

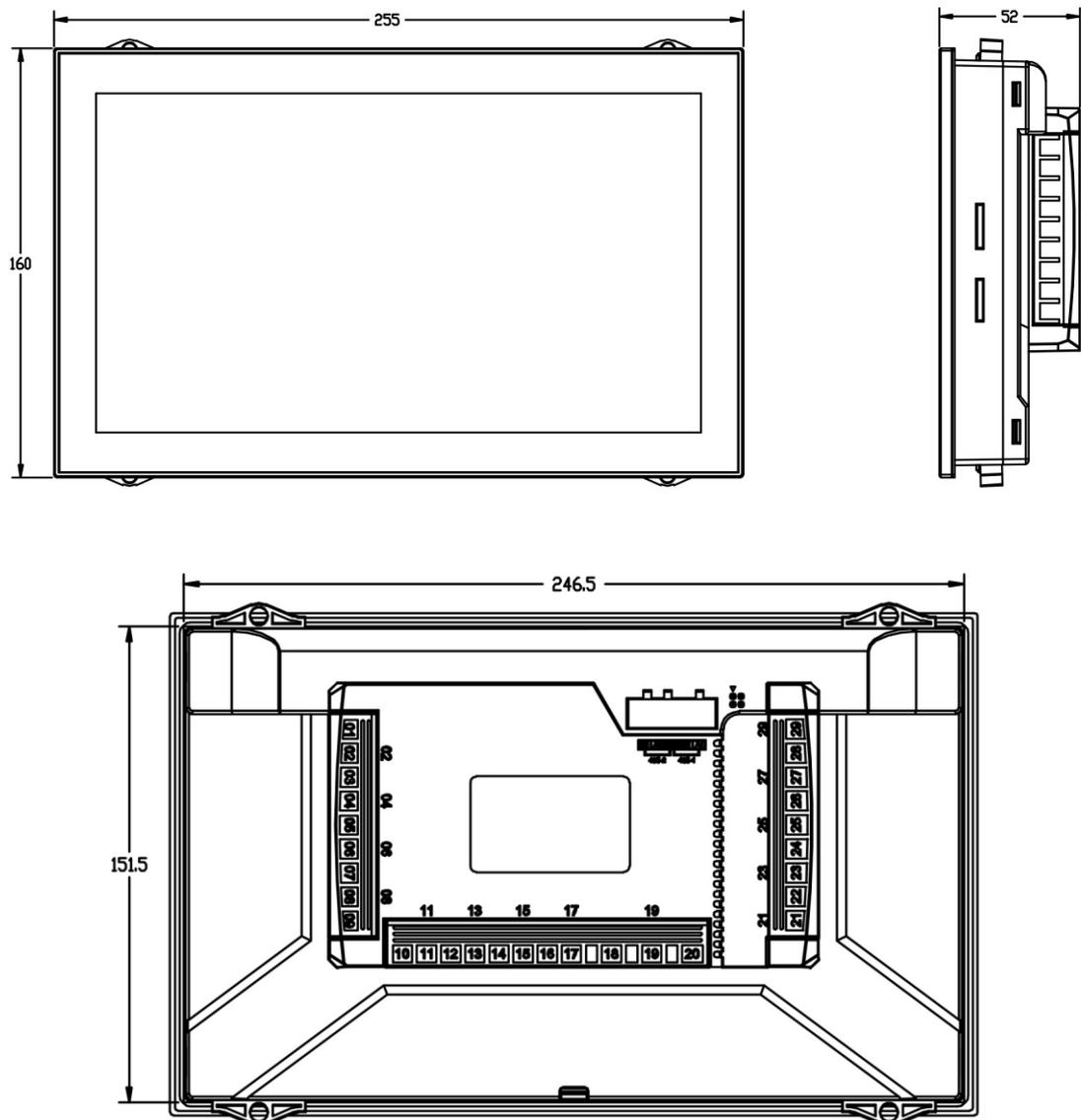
# Air Compressor Control System HMI-8080 Interface User's Manual

## V1.1

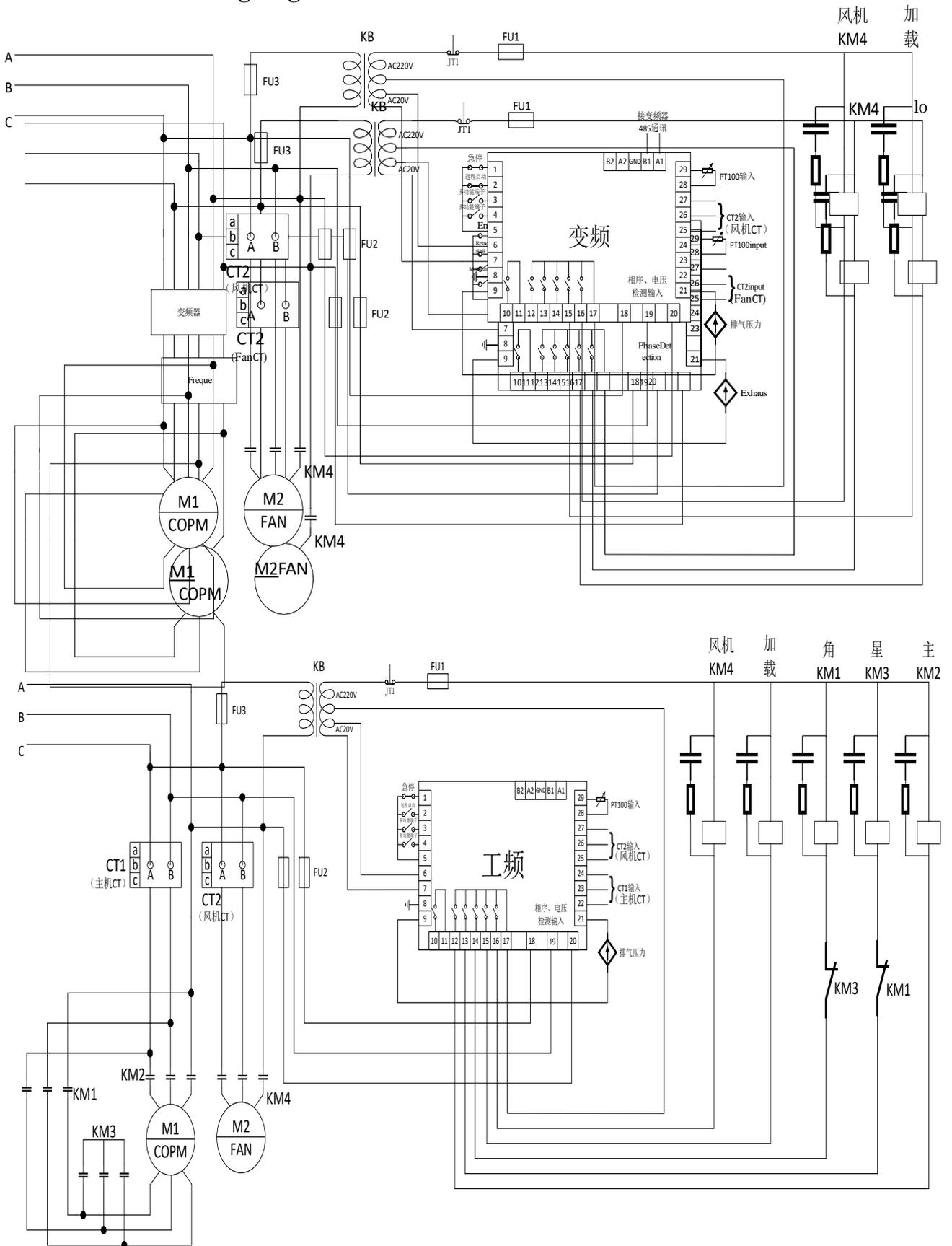
The HMI-8080 air compressor control system developed by our company is rich in interface display, powerful and easy to use, which can easily realize the human-computer interaction function of air compressor control system, thank you for your choice!

### Hardware parameters

#### 1. External dimensions and mounting dimensions



## 2. Terminal wiring diagram



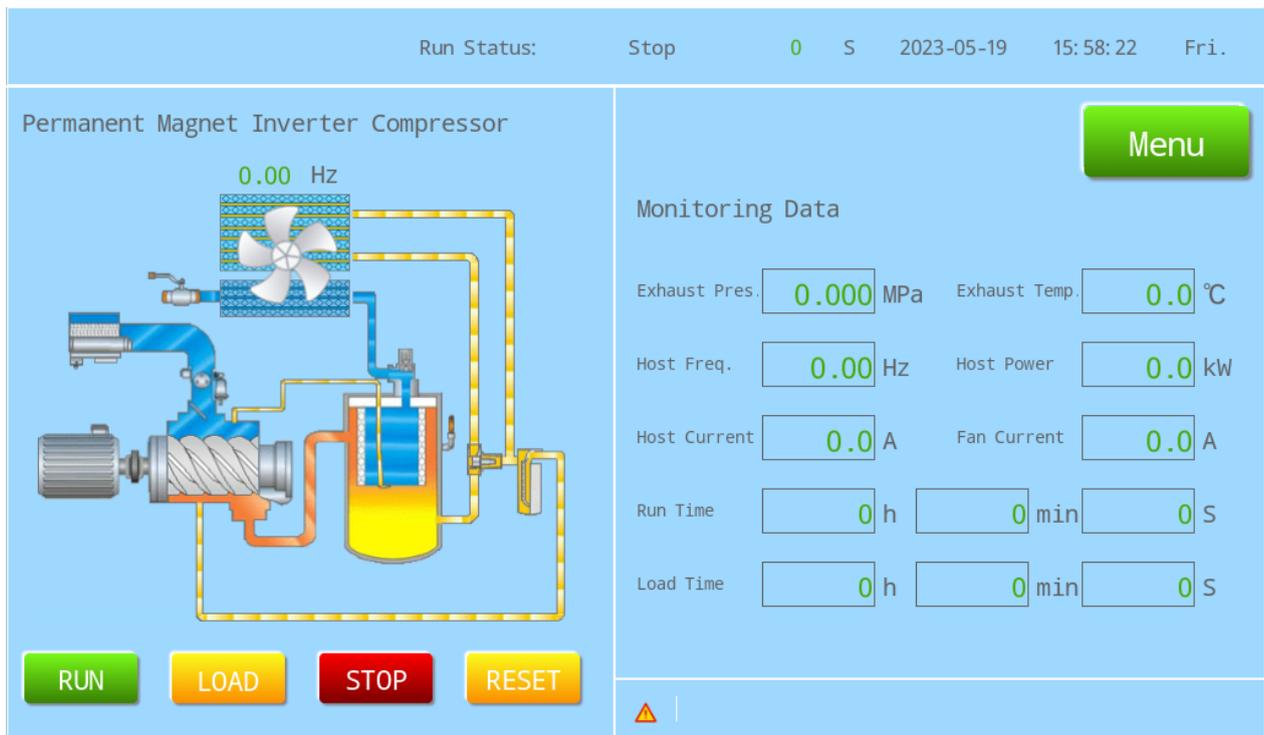
Page2 Terminal Definition

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

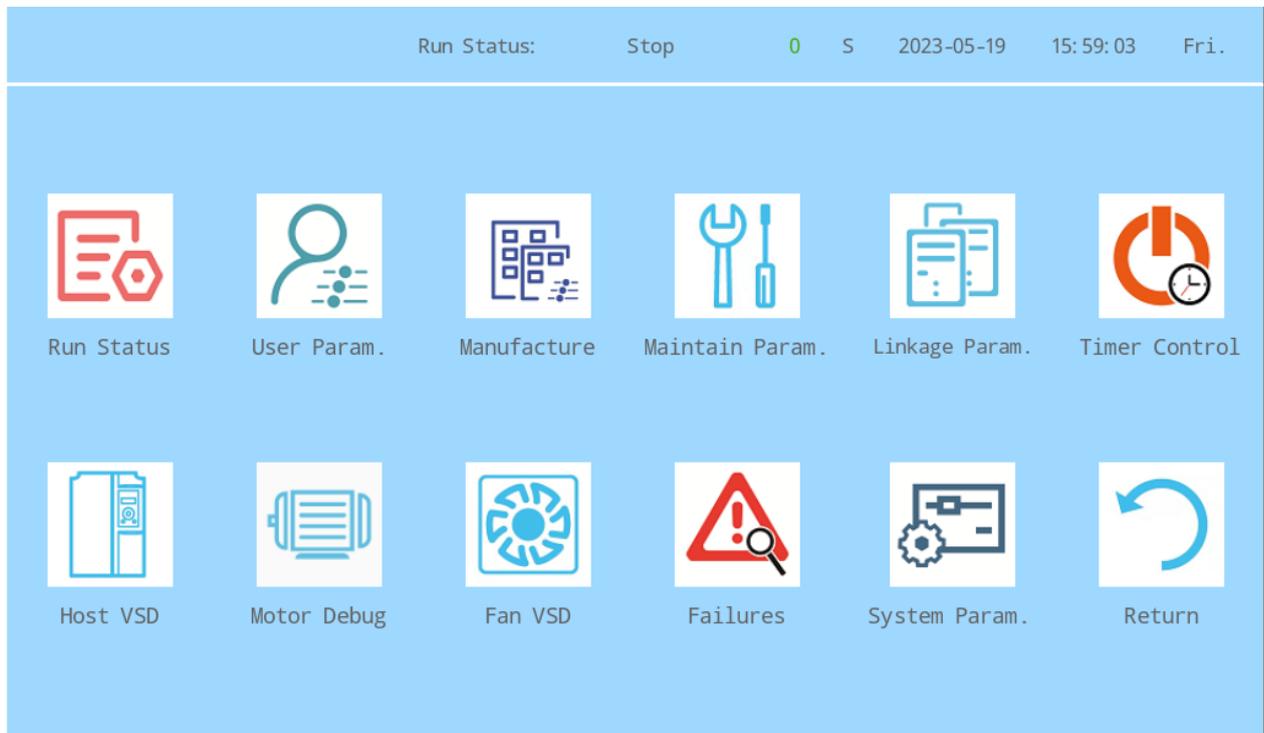
### (1) System main interface

① After 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).

② The 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

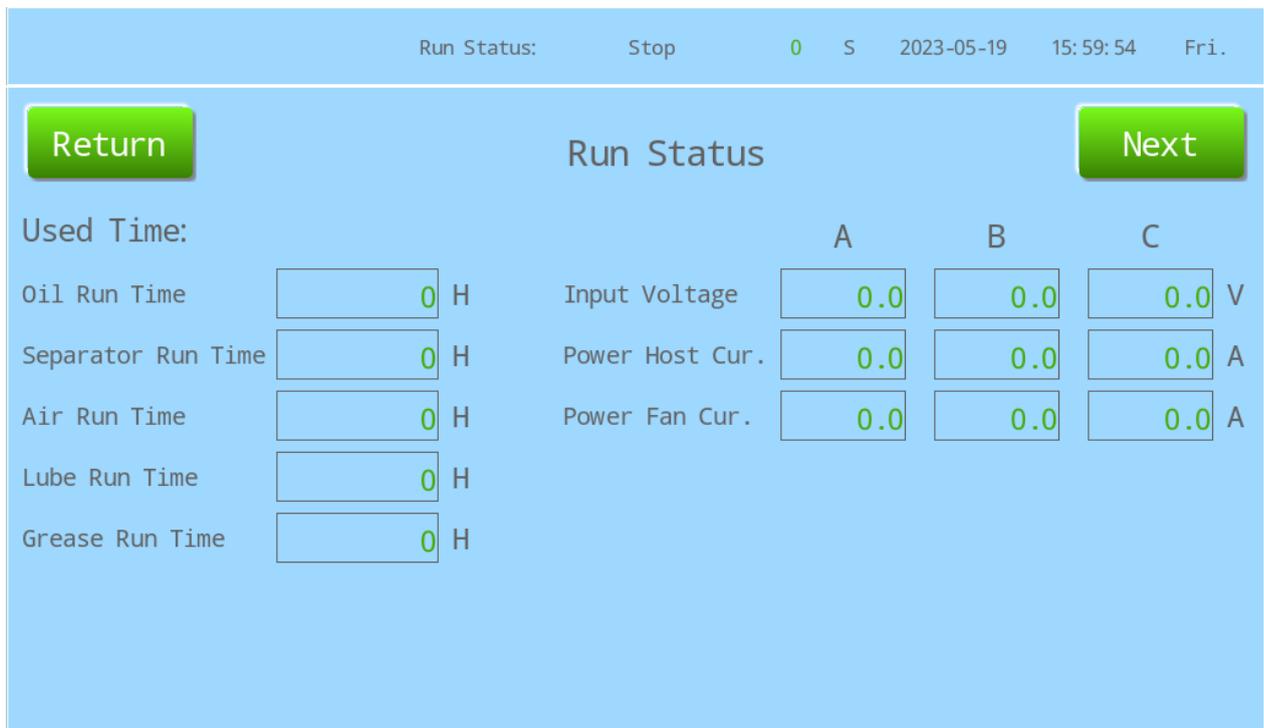
Click the "Menu" option in the upper right corner, the main menu will pop up, including user parameters, manufacturer parameters, maintenance parameters, joint control parameters, timing control, system parameters, mainframe inverter, motor commissioning, fan inverter, history of faults, return and other 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

Run Status:    Stop    0   S    2023-05-19    16:00:46    Fri.

[Return](#)
Run Status
[Last](#)
[Next](#)

Host Status:

Host Speed	0	RPM	Host Write Freq.	0.00	
Host Press	0.000	MPa	Host Status Word	0	
Host Output Freq.	0.00	Hz	Host Error Word	0	
Host Output Cur.	0.0	A	Host Current Power	0.0	kWh
Host Output Volt.	0.0	V	Host Total Power	0.0	kWh
Host Output Power	0.0	kW			

Page6 RunParam.2

Run Status:    Stop    0   S    2023-05-19    16:01:21    Fri.

[Return](#)
Run Status
[Last](#)
[Next](#)

I/O Status:

DI Status	1	2	3	4	
					
DO Status	1	2	3	4	5
					

Page7 RunParam.3

Run Status:    Stop    0    S    2023-05-19    16:02:01    Fri.

Return
Run Status
Last

**Machine Information :**

RunTime	0H	0M	
Load	0H	0M	
Version	V1.0.0	0.00	
Production Number	0		
Production Date	0		
Service Telephone	0		
Manufacturer			

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:

Run Status:    Stop    0    S    2023-05-19    16:02:58    Fri.

Return
User Param.
Next

<p style="text-align: center; font-weight: bold;">Delay Param.(S)</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Load Delay</td><td style="border: 1px solid #ccc; text-align: center;">0</td></tr> <tr><td>Stop Delay</td><td style="border: 1px solid #ccc; text-align: center;">0</td></tr> <tr><td>Restart Delay</td><td style="border: 1px solid #ccc; text-align: center;">0</td></tr> <tr><td>Standby Delay</td><td style="border: 1px solid #ccc; text-align: center;">0</td></tr> <tr><td>Fan Start Delay</td><td style="border: 1px solid #ccc; text-align: center;">0.00</td></tr> </table>	Load Delay	0	Stop Delay	0	Restart Delay	0	Standby Delay	0	Fan Start Delay	0.00	<p style="text-align: center; font-weight: bold;">Temp. Param.(°C)</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Fan Run Temp.</td><td style="border: 1px solid #ccc; text-align: center;">0.0</td></tr> <tr><td>Fan Stop Temp.</td><td style="border: 1px solid #ccc; text-align: center;">0.0</td></tr> </table>	Fan Run Temp.	0.0	Fan Stop Temp.	0.0	<p style="text-align: center; font-weight: bold;">Press Param.(MPa)</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Load Press</td><td style="border: 1px solid #ccc; text-align: center;">0.000</td></tr> <tr><td>Unload Press</td><td style="border: 1px solid #ccc; text-align: center;">0.000</td></tr> <tr><td>Motor VSD Press</td><td style="border: 1px solid #ccc; text-align: center;">0.000</td></tr> </table>	Load Press	0.000	Unload Press	0.000	Motor VSD Press	0.000
Load Delay	0																					
Stop Delay	0																					
Restart Delay	0																					
Standby Delay	0																					
Fan Start Delay	0.00																					
Fan Run Temp.	0.0																					
Fan Stop Temp.	0.0																					
Load Press	0.000																					
Unload Press	0.000																					
Motor VSD Press	0.000																					

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:

Run Status: Stop 0 S 2023-05-19 16:04:15 Fri.

Return **Manufacture** Next

Alarm Disc. Temp.	0.0	°C	Low Temp. Prot.	0.0	°C	
Stop Disc. Temp.	0.0	°C	Fan Min Stop Temp.	0.0	°C	
Stop Press	0.000	MPa	High Input Voltage	0	V	
Max Unload Press	0.000	MPa	Low Input Voltage	0	V	
Alarm Long Stop	0	H	Power Fan Rated Cur.	0.00	A	
Max Run Time	0	H				
Run Time	0	H	0	Min	0	S
Load Time	0	H	0	Min	0	S

Conf. Param.  
Cali. Param.

Page12 Manufacture 1

Run Status: Stop 0 S 2023-05-19 16:46:34 Fri.

Return **Manufacture** Last Next

Alarm	ON	Param. Setting (No Point)	
Auto. Restart	OFF	Func. Code	0
Freq. Select	50Hz	Data	0
Inver. Power Sel.	≤55kW		

Page13 Manufacture 2

Run Status: Stop 0 S 2023-05-19 16:53:17 Fri.

Return Manufacture Last

Production Number	0
Production Date	0
Service Telephone	0
Manufacturer	
Manufacturer Password	1

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:

① Increase 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.

Run Status: Stop 0 S 2023-05-19 16:13:09 Fri.			
<b>Return</b>		<b>Linkage Param.</b>	
Linkage Mach. Num.	<input type="text" value="0"/>	Rotation Time	<input type="text" value="0"/> Min
Linkage Load Press	<input type="text" value="0.000"/> MPa	Linkage Unload Press	<input type="text" value="0.000"/> MPa
Air Compressor Delay Time:			
Linkage Increase Delay	<input type="text" value="0"/> H		
Linkage Reduction Delay	<input type="text" value="0"/> H		

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:

Run Status: Stop 0 S 2023-05-19 16:11:35 Fri.					
<b>Return</b>		<b>Maintain Param.</b>			
<b>Set Value(H)</b>		<b>Current Value(H)</b>		<b>Manufacture</b>	
Air Filter Set	<input type="text" value="0"/>	Air Filter Used	<input type="text" value="0"/>	Load Time	<input type="text" value="0"/> H
Oil Filter Set	<input type="text" value="0"/>	Oil Filter Used	<input type="text" value="0"/>	Unload Time	<input type="text" value="0"/> H
Separator Set	<input type="text" value="0"/>	Separator Used	<input type="text" value="0"/>	Power Used	<input type="text" value="0"/> kWh
Lube Set	<input type="text" value="0"/>	Lube Used	<input type="text" value="0"/>		
Grease Set	<input type="text" value="0"/>	Grease Used	<input type="text" value="0"/>		

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:

Description of the alarm	Start Time	End Time

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:

Run Status: Stop 0 S 2023-05-19 16:40:30 Fri.

**Host VSD**

**Common Param.**

Host Rated Power	0.0	kW
Host Rated RPM	0	RPM
Motor VSD Press	0.000	MPa
Host Acce. Time	0.0	S
Host Dec. Time	0.0	S
Host Inver. Power	0	kWh

**Other Param.**

Host Inver. ADD	0
Inver. Power Coef.	0.000

**Gain**

Host P Gain	0.0
Host I Gain	0.0
Host D Gain	0.00

Advanced Param.

Page19 Host Inverter 1

Run Status: Stop 0 S 2023-05-19 16:41:04 Fri.

**Host VSD**

**Press Param.(MPa)**

Press 1	0.00
Press 2	0.00
Press 3	0.00
Press 4	0.00
Press 5	0.00

**Freq. Param.(Hz)**

Frequency 1	0.00
Frequency 2	0.00
Frequency 3	0.00
Frequency 4	0.00
Frequency 5	0.00

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:

Run Status: Stop 0 S 2023-05-19 16:44:23 Fri.

Return Fan VSD Next

Temp. Param.(°C)		Freq. Param.(Hz)		Gain	
Fan VSD Temp.	0.0	Fan Rated Freq.	0.00	Fan P Gain	0.0
Max VSD Temp.	0.0	Fan Max Freq.	0.00	Fan I Gain	0.00
VSD Fan Start Temp.	0.0	Fan Upper Limit	0.00	Fan D Gain	0.000
VSD Fan Stop Temp.	0.0	Fan Lower Limit	0.00		

Page21 Fan Inverter 1

Run Status: Stop 0 S 2023-05-19 16:44:58 Fri.

Return Fan VSD Last

TIME PARAM(S)		Other Param.	
Fan Acc. Time	0.0	Fan Rated Power	0.0 kW
Fan Dec. Time	0.0	VSD Fan Power	0 kWh
		VSD Fan Rated Cur.	0.00 A
		VSD Fan Power Coef.	0.000
		Fan Inver. Select	<span style="background-color: green; color: white; padding: 2px 10px;">Fan VSD</span>

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:

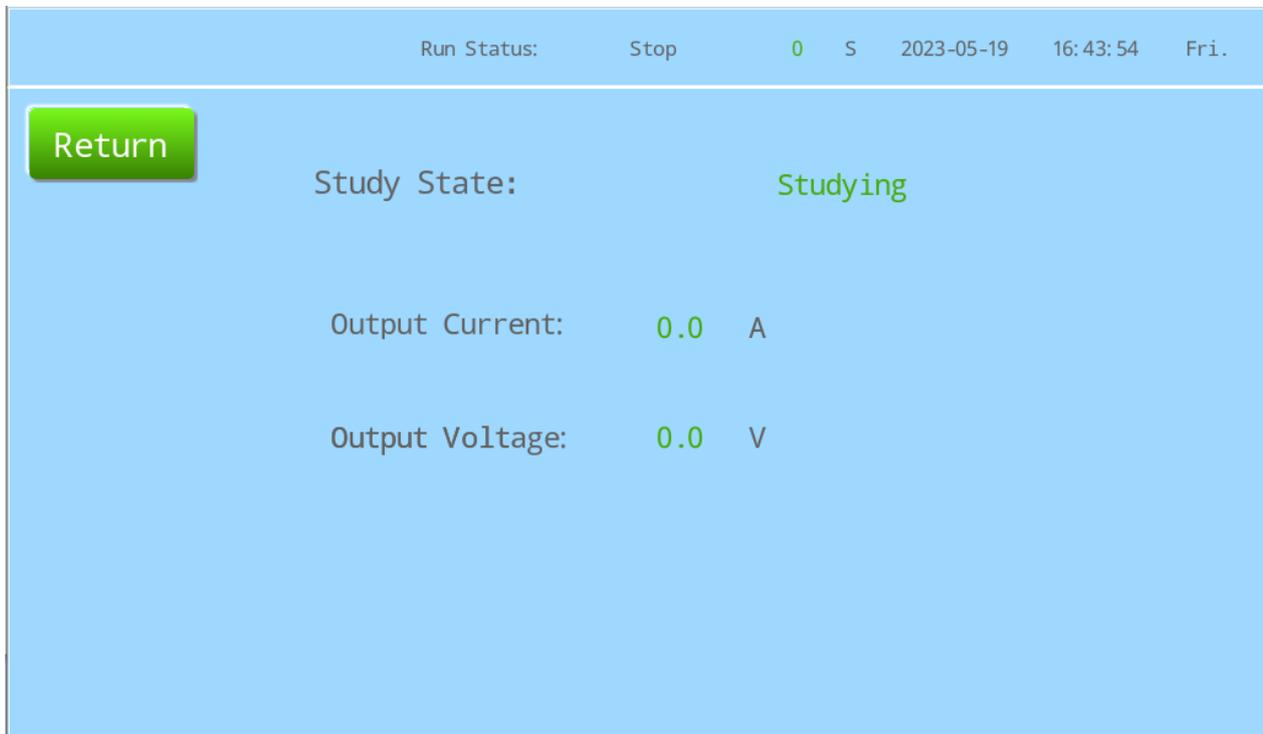


Page23 Motor Param.

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:

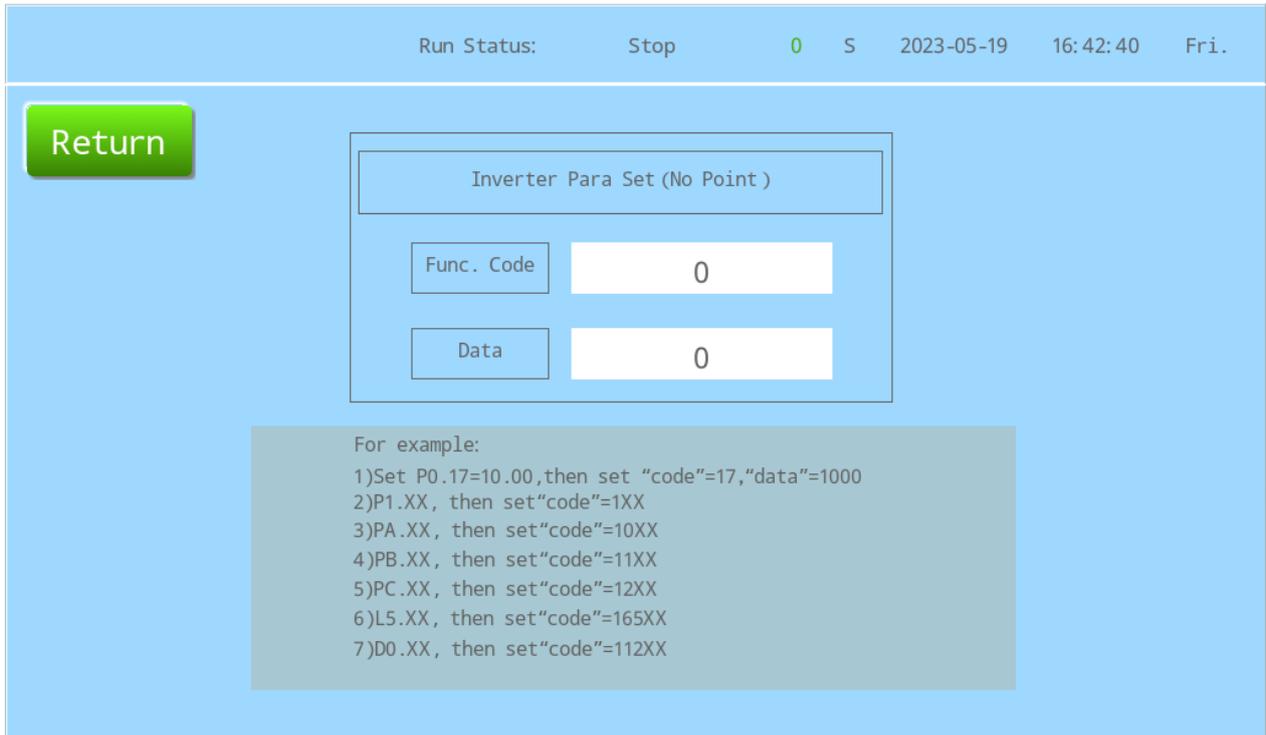


Page24 Motor Study

After successful learning, click the back button to enter the motor debugging interface, "point running" 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

