

Hot runner temperature controller

Operating Instructions



TG series

Thank you for purchasing the Warmeast hot runner temperature controller.

Please read the instruction manual before use and use it correctly.

Please keep this book for future reference.

Specification

1. Temperature accuracy: $\pm 1^{\circ}\text{C}$
2. Temperature compensation deviation: $\leq \pm 1^{\circ}\text{C}$ temperature coefficient
3. Temperature control range: K-type thermocouple 0-450 $^{\circ}\text{C}$, J-type thermocouple 0-450 $^{\circ}\text{C}$
4. Maximum output power: 3.3KW
5. Load capacity: 15A
6. Temperature deviation alarm range: 0-100 $^{\circ}\text{C}$ freely set
7. Temperature sensor type: Thermocouple J type or K type
8. Digital PID control
9. Environment temperature: -10 $^{\circ}\text{C}$ ——+50 $^{\circ}\text{C}$, Environment humidity 35%-85%RH, Non-corrosive

Function

1. Colored screen display
2. Colored light alarm
3. Current and output percentage view
4. Fuse damage indication
5. Thermocouple fault detection
6. Heating pipe fault detection
7. Full industrial grade electronic components, suitable for any low temperature and high temperature working environment
8. Linear voltage control output for better protection of heating tube
9. Historical maximum current storage
10. Overvoltage alarm
11. 8 inch touch screen centralized control (optional)
12. Rs485 communication interface (optional)
13. One-key global temperature and thermocouple model settings

Parameter

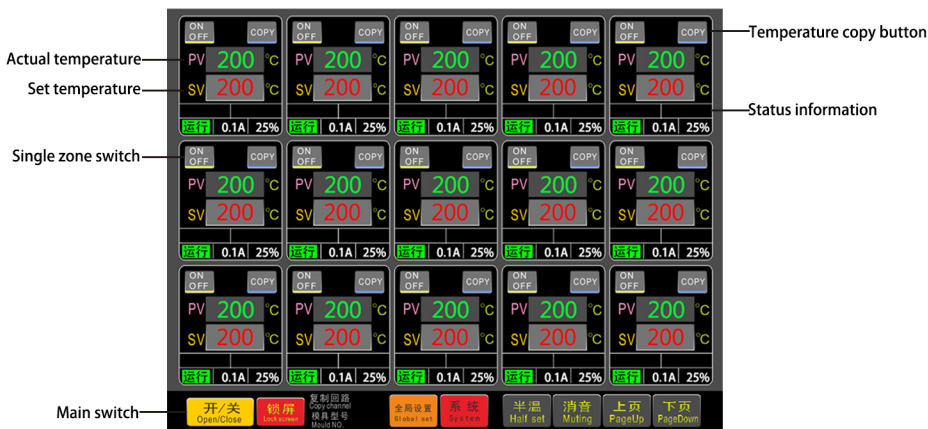
- P1 Mode Setting Automatic / manual
- P2 Manual Output 0%-100%
- P3 Temperature Sensor Type J/K type
- P4 Alarm Setting alarm/disable
- P5 Over-temperature Alarm Range 0-50°C
- P6 Low-temperature Alarm Range 0-50°C
- P7 Temperature Correction Range -50°C-50°C
- P8 Temperature Unit °C/°F
- P9 Signal Output Mode Continuous/Pulse
- P10 Soft Start Time 0-99min
- P11 Soft Start Output 0-100%
- P12 Temperature compensation value Environment temperature (unsettable)
- P13 Parameter P Default value (settable)
- P14 Parameter I Default value (settable)
- P15 Parameter D Default value (settable)
- P16 Parameter D2 Default value (settable)
- P17 PID Setting Positional/Auto-Tuning/Incremental
- P18 serial number 001-128
- P19 Current Limit Range 5.0A-16.0A
- P20 Factory reset Cancel/Reset
- P21 Communication setting Cancel/Communication
- P22 language CN/EN
- P23 Short circuit detection 20-99
- P24 Follow disable/0-128

Power cord arrangement

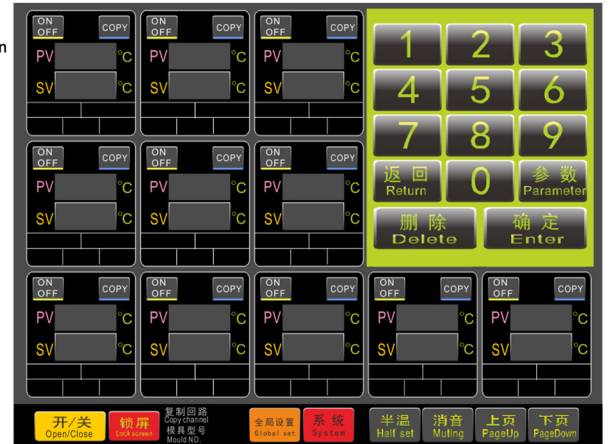
- Red (3pcs)--FireWire
- Blue (1pcs)--zero line
- Yellow-green (1pcs)--ground wire

Operation interface

1.Home



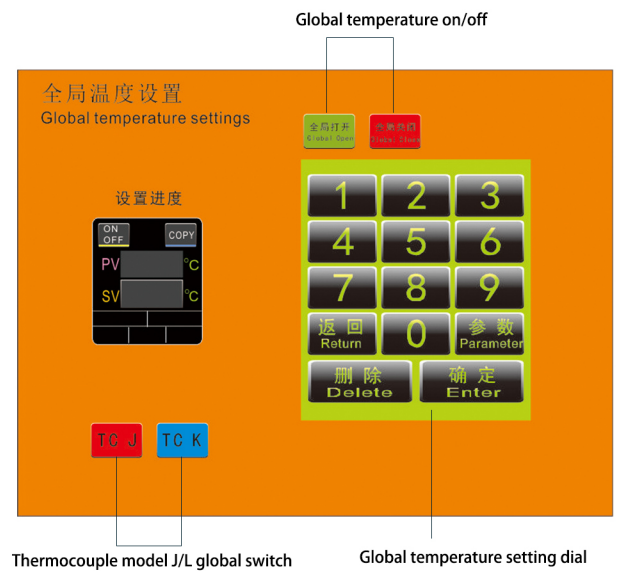
2.Temperature Setting



3.Parameter




4.Global Settings




5.System Settings



1.On/off switching

Power On : First, connect the power feeder and the mold connection cable. Then check that all connections are correct . Finally press the  key on the front panel. Everything is ready and The machine will enter the heating working state, if there is an alarm, it will not enter the heating working state.

Power off : When the machine is the working state, press the key  on the front panel, the control card will stop output and enter the standby state.

Note: If you do not use the machine for a long time, please turn off the air switch on the back!

2.Temperature setting

Turn the knob clockwise to turn the temperature up and counterclockwise to turn the knob down. Once set, press the knob to confirm.

3.Parameter setting

After pressing the knob for 2 seconds, enter the parameter settings. Turn the knob clockwise or counterclockwise to enter the parameter settings. Select the desired parameter, press the knob to enter this parameter, and turn the knob to select the corresponding value. Once set, press the knob again to confirm the setting.

Press the knob for another 2 seconds to exit the parameter settings, or wait for the parameter settings to be automatically exited.

4.Factory reset

Select confirmation as P20 parameter, and then press the knob to reset all operations and parameters to their initial values.

5.Replace the temperature control card

First remove the panel fixing screws, then pull out the temperature control card, then insert a new temperature control card, and tight the screws at last.

Preparation

1. First, confirm that the temperature control card module must be in the communication mode state, otherwise the touch screen cannot control the temperature control card (set the parameter P21 parameter to 'communication' mode, and the temperature control card status bar displays a blue 'communication' logo). Then turn on the boat-type power switch on the back of the touch screen.

2. It is important to ensure that the serial numbers of all the temperature control cards are in order of 1-6-N, and if the sequence numbers are repeated, the 'duplicate sequence number' alarm appears on the touch screen.

This alarm needs to be dismissed by pressing the 'ON/OFF' button on the corresponding alarm loop on the touch screen.

On/Off switching

1. Boot: Dial up all air switches on the back of the control box

Shutdown: Dial down all air switches on the back of the control box

2. Press the "On/Off" button on the interface, when the screen display "Are you sure to open the system?", click the "Yes" button, then the system is turned on.

Press the "On/Off" button on the interface, when the screen display "Are you sure to close the system?", click the "Yes" button, then the system is turned off.

Temperature setting

1 Press the raised button next to "SV" of the circuit that needs to be set, the screen pop out of the input keyboard interface, manually enter the required temperature, and then press the "OK" key to complete the temperature input setting of this loop.

Quickly copy temperature

1.If you need to set multiple loops to the same temperature: for example, set the same temperature for loops 1 to 10.after the temperature setting of the first loop is completed, click the "COPY" key on the first loop, and the "Copy Loop 1" is displayed at the bottom of the screen (press the "COPY" key again to cancel the copy command), and then press the "COPY" key of the 2-9 loop to quickly set the same temperature as the first loop.

2.After clicking the global setting button on the main page, enter the required temperature data on the digital dial, and click OK to complete the temperature setting of all zones with one click!

Parameter settings

1. Press the raised button next to "SV" of the circuit to be set, the screen will pop out of the input keyboard interface, click 'parameter' to enter the parameter setting interface.

Press the up arrow or down arrow to move the cursor to select the desired parameter.

After selecting the desired parameter, you can press the numeric keyboard or 'D+, D-' keys to adjust parameter.

Reset

1. Press the 'Reset' key to restore the initial value.

System settings

1. Press the 'System Settings' button to enter the system settings interface, press the up arrow or down arrow to move the cursor to select the required parameters, After selecting the required parameters, you can press the numeric keypad or the 'D+, D-' key to adjust the parameters. (Language and mold model can be set)

Mold number setting, language setting, address setting, baud rate setting, automatic lock screen setting, °C or °F switching

1. Press the system button, press the arrow up key or down key, select parameter 1/parameter 2/parameter 3 /parameter 4/parameter 5/parameter 6, then press D+ Or D-set mold number/language/address/ baud rate/ auto lock screen/temperature switch between °C and °F.

Global Settings

1. Click the Global Settings button on the main page to enter the settings. Click the global open or global close button to switch all temperature control zones of the device power on or off. Click the TC J or TC K button to switch the thermocouple model of all temperature control zones of the equipment to J type or K type.

Note

1. After the touch screen and the temperature control card establish communication, the temperature control card cannot be operated locally, including switching on and off and temperature settings. But when the touch screen is turned off for 20 seconds, the temperature control card can resume local operation, switch on and off, and temperature settings.

2. If the touch screen is damaged or cannot be used due to failure, it is only necessary to disconnect the connection between the touch screen and the machine to realize the local operation of the temperature control card.

FAQS

1. After turning on the air switch, the temperature control card screen emits a continuous red alarm sound, what should I do?
 - Please check whether the neutral line and the fire line are reversed or if the zero line is missing.
2. Why does the temperature control card emit a continuous alarm sound after powering up?
 - It may be because the thermocouple is disconnected, the heater is short-circuited or open-circuited, check the thermocouple and heater or check if the connecting cable is loose.
3. When the output current does not change, I turned on the power ,why does the temperature rise until the high temperature alarm?
 - The thyristor is short-circuited and the control card needs to be repaired.
4. The temperature control is unstable , and the output current value fluctuates so much ,why?
 - Because the zero wire is missing, check the power plug to troubleshoot.
5. Why does the temperature control card POWER signal light not turn on?
 - Please check if the power is plugged in or if some part is missing.

Precautions

1. Before replacing the mold and pulling out the connecting cable, turn off the air switch on the back of the temperature control box.
2. This product has a metal shell ,requires good grounding during use to prevent electric shock.
3. If you encounter a fault that cannot be solved, please do not disassemble the machine yourself, please contact the after-sales service.
4. Before starting the connection mold, make sure that the wiring diagram of the temperature control box is consistent with the mold wiring diagram.

Disclaimer

Although the company has designed a variety of protective measures in the controller, the user should still set up appropriate protection devices when the controller is used, taking fully into account the possible losses due to the reliability of the controller.

The company declares :Beside of the controller itself, the company is not responsible for any loss of personal, property, etc. caused by the reliability of the controller or other reasons.