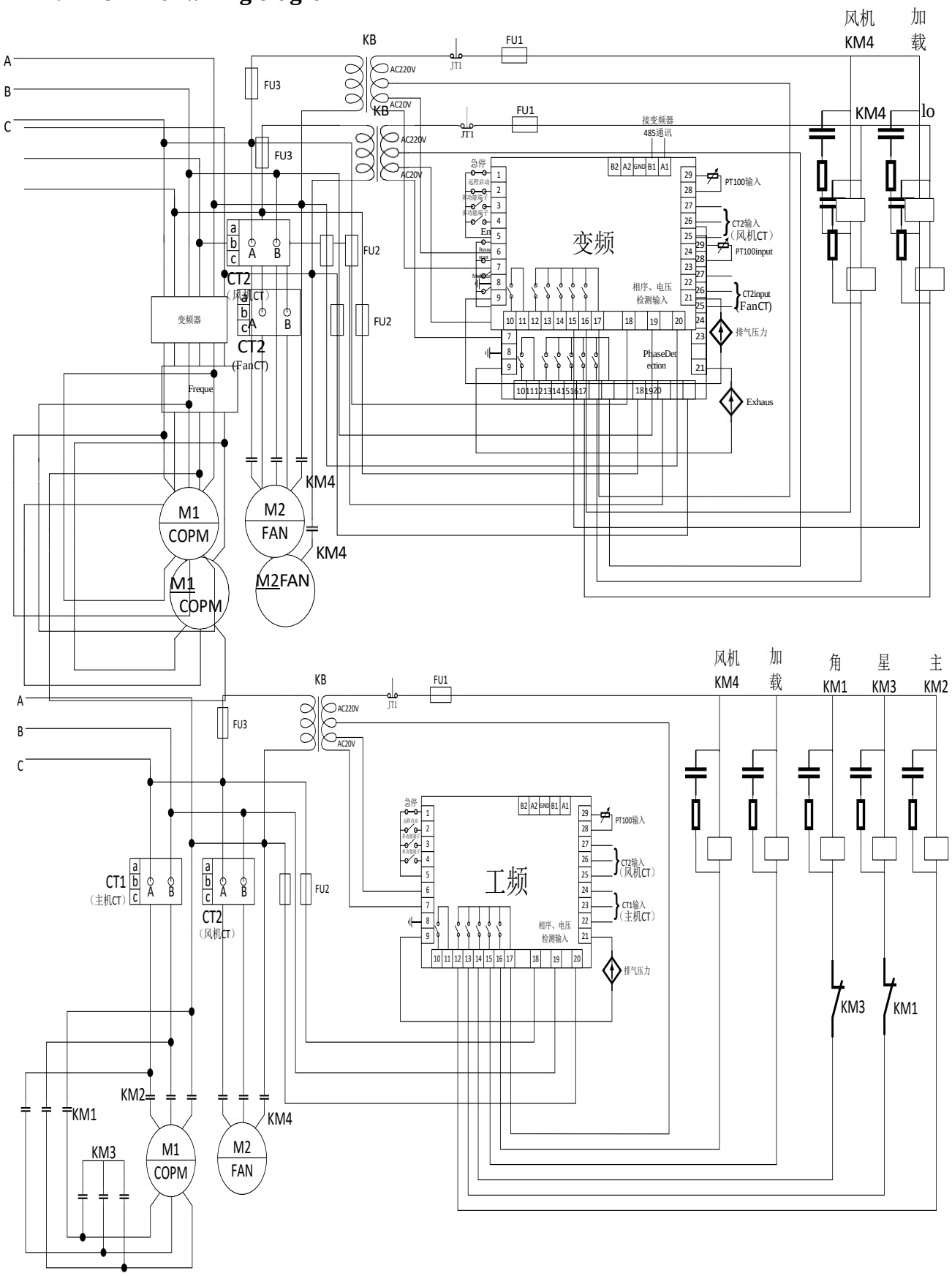
Hardware parameters

1. External dimensions and mounting dimensions



Page 1 Structure schematic

2. Terminal wiring diagram



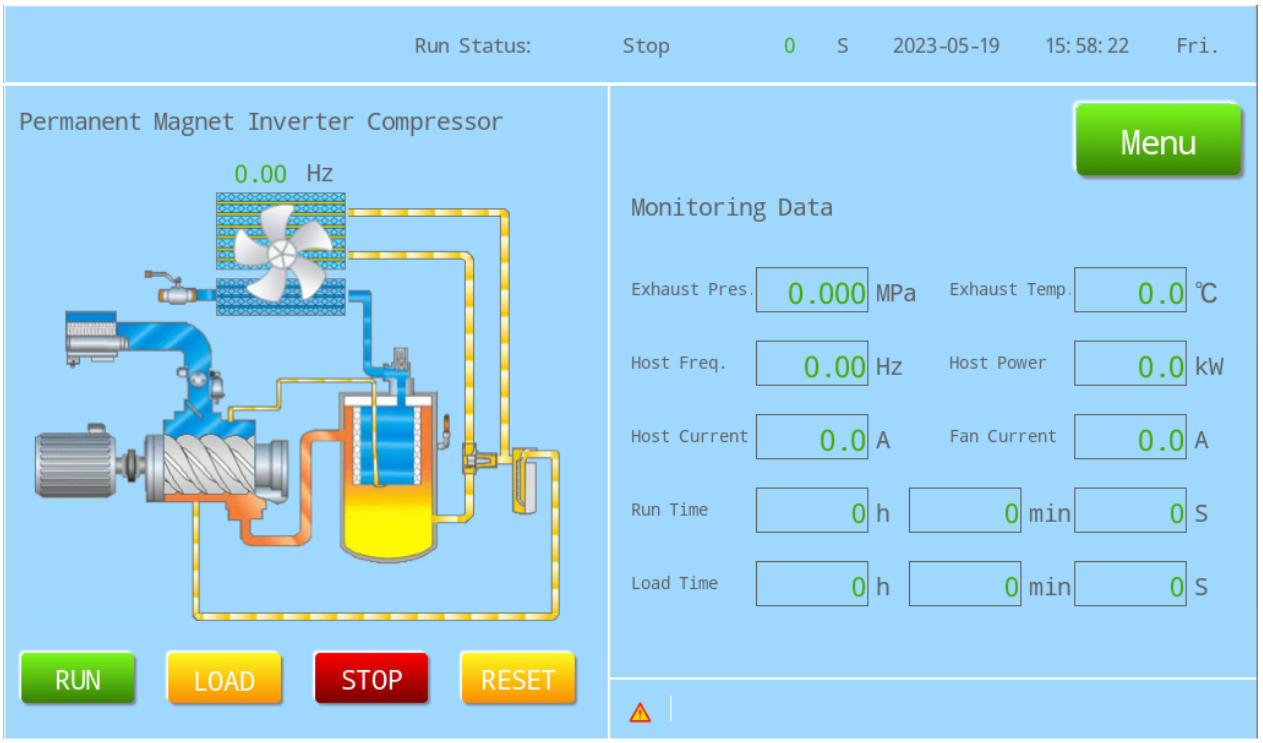
Page2 Terminal Definition

Note: Please check the corresponding terminal wiring,wrong wiring will cause damage to the touch screen.

The use of touch screen instructions

1. System start up

Power on the touch screen with AC/DC24V power supply, wait for a few seconds to finish loading system data and enter the main interface, as shown in Page 3:



Page3 Homepage

2、System set up

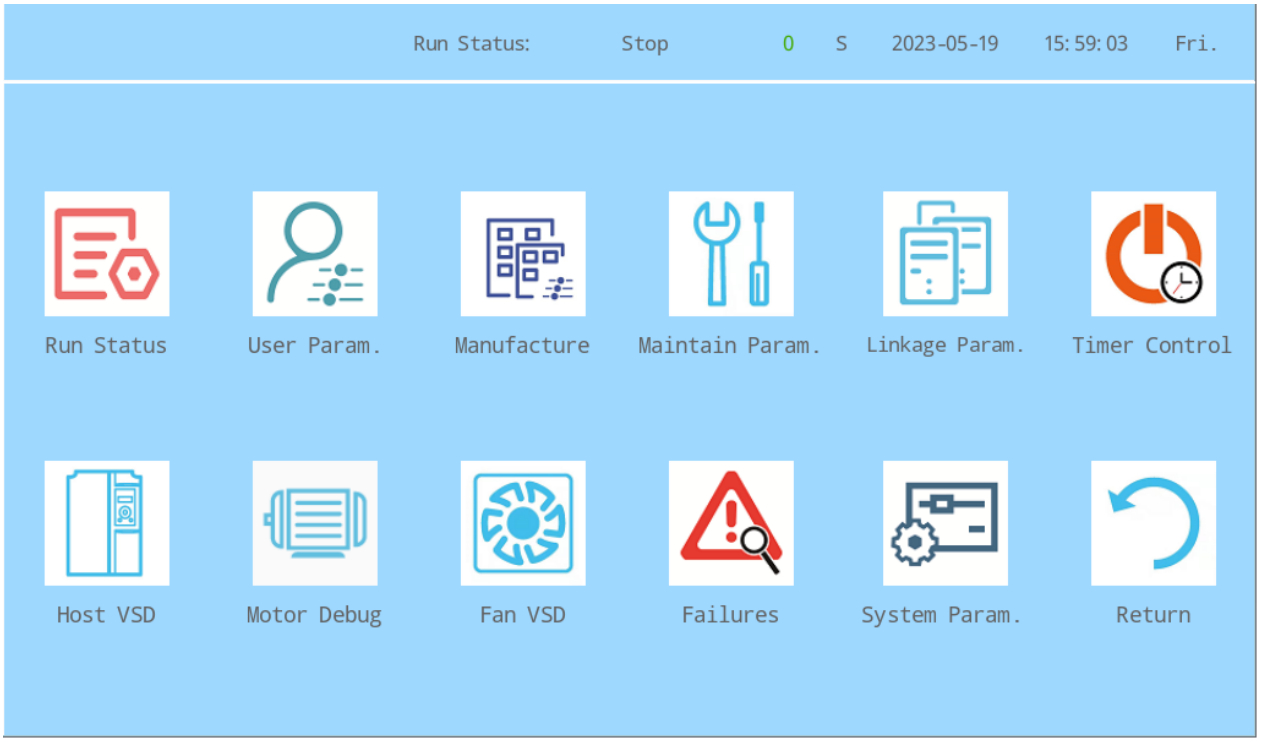
(1) System main interface

①After system start-up is completed, it enters the main interface and displays the main operation commands of the air compressor (start, stop and reset).0.5s long key delay is required for start, stop and reset to prevent mis-touch,1s long key delay for load and unload, operation parameters (temperature, pressure, output frequency, output current, output voltage, output speed, output power, fan current).

②The lower right side has multiple fault display functions; when the communication between the touch screen and the inverter is interrupted, the communication fault is displayed above the total load time.

(2) System Main Menu

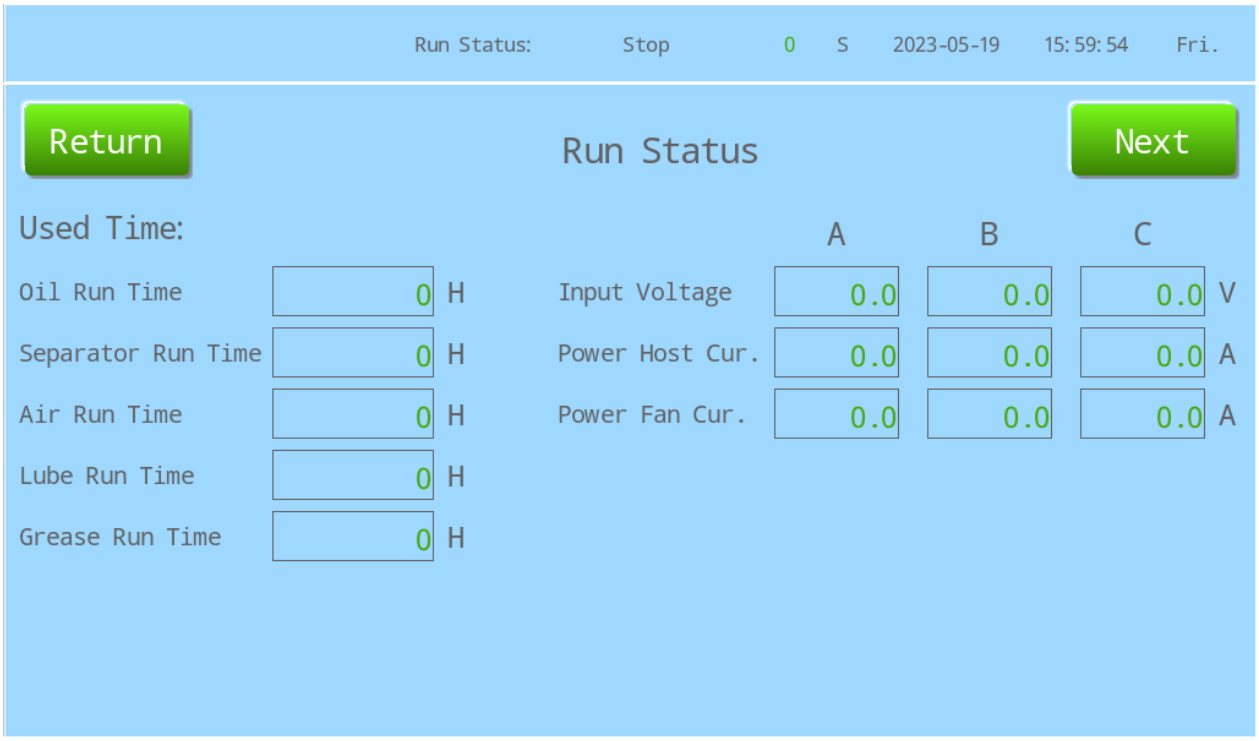
Click the "Menu" option in the upper right corner, the main menu will pop up, including user parameters, manufacturer parameters, maintenance parameters, joint control parameters, timing control, system parameters, mainframe inverter, motor commissioning, fan inverter,history of faults,return and other options.To enter part of the menu,you need to enter the password to enter the interface, including "userparameters","manufacturer parameters","joint control parameters","system parameters Parameters" "Maintenance parameters" "Mainframe frequency conversion" "Motor commissioning" "Fan frequency conversion " as shown in Page 4:



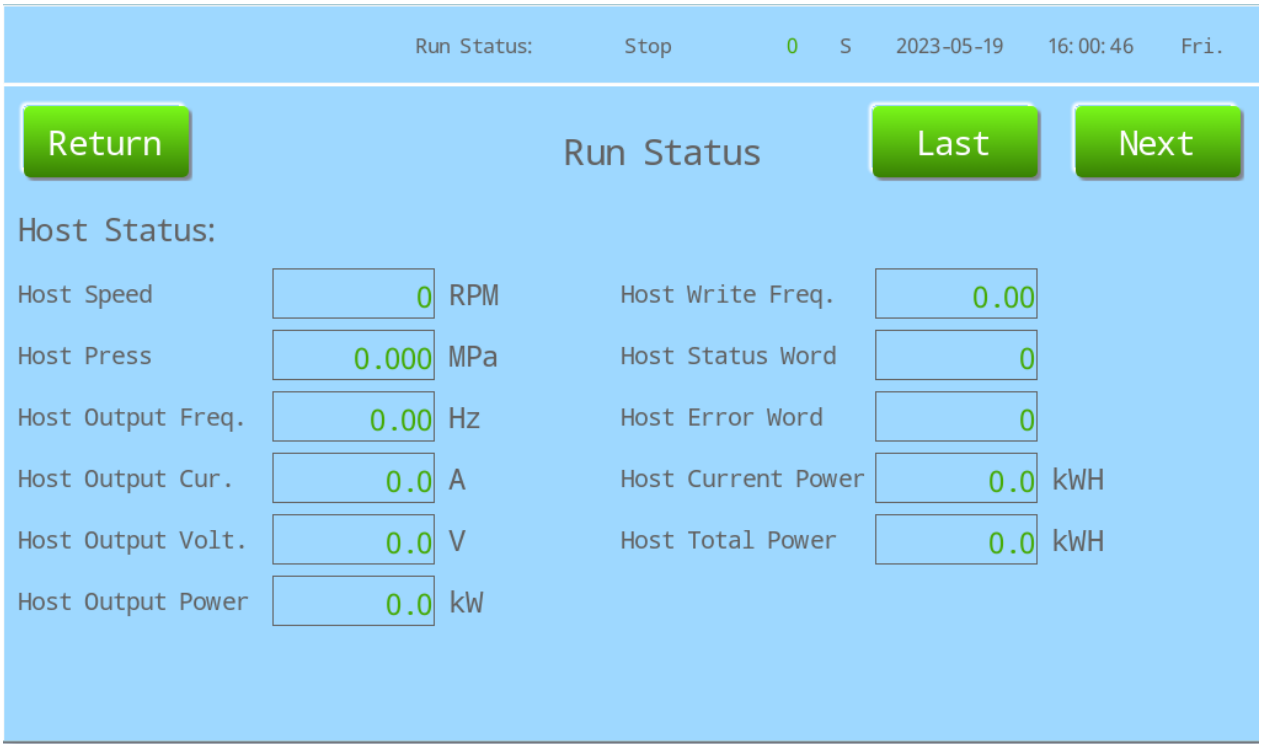
Page4 Main Menu

(3) Operating parameters

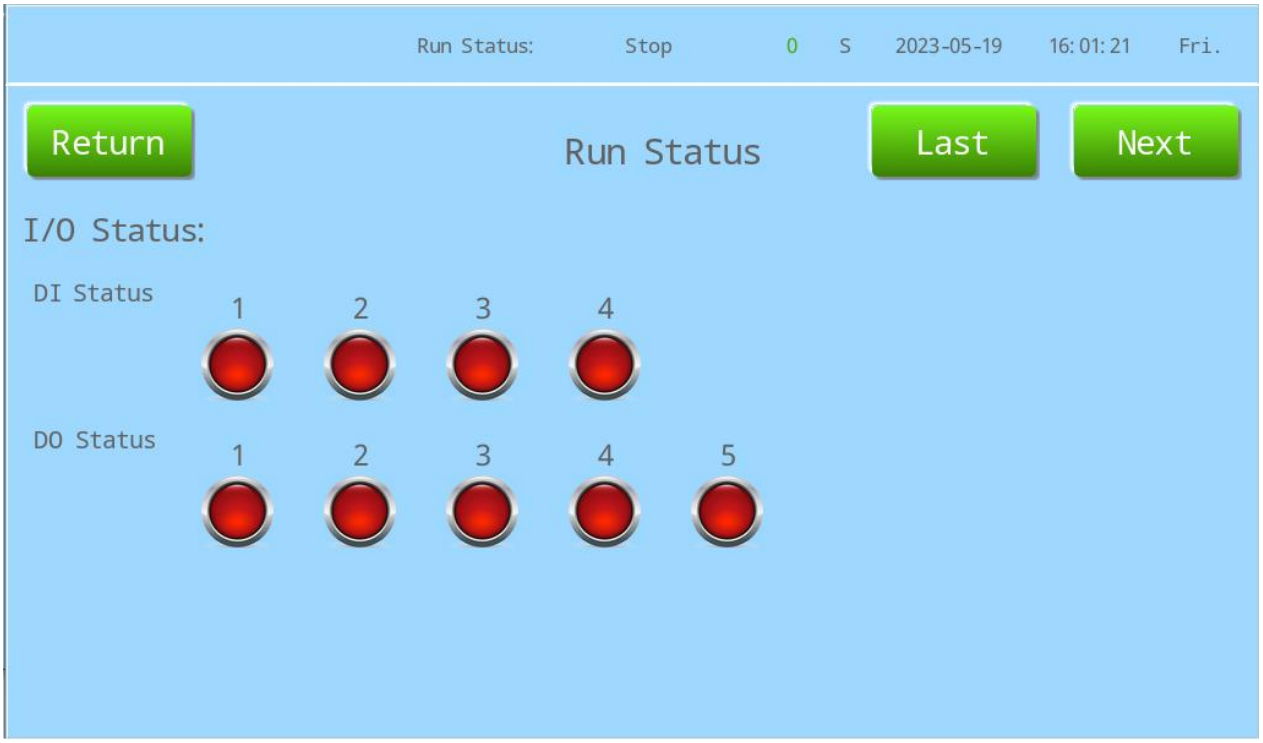
Click the "Run Parameters" option to bring up the "Run Parameters" interface, which actually records the usage time of consumable sand host status parameters, as shown in Page 5:



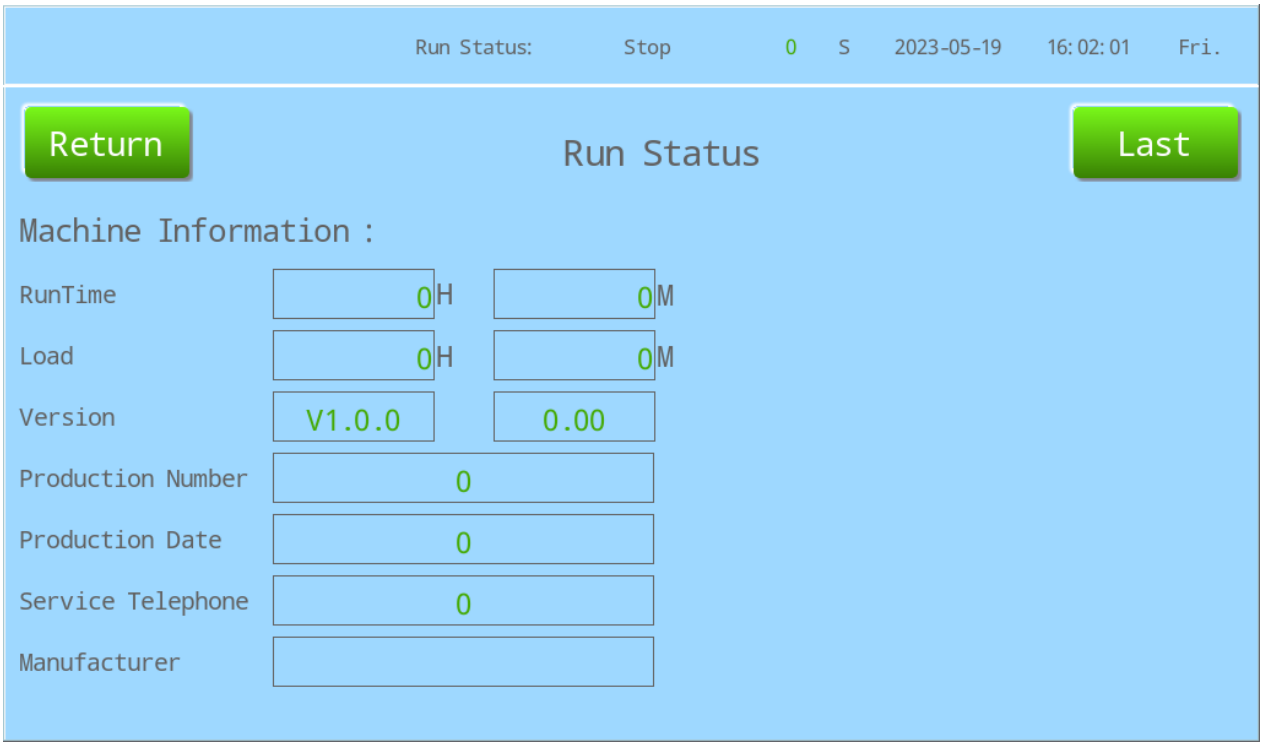
Page5 RunParam.1



Page6 RunParam.2



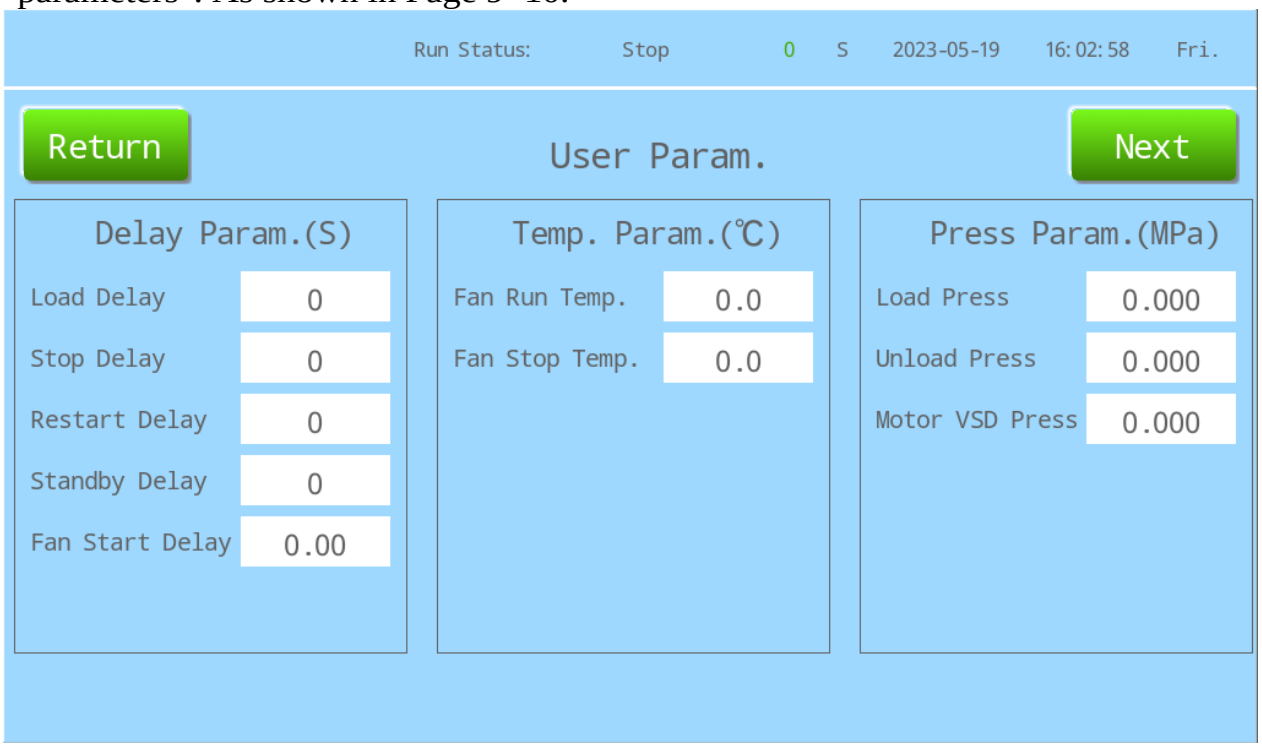
Page7 RunParam.3



Page8 RunParam.4

(4) User Parameters

Enter the password to enter the "user parameters" interface, the user can set the fan control, time delay, timing control, pressure and other parameters in the "user parameters". As shown in Page 9~10:

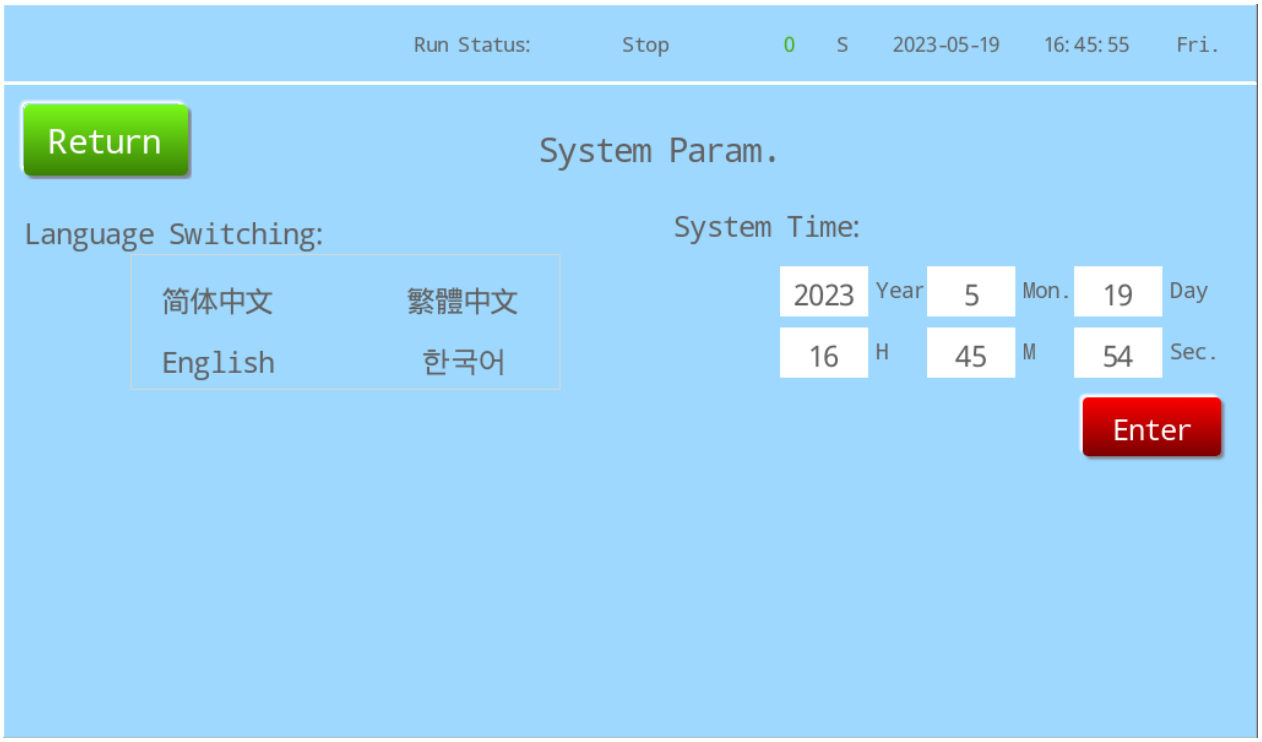


Page9 UserParam.1

Page10 UserParam.2

(5) System Parameters

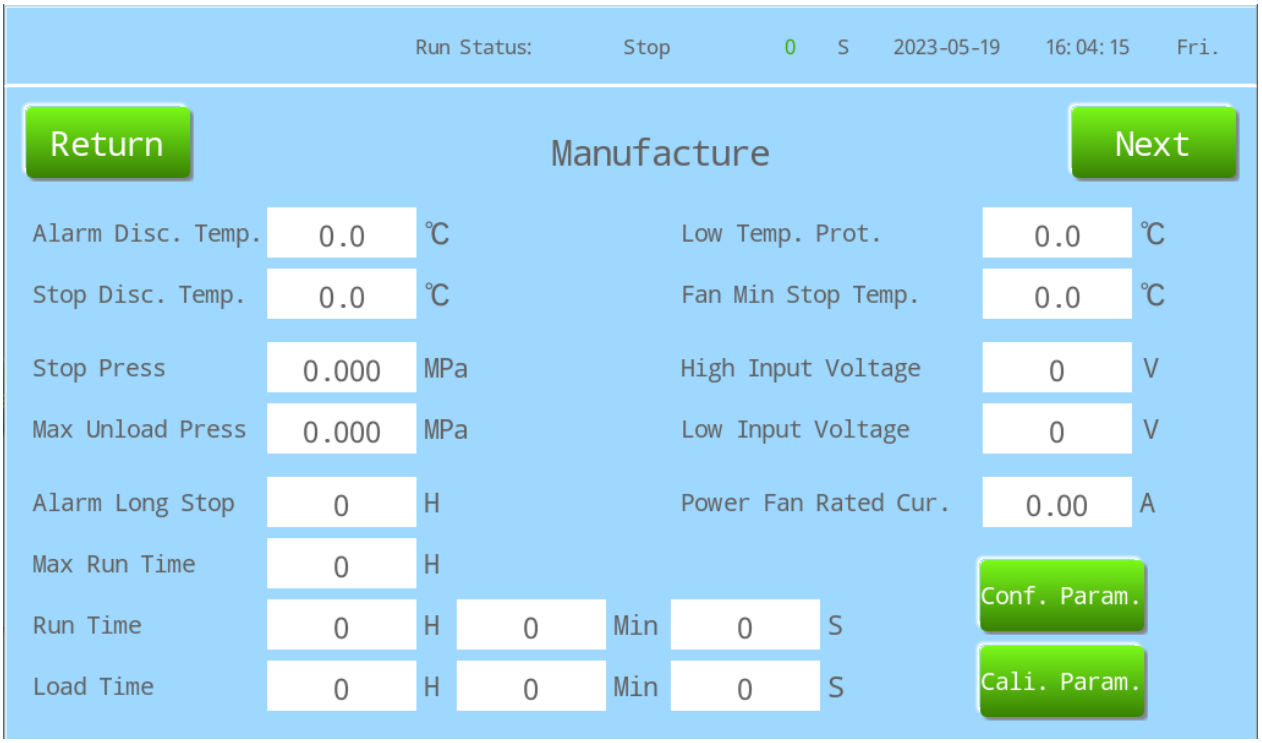
Enter the password to enter the "System Parameters" interface, where you can set the system language and system time. As shown in Page11 ：



Page11 SystemParam.

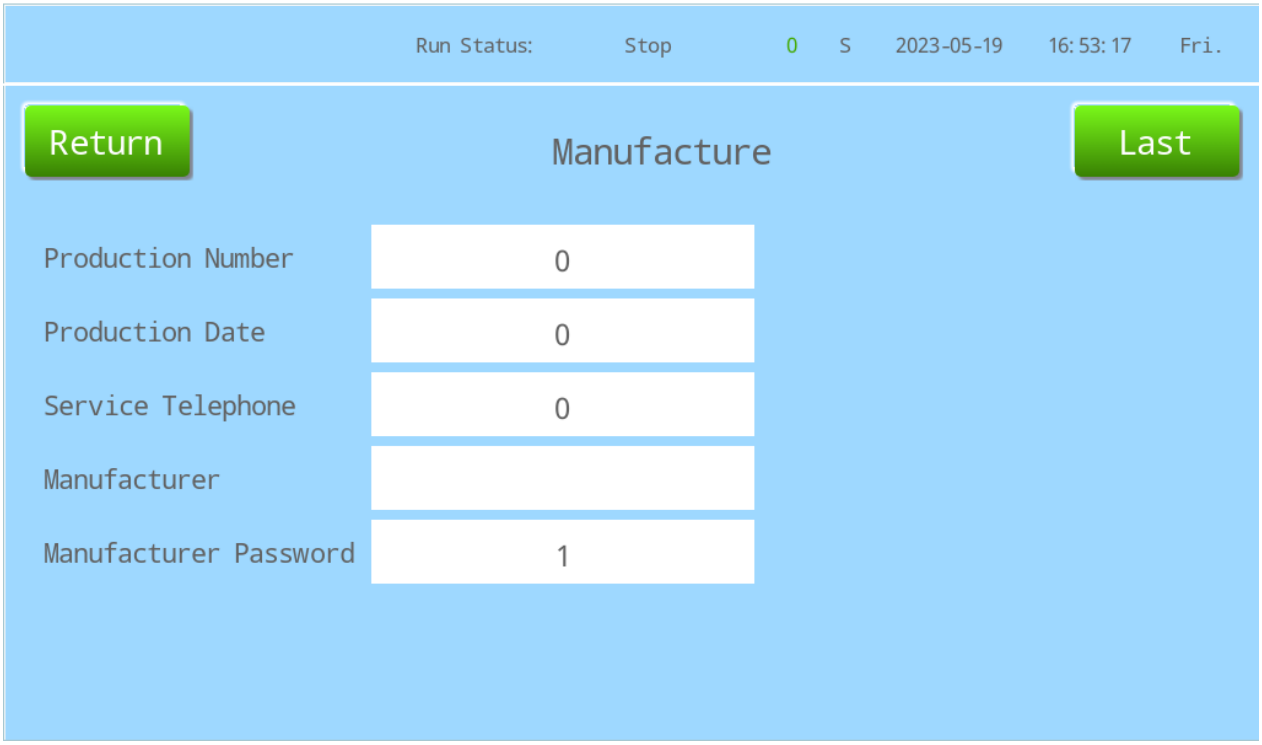
(6) Manufacturer Parameters

Click on the "Factory Parameters" option to bring up the "Password Input" interface, enter the password to enter the parameters interface, the main functions include. Exhaust parameters, hardware configuration parameters, calibration parameters, factory parameters, etc. are set. As shown in Figure 12~14:



Page12 Manufacture 1

Page13 Manufacture 2



Page14 Manufacture 3

(7) Joint control parameters

Click on the "Joint Control Parameters" option to bring up the "Password Input" interface, enter the password to enter the parameter interface, as shown in Page 15:

①Increase air compressor

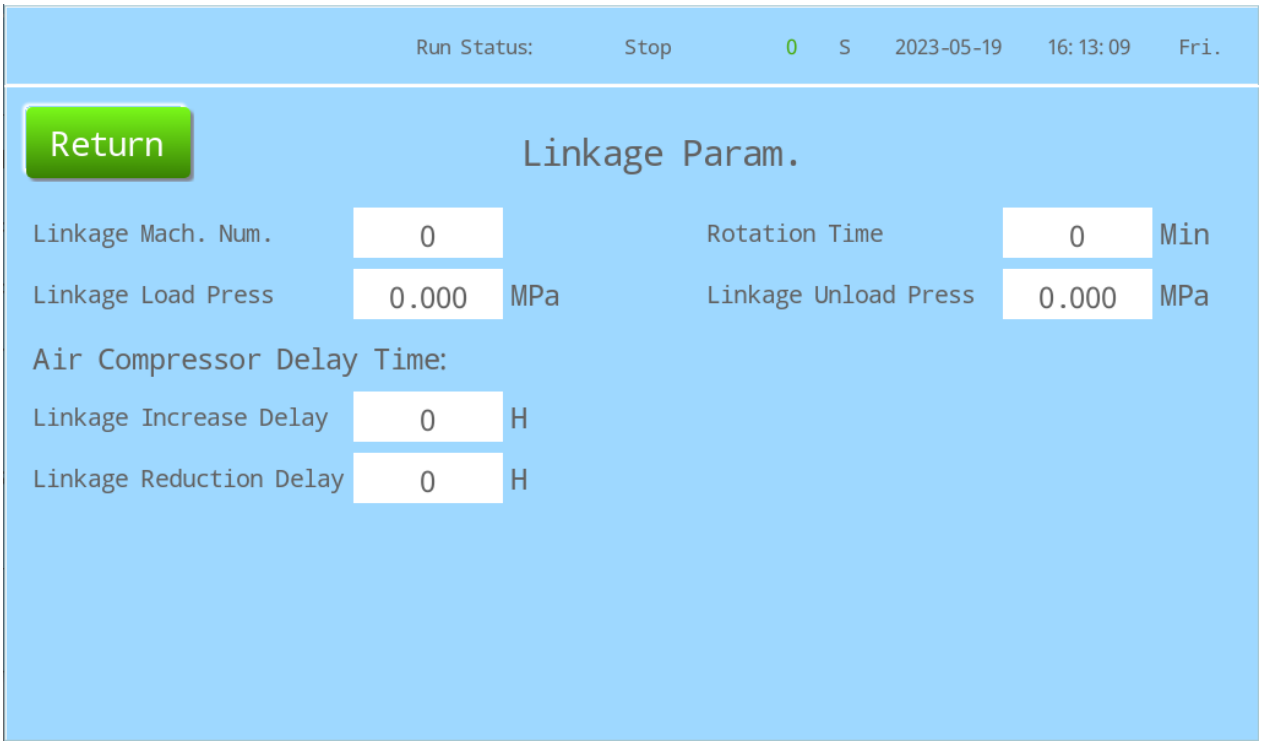
When the host pressure < the linkage loading pressure and in the running state, the next compressor is started for the number of seconds set by the linkage increasing compressor delay time, and so on.

② Reduction of air compressor

When the host pressure is > the linked unloading pressure and lasts for the set number of seconds (linked reduction of compressor delay time), the running compressors will be stopped in sequence according to the principle of adding first and reducing second.

③ Rotation of air compressor

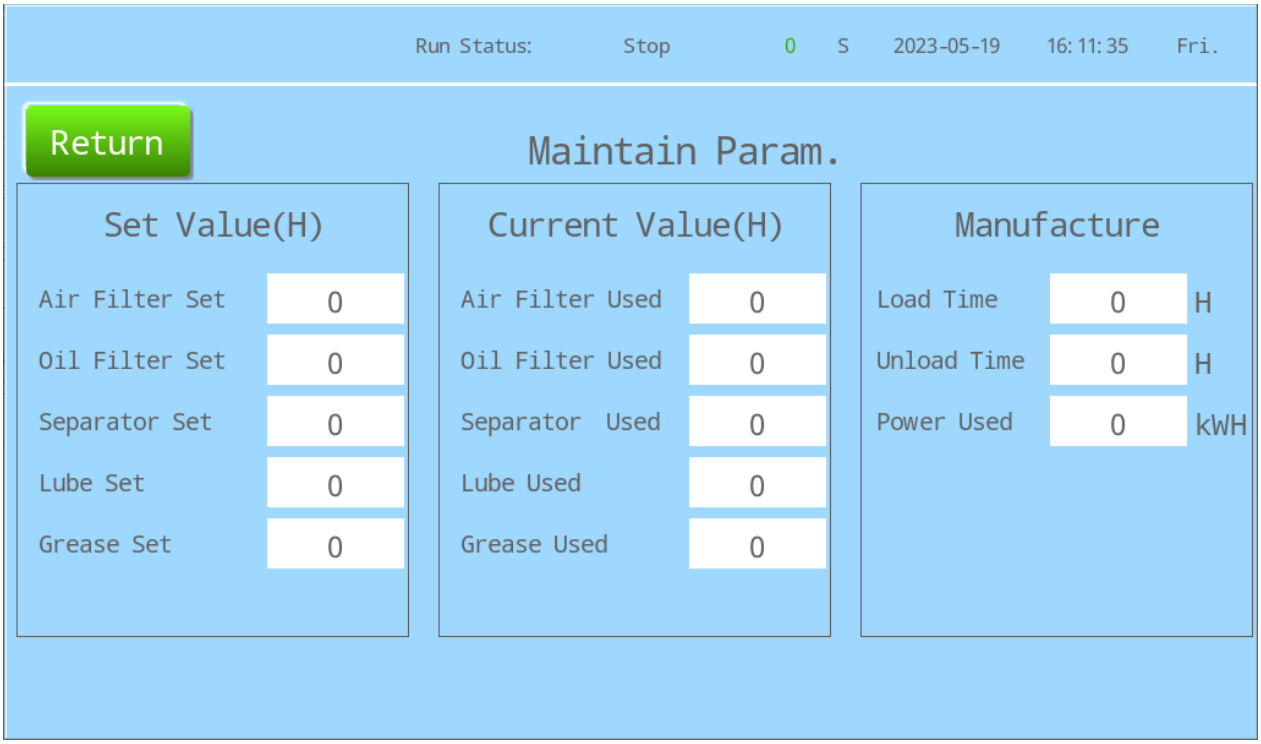
In a linked network,when an air compressor runs longer than the rotation time,it will be rotated to the next idle air compressor.



Page15 Linkage Page

(8) Maintenance Parameters

Click on "Maintenance Parameters" to bring up the "Password Input" interface, enter the password to enter the parameters interface, as shown in Page 16:



Page16 Maintain Param.

(9) Timing control

Click "Timing Control" on the user parameter sub-screen, and then the "Password Input" interface will pop up, enter the password to enter the parameter

interface, as shown in Page17:

Page17 Timer Control

(10) History of failures

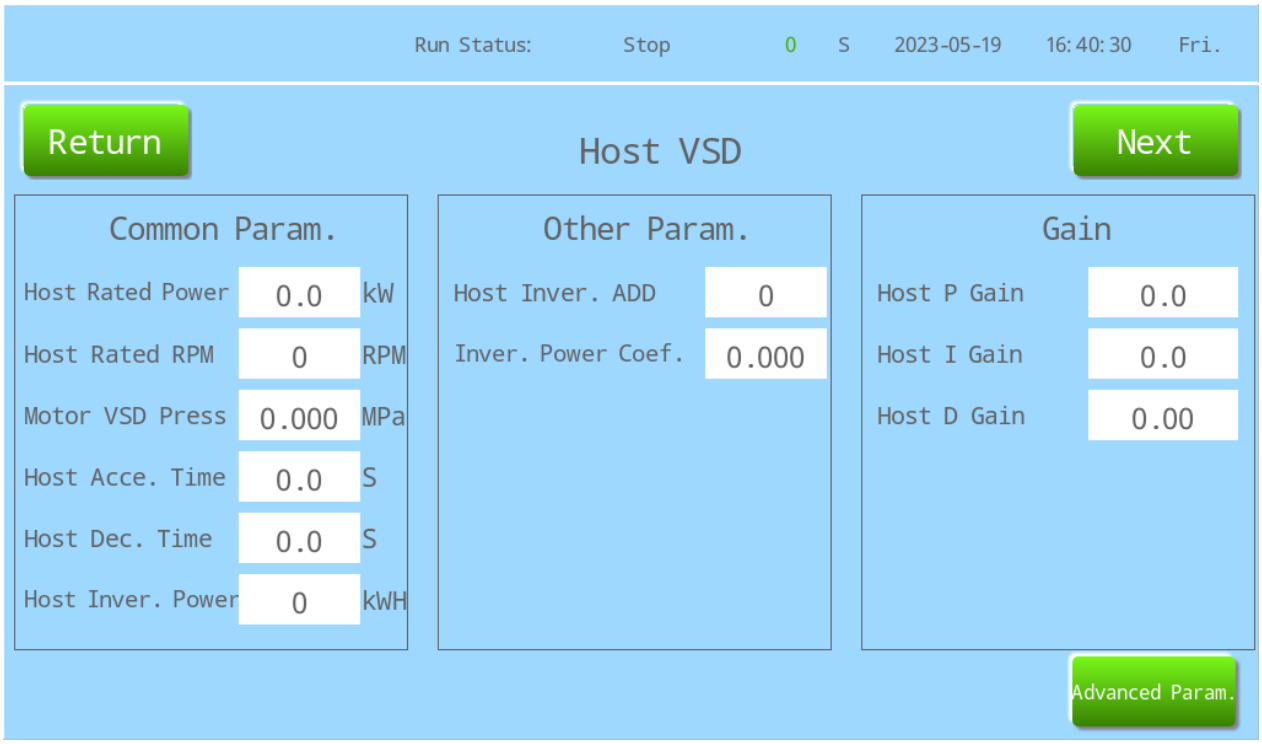
Click "History Failure" to bring up the"HistoryFailure"interface,which actually records, the type of system failure and the time of failure,as shown in Page18:

Page18 History Error

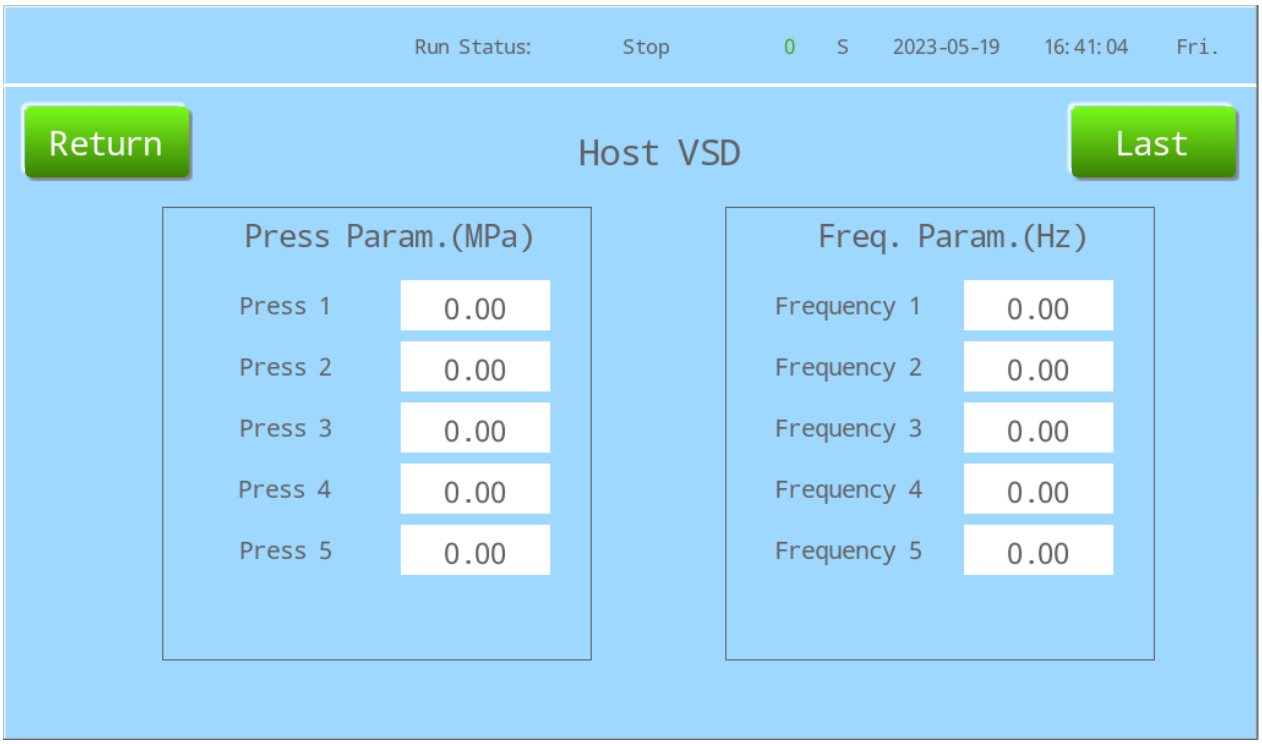
(11) Host frequency conversion

Click "Host Frequency "to bring up the "Password Input" interface, enter the password to enter the parameter interface. The main functions include: host

state parameters, host gain, advanced parameters, and constant power control parameter settings. As shown in Page 19:



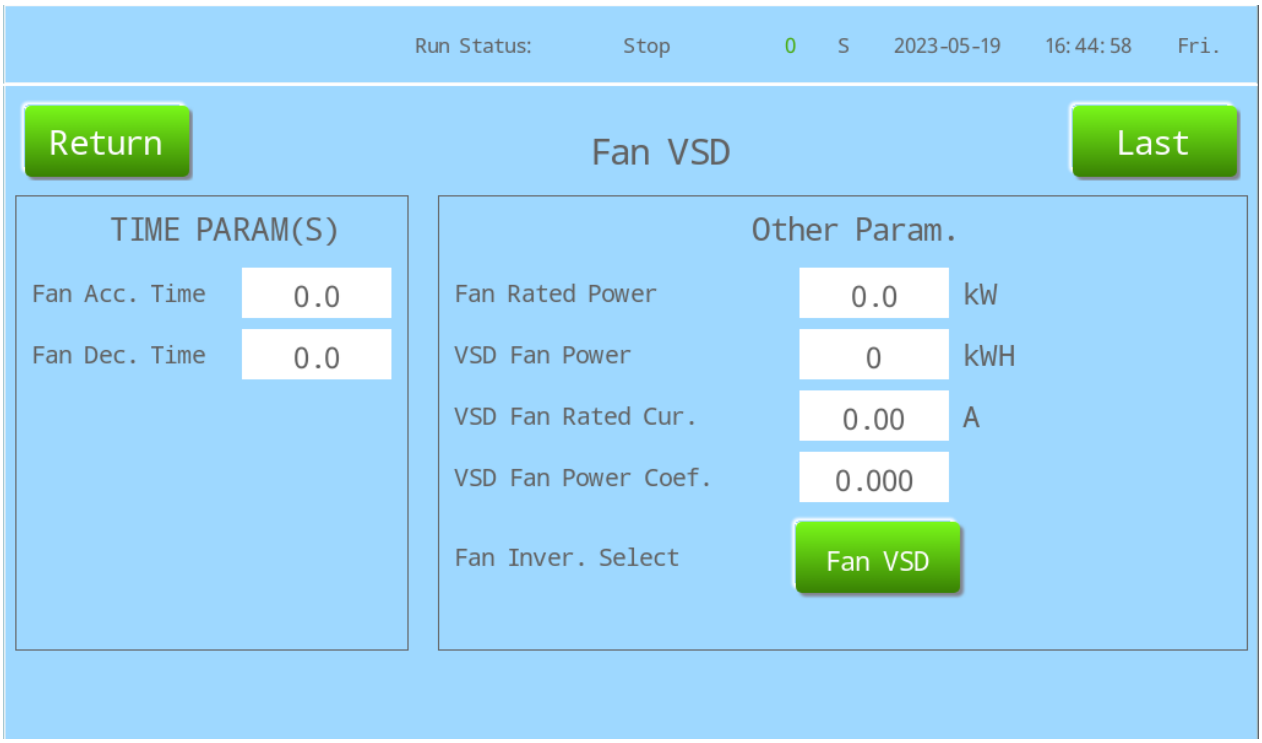
Page19 Host Inverter 1



Page 20 Host Inverter 2

(12) Click"Fan Frequency Conversion" to bring up the "Password Input" interface, enter the password to enter the parameter interface, as shown in Page 21~22:

Page21 Fan Inverter 1



Page22 Fan Inverter2

(13) Other functions:

① Motor commissioning

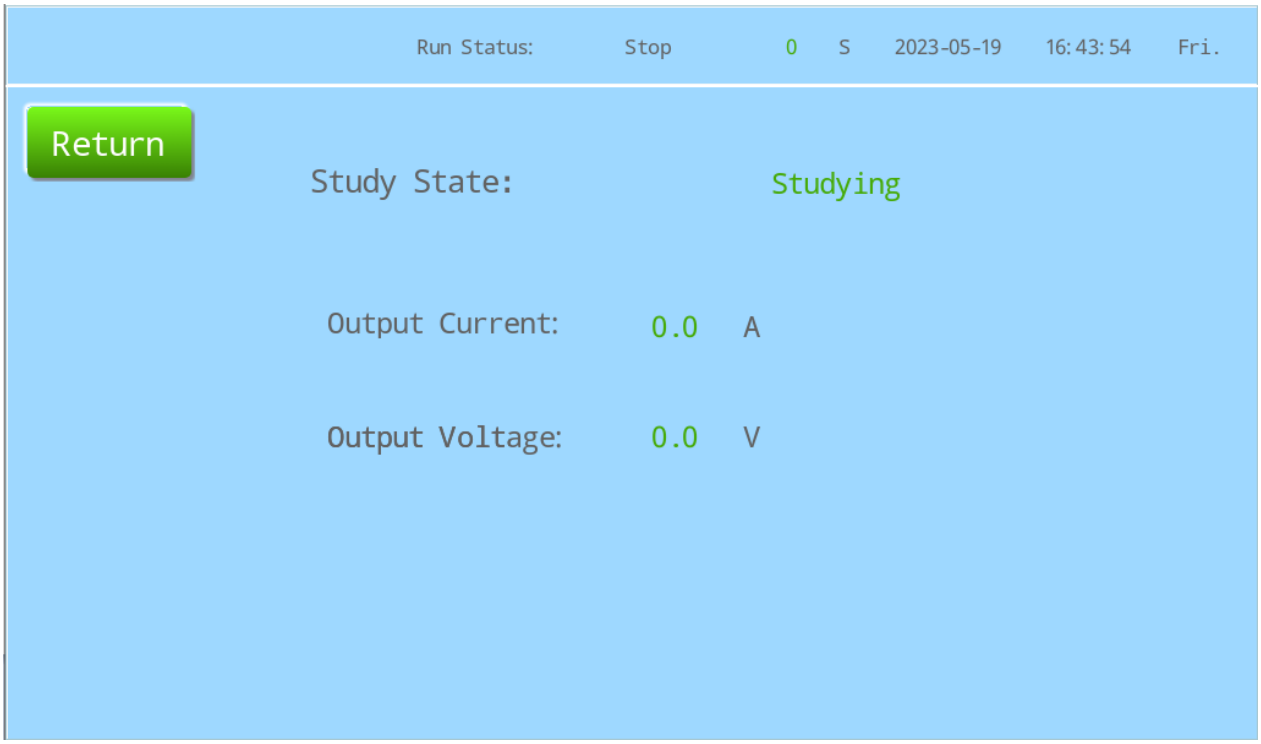
Click on "Motor Commissioning" on the Factory Parameters sub-screen to enter the "Motor Commissioning" screen, as shown in Page 23:

Page23 Motor Param.

The main functions include : setting motor-related parameters,motor self-learning,point start trial and fan start/stop control.

②Motor self-learning

Click "Start learning", in the state of motor shutdown, the system automatically self-learning motor,learning is complete,the system prompts "self-learning success",if learning fails,the system prompts"learning error.If learning fails,the system prompts "learning error", the interface is shown in Page 24:

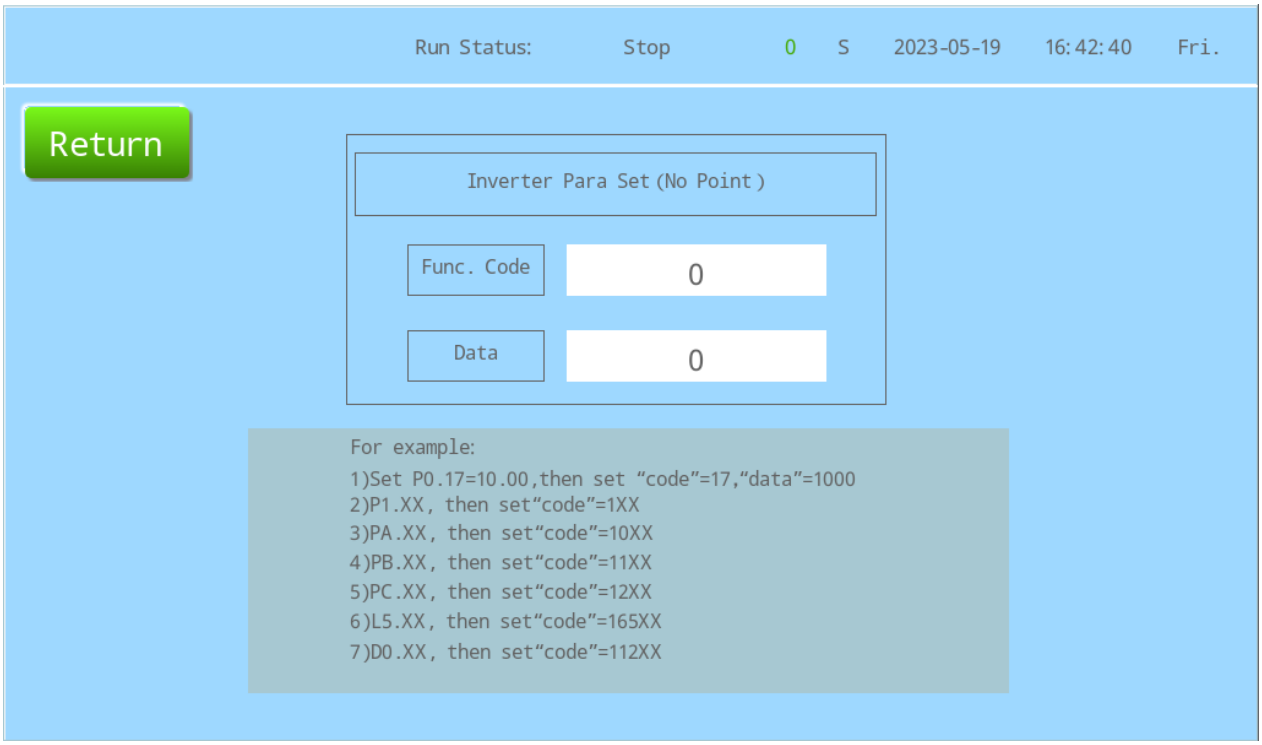


Page24 Motor Study

After successful learning, click the back button to enter the motor debugging interface, "pointrunning" is used to test the motor steering, the default running at 10Hz, pay attention to observe whether the motor steering is correct, such as steering errors in time to release the button to achieve the "point stop" effect. If the motor steering is wrong, release the button in time to achieve the effect of "Tap Stop", replace the motor line, re-appeal the steps to commission the motor.

Fan debugging, click on"fan running",observe whether the fan steering is correct, such as working properly , then stop running , return to the main interface can be,such as reverse operation,then switch any two fan lines can be.

③ Click Advanced Parameters on the main frame inverter sub-screen, as shown in Figure 25:



Page25 HighParam.

The key pad can be simulated to modify the inverter host parameters.

System commissioning/operation