

## HOT RUNNER COMPONENTS

- Hot runner controller
- Sequence valve gate controller
- Hot runner cables
- Connectors
- PID process controller
- Temperature & humidity transmitter

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# Company Profile

Tinko Instrument(Suzhou) Co., Ltd. is a high-tech company specialized in designing, manufacturing and selling all kinds of hot runner controllers and accessories for plastic injection molding industry. It was established in 2001, total 20 years till now.

Apart from hot runner temperature controllers, we also provide sequence valve gate controllers, connectors, sensors, cables, heaters, PID temperature controllers, temperature & humidity transmitters.

We have passed ISO9001 quality management system certificate and CE certificate. At Tinko, we strive to provide reliable and high performing controllers and components to our customers.



## TBC Series Controller

### Features:

- New design and new surface
- Dual lines LED display
- Advanced PID control algorithm
- Toggle power switch
- Two temperature scales selectable (°C/°F)
- Two thermocouple types (J or K)
- Output type: PWM, SSR
- Cabinet zone: 1-24
- Easy operation and convenient replacement



### Function:

- Auto or manual function
- Dehumidify soft start function
- High/Low temperature alarm
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Fuse break alarm
- Over voltage protection function
- Remote standby function (optional)
- Alarm output function (optional)



## TGC Series Controller

### Features:

- Dual lines LCD display
- Contactless switch
- Internal alarm buzzer
- PID auto control
- Single zone 15A 3600W
- High and stable control accuracy
- Load current, output percentage display
- Standard cabinet size: 1-24 zone
- Single deck or double deck selectable
- Compatible with DME, Athena, Yudo, etc. brands



### Function:

- Auto, manual, standby function
- Dehumidify soft start function
- High/Low temperature alarm
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Fuse break alarm
- Over voltage protection function
- Remote standby function (optional)
- Alarm output function (optional)
- RS485 communication (optional)



## TCC Series Controller

### Features:

- Simple design
- LED display
- Internal alarm buzzer
- Power supply: 230VAC or 380VAC
- Measurement accuracy:  $\pm 0.25\%$  FS
- Two output type: phase angle, zero cross
- Economic version with competitive price
- 1-24 zone selectable
- Compatible with DME, Athena, Yudo, etc. brands

### Function:

- Smart soft start function
- Auto or manual function
- Boost function
- High/Low temperature alarm
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Over voltage protection function
- Thermocouple & heater misconnection protection



## TNC Series Controller

### Features:

- LCD display
- Internal alarm buzzer
- CE certification
- Economic version
- Logo can be customized
- Cabinet zone: 1-24
- Control accuracy:  $\pm 0.1\%$  Full Scale
- Easy replacement for modules
- Compatible with DME, Athena, Yudo, etc. brands



### Function:

- One key start-stop, boost function
- Auto or manual selection function
- Soft start function
- Triac short circuit protection
- Automatic detection of wire break of heater
- High/Low temperature alarm
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Over voltage protection function



## TFC Series Controller

### Features:

- New design surface
- LED display
- Fuzzy pid control
- One card with 2 zones design
- Operate and set parameters separately
- Small size, save space
- Cabinet zone: 2-48
- Easy operation and convenient replacement



### Function:

- Auto or manual function
- Boost function
- Dehumidify soft start function
- High/Low temperature alarm
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Over voltage protection function
- Thermocouple & heater misconnection protection





## WBC Series Controller

### Features:

- Unique construction
- LED display
- Fuzzy pid control
- Two temperature scales selectable ( $^{\circ}\text{C}/^{\circ}\text{F}$ )
- Two thermocouple types (J or K)
- Output type: zero cross or phase angle
- Can be installed on floor stand
- Cabinet zone: 5, 8, 12
- Universal size for north American standard
- Easy operation and convenient replacement

### Function:

- Auto or manual function
- Dehumidify soft start function
- High/Low temperature alarm
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Fuse break alarm
- Over voltage protection function
- Remote standby function (optional)
- Alarm output function (optional)



## WGC Series Controller

### Features:

- LCD display
- Contactless switch
- Internal alarm buzzer
- PID auto control
- High and stable control accuracy
- Load current, output percentage display
- Can be installed on floor stand
- Cabinet zone: 5, 8, 12
- Universal size for north American standard
- Compatible with DME, Athena, Yudo, etc. brands

### Function:

- Auto, manual, standby function
- Dehumidify soft start function
- High/Low temperature alarm
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Fuse break alarm
- Over voltage protection function
- Remote standby function (optional)
- Alarm output function (optional)
- RS485 communication (optional)



### Hot Runner Control Module / Card



HRTC-B1



HRTC-G1



HRTC-C1



HRTC-N1



HRTC-F2

Features	HRTC-B1	HRTC-G1	HRTC-C1	HRTC-N1	HRTC-F2
Process display:	LED	LCD	LED	LCD	LED
Power supply:	85-265VAC, 50/60Hz				
Input sensor type:	Thermocouple J or K				
Load capability for single zone:	15A, 240VAC, 3600W max.				
Output type:	Zero cross (Factory default), Phase angel				
Control accuracy:	$\pm 0.1\%$ Full Scale				
Selectable degrees °C or °F	•	•	•	•	•
Control mode: Auto / Manual /Standby	•	•	•	•	•
Soft Stat (Dehumidy) function	•	•	•	•	•
Alarms:					
High/Low temperature	•	•	•	•	•
Open thermocouple	•	•	•	•	•
Reverse themocouple	•	•	•	•	•
Shorted thermocouple	•	•	•	•	•
Open heater / Triac	•	•	•	•	•
Shorted heater / Triac	•	•	•	•	•
Overload heater / Triac	•	•	•	•	•
Fuses blowout	•	•			
Over voltage protection fuction	•	•	•	•	•
Compatible with DME, Athena, Yudo, etc	•	•	•	•	
RS485 communication (optional)		•			
Remote standby functor(optional)	•	•			
Alarm output function (optional)	•	•			

## TSC Series Controller



### Features:

- Compact Integrated cabinet design
- LED display
- Single zone and dual zone selectable
- Auto or manual mode
- PID auto control
- Two temperature scales selectable (°C/°F)
- Two thermocouple types (J or K)
- Two output control mode (Phase angle, Zero cross)
- Single zone 15A 3600W
- Easy operation



### Function:

- Auto or manual function
- Boost function
- Dehumidify soft start function
- High/Low temperature alarm
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Over voltage protection function
- Thermocouple & heater misconnection protection



## M20-S Series Controller



### Features:

- Full color 10.2" size LCD touch screen
- English and Spanish language selectable
- Single zone 15A 3600W
- Alarm indicator
- Cabinet zone: 2-36
- Easy operation and convenient replacement
- Dehumidify soft start function
- Remote standby function (optional)
- Alarm output function (optional)
- RS485 communication (optional)

## M20-M Series Controller



### Features:

- Rack type cabinet design
- Full color 10.2" size LCD touch screen
- English and Spanish language selectable
- USB port (storage and reading)
- Cabinet zone: 2-80
- Easy operation and convenient replacement
- Dehumidify soft start function
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Over voltage protection function
- Remote standby function (optional)
- Alarm output function (optional)
- RS485 communication (optional)

## M20-L Series Controller



### Features:

- Rack type cabinet design
- Full color 10.2" size LCD touch screen
- English and Spanish language selectable
- USB port (storage and reading)
- Temperature combo valve gate control
- Fuzzy pid control
- External heat sink design, reduce downtime
- Cabinet zone: 2-120
- Easy operation and convenient replacement



### Function:

- Dehumidify soft start function
- Boost function
- Password enabled security
- Thermocouple open, reverse, short alarm
- Heater open, short, overload alarm
- Over voltage protection function
- Remote standby function (optional)
- Alarm output function (optional)
- RS485 communication (optional)

## D600 Series Controller



### Features:

- New design and new surface
- 8 zones
- LED display
- Manual control output function
- Pneumatic and hydraulic valve selectable
- Small size and light weight
- Easy operation and intelligent control

## D800 Series Controller



### Features:

- New design and new surface
- 8 zones
- Touch screen
- LCD display
- Manual control output function
- Pneumatic and hydraulic valve selectable
- Small size and light weight
- Easy operation and intelligent control

## HRVG-C Module



### Features:

- LED display
- Auto or manual function
- Time display mode: 0.1s or 0.01s
- Output control mode: Mode-0 or Mode-1
- Input signal type: DC24V or Relay contact
- Output signal type: AC220V, DC24V or Relay contact
- Wide power supply range: AC85~400V
- Polarity can be ignored when input signal is DC24V
- Recover parameters default easily
- Easy operation

## SVG Series Valve Gate Controller




















### Features:



























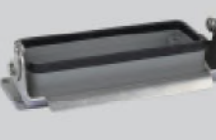




- New design construction
- Standard plug-in modular cabinet
- LED display
- Time display mode: 0.1s or 0.01s
- Input signal type: DC24V or Relay contact
- Output signal type: AC220V, DC24V or Relay contact
- Fit for pneumatic and hydraulic valve
- Connector type can be customized
- Cabinet zone: 1-24
- Easy operation and convenient replacement

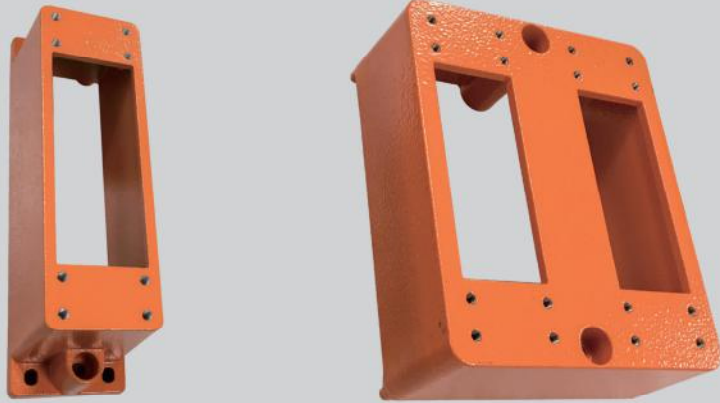


## Hot Runner Cable

Zones	Thermocouple cable	Mold Power cable	Combo cable
1-2			
			MPTC-01-03
3-4			
			MPTC-04-03
5			
	TC-05-03	MP-05-03	MPTC-06-03
6			
	TC-08-03	MP-08-03	MPTC-06-03
8			
	TC-08-03	MP-08-03	MPTC-04-03
10			
	TC-12-03	MP-12-03	MPTC-06-03
12			
	TC-12-03	MP-12-03	MPTC-06-03

## Connectors

HA Series 5 Pin					
	HA-004-M	HA-004-F	H3A-MTG-M20	H3A-MAG	
HE Series 10 Pin					
	HE-010-M	HE-010-F	H10B-TG-PG16	H10B-TG-RO-PG16	H10B-TGB-PG16
					
	H10B-TS-PG16	H10B-TS-RO-PG16	H10B-AG	H10B-AG-LB	H10B-AD-BO
HE Series 16 Pin					
	HE-016-M	HE-016-F	H16B-TG-PG21	H16B-TG-RO-PG21	H16B-TGB-PG21
					
	H16B-TS-PG21	H16B-TS-RO-PG21	H16B-AG	H16B-AG-LB	H16B-AD-BO
HE Series 24 Pin					
	HE-024-M	HE-024-F	H24B-TGH-PG29	H24B-TGH-RO-PG29	H24B-TGB-PG29
					
	H24B-TSH-PG29	H24B-TSH-RO-PG29	H24B-AG	H24B-AG-LB	H24B-AD-BO
HD Series 25 Pin					
	HD-025-M	HD-025-F	H16A-TGH-RO-PG21	H16A-AG-LB	



### Terminal Boxes

Item No.	Description
TB-01	Fit for 16 pin or 24 pin connectors
TB-02	Fit for 16 pin or 24 pin connectors



### Floor Stand for Mainframes

Item No.	Description
MFS58121	Fit for 5, 8, 12 zone controllers

## CTL Series Temperature Controller



### Features:

- Fuzzy PID, control fast and smooth
- Multi type input signal
- Multi type output mode
- LED display
- Sensor break, reverse, short alarm
- PV bias, PID auto-tuning, alarm delay, etc.
- Alarm output and RS485 selectable
- Manual and soft start output control

### Ordering Code

C	T	L	-	□	F	□	□	□	-	□	-	□	□	□	-	□	□	C	C
				(1)		(2)	(3)	(4)		(5)									

(1) Front Panel Size (W×H, mm)

4: 48\*48    5: 48\*96    6: 96\*48    7: 72\*72    9: 96\*96

(2) Input Signal & Range

K03: K (-50~999℃)    E03: E (-50~800℃)    J03: J(-50~999℃)  
 T03: T (-50~400℃)    P03: Pt100 (-20~580℃)    P06: Pt100 (-19.9~99.9℃)

(3) Control Output

M: Relay contact (AC250V, 3A)    V: SSR Drive (Voltage pulse)  
 8: D.C.4-20mA

(4) Alarm output

Blank: None    M: 1x Relay contact (AC250V, 3A)  
 MM: 2x Relay contact (AC250V, 3A)    MMM: 3x Relay contact (AC250V, 3A)

(5) Communication

Blank: None    C1: RS485, Modbus RTU

# CTM Series Temperature Controller



## Features:

- Fuzzy PID, control fast and smooth
- Single loop and dual loop control selectable
- Multi type input signal
- Multi type output mode
- LED display
- Sensor break, reverse, short alarm
- PV bias, PID auto-tuning, alarm delay, etc.
- Alarm output and RS485 selectable
- Manual and soft start output control

## Ordering Code

CTM - □ F □ □ □ - □ - □ - □ □ □ - □ □ □ - C C  
 (1) (2) (3) (4) (5) (6)(7)(8)

### (1) Front Panel Size (W×H, mm)

4: 48\*48    5: 48\*96    6: 96\*48    7: 72\*72    9: 96\*96

### (2) Input Signal & Range

K03: K (-50~999℃)    E03: E (-50~800℃)    J03: J(-50~999℃)  
 T03: T (-50~400℃)    P03: Pt100 (-20~580℃)    P06: Pt100 (-19.9~99.9℃)  
 801: 4-20mA    402: 0-10V

### (3) Control Output 1 (for heating control)

M: Relay contact (AC250V, 3A)    V: SSR Drive (Voltage pulse)  
 8: 4-20mA    9: 0-10V DC

### (4) Control Output 2 (for cooling control)

M: Relay contact (AC250V, 3A)    V: SSR Drive (Voltage pulse)  
 8: 4-20mA D.C.    9: 0-10V DC

### (5) Alarm output

Blank: None    M: 1x Relay contact (AC250V, 3A)  
 MM: 2x Relay contact (AC250V, 3A)    MMM: 3x Relay contact (AC250V, 3A)

### (6) Transmit output

8: 4-20mA DC output    9: 0-10V DC output  
 Blank: No transmit output

### (7) Power feedback output

Blank: No output (can be omitted)    V4: 24Vdc output

### (8) Communication

Blank: None    C1: RS485, Modbus RTU

## TKSB Series Split Type



### Features:

- All-in-one design of sensor, transmitter & display
- Suitable for HVAC temperature and humidity measurement
- Use digital sensor, reliable & good interchangeable
- Temperature compensation by software, high precision, low offset
- LCD display
- RS485 selectable
- Can work with temperature controller & scanner

## TKSD Series Duct Mounting Type



### Features:

- All-in-one design of sensor, transmitter & display
- Suitable for HVAC temperature and humidity measurement
- Use digital sensor, reliable & good interchangeable
- Temperature compensation by software, high precision, low offset
- LCD display
- RS485 selectable
- Can work with temperature controller & scanner

## TKSF Series Wall Mounting Type



### Features:

- All-in-one design of sensor, transmitter & display
- Suitable for HVAC temperature and humidity measurement
- Use digital sensor, reliable & good interchangeable
- Temperature compensation by software, high precision, low offset
- LCD display
- RS485 selectable
- Can work with temperature controller & scanner



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