

# MYPIIN

## TA Series Temperature Controller

### Instruction Manual

Thank you for selecting **MYPIIN** products!  
 Before operating this instrument, please carefully read this manual and fully understand its contents. If any problems, please contact our sales or distributors whom you buy from. This manual is subject to change without prior notice.

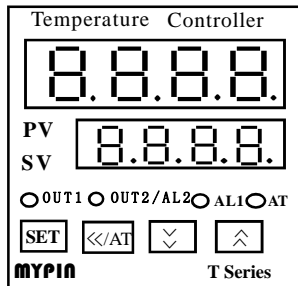
#### Warning

Do not turn on power until all wiring is complete.  
 Do not wire when power on.  
 Do not turn on the power when cleaning this instrument.  
 Do not disassemble, repair or modify the instrument.  
 Use this instrument within the scope of its specifications. Otherwise fire or malfunction may result.  
 Should be installed in a domestic environment.  
 To avoid using this instrument in environment full of dust/caustic gas/strong shock/concussion/explosive oil.

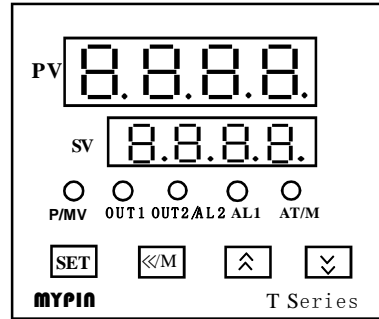
#### Applications

- 1 Use of advanced technology, autotune PID, fuzzy PID that make it very precise, stable, strong anti-interference and simple operation.
- 2 Input: K J E S R B T Pt100, cu50, 4-20mA, 0-10V
- 3 PID heat/cool Output: Relay, SSR, SCR, 4-20mA, 0-10V
- 4 Can be used as temperature transmitter or PID control for output 4-20mA/0-10V
- 5 Multi-function alarm output: Relay/SSR/SCR/logic
- 5 The controller is widely applied to automation systems of mechanism, chemical industrial, chinaware, light industrial, and the production line of foodstuff, packing, or dry machine, metal heat process equipment.

#### Panel



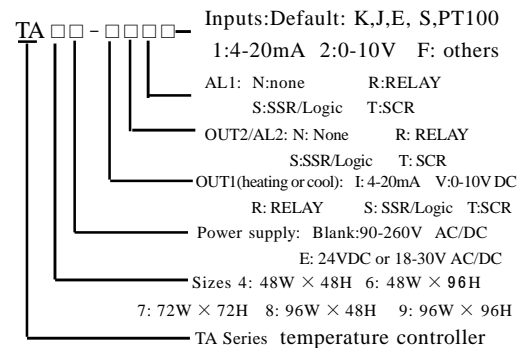
TA4



TA7/TA9

- ① PV LED :temperature or parameter symbols
- ② SV LED:Preset temperature or parameter value
- ③ Indication lamps  
 OUT1: Heating PID output lamp  
     On: Output Off: No output  
 OUT2/AL2: Cooling or AL2 output lamp  
     On: Output Off: No output  
 AT/M: On: Autotune Off: Non-autotune  
 AL1: On: Alarm Off: No Alarm  
 P/MV: on: output percentage  
     OFF: preset temperature value
- ④ **SET** Parameter Select/Confirm key
- ⑤ **<<** Shift / Autotune key
- ⑥ **<math>\uparrow</math>** Up key **<math>\downarrow</math>** Down key

#### Ordering code



E.g TA4-SNR temperature controller, Size:48\*48\*80mm,  
 Power : 90-260V AC/DC, PID control, output :SSR  
 Alarm : AL1 Relay, Input : K J E S Pt100

#### Inputs

Input	Range	impedance	Factory	
F	mA	0~1mA,0~10mA,4~20mA	$\leq 100 \Omega$	
	V	0~1V,0~10V,0~500V	$\leq 3M \Omega$	
	mV	0~75mV, $\pm 100mV$	$\leq 2M \Omega$	
	Rt		0~400 $\Omega$	$\leq 0.2mA$
		Cu50 Cu100 -50 ~150°C		
Pt100	-200~650°C	$\leq 0.2mA$	Pt100	
TC		K/J: 0-1200°C S:0-1700°C	$\leq 2M \Omega$	K J E S
		E: 0-1000°C		
		T: -150-400°C		
		R/B: 0-1800 °C		

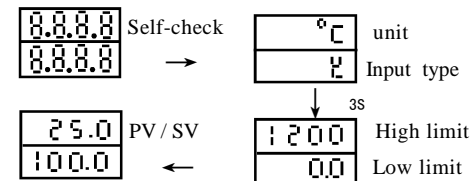
#### Specifications

Power supply	90-260V AC/DC 50/60Hz or DC 24V,DC12-30V
Consumption	$\leq 5VA$
Accuracy	0.3%F. S $\pm 2$ digit
Sampling time	$\leq 250ms$
output	RELAY:normal open AC 250V/5A DC 30V/5A resistive load SSR / LOGIC: 12/24V/20mA SCR:Triac I:4-20mA(Load<500 $\Omega$ ) V: 0-10V
Alarm	RELAY:normal open AC 250V/5A DC 30V/5A resistive load SSR / LOGIC:DC 12/24V/20mA
Withstand	1500V Rms (Between power terminal and the housing)
impedance	Min 50M $\Omega$ (500VDC) (Between power terminal and the housing)
Environment	-10~50°C 30~85%RH
Weight	$\leq 350g$

#### Mounting and Sizes

- |        |                   |          |             |
|--------|-------------------|----------|-------------|
| 1 TA4  | W48 X H48 X L80mm | mounting | W45 X H45mm |
| 2 TA6  | W48 X H96 X L80mm | mounting | W45 X H92mm |
| 3 TA7  | W72 X H72 X L80mm | mounting | W68 X H68mm |
| 4 TA8  | W96 X H48 X L80mm | mounting | W92 X H45mm |
| 5 TA9  | W96 X H96 X L80mm | mounting | W92 X H92mm |
| 6 TA10 | W160X H80 X L70mm | mounting | W152X H76mm |

#### Power on Process



#### Parameter Setting

Setting steps

- A: Press SET key to select parameter
- B: Press << key once, LED flashing, press << key again to shift LED
- C: Press **<math>\uparrow</math>** key and **<math>\downarrow</math>** key to modify the data
- D: Press SET key to confirm data

#### Preset temperature Setting

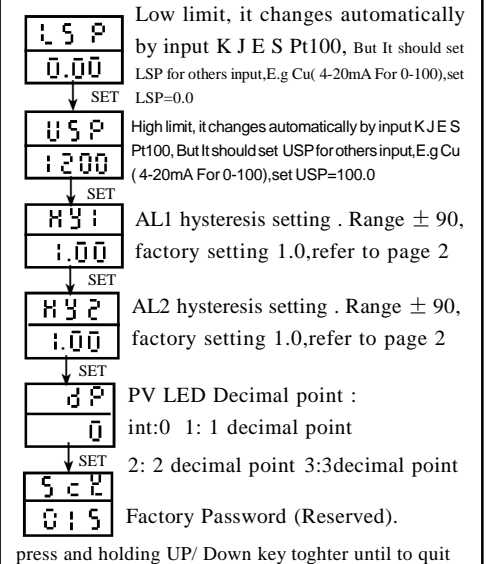
In displaying estate, press << key, SV LED flashing, press << key again to shift LED, Press UP and Down key to modify the data, press SET key to confirm

#### Autotune operation (only for output RELAY/SSR/SCR, don't use for 4-20mA/0-10V)

start: Press << Key until AT LED ON to enter autotune estate.  
 stop: AT LED will go off until autotune completed, or Press << Key until AT LED OFF to quit autotune estate.  
 you should start auto-tune mode once when using in a new control system.  
 you should start auto-tune mode again if preset temperature has been changed

#### In Non-autotune estate, press and holding UP /

Down key together until to enter menu



press SET key until to enter menu

- AL1 AL1 setting, range: -1999-9999  
 9000 AL1 control mode  
 ↓ SET (PV: temperature value, SV : preset temperature value)  
 0: Deviation (PV-SV) > AL1 alarm  
 1: Deviation (SV-PV) > AL1 alarm  
 2: PV>AL1 alarm 3: PV <AL1 alarm  
 4: |SV-PV| >AL1 alarm 5: |SV-PV| <AL1 alarm  
 6: TC broken alarm, factory setting is 2  
 AL2 setting, range: -1999-9999.  
 AL2 control mode  
 0: Deviation (PV-SV) >AL2 alarm  
 1: Deviation (SV-PV)>AL2 alarm  
 2: PV>AL2 alarm 3: PV <AL2 alarm  
 4: |SV-PV| >AL2 alarm 5: |SV-PV| <AL2 alarm  
 6: TC broken alarm, factory setting is 2  
 Offset value,range: ± 100.  
 Display value PV = Measured value - PVF  
 Input signal selection  $\frac{K}{J} \frac{E}{S} \frac{Pt100}{Cu}$   
 stands for K, J, E, S, Pt100, Cu: Cu50 or mA / V  
 Factory setting: K  
 Proportional band (%) range 0.1-3600.  
 If P=OFF, it means ON/OFF control  
 Integral time range 0.1-3600.  
 I=OFF means cancel integral function.  
 Derivative time range 0.1-3600. d=OFF means cancel derivative function.  
 Control output: HEAT: heating  
 COOL: cooling  
 ON/OFF control hysteresis(only for P=OFF) ,range: ± 100.  
 PID Control Cycle Time, unit : second  
 Relay: range 4-20 seconds,suggest: Ctl= 020,  
 SSR/SCR Ctl=001, 4-20mA/0-10V Ctl= 000  
 Low limit (only for transmit output 4-20mA /0-10V ), E.g 0-800°C for 4-20mA, SET trL=0.0  
 High limit (only for transmit output 4-20mA /0-10V ), E.g 0-800°C for 4-20mA, SET trH=800  
 goto bSL parameter

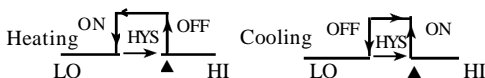
- SET PID or transmit function select (only for output ctL=000,4-20mA / 0-10V )  
 PID means : PID control ;  
 TP means: transmitter,4-20mA or 0-10V  
 Temperature unit. C: °C degree,  
 F: F degree.  
 Parameter lock setting.  
 LcK=000 means unlocked,can be read or write  
 LcK=010 means locked,read only.

press SET key until to enter menu or return AL1 paramwter

**Note:**

**P=OFF ,ON/OFF control**

PV: measure temperature value, SV : preset temperature value  
 oud=HEAT, If SV>PV, OUT1 OFF (inactive), if PV<SV - Hys,OUT1 ON(active),|SV-PV|<Hys,OUT1 keeps ON or OFF  
 oud=Cool, If PV>SV, OUT1 ON (active), if PV<SV - Hys,OUT1 OFF(inactive),|SV-PV|<Hys,OUT1 keeps ON or OFF  
 ON/OFF control: ▲ Set value

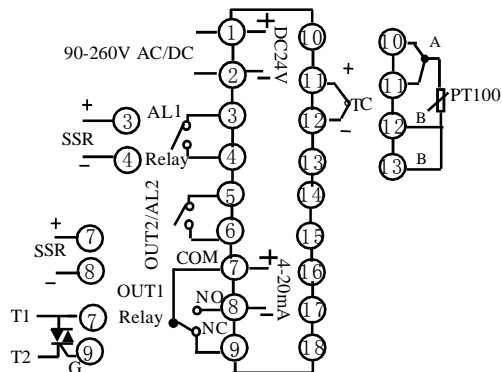
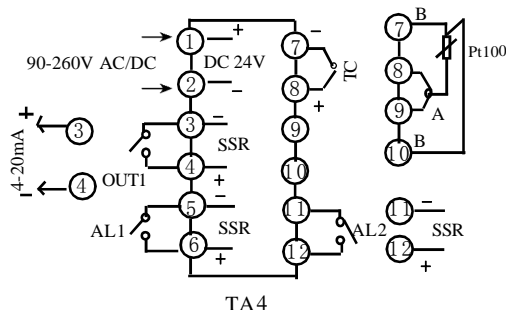


**Hy1 Hy2 Application**

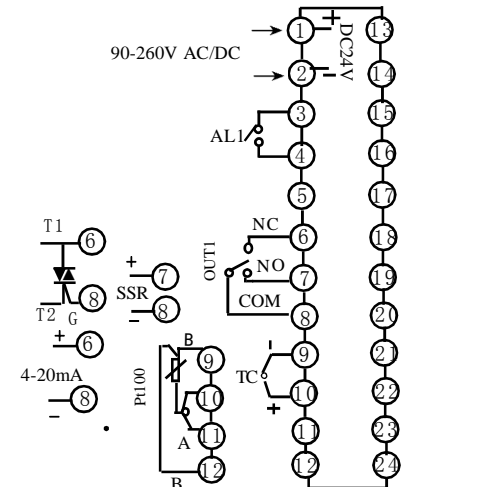
E.g AM1=2,AL1=100.0,Hy1=2.0  
 If PV>=100(AL1), AL1 ON(active),  
 if PV<98(AL1-Hy1), AL1 OFF(inactive)  
 AM1=0,AL1=3.0,Hy1=2.0, SV=100  
 If (PV-SV)>=3(AL1), AL1 ON(active),  
 if (PV-SV)<1(AL1-Hy1), AL1 OFF(inactive)

**Terminal configurations**

(If any changed, please refer to lable on meter.)

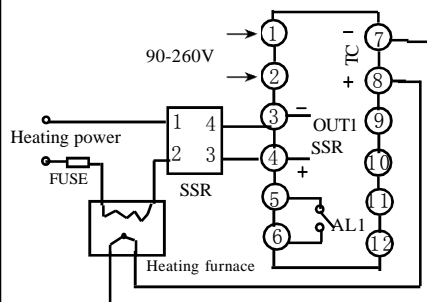


TA7



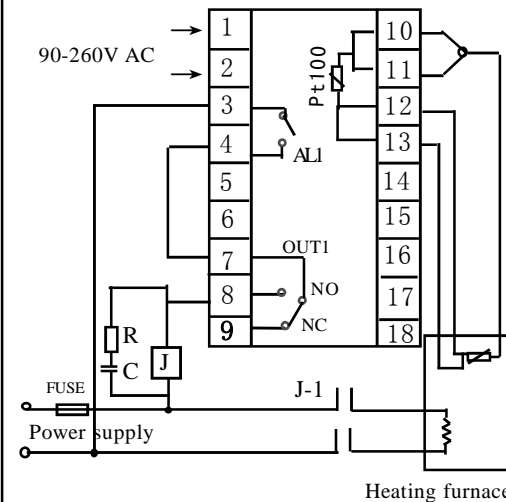
TA6/TA8/TA9

**Application examples**



1.SSR output control (for TA4-SNR)

2.Relay output control (for TA7-RNR)



**Trouble shooting**

- displayerror:  
 Check all the connection and wiring if it is correct.  
 A. check INP ,PVF parameter and terminal connect,  
 For Pt100 input, please use 3-wires low impedance cable.  
 B. display 'UUUU',Checking: INP \USP and Tc  
 (OPEN connect, PV >USP or overrange input)
- Output error :  
 checking: P,I,D, Alarm setting(E.g AL1 AM1 HY1)  
 and output connection ,extrenal load

**Factory Products Contains**

- ★ 1 Copy of user manual
- ★ 1 Inspection certificate
- ★ 2 installing brackets.

We are responsible for the overal repairment for the failure of manufacturing quality within 12 months since the date of purchase.Repair fee will be charged according to damage caused by improper use

**More other information**

PLS Download from :www.mypinchina.com  
 IP / wechat: 86-18689341985  
 Email: sale@mypinchina.com