

Intelligent PID Temperature Control instrument

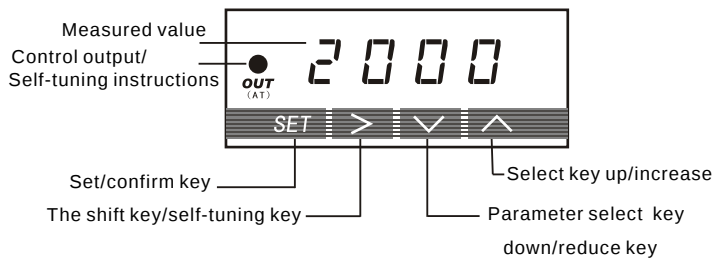
- Input type can be RTD input (Pt100、Cu50) or Thermocouple input (T、R、J、B、S、K、E、WRe3-WRe25)
- The instrument has automatic function to self adapt to different systems
- Instrument can be degrees Celsius, degrees Fahrenheit temperature



一、Specifications

- Power supply: AC/DC 85~260V (50Hz/60Hz)
- Load capacity: 250W
- Power consumption: 6W
- Temperature precision: 0.2%FS
- Environment: 0~+50°C; ≤85%RH
- Outline Dimension: 48×24×75
- Panel Dimension: 45×22

二. Panel description



三、Parameter setting guide

(一)、Initiation function parameter (Log in by inputting password 0089 after pressing set key)

1. Details of parameters

Symbol	Description	Range	Factory value
INTY	inty	Input type	Table —
OUTY	outy	Control output type	2
HY	Hy	Autotuning pV bias	0~9999
PSB	Psb	pV bias	-1000~1000
RD	rd	Control action type	0
CORF	CorF	Engineering un selection	0
END	End	End	

2. Parameters of the initial functional description

1) inty : Temperature sensor type list

Table —

Symbol	Name	Sensor type	Temperature range °C	Mark
t	T	T TC	-200~400	Internal resistance 100K Ω
r	R	R TC	-50~1600	
j	J	J TC	-200~1200	
wre	WRE	WRE TC	0~2300	
b	B	B TC	350~1800	
s	S	S TC	-50~1600	
k	K	K TC	-200~1300	
e	E	E TC	-200~900	Constant current output 0.2mA
p10.0	P10.0	Pt100 RTD	-199.9~600.0	
p100	P100	Pt100 RTD	-199~600	
cu50	Cu50	Cu50 RTD	-50.0~150.0	

2) Psb : Zero error correction

Amendments End value = amended before the value + PSB

3) rd : Heat, Cool selection

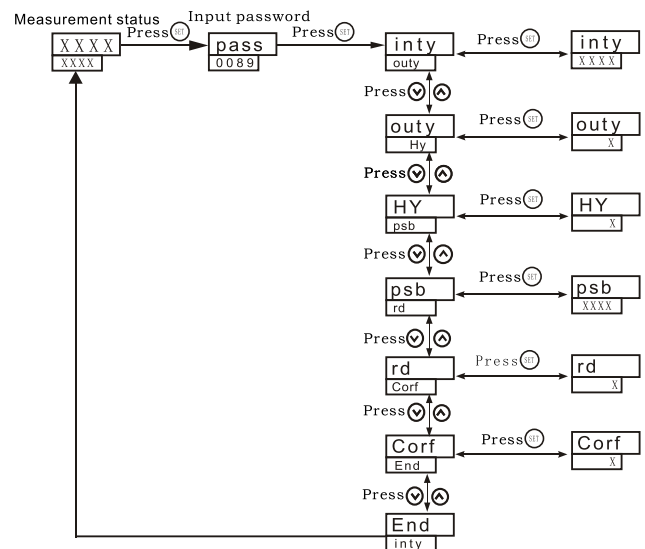
0 : heat 1 : cool

4) Corf : Choice of temperature actions

F and C for the conversion relations:

$F = 9/5^{\circ}\text{C} + 32(^{\circ}\text{C} : \text{degree Celsius}; F : \text{degree Fahrenheit})$

3. Parameters settings procedure



(二) Initiation function parameter (Log in by inputting password 0036 after pressing set key)

1. Detail of PID parameters

Symbol	Description	Range	Factory value
P	P	Proportional band	0.1~99.9%
I	i	Integral time	2~1999 (minute)
D	d	Derivative time	0~399 (minute)
SOUF	SouF	Overshoot suppression factor	0.0~1.0
OT	ot	Proportional cycle	2~199 (minute)
FILT	FiLt	Digital filter factor	0~3
END	End	End	

2. PID parameter setting guide

Note 1 (P): the temperature oscillation is inverse proportion of P value and proportion of the response speed

Note 2 (i): Set the time of integral action which eliminate the offset occurring in proportional control

Note 3 (d): Set the time of derivative action which prevents ripples by predicting output change and thus improves control stability

Note 4 (Souf): Overshooting and undershooting are restricted by the Souf and increase of the parameter can suppress the overshooting

Note 5(ot):In general,control cycle is 2 when outputtype is volt-age
pluse output,and is 5-15 when output type is relay contact output.
Note 6(Filt):0 means the Pvdigital filter is turned off;1,2 and 3
are weak,medium and strong,respectively.

Start AT function: In the constant temperature control, con-stant or
if they can not over-temperature phenomena, canactivate the self-
tuning instrument functions, more app-ropriate instrument calculates
the PID parameters.Long press > keys, flashing lights until the AT
instrument to enter a state of self-tuning; AT lamp goes out, the end
of self-tuning, instrument set by self-tuning PID parameter adjustment
Ending AT function: a long three seconds by the> key, AT light is off
the end of self-tuning, the parameters do not change

- Self-tuning from time to time, there will be a significant
over-temperature, please lower SV values appropriate to
prevent the accident
- Must be properly connected to the corresponding sensor,
heater, otherwise self-tuning unable to complete
- Self-tuning system response time depends on speed, ra-
nging from a few minutes to several hours
- Self-tuning is a function of time on the start line, do not
need to start every time

(三)SV and alarm parameters(Log in by inputing pass-
word'0001' after pressing set key)

1.Detail of SV and alarm parameters

Symbol		Description	Range	Factory value
SV	SV	set value	Arbitrary set	710
Ah1	AH1	Relay J1 pull-in set value		800
AL1	Al1	Relay J1 release set value		900
End	End	End		

Note:In normal display mode,the SV is increased by using
the Up and Down key.

四、Wiring diagram

