

THYRISTOR POWER REGULATOR

电力调整器

Instruction Manual

使用说明书

(For:6K3C/6K0E/D4/G2/G5/G7/G8/G9/L6Series)

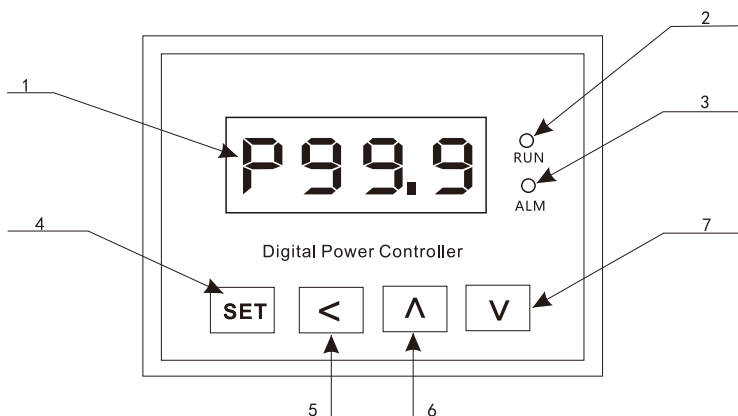
目 录

contents

Panel introduction	
面板简介-----	1
Display status	
运行操作状态说明-----	1
Parameter modification	
参数修改说明-----	3
Alarm Code and Indicator Status	
报警代码和指示灯状态-----	5
Three phase parameter code table	
三相系统参数代码表-----	6
Single phase parameter code table	
单相系统参数代码表-----	9
PI parameter table	
PI参数表-----	12
Communication protocol	
通讯协议-----	12
Three phase communication address table	
三相通讯地址表-----	13
Single phase communication address table	
单相通讯地址表-----	15

Panel introduction

面板简介

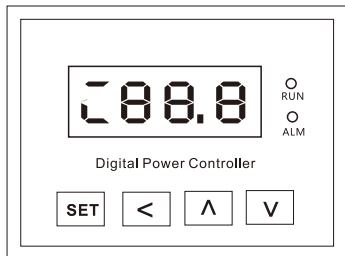


- (1) Parameter display window: Display system present voltage, current, Input signal percentage, power and operation, alarm, parameter setting.
参数显示窗：显示系统当前电压, 电流, 输入信号百分比, 功率等运行、报警、设定参数。
- (2) Operation indicator: System normal operation, the green light is always on.
运行指示灯：系统正常运行时，绿灯常亮。
- (3) Alarm indicator: System operation failure, the red light is always on.
报警指示灯：系统产生故障时，红灯常亮。
- (4)  key: During operation press this button to switch variety of display state.
This key is used to switch parameters.
 键：运行时按该键可切换各种显示状态。设定参数时切换参数用。
- (5)  key: Shift and set parameters.
 键：移位及设定参数用。
- (6)  key: Modification parameters add key.
 键：修改参数增加键。
- (7)  key: Modification parameters reduce key.
 键：修改参数减少键。

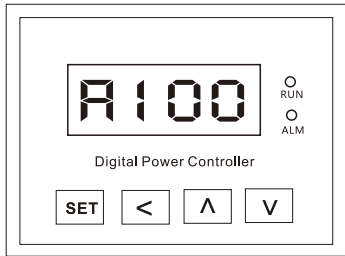
Operation state specifications

运行操作状态说明

- (1) Display the current Input signal percentage during power supply the system
系统上电时显示当前输入信号百分比
- (2) Press the  button to automatically switch to the current display status
按  键系统自动切换到电流显示状态



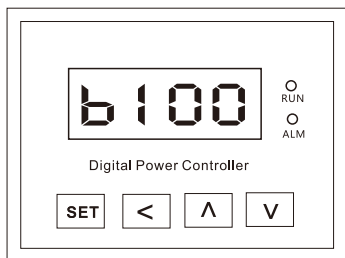
The figure represents the system Input signal percentage of the sample was 88.8%
上图示例表示系统输入信号百分比为88.8%



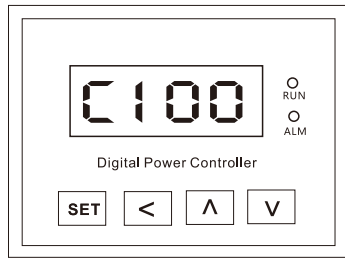
Above example indicates that the present A-phase current is 100A
上图示例中表示当前A相电流为100安

- (3) Continue to press the **SET** key switch to the B-phase current system display status
继续按 **SET** 键系统切换到B相电流显示

- (4) Continue to press the **SET** key switch to the C-phase current system display status
继续按 **SET** 键系统切换到C相电流显示



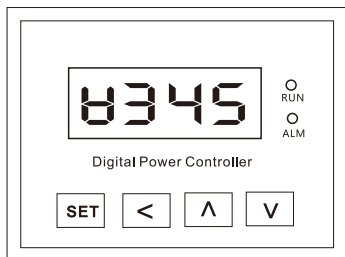
Above example indicates that the present B-phase current is 100A
上图示例中表示当前B相电流为100安



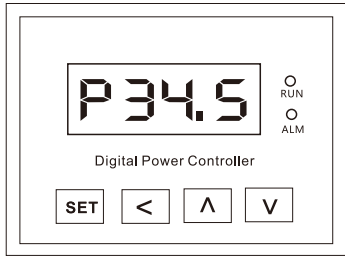
Above example indicates that the present C-phase current is 100A
上图示例中表示当前C相电流为100安

- (5) Continue to press the **SET** key, the system displays the present parameters of the load voltage
继续按 **SET** 键, 系统显示当前负载电压参数

- (6) Continue to press the **SET** key, the system displays the present parameters of the actual power
继续按 **SET** 键, 系统显示当前实际功率参数



Above example indicates that the present load voltage is 345 volts
上图示例中表示当前负载电压为345伏



Above example indicates that the actual power consumption of the present load is 34.5KVA
上图示例中显示当前负载实际消耗功率为34.5KVA

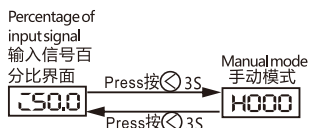
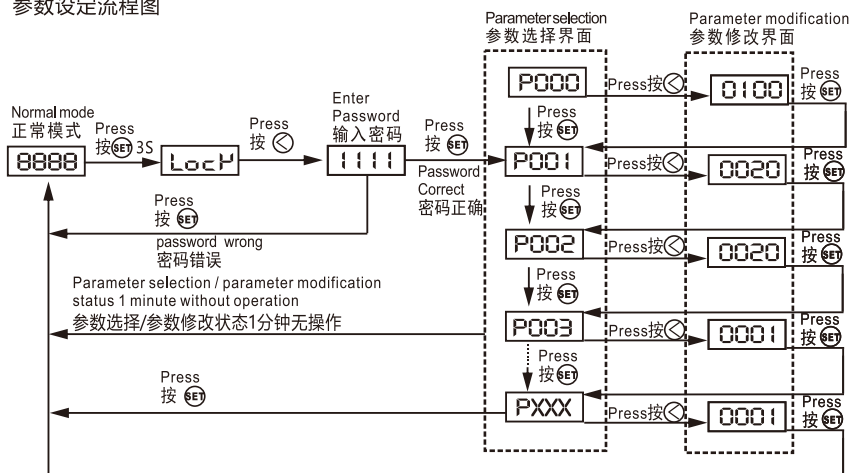
Parameter modification status 参数状态修改说明

Warning警告：

Parameter status changes may lead to unnecessary failure and loss. Non-engineering and technical personnel please do not change technical parameters. For revising the parameters beyond order specifications causes unnecessary losses, not warranty scope, we does not undertake any responsibility and obligation.

参数状态修改可能会引起不必要的故障和损失，非工程技术人员请不要擅自改动系统参数。对于修改超出订货规格的参数造成的不必要损失，不在保修范围之内，我们不承担任何责任和义务。客户如需修改参数，请致电咨询。

Parameter Setting Flow
参数设定流程图



密码说明：

P000~P016密码1111

P000~P066密码2222

P000~P094密码7777

Password description:

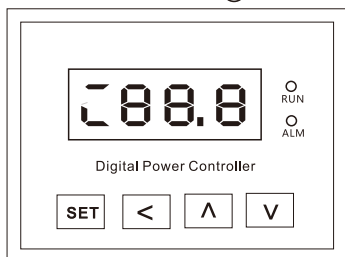
P000 - P016 password 1111

P000 - P066 password 2222

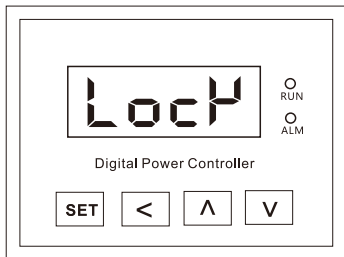
P000 - P094 password 7777

Manual mode, enter password interface, parameter modification interface, press the $\odot$ $\triangle$ $\ominus$ key to enter the value.
手动模式、输入密码界面、参数修改界面，可按 $\odot$ $\triangle$ $\ominus$ 键输入数值。

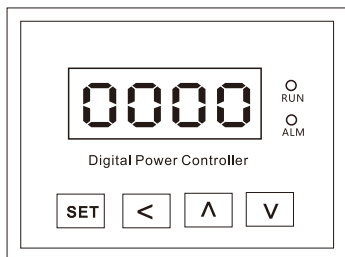
- (1) In the running state press **SET** key for 3 seconds continuously
在运行状态下连续按 **SET** 键3秒



- (2) The system displays the following interface
系统显示如下界面

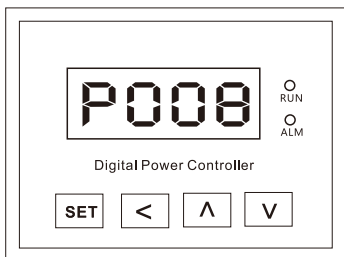


- (3) Press **SET** key, the system displays the following password entry screen
按 **SET** 键系统显示如下密码输入界面



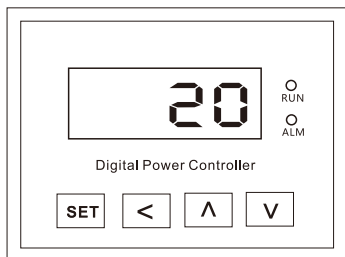
Enter password interface press the **SET** key to enter the value.
输入密码界面, 可按 **SET** 键输入数值。

- (4) Enter the password: 1111 and press the **SET** key to enter parameters modification menu
输入密码: 1111 然后按 **SET** 键进入系统参数修改菜单



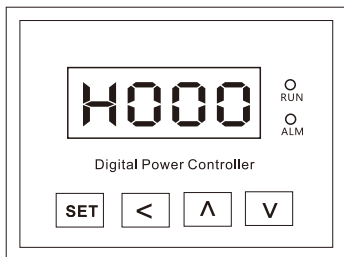
Press **SET** key continuously, it will automatically switch to the next parameter
连续按 **SET** 键, 参数会自动切换到下一个参数

- (5) Find the parameters to modify, press the **SET** key to enter the modification of status
找到所需修改参数后, 按 **SET** 键系统会进入参数值修改状态



Modify the parameters, then press the **SET** key to confirm the save
修改到所需参数值, 然后按 **SET** 键确认保存

- (6) In the Input signal percentage state press **SET** key for 3s enter manual mode.
在输入信号百分比界面按 **SET** 键3秒进入手动模式。



Manual mode interface press the **SET** key to regulate the output
手动模式界面, 可按 **SET** 键调节输出

Alarm Code and Indicator Status
报警代码和指示灯状态

(1) 3PH Alarm code table
3PH 报警代码表

No. 编号	Code 代码	Code Description 代码说明	Solutions 解决方案
1	AL A1	Over-voltage alarm 过压报警	Check if the voltage exceeds the rated voltage 检查电网电压是否超过额定电压
2	AL A2	A phase over-current alarm A相过流报警	Check the load 检查负载
3	AL A3	B phase over-current alarm B相过流报警	Check the load 检查负载
4	AL A4	C phase over-current alarm C相过流报警	Check the load 检查负载
5	AL A5	Power controller overheating 功率控制器过热	Check the fan works or not, whether the temperature sensor is damaged 检查系统风机是否工作, 温度传感器是否损坏
6	AL A6	Power supply phase lack alarm 电源缺相报警	Check whether the three-phase input phase lack, fast fuse is damaged 检查三相输入是否缺相, 快熔是否损坏
7	AL A7	Unbalance alarm 三相不平衡报警	Check the load and power supply 检查负载及供电情况
8	AL A8	Frequency alarm 频率报警	Check the main loop power supply 检查主回路供电情况

1PH Alarm code table
1PH 报警代码表

No. 编号	Code 代码	Code Description 代码说明	Solutions 解决方案
1	AL A1	Over-voltage alarm 过压报警	Check if the voltage exceeds the rated voltage 检查电网电压是否超过额定电压
2	AL A2	Over-current alarm 过流报警	Check the load 检查负载
3	AL A3	Power controller overheating 功率控制器过热	Check the fan works or not, whether the temperature sensor is damaged 检查系统风机是否工作, 温度传感器是否损坏
4	AL A4	Heater disconnection alarm 加热器断线报警	Check the fast fuse and load circuit breakage or damage 检查快熔和负载回路是否断线和损坏

Alarm fault query: when power is off, can keep the last 3 alarm records, press ⑤ button for 3 seconds, will display the history 3 alarm records recently. Press the ⑥ key to switch the next.

报警故障锁存查阅：当断电时，可以保存最近3条报警记录，按 ⑤ 键3秒，会显示历史最近的3条报警记录。按 ⑥ 键切换下一条。

01MX:Recently the first alarm fault code,ALM1-7.

01MX: 最近第一次的报警故障代码，ALM1-7,如 01 5 6。

02MX:Recently the second alarm fault code,ALM1-7.

02MX: 最近第二次的报警故障代码，ALM1-7,如 02 5 6。

03MX:Recently the third alarm fault code,ALM1-7.

03MX: 最近第三次的报警故障代码，ALM1-7,如 03 5 6。

Alam automatic sorting, the number is smaller, the fault code is newer.

报警自动排序处理，序号越小，就是最新的故障代码。

LED Status Description

指示灯状态说明

1	RUN Green light 绿灯	Power Supply 上电	Power flashes 3 times 上电闪烁3次
		Run 运行	Green light always on 绿灯常亮
		Stop 停止	Green light flashes 绿灯闪烁
		Failure 故障	Green light off 绿灯熄灭
2	ALM Red light 红灯	Alarm 报警	Always on 常亮
		Run 运行	Off 熄灭

3PH System parameter code table

3PH 系统参数代码表

No. 编号	Parameter 参数	Name 名称	Parameter range 参数范围	Description 说明	Default value 默认值
1	P000	Output slope 输出斜率	0-100.0%	Output slope adjustment 输出斜率调整	100.0
2	P001	Soft start-up time 软启动时间	0-360 (s)	To avoid electric current on impact , set the time for power up from start-up to a given value 避免启动电流冲击，设定该时间为从启动到给定值的功率上升时间	20
3	P002	Soft stop time 软停止时间	0-60 (s)	System stops, the time needed from a given value reduced to zero 系统停止时，从给定值到功率减小到零需要的时间	20

No. 编号	Parameter 参数	Name 名称	Parameter range 参数范围	Description 说明	Default value 默认值
4	P003	Phase lack alarm 缺相报警使能	0, 1	0-Disable phase lack alarm 1-Enable phase lack alarm 0-禁止缺相报警, 1-使能缺相报警	1
5	P004	Over-current alarm 过流报警使能	0, 1	0-Disable over-current alarm 1-Enable over-current alarm 0-禁止过流报警, 1-使能过流报警	1
6	P005	Over-current alarm value 过流报警值	0-1.2*I	Rated current of 1.2 times, the system automatically alarm 额定电流的1.2倍时, 系统自动报警	1.2*I
7	P006	Limit current 电流限制保护	0-1.1*I	Rated current of 1.1 times, The system will automatically reduce current. 当系统电流达到额定电流的1.1倍 时系统自动减小电流.	1.1*I
8	P007	Over-voltage alarm 过压报警使能	0, 1	0-Disable over-voltage alarm, 1-Enable over-voltage alarm 0-禁止过压报警, 1-使能过压报警	1
9	P008	Over-voltage alarm value 过电压报警值	0-1.2*U	Rated load voltage*1.2,the system automatically alarm 系统工作电压超过1.2倍时, 系统自 动报警保护	1.2*U
10	P009	Limit voltage 电压限制保护	0-1.1*U	Rated load voltage*1.1,The system will automatically reduce voltage 当系统电压达到额定电压的1.1倍 时, 系统自动减小电压。	1.1*U
11	P010	Unbalanced three-phase alarm 三相不平衡报警 使能	0, 1	0-Disable unbalanced three-phase alarm 1-Enable unbalanced three-phase alarm 0-禁止三相不平衡报警 1-使能三相不平衡报警	0
12	P011	Unbalanced three- phase alarm value 三相不平衡报警 电流值	0-1.1*I	Unbalanced three-phase current alarm value set 三相不平衡电流报警值设定	1.1*I
13	P012	Remote control for a given 通讯给定使能	0, 1	0-Local given, 1-Computer communication digital given 0-模拟给定, 1-通讯数字给定	0
14	P013	Address 通讯地址	1-247	Communication address 通讯地址	1
15	P014	Baud Rate 通讯速率	0, 1, 2	0-4800, 1-9600, 2-19200	1
16	P015	Verification mode 通讯校验方式	0, 1, 2	0-No verification, 1-Odd verification, 2-Even verification. 0-无校验, 1-奇校验, 2-偶校验	2
17	P016	Communication delay 通讯延迟时间	0-60	Communication delay time, unit: mS 通讯延时时间, 单位: mS	0
18	P020	Communication control 通讯启停控制	0, 1	0-Disable, 1-Enable 0-禁止, 1-允许	0
19	P030	Load wiring 负载接线方式	0, 1 (6K3C)	0-Three phase without neutral, 1-Three phase with neutral, 2-Triangle, 3-Triangle2 0-三相中性点不接零, 1-三相 中性点接零, 2-内三角1, 3-内三角2	0
			0, 1, 2, 3		

注：P030参数必须和实际接线方式相同，否则可能烧坏设备等，并不予保修。

No. 编号	Parameter 参数	Name 名称	Parameter range 参数范围	Description 说明	Default value 默认值
20	P031	Voltage and power regulation selection 调压调功选择	0, 1, 2, 3	0-Phase shift voltage regulation, 1-Variable period zero-crossing power regulating, 2-Power regulation and voltage regulation transformation(U1 function), 3-Fixed period power regulation 0-移相调压, 1-变周期过零调功, 2-端子调压调功转换(U1功能), 3-定周期调功(L6时: 0-变周期, 1:PWM定周期调功器, 2:PWM跟随输入)	0
21	P032	Operating conversion 操作转换	0, 1, 2	0-The input signal controlled by terminal C1-C2, 1-Panel operation and terminal signal control conversion, 2-Panel operation 0-输入信号由端子C1-C2控制, 1-面板加减操作或外接端子给定, 2-面板加减键操作。	0
22	P033	Closed-loop selection 闭环功能选择	0, 1, 2, 3, 4	0-Open-loop control, 1-Closed-loop constant current, 2-Closed-loop constant voltage, 3-Closed-loop constant power, 4-Linearized output 0-开环控制, 1-闭环恒流, 2-闭环恒压, 3-闭环恒功率, 4-线性化输出	0
23	P034	Operating frequency 工作频率	0, 1	0-50HZ, 1-60HZ	0
24	P035	Fixed cycle time setting 定周期时间设定	0-60 (s)	Fixed cycle time setting 定周期时间设定	4
25	P036	Online distribution 联机分配使能	0, 1	0-Disable, 1-Enable online 0-禁止, 1-使能(G8)	0
26	P037	Online distribution address 联机分配地址	0-9	0-The host, 1-9-From the machine 0-主机, 1~9-为从机(G8)	1
27	P038	The number of the online distribution from the machine 联机分配从机数	1-9	Set the host only 只在主机设定即可(G8)	1
28	P039	Display change 显示参数切换	0, 1	0-Disable, 1-Enable online 0-OLED, 1-LED 注: 现场不能改动此参数)	1
29	P040	Display/Hide 显示/隐藏参数	0-53	The zeroth is A-phase current, the first is B-phase current, the second is C-phase current, the third is voltage, the fourth is power. Composed by the binary code 8421, set to 1 to display, set 0 to hide parameter 第0位A相电流, 第1位B相电流, 第2位C相电流, 第3位电压, 第4位功率。由二进制8421码构成, 置1显示, 置0隐藏	31
30	P050	Output lower limit 输出下限限制	0-50%	Output lower limit setting 输出下限设定	0
31	P051	Output upper limit 输出上限限制	0-100%	Output upper limit setting 输出上限设定	100

No. 编号	Parameter 参数	Name 名称	Parameter range 参数范围	Description 说明	Default value 默认值
32	P060	Rated current value 额定电流值	0-5000 (A)	At the scene can not set current over the rated current value of the order to avoid serious consequences 额定电流值，出厂已经设定好，现场勿改动	I
33	P061	Rated voltage value 额定电压值	0-999 (V)	Rated voltage value 额定电压值	U
34	P062	Communication settings 通讯功能使能	0, 1	0-Disable, 1-Enable communication 0-通讯禁止，1-通讯允许	1
35	P063	A-phase current zero point A相电流零点	0-99	A-phase current zero calibration A相电流零点校准	0
36	P064	B-phase current zero point B相电流零点	0-99	B-phase current zero calibration B相电流零点校准	0
37	P065	C-phase current zero point C相电流零点	0-99	C-phase current zero calibration C相电流零点校准	0
38	P066	Voltage zero 电压零点	0-99	Load voltage zero calibration 负载电压零点校准	0

1PH System parameter code table

1PH 系统参数代码表（密码1111）

No. 编号	Parameter 参数	Name 名称	Parameter range 参数范围	Description 说明	Default value 默认值
1	P000	Output slope 输出斜率	0-100%	Output slope adjustment 输出斜率调整	100
2	P001	Soft start-up time 软启动时间	0-360	To avoid electric current on impact, set the time for power up from start-up to a given value 避免上电电流冲击，设定该时间为从启动到给定值的功率上升时间	20
3	P002	Soft stop time 软停止时间	0-60	System stops, the time needed from a given value reduced to zero 系统停止时，从给定值到功率减小到零需要的时间	20
4	P003	System reserved 系统保留			
5	P004	Over-current alarm 过流报警使能	0-1	0-Disable over-current alarm, 1-Enable over-current alarm 0-禁止过流报警，1-使能过流报警	1
6	P005	Over-current alarm value 过流报警值	0-1.2*I	Rated current of 1.2 times, the system automatically alarm 额定电流的1.2倍时，系统自动报警	1.2*I

No. 编号	Parameter 参数	Name 名称	Parameter range 参数范围	Description 说明	Default value 默认值
7	P006	Limit current 电流限制保护	0-1.1*I	Rated current of 1.1 times, The system will automatically reduce current, current limit protect the load who has a particularly large difference from cold to hot. 当系统电流达到额定电流的1.1倍时系统自动减小电流, 对冷热态电阻差别特别大的负载进行限流保护	1.1*I
8	P007	Over-voltage alarm 过压报警使能	0-1	0-Disable over-voltage alarm, 1-Enable over-voltage alarm 0-禁止过压报警, 1-使能过压报警	1
9	P008	Over-voltage alarm value 过电压报警值	0-1.2*U	Rated load voltage*1.2, the system automatically alarm 系统工作电压超过1.2倍时, 系统自动报警保护	1.2*U
10	P009	Limit voltage 电压限制保护	0-1.1*U	Rated load voltage*1.1, The system will automatically reduce voltage 当系统电压达到额定电压的1.1倍时, 系统自动减小电压。	1.1*U
11	P010	Remote control for a given 通讯给定使能	0, 1	0-Local given, 1-Computer communication digital given 0-模拟给定, 1-通讯数字给定	0
12	P011	Address 通讯地址	0-247	Communication address 通讯地址	1
13	P012	Baud Rate 通讯速率	0, 1, 2	0-4800, 1-9600, 2-19200	1
14	P013	Verification mode 通讯校验方式	0, 1, 2	0-No verification, 1-Odd verification, 2-Even verification. 0-无校验, 1-奇校验, 2-偶校验	2
15	P014	Communication delay 通讯延迟时间	0-60	Communication delay time, unit: mS 通讯应答延时时间, 单位: mS	0
16	P030	Trigger way 触发方式	0, 1	0-Wide pulse, 1-Modulating pulse 0-宽脉冲, 1-调制脉冲	1
17	P031	Voltage and power regulation selection 调压调功选择	0, 1	0-Phase shift voltage regulation, 1-Variable period zero-crossing power regulating 0-移相调压, 1-变周期过零调功	0
18	P032	Operating conversion 操作转换	0, 1, 2	0-The input signal controlled by terminal C1-C2, 1-Panel operation and terminal signal control conversion, 2-Panel operation 0-输入信号由端子C1-C2控制, 1-面板加減操作或外接端子给定, 2-面板加減键操作。	0
19	P033	Closed-loop selection 功能选择	0, 1, 2, 3, 4	0-Open-loop control, 1-Closed-loop constant current, 2-Closed-loop constant voltage, 3-Closed-loop constant power, 4-Linearized output 0-开环控制, 1-闭环恒流, 2-闭环恒压, 3-闭环恒功率, 4-线性化输出	0

No. 编号	Parameter 参数	Name 名称	Parameter range 参数范围	Description 说明	Default value 默认值
20	P034	Operating frequency 工作频率	0, 1	0-50HZ, 1-60HZ	0
21	P039	U1 function switch U1端子功能 切换	0, 1	0- communication and simulation switch, not short for simulation, short for communication 1- voltage regulation and power regulation switch, not short for pressure regulation, short for power regulation 0-实现通讯与模拟切换, 不短接模拟, 短接通讯 1-实现调压调功切换 不短接调压, 短接调功	0
22	P040	Display/Hide 显示/隐藏参数	0-63	The zeroth is A-phase current, the first is B-phase current, the second is C-phase current, the third is voltage, the forth is power. Composed by By the binary code 8421, set to 1 to display, set 0 to hide parameter 第0位A相电流, 第1位B相电流, 第2位C相电流, 第3位电压, 第4位功率。由二进制8421码构成, 置1显示, 置0隐藏	31
23	P041	Disconnection alarm 断线报警使能	0, 1	0-Disable, 1-Enable 0-禁止, 1-允许	0
24	P042	Disconnection alarm comparison value 断线报警比较值	0-100%	When P041=1, start-stop bits for operation, when the control signal and the P000 parameters's product is greater than the parameter, detecting load current, if less than P043 occurs ALM4. 当P041=1, 启停位为运行时, 控制信号与P000参数的乘积大于此参数时, 检测负载电流是否小于P043参数时, 小于P043时就发生报警ALM4	100
25	P043	Disconnection alarm low current limit comparison value 断线报警电流下限比较值	0-I	When P041=1, when the load current is less than the value, it's the heater disconnection alarm value 当P041=1时, 负载电流小于该值时为系统加热器断线报警值	0
26	P060	Rated current value 额定电流值	0-800	Rated current, the factory has been set, the scene do not change 额定电流值, 出厂已经设定好, 现场勿改动	I
27	P061	Rated voltage value 额定电压值	0-500	Rated voltage value 额定电压值	U
28	P062	Communication settings 通讯功能使能	0, 1	0-Disable, 1-Enable communication 0-通讯禁止, 1-通讯允许	1
29	P063	Current zero point 电流零点	0-50	Current zero calibration 电流零点校准	0
30	P064	Voltage zero point 电压零点	0-50	Load voltage zero point calibration 负载电压零点校准	0

PI parameter table
PI菜单 (密码7777)

No. 编号	Parameter 参数	Name 名称	Parameter range 参数范围	Description 说明	Default value 默认值
1	P070	Digital filtering 数字滤波	0-20	Unit: second 单位：秒	5
2	P080	Proportional band 比例带	0-9999	P	20
3	P081	Integration time 积分时间	0-1000	I	2

Communication protocol rules
通讯协议规则

The system uses the international standard MODBUS RTU communication protocol format. It can be connected with a variety of configuration software, or connected with OPC, without secondary development of communication code. The company can provide OPC SEVER, user original code programming can be directly called by the ACTIVER control provided by us. User configuration software can be directly linked by OPC SEVER.

本系统采用国际标准MODBUS RTU通讯协议格式，可与各种组态软件相连，或采用OPC SEVER方式连接，无需二次开发通讯代码。本公司可提供OPC SERVER, 用户原代码编程可以直接通过本公司提供的ACTIVER控件调用。用户采用组态软件可以直接用OPC SERVER链接。

Product communication conforms to MODBUS RTU line agreement, RS485 interface, communication format for 11 bits:
本产品通讯符合标准Modbus RTU总线协议，RS485接口，通讯格式为11位：

The first is start bit
1位起始位
8 bits of data bits
8位数据位
1 parity bit, no parity no it
1位奇偶校验位，无校验则无
1 stop bit (with parity), 2 stop bits (without parity)
1位停止位（有奇偶校验时），2位停止位（无奇偶校验时）

Start Bit 起始位	1	2	3	4	5	6	7	8	Parity Bit 奇偶位	Stop Bit 停止位
------------------	---	---	---	---	---	---	---	---	-------------------	-----------------

With parity
有奇偶校验

Start Bit 起始位	1	2	3	4	5	6	7	8	Stop Bit 停止位	Stop Bit 停止位
------------------	---	---	---	---	---	---	---	---	-----------------	-----------------

Without parity
无奇偶校验

3PH Communication parameter address table

3PH 通讯协议地址参数表：

No. 编号	MODBUS Address 地址	Corresponding system parameters 对应系 统参数	Address Parameter Description 地址参数说明	MODBUS RTU Function Code 功能码	Function Code Description 功能码 说明
1	0X0001		Allows Comm. control start and stop 通讯控制启停允许位	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
2	0X0002	P003	Phase lack alarm 缺相报警允许位	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
3	0X0003	P004	Over current alarm 过流报警允许位	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
4	0X0004	P007	Over voltage alarm 过压报警允许位	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
5	0X0005	P012	Communication permission 数字和模拟给定切换	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
6	0X0006	P010	Unbalanced alarm 三相不平衡报警允许位	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
7	0X0007		Comm. control to start and stop 数字启停控制	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
8	0X0008	P036	Online distribution 联机分配允许位	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
9	1X0001		Stop state 运行停止状态	02-Read bit 02-读位	Read-only 只读
10	1X0002	ALARM5	Internal overheating alarm 系统内部过热报警	02-Read bit 02-读位	Read-only 只读
11	1X0003	ALARM1	Over voltage alarm 过压报警状态位	02-Read bit 02-读位	Read-only 只读
12	1X0004	ALARM2	A-phase over-current alarm A相过流报警状态位	02-Read bit 02-读位	Read-only 只读
13	1X0005	ALARM3	B-phase over-current alarm B相过流报警状态位	02-Read bit 02-读位	Read-only 只读
14	1X0006	ALARM4	C-phase over-current alarm C相过流报警状态位	02-Read bit 02-读位	Read-only 只读
15	1X0007	ALARM6	Phase lack alarm 缺相报警状态位	02-Read bit 02-读位	Read-only 只读
16	1X0008	ALARM7	Load unbalanced alarm 负载不平衡报警状态	02-Read bit 02-读位	Read-only 只读
17	1X0009	S1	Slow start and slow stop 缓起缓停端子状态	02-Read bit 02-读位	Read-only 只读
18	1X0010	U1	Adjust the power and voltage 调功调压端子状态	02-Read bit 02-读位	Read-only 只读

No. 编号	MODBUS Address 地址	Corresponding system parameters 对应系统参数	Address Parameter Description 地址参数说明	MODBUS RTU Function Code 功能码	Function Code Description 功能码说明
19	3X0001	C	Input signal 输入信号	04-Read Byte 04-读字节	Read-only 只读
20	3X0002	U	The present load voltage 负载电压	04-Read Byte 04-读字节	Read-only 只读
21	3X0003	a	A-phase current A相电流	04-Read Byte 04-读字节	Read-only 只读
22	3X0004	b	B-phase current B相电流	04-Read Byte 04-读字节	Read-only 只读
23	3X0005	c	C-phase current C相电流	04-Read Byte 04-读字节	Read-only 只读
24	3X0006	P	Load power 负载功率	04-Read Byte 04-读字节	Read-only 只读
25	3X0007		The code of Last alarm 最近一次报警代码	04-Read Byte 04-读字节	Read-only 只读
26	3X0008		Power frequency 电源频率	04-Read Byte 04-读字节	Read-only 只读
27	4X0001	C	Microcomputer given signal 微机给定信号 注	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
28	4X0002	P000	Slope adjustment parameters 斜率调整参数	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
29	4X0003	P001	Soft start-up time 软启动时间	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
30	4X0004	P002	Soft stop time 软停止时间	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
31	4X0005	P005	Over-current value 过流值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
32	4X0006	P006	Current limit 限流值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
33	4X0007	P008	Over voltage value 过压值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
34	4X0008	P009	Voltage limit 限压值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
35	4X0009	P011	Unbalanced load current alarm 负载电流不平衡报警值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写

No. 编号	MODBUS Address 地址	Corresponding system parameters 对应系 统参数	Address Parameter Description 地址参数说明	MODBUS RTU Function Code 功能码	Function Code Description 功能码 说明
36	4X0010	P067	Fixed cycle time setting 定周期时间设定	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写 多字节	Read and write 读写
37	4X0011	P030	Load connection way 负载接线方式	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写 多字节	Read and write 读写

1PH Communication parameter address table

1PH 通讯协议地址参数表：

No. 编号	MODBUS Address 地址	Corresponding system parameters 对应系 统参数	Address Parameter Description 地址参数说明	MODBUS RTU Function Code 功能码	Function Code Description 功能码 说明
1	0X0001	P004	Over current alarm 过流报警	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
2	0X0002	P007	Over voltage alarm 过压报警	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
3	0X0003		Communication permission 通讯功能使能	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
4	0X0004		Communication start-stop control 通讯启停控制	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
5	0X0005			01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
6	0X0006			01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
7	0X0007	P041	Disconnection alarm 断线报警使能	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
8	0X0008		Fault reset (communication control) 故障复位(通讯控制)	01-Read bit,05-Write bit,15-Multiple write bit 01-读位，05-写位，15-写多位	Read and write 读写
9	1X0001		Run or stop state 运行停止状态	02-Read bit 02-读位	Read-only 只读
10	1X0002	ALARM3	Internal overheating alarm 系统内部过热报警	02-Read bit 02-读位	Read-only 只读
11	1X0003	ALARM1	Over voltage alarm 过压报警	02-Read bit 02-读位	Read-only 只读
12	1X0004	ALARM2	Over-current alarm 过流报警	02-Read bit 02-读位	Read-only 只读
13	1X0005	ALARM4	Heater disconnection alarm 加热器断线报警	02-Read bit 02-读位	Read-only 只读
14	1X0006			02-Read bit 02-读位	Read-only 只读
15	1X0007			02-Read bit 02-读位	Read-only 只读
16	1X0008			02-Read bit 02-读位	Read-only 只读
17	1X0009	S1	Slow start and slow stop 缓起缓停端子状态	02-Read bit 02-读位	Read-only 只读
18	1X0010	U1	Adjust the power and voltage 调功调压端子状态	02-Read bit 02-读位	Read-only 只读

No. 编号	MODBUS Address 地址	Corresponding system parameters 对应系统参数	Address Parameter Description 地址参数说明	MODBUS RTU Function Code 功能码	Function Code Description 功能码说明
19	3X0001	C	Input signal percentage 当前输入信号百分比	04-Read Byte 04-读字节	Read-only 只读
20	3X0002	U	The present load voltage 当前负载电压	04-Read Byte 04-读字节	Read-only 只读
21	3X0003	a	Load current 负载电流	04-Read Byte 04-读字节	Read-only 只读
22	3X0004	P	Load power 负载功率	04-Read Byte 04-读字节	Read-only 只读
23	3X0005			04-Read Byte 04-读字节	Read-only 只读
24	3X0006			04-Read Byte 04-读字节	Read-only 只读
25	3X0007		When power off to save the last time fault alarm value 断电后锁存上次故障报警值	04-Read Byte 04-读字节	Read-only 只读
26	4X0001	C	Communication given Input signal percentage 通讯给定输入信号百分比 注	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
27	4X0002	P000	Slope adjustment parameters 斜率调整参数	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
28	4X0003	P001	Soft start-up time 软启动时间	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
29	4X0004	P002	Soft stop time 软停止时间	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
30	4X0005	P005	Over-current value 过流值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
31	4X0006	P006	Current limit 限流值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
32	4X0007	P008	Over voltage value 过压值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
33	4X0008	P009	Voltage limit 限压值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
34	4X0009	P042	Disconnection alarm setting value of the parameter 断线报警参数设定值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写
35	4X0010	P043	Disconnection alarm comparison value 断线报警比较电流值	03-Read Byte,06-Write Byte,16-Multi-byte write 03-读字节, 06-写字节, 16-写多字节	Read and write 读写

注：给定值范围0-1000，对应百分比0%-100.0%