

Three-Phase Power Regulator

PRT30L Series

- Built in high-performance, low-power microprocessor
- Voltage input: 260-440VAC
- Alarm function: phase loss, overheating, overcurrent, load loss
- Relay output (3A 250VAC)
- 0-20mA/4-20mA/0-5/10V (potentiometer) inputs
- RS485 communication (supports Modbus RTU protocol)
- Small size, light weight, efficient heat dissipation
- Supports seven temperature module extensions including Pt100, K, S, B, E, R, and N, supports automatic recognition, calculation, and calibration, and optimizes PID parameters



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Description

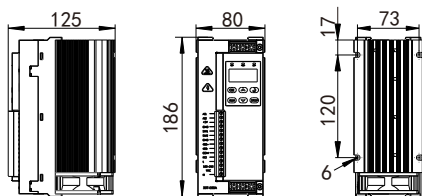
The PRT30L series is a universal three-phase power regulator that provides stable and efficient output power to loads through various control methods (current, voltage, potentiometer, communication). In addition, different output methods (zero crossing output, phase shifting output) are integrated for different load types and power grid environments, enabling the product to adapt to complex application environments. It has a wide range of applications in industrial fields such as nuclear power, vacuum, glass, packaging machinery, and kilns

Type selections

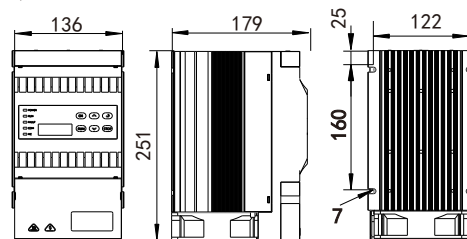
Type Series	Current	Expansion
PRT30L	— 025 150 045 170 060 200 080 250 100 300 120 350	— None:No fuctional expansion ED: Display external references T: Temperature control

Dimensions(mm)

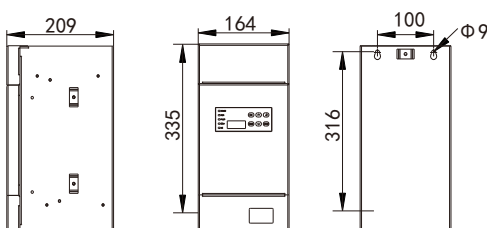
1) 25-45A



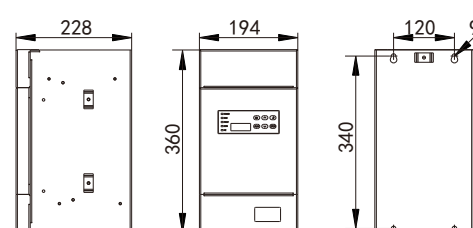
2) 60-120A



3) 150-170A



4) 200-350A



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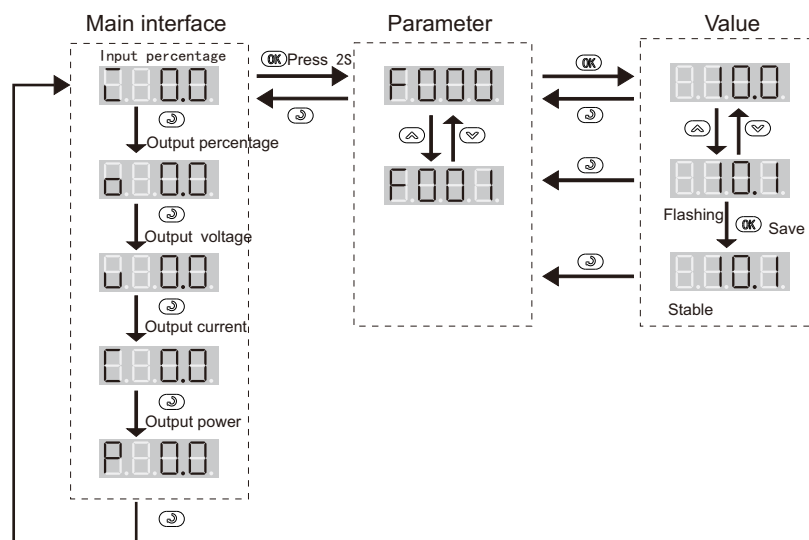
PRT30L Series

Specifications

Operational voltage range	AC260-440VAC
Supply voltage range	100-240VAC
Frequency	45-60Hz
Rated output voltage	0-98%operational voltage
Rated output Current	AC25-350A
Operating mode	continuous
control mode	V/I/P
Trigger method	Phase angle control/full cycle control
Accuracy	±1%
Resolution	0. 1%
Static stability	±0. 2%
Analog input	0-5V/0-10V/0-20mA/4-20mA
Switching input	2 channels
Switching output	1 channels
Communication	RS485
Start and stop methods	Soft start/Soft shutdown
Monitoring protection	Phase loss protection, overcurrent protection, overheating protection, load loss protection
Application environment	-10~+50 rated current will decrease if it exceeds 45 °C, and altitude above 1000M will also cause rated current to decrease
Storage temperature	-10~+70°C
Relative humidity	20%~90%RH, non-condensing
Approval	CE

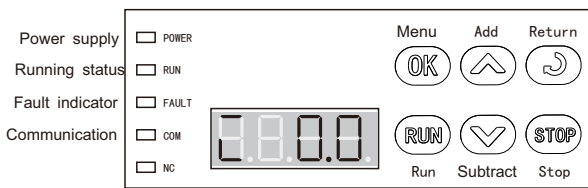
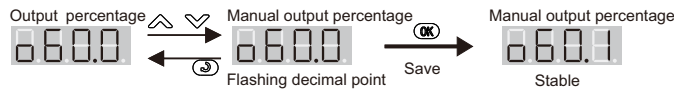
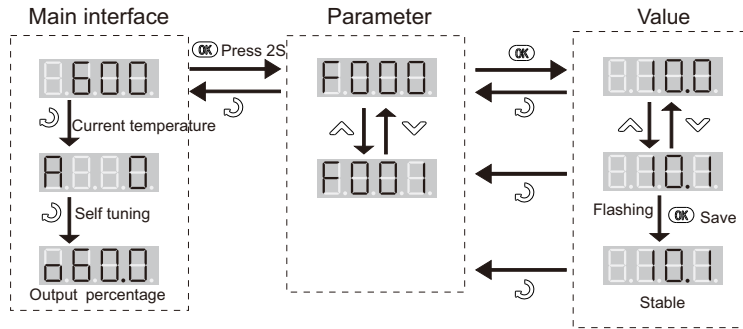
Display Page

1.View and set the value

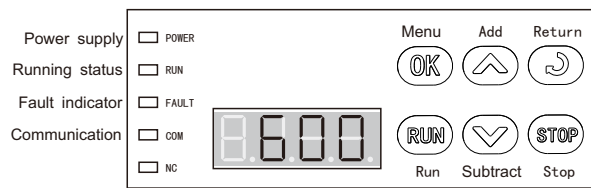


Display page

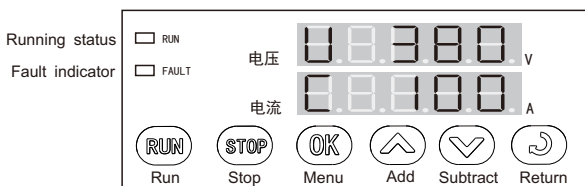
2.View and set the value(extend temprature control version)



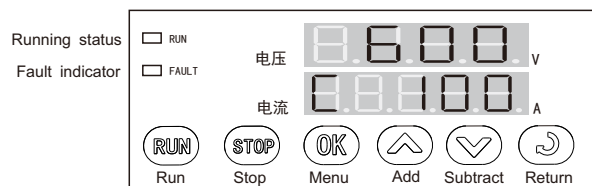
Standard configuration operation interface



Temperature control extension operation interface



When displaying external standard configuration, the digital tube displays voltage, and the operation menu is the digital tube below

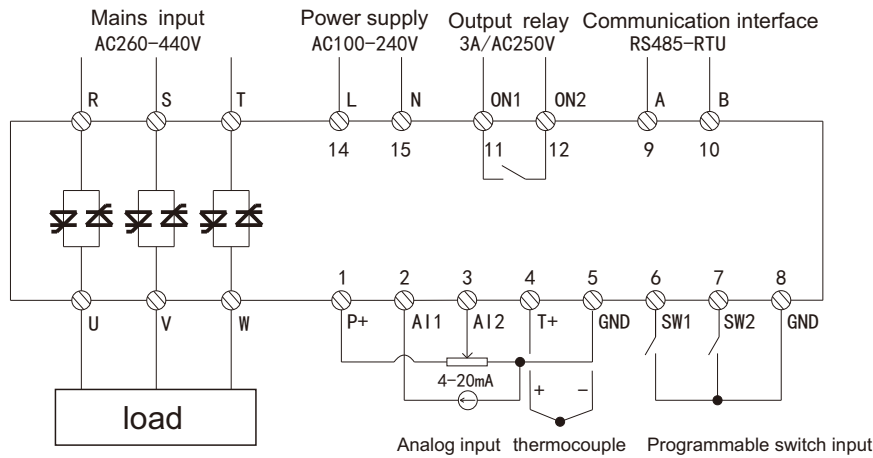


When displaying external standard configuration, the digital tube displays current temperature, and the operation menu is the digital tube below

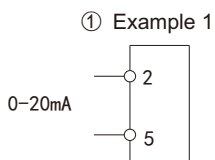
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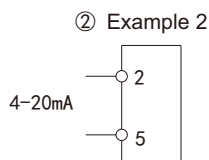
Connections



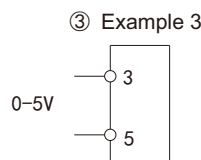
Element	Function
1	DC10V POT power supply
2	AI1 signal: 0-20mA/4-20mA/Integrated slope control (set through F12)
3	AI2 signal: 0-5V 0-10V (set through F-33)
4	Thermocouple signal+
5	Common/thermocouple signal-
6	Programmable switch input 1(Default: regulator start or stop)
7	Programmable switch input 2 Default: switch AI1 and AI2, SW2 and GND closed AI2 is valid, disconnected AI1 is valid
9,10	RS485 communication interface(modbus-rtu)
11,12	Programmable relay output (can be set by F40,0 for fault, 1 for startup state output)
14,15	Power supply 100-240VAC



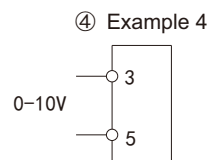
F12=0, SW2 Disconnect



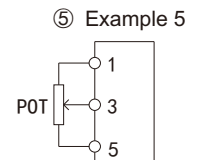
F12=1, SW2 Disconnect



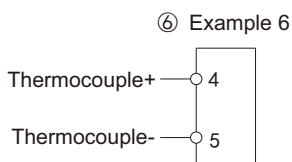
F33=0, SW2 Connect



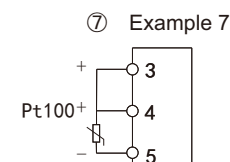
F33=1, SW2 Connect



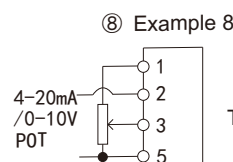
F33=0, SW2 Connect



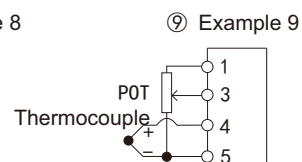
F11=2
Select temperature
signal valid



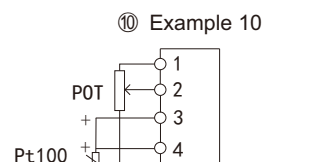
F11=2
Select temperature
signal valid



F12=2
Integrated slope control,
AI2 is the limiting effect



F11=3
AI2 is the limiting effect
SW2 Connect



F11=2 F12=4
AI1 is the limiting effect
SW2 Connect

Diagnose

1. Fault list

fault code	description
E002	Main power fault, possible fault reason: 1、 No voltage of mail loop or not the same of nameplate. 2、 Synchronous cable of terminal 12 is not connected, please refer to the wiring drawing.
E003	Overcurrent, measured current exceeds 1.25 time of rated current, possible reason: 1、 Load changes rapidly or short-circuit. 2、 Thyristor breaks.
E004	Load-off, load off current = set-point percentage * rated current * load threshold, alarms when difference between set-point and measured current is bigger than load off current. Possible reason: 1、 Load off 2、 Load current is small 3、 Setting of(F-45)is small
E005	Overheat of regulator, heat-sink temperature is bigger than 85, possible reason: 1、 Ambient temperature is higher than 45. 2、 Fan breaks. 3、 Dust on the ventilation path.
E054	Alarm 1 when the absolute temperature value exceeds the upper limit.
E055	Alarm 2 when the absolute temperature value exceeds the upper limit.
E056	Alarm 1 for temperature absolute value below lower limit.
E057	Alarm 2 for temperature absolute value below lower limit.
E058	Alarm for temperature exceeding deviation value (deviation value relative to SV)
E059	Alarm for temperature below deviation value (deviation value relative to SV)