PF500 series operation manual V1.2

Winpark PF500 series intelligent hot runner temperature controller uses microcomputer chip as control center. It possesses multi-digital filter circuit, interference automatic recovery, fuzzy PID control algorithm and other advanced technology. PF500 series is designed for Hot Runner System and control temperature between 0℃-450℃. This series is proved to be high measuring accuracy, stable temperature control, easy operation and etc.

1. Technical Specification

Total Output Power	100W-3300W（220V）
Rated Voltage	AC85V-250V，50HZ，15A
Working Environment	Ambient Temperature -10℃-50℃ Relative Humidity 35%-85% RH（No Condensation）
Storage Temperature	-25℃～65℃（Avoid Ice or Dew）
Resolution	1℃, 0.1℃(Adjustable)
Accuracy	±0.5%FS
Sensor	Thermocouple（K/J）

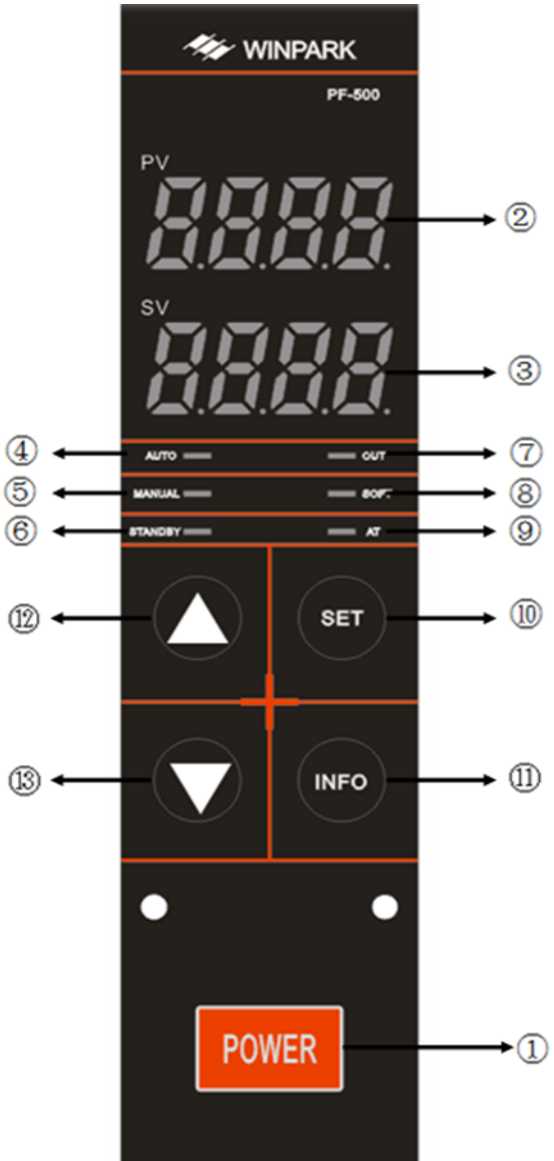
2. Read two steps before operate PF500 hot runner temperature controller

1. Please use power line to wire with mold, then open main power switch on back panel. When power on, you will hear one tik voice inside and that means enter standby state. If you want to heat mold, please press Power button then enter heating state. If error occurred, PF500 will display error and stop working immediately. Please check error display explanation for more detail.

2. In Main Display, press SET key once and press ▲ key or ▼ key to change set temperature value. If you finish changes, please press SET key once to save changes. (Tips: If this is your first time to use this PF500 hot runner temperature controller, please do AT, Auto-Tuning for better temperature control performance. Please long press ▼ key to start AT)

3. Product Functions

- Fuse broken detection
- Load break up detection
- Power on, soft start（Default=3min, 20% power output and adjustable）
- Over-temperature cut off power protection（Default over-temperature=20℃ and adjustable）
- T/C break up and reverse connection detection
- 380V Power misconnection protection
- T/C and Heater misconnection detection
- Big current limit for longer lifetime
- Linear voltage to control output and protect heater
- RS-485 COM is optional strengthened function
- Proportion display current and output, upper and lower limit alarm, manual/automatic output
- Winpark PF500 series hot runner controller is compatible with YUDO, Athena, DME, PCS, INCOE and etc



4. Operation Panel Explanation

① Power Button: Open or Close controller

② Main Display:

A. Measurement Mode: Display measure value

B. Parameter Mode: Display parameter value according to controller status

C. Alarm Mode: When error occurred in the controller, display corresponding error code. Please check detail in Error Display Explanation.

③ Deputy Display:

A. Target Value Mode: Display set temperature value

B. Parameter Mode: Display parameter value

C. Manual Mode: Display manual output percentage

④ AUTO Indicator

⑤ MANUAL Indicator

⑥ STANDBY Indicator

⑦ OUT Indicator

⑧ SOFT Indicator

⑨ AT Indicator

⑩ SET Key:

A. Long Press Key to enter parameter setting mode or leave parameter setting mode

B. Press key once to save parameters

⑪ INFO Key:

A. Press key once to shift in parameter setting mode

B. Press Key once to display current and output in panel

C. Long Press key to shift senor of K/J

⑫ Plus Key:

A. Press Key once to increase value

B. Long Press Key to enter manual output mode

⑬ Minus Key:

A. Press Key once to decrease value

B. Long Press Key to start AT(Auto-Tuning)

5. Error Display Explanation

ERR1 Reverse T/C Connection	ERR2 Wrong T/C terminal
ERR3 T/C break	ERR4 Misconnection with 380V
ERR5 Wrong heater connection	ERR6 Heater open
ERR7 Fuse-1 blew out	ERR8 Fuse-2 blew out

6. Menu Display Explanation

Code	Menu Function	Default	Upper Limit	Lower Limit	Explanation
P10	Modbus address	1	100	0	Modbus address
P12	Resolution	0	1	0	0=no decimal point 1=decimal point available
P13	Temperature compensation	0	1999	-1999	Temperature revise
P16	Input sensor	0	2	0	0=K 1=E 2=J
P18	Upper limit of Alarm	20	25	0	Deviation upper limit
P19	Lower limit of Alarm	20	25	0	Deviation lower limit
P20	℃/℉ shift	0	1	0	0=℃ 1=℉
P22	Soft-Start temperature	80	100	0	Soft-Start temperature
P23	Soft-Start percentage	20	100	0	Soft-Start percentage
P24	Soft-Start time	3	8	0	Soft-Start time limit
P40	Brightness	7	7	0	Brightness of display
P73	Overshoot suppression factor	5	20	0	Overshoot suppression factor
P74	Control intensity factor	1	3	0	Control intensity factor
P76	Heat parameter P	145.0	199.9	0.1	Proportional band of heat
P77	Heat parameter I	95	1999	1	Integral time of heat
P78	Heat parameter D	18	1999	1	Derivative time of heat