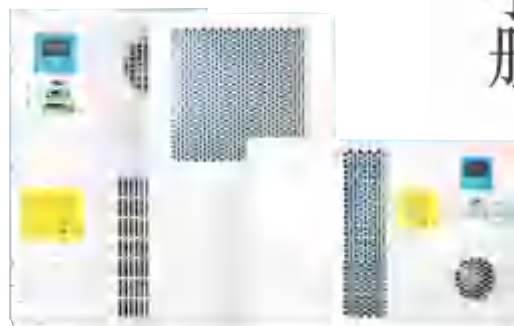


工业控制柜空调器



用户使用手册



在使用空调器前请详细阅读此说明书

conditioner. Please read this instruction carefully before using the air conditioner.

保 修 卡

Warranty Card

- 1、 保修期：
Warranty period
从售出之日起一年内，正常使用损坏，我公司负责予以保修。
Within one year from the date of sale, our company is responsible for the warranty for these normal use of damage.
- 2、 在保修期内，因为以下事项发生故障，本公司维修将收取维修费
During the warranty period, we will charge the maintenance fee for the following conditions:
- (1) 机器的不正确使用；
improper use of the machine;
 - (2) 部分或全部忽视使用说明书
ignore the instruction manual in part or in whole;
 - (3) 未经授权的擅自改装或修理；
unauthorized modification or repair;
 - (4) 外部能源供应的缺陷；
defects in external energy supply;
 - (5) 由于其他机器或零件故障，引起的本机二次故障；
secondary failure of the machine due to failure of other machines or parts;
 - (6) 自然灾害。
natural disasters.
- 3、 本机质量保证限于中国大陆境内；
The quality assurance of the machine is limited to China;
- 4、 本保修卡涂改无效、遗失不补，请妥善保管；
This warranty card is invalid if altered, and will not be replaced if lost. Please keep it properly.
- 5、 本保修卡必须加盖公司印章，否则无效；
This warranty card must be stamped with the company's seal, otherwise it is invalid;
- 6、 使用中如果机器出现故障，请联系售后服务部：
If the machine fails in use, please contact after-sales service department

产品名称 Product Name	型 号 Model	出厂编号 Factory No.	日 期 Date	公司 印章
空 调 器 Air Conditioner				
制 冷 量 Cooling capacity		额定电流 Rated Current		

1、概述：

Summarize:

工业空调器，是专门为机床及通讯、通信等行业开发制造的配套产品。
industrial air conditioner is specially developed and manufactured for machine tools, communication and other industries.
主要用来控制电器控制箱内的温度及湿度，以提高电器元件的可靠性和寿命，
It is mainly used to control the temperature and humidity in the electrical control cabinet, to improve the reliability and life of electrical components,
减少电控系统因高温、潮湿等造成的故障，确保电气控制系统安全、可靠运行。
to reduce the failure of the electrical control system caused by high temperature and humidity, and ensure the safe and reliable operation of the electrical control system.

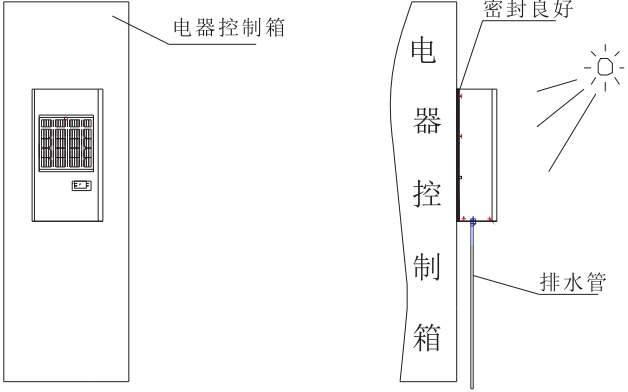
2、搬运与安装：

Carry and installation:

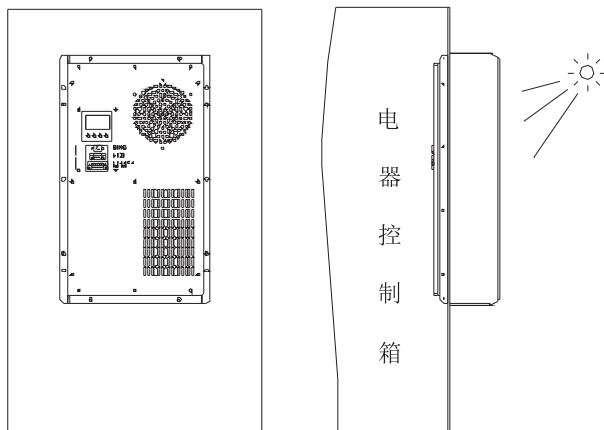
- (1) 搬运过程中请勿倾斜超过45° 并请勿撞击，否则会引起制冷系统失效；
Do not tilt more than 45° during carry, and do not impact, otherwise it will cause cooling system failure;
- (2) 机器不得受阳光曝晒，不得与酸、碱等腐蚀性物品一起放置；
The machine should not be exposed to the sun, and should not be placed with acid, alkali and other corrosive substances;
- (3) 机器必须与电器控制箱固定牢靠（使用随机附带螺栓），并保证密封良好；
The machine must be firmly fixed with the electrical control box (use attached bolts), and ensure good sealing;
- (4) 机器周围应留出足够的通风空间，以利于空气流动和设备维护；
The machines should leave enough ventilation space around, in order to facilitate air flow and equipment maintenance;
- (5) 空调器必须在下列环境下运行：环境温度5~45℃，相对湿度不大于95%。
The air conditioner must be run in the following environment, the environment temperature is 5~45℃, the relative humidity is not more than 95%. Without conductive dust, no flammable gas and corrosive gas occasions.

- (6) 空调器的箱内出风孔必免与机床电器控制箱内的变频器、伺服器等精密电器
The air conditioner air hole in the box must be keep enough space to the machine tool electrical control box in the
元件正对或距离太近，以防影响电器元件正常工作；
inverter, and other precision electrical components, in order to avoid affecting the normal work of electrical components;
- (7) 壁挂式空调器底部有排水管配有快速接头，可外接排水管
The wall-mounted installed air conditioner can be installed onto the outer wall of the electrical control box since the bottom drain pipe have quick coupling, as shown in (1)
- (8) 安装方式：壁挂式安装：空调器安装于电器控制箱的外壁上，如图（一）
Installation: a. Wall-mounted installation: the air conditioner is installed on the outer wall of the electrical control box, as show in picture 1
嵌入式安装：空调器安装于电器控制箱的外壁上，但是有一部分
b. Embedded installation: the air conditioner is installed on the outer wall of the electrical control box, but some of it is embedded in
嵌入到电器控制箱的内部，如图（二）
the inside of the electrical control box, as shown in picture 2.

如图（一）（二）：
As shown in picture (1) (2):



图（一） 1、外挂式安装
Picture 1. External installation.
2、与电器控制箱固定牢固且密封良好
The air conditioner is fixed firmly and sealed well with the electrical control box.
3、避免阳光直射且远离热源
Avoid direct sunlight and keep away from heat sources
4、排水管保持通畅
Keep the drain clear.



图（二） 1、嵌入式安装
2、与电器控制箱固定牢固且密封良好

Picture2. Embedded installation, fixed firmly and sealed well with the exlectrical control box.

3、电气连接:

Electrical connection

由专业人员按要求连接电源,并要求安装接地线,以确保安全。

Connect the power by professionals as required and instal the grounding wires to ensure safety.

机器在安装完毕未通电之前,应检查绝缘电阻不小于 $2M\Omega$ 。

Please check the insulation resistance is not less than $2m\Omega$ before the machine installed and unpowered.

4、试运行

Trial operation

接通电源,设备会自动启动,当电器控制箱内温度大于设定值 2°C 时,

The device will automatically start once switched the power, when the temperature of the electric control box is greater than the set

制冷系统启动(注意:有自动延时功能);当电器控制箱内温度小于设定

point 2°C , the cooling system start (note: it have auto delay function); When the electric control box temperature less than the set point 2°C ,

值 2°C 时,制冷系统停止工作。具有加热功能的机型,当电器控制箱内温度

refrigeration system to stop working. For these conditioner have heating function, when the temperature of the electric control box is below 5°C ,

低于 5°C 时,加热功能自动启动,当温度到达 10°C 后,加热自动停止(加热状

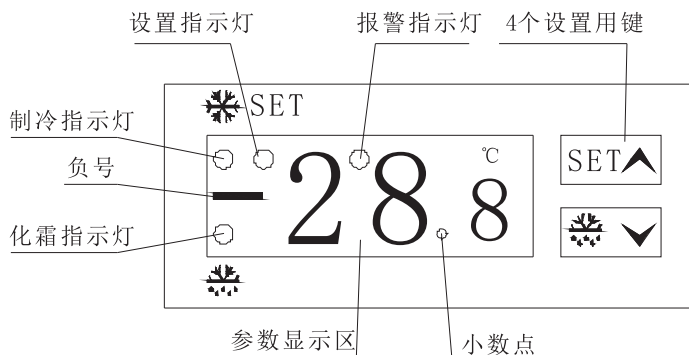
heating automatic start function, while the temperature reached after 10°C , automatic stop heating (heating status is unlinked with the

态与面板上的温控仪设置无关,温控仪只用于制冷状态参数的设置)。

temperature controller on the panel, the temperature controller is used only for refrigeration state parameter settings).

5、温控盒设置与操作:

Setting and operation of the temperature controller



控制器操作面板实物图



5.1、按键功能及设置方式:

5.1 The key function and setting way.

按键动作 KEY ACTION	功能一(正常状态下) FUNCTION1 (normal condition)	功能二(设置状态下) FUNCTION2 (set condition)	功能三(参数更改状态下) FUNCTION3 (change the parameters)	备注 REMARK
SET		进入参数设置 Enter into the parameters set	保存参数并返回设置界面 Save the parameters and return to the setting screen	
SET.....3秒 SET.....3s	进入用户设置 Enter into the user set			
▼			参数更改 Parameters change	
▼.....3秒 ▼.....3s	进入/退出强制制冷 On/off forced cooling			3分钟自动退出 Automatic
▲			参数更改 Parameters change	
▲.....3秒 ▲.....3s	进入/退出强制除霜 On/off forced defrost			
●		退出设置状态 Exit settings		
⏻.....5秒 ⏻.....5s	关机 Power off			
⏻.....1秒 ⏻.....1s	开机 Starting up			
▲+▼.....3秒 ▲+▼.....3s	恢复出厂设置 Factory data reset			显示“---” display“---”

说明: 此表未有说明的按键功能及未显示的按键请不要随意按动,

Note: please do not press the keys that are not shown in this table, or the machine will not work normally.

5.2、菜单说明:

5.2 Menu description

代码 code	功能说明 Function description	设置范围 Set range	出厂设置 Factory setting	调节幅度 Adjustment range	单位 Unit	备注 Remark
F01	停机温度 Stop temperature	15~50	23	1	℃	
F02	制冷灵敏度 Cooling sensitivity	1~10	5	1	℃	
F03	压缩机延时保护 Compress Delay protection	0~20	3	1	分钟 minute	
F04	高温报警 high temperature alarm	11~70	38	1	℃	
F05	低温报警 low temperature alarm	-20~F1	0	1	℃	
F06	化霜周期 Frost period	0~24	0	1	小时 hour	0为取消化霜 0
F07	化霜时间 Frost time	1~60	20	1	分钟 minute	
F08	化霜截止温度 Frost cut-off temperature	0~50	20	1	℃	

5. 3、指示灯说明：

5.3 Indicator light

指示灯 Indicator light	状态 Status	表示意义 Meaning
制冷指示灯 Cooling light	灭 extinguish	压缩机停止 The compress stopped working
	闪烁 twinkle	压缩机延时 The compress delayed
	亮 bright	压缩机工作 The compress is working
	快闪 Quick flashing	强制制冷 Forced to make cooling
化霜指示灯 Frost light	灭 extinguish	化霜停止 Frost stopped to working
	亮 bright	化霜工作 Frost working
	快闪 Quick flashing	强制化霜 Forced to make frost
报警指示灯 Alarm light	灭 extinguish	报警停止 Alarm stopped
	亮 bright	报警工作 Alarm working

5. 4、功能说明：

- 5.4 Function description
- 5.4.1 开机、停机温度：
- 5.4.1 starting up temperature and the shutdown temperature
- 当库内温度 $\geq$ 停机温度设定值+制冷灵敏度时，开始延时，制冷继电器输出。
When the temperature in the storage is above or equal to the set value of the shutdown temperature + the refrigeration sensitivity, the delay starts and
- 当库内温度 $<$ 停机温度设定值时，制冷停止输出。
the refrigeration relay outputs. When the temperature in the storage is less than the set value of the shutdown temperature, the refrigeration stops the output.
- 5.4.2 超温报警
- 5.4.2 Over temperature alarm
- 当实际温度 $\geq$ 高温报警温度，蜂鸣器响，同时显示相应的故障代码，请合理设置报警温度。
When the actual temperature higher or equal to the high temperature alarm temperature, buzzer sound, and display the corresponding fault code, please set the alarm temperature reasonably. When the
- 当实际温度 $\leq$ 低温报警温度，蜂鸣器响，同时显示相应的故障代码，请合理设置报警温度。
actual temperature is less than or equal to the low temperature alarm temperature, the buzzer will sound and the corresponding fault code will be displayed. Please set the alarm temperature reasonably.
- 5.4.3 压缩机延时保护时间：
- 5.4.3 The compressor delay protection time:
- 第一次通电，若当前温度大于温度设定值+制冷灵敏度时，压缩机不会立即启动制冷，
For the first power on, if the current temperature is more than the set temperature + refrigeration sensitivity, the compressor will not
- 需要运行设定的延时时间后才能启动。工作期间，压缩机两次启动之间的间隔时间要大于
start refrigeration immediately, and it can only start after the delay time set is operated. During the working period, the interval time
- 设定的延时启动时间后才能启动。
between two starts of the compressor should be greater than the set delay starting time before starting.
- 5.4.4 温度校正：
- 5.4.4 Temperature correction:
- 当测量温度与标准温度有偏差时，使用此功能，可以将机器测量值与标准温度调整一致。
When there is a deviation between the measured temperature and the standard temperature, this function can be used to adjust the measured value
- 校正后的温度=校正前的温度+校正值。
of the machine in accordance with the standard temperature. Temperature after correction = temperature before correction + correction value.
- 5.4.5 化霜功能：(冰箱控制才启用)
- 5.4.5 Defrosting function: (only start when the air conditioner is under control)
- 化霜周期：化霜周期为两次化霜之间的间隔。
Defrosting cycle: defrosting cycle is the interval between defrosting and defrosting.
- 化霜时间：化霜时间为化霜器实际工作的时间。
Defrosting time: defrosting time is the actual working time of defrosting device.
- 化霜截止温度：化霜过程中，如果蒸发器温度过高，超过此功能设定值，那么强制停止化霜。
Defrosting cut-off temperature: during defrosting, if the evaporator temperature is too high and exceeds the set value of this function, the defrosting shall be stopped forcibly.
- 5.4.6 非正常工作模式：
- 5.4.6 Abnormal working mode:
- 当库温探头短路或者库温探头开路此时进入定时控温模式，压缩机按照停止 15 分钟，
When the storage temperature probe shortens or the storage temperature probe opens, the compressor will enter the timing temperature control
- 运行30分钟的间歇方式工作。间隔时间设置为0·就表示取消此功能。
mode, and the compressor will stop for 15 minutes and run in 30 minutes intervals. Setting the interval time to 0 will disables this feature.
- 5.4.7 关机功能
- 5.4.7 Shutdown function
- 关机后，控制器关闭所有功能，再次上电都保持关机状态
After shutdown, the controller will turn off all functions and keep the shutdown state when power on again

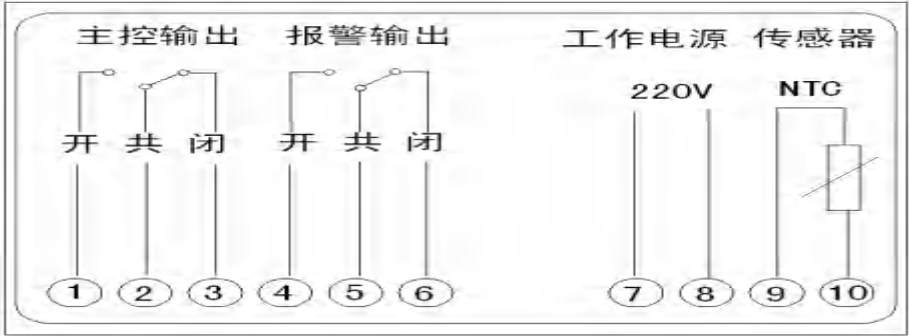
5. 5故障分析与排除:

5.5 Failure analysis and troubleshooting

故障现象 Failures	故障原因 Failure reason	排除方法 Solution
上电温控仪无显示 No display on the electric temperature controller	1、电源异常 1. power abnormality 2、电源开关坏 2. power switch is bad	1、检查电源 1. check the power 2、更换电源开关 2. Change the power switch
温控仪显示正常,但机器不运转 The temperature controller without problems but the conditioner out of operation.	1、电源电压低 1. Low power supply 2、设置有问题 2. The setting is defective 3、温控仪内中间继电器坏 3. Intermediate relay in the temperature controller is bad	1、加装稳压装置 1. Add voltage stabilizing device 2、正确设置 2. Correct setting 3、更换温控仪 3. Replace the temperature controller
噪音大 High noise	1、与电器控制箱固定不牢靠 1. Irregularly fixed with the electrical control box 2、电器控制箱强度不够 2. Electrical control box strength is not enough 3、风机问题 3. Fan problem 4、外罩板螺钉松 4. Screw of outer cover plate is loose	1、固定牢靠 1. Firm fixation 2、增加强度 2. Increase the intensity 3、更换风机 3. Replace the fan 4、紧固螺钉 4. Tighten the screws
制冷压缩机不工作 The compressor is not working when make cooling	1、压机热保 1. Thermal protection of the press 2、压机坏 2. The press is broken	1、通风散热、清理过滤网,检查风机,检查供电电压 1. ventilation and heat dissipation, clean the filter, check the fan, check the power supply voltage 2、更换压机 2. Replace the press
制冷效果不好 Poor refrigeration effect	1、环境温度太高 1. The ambient temperature is too high 2、过滤网堵塞 2. The filter is blocked 3、制冷剂泄漏 3. Refrigerant leakage 4、风机问题 4. Fan problem	1、通风散热 1. Ventilation and heat dissipation 2、清理过滤网及风机 2. Clean the filter screen and fan 3、充注制冷剂 (与厂家联系) 3. Filling refrigerant - contact the manufacturer 4、更换风机 4. Replace the fan
温度显示“E01” Temperature display "E01"	温度传感器故障 Temperature Sensor Failure	检验传感器情况, 进行针对修复 Verify sensor condition for repair
温度显示“E02” Temperature display "E02"	高温报警 High temperature alarm	查明高温超限原因, 进行针对解决 Find out the cause of high temperature overrun and solve it
温度显示“E03” Temperature display "E03"	低温报警 Low temperature alarm	查明低温超限原因, 进行针对解决 Find out the cause of low temperature overrun and solve it

5.6 电器原理图

5.6 Electrical schematic diagram



注：本电路图为参考文件，更改内容恕不另行通知！

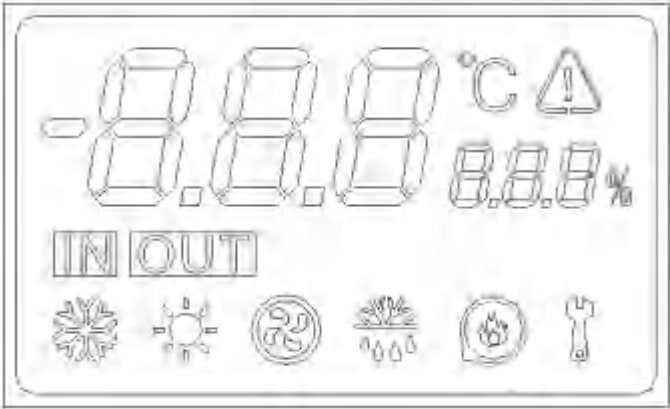
Note: this circuit diagram is for reference only and subject to change without prior notice.

6. 液晶面板温控设置与操作

6. Liquid crystal temperature control setting and operation

6.1 显示屏

6.1 Display screen



液晶控制器操作面板实物图



6. 2 操作说明

6.2 Operating instructions

6. 2. 1开机自检

6.2.1 Power-on Self-test

上电时LCD全显2S后闪动显示温度控制板的版本号（0.01）2秒钟。

The version number (0.01) of the temperature control panel will be displayed 2 seconds after the LCD fully displays 2S. Enter the

进入温度探头检查， LCD显示依次内探头外探头的温度，然后内风机，
temperature probe for inspection, and the LCD will display the temperature of the inner probe and the outer probe in turn, then
排氢风机，制冷，加热的自检。

the internal fan, the hydrogen exhaust fan, the self-test of refrigeration and heating.

序号 No	内容 Content	显示图标 Icon displayed	持续时间 Continue time	备注 Remarks
1	显示版本号 Display the version No.	1. 03	2S	
2	内温度探头 The inner temperature probe	 +温度 +temperature	5S	故障显示错误代码，60S The fault display error code will 后进入下一个项目 enter the next item after 60S
3	外温度探头 The outer temperature probe	 +温度 +temperature	5S	故障显示错误代码，60S The fault display error code will 后进入下一个项目 enter the next item after 60S
4	内风机 The inner fan	 + 1-F	15S	
5	应急风机 The emergency fan	 + 2-F	15S	
6	加热 heating	 + HEA	30S	
7	制冷 Cooling	 + COL	60S	

6. 2. 2 显示说明

6.2.2 The display declaration

序号No.	图标 Icon	功能 Function	功能说明 Function description
1		制冷运行 Making cooling	1: 闪烁表示等待制冷 1: flashing means waiting for refrigeration 2: 长亮表示正在制冷 2: long time shine means cooling
2		制热运行 Making heating	1: 闪烁表示等待制热 1: flashing means waiting for heating 2: 长亮表示正在制热 2: long time shine means heating
3		应急风机 Emergency fan	表示应急风机是否运行 Means whether the emergency fan is running
4		除湿运行 Making dehumidify	表示除湿是否运行 Means whether the dehumidify is running
5		化霜图标 defrosting	表示空调在化霜 Means the air conditioner is make defrosting

6		设置 setting	1: 长亮表示是否进设置页面 1: long light indicates whether to enter the setting page 2: 闪烁表示在模拟温度状态 2: flashing indicates the simulated temperature state
7		报警动作 Alarm	表示空调是否出现告警 Means whether the air conditioner display alarm
8		温度显示 Temperature display	表示温度数值 Means the temperature data
9		湿度显示/设置 humidity display/ 代码/错误代码 set icon/error icon	表示湿度数值或错误代码或设置代码 Indicates humidity data or error code or setting code
10		内部 inner	与其他图标合用表示柜内的某某单元 Use with other ICONS to represent units within the cabinet.
11		外部 outter	与其他图标合用表示柜外的某某单元 Use with other ICONS to represent units outside the cabinet
12	 	制冷除湿 Refrigeration dehumidification	表示空调进入制冷除湿 Indicates that the air conditioner go to make refrigeration dehumidifier
13	 	加热除湿 Heating dehumidify	表示空调进入加热除湿 Means the air conditioner move to heating and dehumidify
14	 	等待制冷除湿 Waiting for cooling and dehumidify	蓝色表示闪烁 Blue means flashing
15	 	等待加热除湿 Waiting for heating and dehumidify	蓝色表示闪烁 Blue means flashing
16	 	制冷除湿延时 Refrigeration dehumidification delayed	蓝色表示闪烁 Blue means flashing
17	 	加热除湿延时 Heating dehumidification delayed	蓝色表示闪烁 Blue means flashing
18	PPP	紧急关机 Emergency shutdown	表示空调进入紧急停止状态 Means the air conditioner went into a state of emergency shutdown.

6. 2. 3开关机

6.2.3 Start up and Shut down

按退出键（4键）开机，长按退出键（4键）5秒以上关机。关机画面如下。

Press the exit key (the 4 key) to start the machine, and press the exit key (the 4 key) for more than 5 seconds to shut down. The shutdown screen is as follows.



6.3 用户参数设定

6.3 User parameter setting

长按“设置键”4秒进入到“用户设置”页面，当屏幕出现F01代码时，Press “setting button” for 4 seconds to enter the “user setting” page. When F01 code appears on the screen, press the up button or the down button to set the code. Press the SET key when displaying the status of the code. Press the SET key when displaying the status of the code. Press the up button or the down button to change the setting value. After setting, press the power button to save and exit to no key operation state for 60 seconds to return to normal operation state.

用户参数设置

User parameter setting

代码 CODE	名称 NAME	数据 DATA	单位 UNITS	精度 PRECISION	出厂 DEFAULT	定义 MEANING
F00	恢复用户参数 Restore user parameters	0~1	—		0	设置为1则恢复所有用户参数设置 Set to 1 to restore all user parameter settings.
F01	压机停止温度 Press stop temperature	15~50	℃	1	20	制冷运行停止的温度点 The temperature at which a refrigeration operation stops.
F02	压机灵敏度 Press sensitivity	1~20	℃	1	5	
F03	加热停止温度 Heating stop temperature	-20~F1	℃	1	10	加热停止温度点 The temperature at which the heating stops.
F04	加热灵敏度 Heating sensitivity	1~20	℃	1	5	
F05	柜内高温告警温度 High temperature alarm temperature in the cabinet	30~70	℃	1	50	柜内温度等于或大于高温设定温度时 When the temperature inside the cabinet is equal to or greater than the high temperature alarm temperature, the alarm will sound.
F06	柜内低温告警温度 Low temperature alarm temperature in the cabinet	-30~-25	℃	1	0	柜内温度等于或小于低温设定温度时 When the temperature inside the cabinet is equal to or less than the low temperature alarm temperature, the alarm will sound.
F07	湿度设定 Set the humidity	10~99	%RH	1	50	除湿使能设置为禁用，此设置无效 Dehumidification enable is disabled. This setting is invalid.
F08	柜内高温高湿报警度 High humidity alarm in the cabinet	60~100	%RH	1	90	设置空调柜内高湿度报警点 Set the high humidity alarm point in the air conditioner cabinet.
F09	柜内低湿报警湿度 Low humidity alarm in the cabinet	10~50	%RH	1	20	设置空调柜内低湿度报警点 Set the low humidity alarm point in the air conditioner cabinet.
F10	紧急风机工作模式 Emergency fan operating mode	0~2			2	0-关闭, 1-长开, 2-定时 0-shutdown, 1-lasting open, 2-timing
F11	应急风机间隔时间 Interval time between emergency fans	1~24	小时		24	
F12	应急风机运行时间 Operation time of emergency fan	1~60	分钟		5	
F13	模拟温度点 Simulated temperature point	10~60	℃	1	0	用于调试，可模拟模拟温度，有设置点 用于显示模拟温度，有设置点 Used for debugging, can simulate simulated temperature, has setting point Used for displaying simulated temperature, has setting point
F14	RS485 通讯地址 RS485 serial address	1~247			1	多台空调柜同时使用 Used when multiple air conditioners are used simultaneously.
F15	485 波特率 485 Baud rate	9600/19200/38400	bps		9600	选择 485 的通信速率 Choose 485 traffic rate
F16	485 奇偶校验 485 odd-even check	0/1			1	0 为无校验 1 为奇校验 2 为偶校验 0 means no check, 1 means odd check, 2 means even check.

注意：为使机组可靠运行，发挥最大能效，请用户不要随意更改空调设置。
Attention: In order to make the unit run stably and maximize energy efficiency, please do not change the air-conditioning settings at will.

6.4 应急通风运行

6.4 Emergency ventilation operation

当控制器损坏时，或室内温度达到告警温度时，将强制启动应急风阀。

When the controller is damaged or the indoor temperature reaches the alarm temperature, the emergency fan will be forced to start when an power failure.

交流掉电、压机故障、高温报警时，柜内温度探头失效应急风扇开启。

the compressed failure and high temperature alarm occur, the emergency fan inside the cabinet will open when the fan probe fails.

6.5 控制板告警及复位

6.5 Alarm and reset of the control panel

代码 CODE	故障 FAULT	报警条件 ALARM CONDITION	延迟时间 DELAY TIME	持续时间 CONFIRM TIME	故障 FAULT	复位操作 RESET OPERATION	有故障相应动作 CORRESPONDING ACTION OF FAULT
E01	柜内温度 探头故障 Indoor temperature probe fault	随时 anytime	0 秒 0 S	5 秒 5 S	一般 general	自动 AUTO	报警 Alarm
E02	柜内高温 告警 Indoor high temperature alarm	随时 anytime	0 秒 0 S	2 秒 2 S	一般 general	自动 AUTO	报警，柜内温度等于或大于高温设定温度时报警，当柜内温度小于高温报警点 -5 度故障自动复位 Alarm, when the temperature in the cabinet is equal to or more than the set high temperature, the alarm will be automatically reset when the temperature is less than the high temperature alarm point -5 degrees. Automatic reset Automatic alarm point -5 degrees.
E03	柜内低温 告警 Indoor low temperature alarm	随时 anytime	0 秒 0 S	3 秒 3 S	一般 general	自动 AUTO	报警，柜内温度等于或小于低温设定温度时报警，当柜内温度大于低温报警点 +5 度故障自动复位 Alarm, when the temperature in the cabinet is equal to or less than the set low temperature, the alarm will be automatically reset when the temperature is more than the low temperature alarm point +5 degrees. Automatic reset Automatic alarm point +5 degrees.
E04	柜外温度 探头故障 Outdoor temperature probe fault	随时 anytime	0 秒 0 S	5 秒 5 S	一般 general	自动 AUTO	报警，控制温度切换到回风温度控制，此时温度设置默认值 -7 度 Alarm, control temperature switch to return air control, at this time the set temperature default value is -7 degrees.
E05	柜外高温 告警 Outdoor high temperature alarm	随时 anytime	0 秒 0 S	2 秒 2 S	一般 general	自动 AUTO	报警，柜内温度等于或大于高温设定温度时报警，当柜内温度小于高温报警点 -5 度故障自动复位 Alarm, when the temperature in the cabinet is equal to or more than the set high temperature, the alarm will be automatically reset when the temperature is less than the high temperature alarm point -5 degrees. Automatic reset Automatic alarm point -5 degrees.
E06	柜外低温 告警 Outdoor low temperature alarm	随时 anytime	0 秒 0 S	2 秒 2 S	一般 general	自动 AUTO	报警，柜内温度等于或小于低温设定温度时报警，当柜内温度大于低温报警点 +5 度故障自动复位 Alarm, when the temperature in the cabinet is equal to or less than the set low temperature, the alarm will be automatically reset when the temperature is more than the low temperature alarm point +5 degrees. Automatic reset Automatic alarm point +5 degrees.
E07	柜内湿度 探头故障 Indoor humidity probe fault	随时 anytime	0 秒 0 S	5 秒 5 S	一般 general	自动 AUTO	报警 Alarm
E8	柜内高湿 告警 Indoor high humidity alarm	随时 anytime	0 秒 0 S	2 秒 2 S	一般 general	自动 AUTO	报警，柜内湿度等于或大于高湿设定温度时报警，当柜内湿度小于高湿报警点 -5 度故障自动复位 Alarm, when the humidity in the cabinet is equal to or more than the set high humidity, the alarm will be automatically reset when the humidity is less than the high humidity alarm point -5 degrees. Automatic reset Automatic alarm point -5 degrees.
E9	柜内低湿 告警 Indoor low humidity alarm	随时 anytime	0 秒 0 S	2 秒 2 S	一般 general	自动 AUTO	报警，柜内湿度等于或大于低湿设定温度时报警，当柜内湿度小于低湿报警点 +5 度故障自动复位 Alarm, when the humidity in the cabinet is equal to or less than the set low humidity, the alarm will be automatically reset when the humidity is more than the low humidity alarm point +5 degrees. Automatic reset Automatic alarm point +5 degrees.

E10	柜外湿度 humidity outside the 探头故障 cabinet failure of probe	随时 anytime	0 秒 0 S	5 秒 5 S	一般 general	自动 AUTO	报警 Alarm
E11	柜外高湿告警 High humidity alarm outside the cabinet	随时 anytime	0 秒 0 S	2 秒 2 S	一般 general	自动 AUTO	报警。柜外湿度等于或大于高湿 Alarm: when the humidity outside the cabinet is 设定湿度时报警。当柜外湿度小 equal to or greater than the high humidity set- 于高湿报警点-5%故障自动复位。 the alarm will be automatically reset when the humidity outside the cabinet is less than -5% of the high humidity alarm point.
E12	柜外低湿告警 Low humidity alarm outside the cabinet	随时 anytime	0 秒 0 S	2 秒 2 S	一般 general	自动 AUTO	报警。柜外湿度等于或大于高湿 Alarm: when the humidity outside the cabinet is 设定湿度时报警。当柜外湿度小 equal to or greater than the humidity set by high 于高湿报警点+5%故障自动复位。 humidity, the alarm will be automatically reset when the humidity outside the cabinet is less than the alarm point of high humidity +5%.
E13	压缩机高压 Compressor high pressure	随时 anytime	0 秒 0 S	2 秒 2 S	严重 Serious	自动 AUTO	Stop the compressor, the high pressure alarm also reset 3 times after locking, the fourth time to 停压缩机: 高压自动复位 3 次/ power reset, power needed after 15 minutes times, 小时后锁定, 第四次需要断电复 The first three times the generator fails, and the fourth 位, 断电复位后重新计算次数。 The last time is needed to stop the compressor. The last 前三次为一般故障, 第四次为 alarm is a general fault, the fourth time is a 重故障 heavy fault. This fourth time is power off and reset, and the number of resets after power off is not required.
E14	压缩机低压 Compressor low pressure	压缩机升启 Compressor open	120 秒 120 S	10 秒 10 S	一般 general	自动 AUTO	停压缩机。低压自动复位 3 次/ 小时后锁定, 第四次需要断电复 位, 断电复位后重新计算次数
E15	制冷告警 Cooling alarm	开启电加热 After electric heating 后, 如果持续 change within the cabinet 30 分钟柜内 for 30 minutes after 温度变化未超 starting electric heating 过 2℃以上则 More than 2℃ is 认为是电加热 considered to be 故障。 electric heating failure	30 分钟 30 min	2 秒 2 S	一般 general	手动 Manual	报警, 不动作 Alarm, inaction
E16	制热告警 Heating alarm	开启压缩机 After the compressor is 后, 如果持续 started, the temperature 30 分钟柜内 in the cabinet does not 温度变化未超 change if it lasts for 30 过 2℃则认为 minutes more than 2℃ 是制冷故障 is considered a refrigeration failure	30 分钟 30 min	2 秒 2 S	一般 general	手动 Manual	报警, 不动作 Alarm, inaction

E17	通信故障 communication failure	随时 anytime	0 秒 0 S	20 秒 20 S	一般 general	手动 Manual	无 N
E18	内盘管温度 Failure of internal 探头故障 coil temperature probe	随时 anytime	0 秒 0 S	5 秒 5 S	一般 general	自动 AUTO	报警 Alarm
E19	内盘管低温警告 Low temperature alarm of inner coil	低于 0 度报警, Lower than 0 degree alarm, 大于 0 度清报警 greater than 0 degree clear alarm	0 秒 0 S	5 秒 5 S	一般 general	自动 AUTO	报警 Alarm

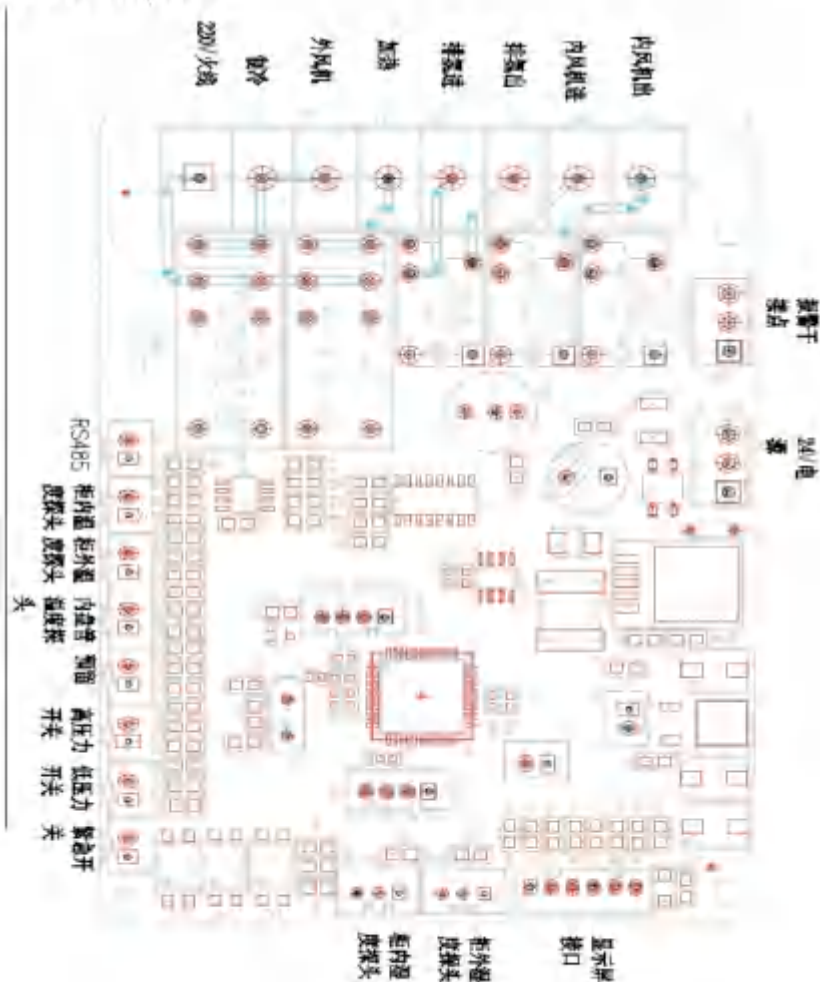
如果发生多个故障时，可按“UP”或“DOWN”键进行切换查看。

In case of multiple failures, press the "UP" or "DOWN" key to switch the view.

当要手动清除故障时，按下ESC键就清除故障。

To clear the fault manually, press the ESC key to clear the fault.

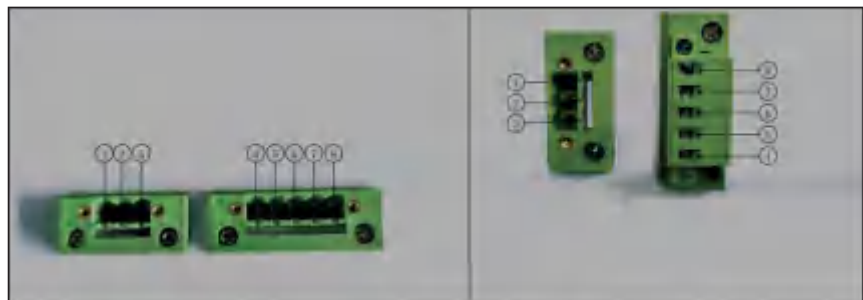
6. 6电路接线图



6.7 电气接线示意图



端口	备注
1	电源接线座
2	电源零线N输入 (220V AC, 50Hz)
3	电源火线L输入 (220V AC, 50Hz)
4	报警常开NO
5	报警公共端C
6	报警常闭NC
7	RS485+
8	RS485-
9	备用
10	备用
11	备用
12	备用
13	备用
14	备用



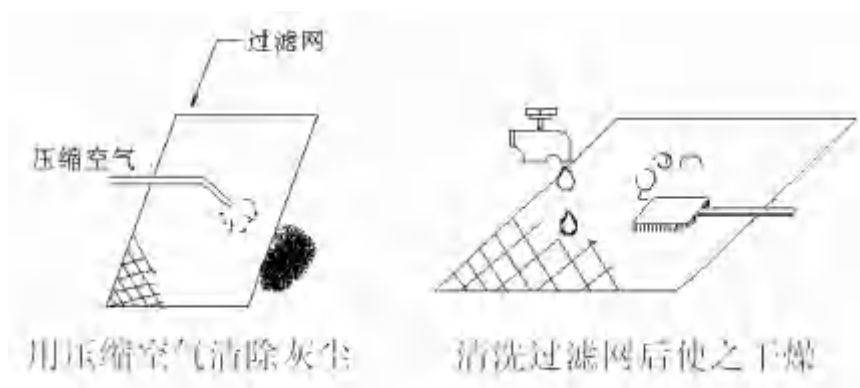
端口	备注
1	电源接线座
2	电源零线N输入 (220V AC, 50Hz)
3	电源火线L输入 (220V AC, 50Hz)
4	报警常开NO
5	报警公共端C
6	报警常闭NC
7	RS485+
8	RS485-

7、维护与保养

7、Maintenance and repair

- [⚠危险] 务必在通风良好的环境下操作；
[⚠ Dangerous] Be sure to operate in a well-ventilated environment.
- [⚠危险] 空调器所接电源必须正确。
[⚠ Dangerous] The power supply to the air conditioner must be correct.
- [⚠危险] 作业时务必切断电源，并在断电五分钟后操作；
[⚠ Dangerous] Be sure to cut off the power supply during the operation, and operate five minutes after the power is cut off;
- [⚠注意] 每周清扫冷凝器过滤网，检查冷凝器是否被污物堵塞，
[⚠ Note] Clean the condenser filter every week, check whether the condenser is blocked by

如果堵塞请将冷凝器过滤网取下，脏面朝下轻轻摔打。
dirt, if blocked please remove the condenser filter, dirty face down gently beat. Or blow in
或是用压缩空气反方向吹（用水和毛刷清理），如图：
the opposite direction with compressed air (clean with water and brush), as shown in the figure:



- [⚠注意] 使用中性洗涤剂擦拭产品表面；
[⚠ Note] Use a neutral detergent to clean the surface of the product.
- [⚠注意] 报警停机后，禁止在不排除故障的情况下重新启动。
[⚠ Note] After the alarm stops, it is forbidden to restart without troubleshooting.
- [⚠注意] 运行时，严禁将导电物体插入或导电粉尘撒入设备内，
[⚠ Note] During operation, it is strictly prohibited to insert conductive objects or scatter conductive dust into the equipment,
否则有触电及短路的危险！
otherwise there is a risk of electric shock and short circuit!
- [⚠注意] 注意外接排水管不得弯、折，以免排水不畅，导致水
[⚠ Note] Pay attention to the external drain pipe shall not be bent or folded, so as to avoid poor drainage and
流入电器控制箱内，将造成严重后果。
water flowing into the electrical control box, which will cause serious consequences.