REX-C100 PID Intelligent Temperature Controller Universal REX-C100 Thermostat SSR Relay output Universal K PT100 J Type Input

Specifications:

- Display: Dual display for Celsius (C)
- Range: -0-400C (Only when with the factory K type thermocouple)
- Main Output: SSR/Realy
- PID cooling/heating control

- 1 RELAY alarm: Normal open, capacity 250V/3A AC or 30V/3A DC
- 7 different Dual Output combinations with: high / low / high deviation / low deviation /interval / out of interval / breakage alarm
- Accuracy: 0.5%
- Input:K,J,E,R,Js,B,N,T,PT00,Cu50
- Individually programmable PID control parameters.P, I, d, controlling period, digital filter coefficient, and more
- SSR control ready to connect
- Compact design:DIN 1/8 great form-factor to be included/build-in to your product.
- Alarm output: 1 line output, 7 kinds of alarm mode: high/low/high deviation/low deviation/interval/out of interval/breakage alarm.

User manual

First of all, thank you for using our company's products. This series of products is based on the most advanced modern control theory, microcomputers controlled by microcomputers and a smart temperature control instrument with PID self tuning (automatic optimization) function. Please read the instructions in detail before use.

1.Model description

Please refer to the first way to the police

REX □ F □ □-□ * □ □

- Instrument series
- PID self-tuning function
- Instrument size: Wide × height (unit: mm)

Model \ Size	Panel size	Installation hole size
C900	96×96	92×92
C700	72×72	68×68
C400	48×96	45×92
C410	96×48	92×45
C100	48×48	45×45

- Second route alarm:(ALM2)
- Second route alarm:(ALM1)
  - N-no alarm.
  - E-error upper limit alarm
  - F-error lower limit alarm
  - H-absolute upper limit alarm
  - L-absolute lower limit alarm
  - M-relay contact output(RELAY)
  - V-contactless voltage pulse output Drive solid state relay SSR
  - 8-DC current 4~20mA output
  - G-Phase shift pulse output, thyristor
  - g-zero pulse output, thyristor
- Master control output:(OUT)
- Temperature range:(RANGE)
  - 02 is 0-400 degrees centigrade
  - 05 is 0-999 degrees centigrade
  - 06 is 0-1200 degrees centigrade
  - 07 is 0-1372 degrees centigrade
  - 08 is 0-1600 degrees centigrade
- Input signal: (INPUT)
  - K-K type thermocouple
  - J-J type thermocouple
  - S-S type thermocouple
  - D-Pt100 thermal resistance

Example:C100FK02-V*EN

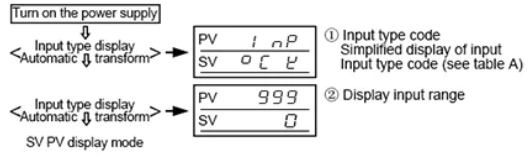
The instrument should be: the size of the panel is 48 X 48; it has PID self setting function; with K thermocouple; temperature range of 0-400℃;contactless voltage pulse output (driving solid state relay SSR); the first alarm for the upper limit of deviation alarm; no second road alarm.

2.Panel name and its functions

NO	Panel description	Content description
1	PV	Measured value / pattern display value
2	SV	Set value / Mode content display value
3	OUT1	Output 1 Indicator lamp
4	OUT2	Output 2 Indicator lamp
5	AT	PID automatic indicator lamp
6	ALM1	Alarm 1 indicator lamp
7	ALM2	Alarm 2 indicator lamp
8	▲	Add keys
9	▼	Reducing key
10	◄	Displacement key
11	SET	Setting, pattern key

3.Operation process

3.1 Opening process



3.2 SV setting mode

In the normal display state of SV/PV, press the “SET” key, make SV display in the flicker state, by pressing the “＜” key, find the number of required temperature, and then press the rise or drop key, set to the required temperature value, after setting, again press a “SET” key, so that the instrument to SV/PV normal display state.

3.3 Parameter setting mode

This parameter is used to set alarm, PID constant and other parameters. In the normal display state, after holding the "SET" key for three seconds, the parameter setting state is displayed in the PV display, the corresponding value is displayed in the SV display, and the lower table parameter symbol is displayed in turn according to the "SET" key.

Note: This machine has an automatic response function. The instrument automatically returns to the main display mode after 30 seconds when the operator forgets to return to the main display mode by setting parameters and modifying operations. Read the following contents before using or modifying parameters. The contents of the following processes, such as meters without this function, will not display this content.

4.Main menu

After the instrument is energized, press the SET key for about 2 seconds to enter the main menu.

Display character	Parameters	Default value	Adjustable range	Explain
SU	SV	100	SLL-SLH	Set value
AL1	AL1	10	SLL-SLH	Alarm value (AC1==0 does not display)
ATU	AT	0	0-1	Self-tuning 0-closes, 1-open

Measurement range of various types of sensors

Display character	Parameters	Adjustable range
b	B	500～999(Customized)

P	P	30	0-999	Proportions
oH	OH	2	1-100	Main control return (P==0)
I	I	120	0-999	The integral term (P==0 does not display)
d	D	30	0-999	The differential term (P==0 does not display)
Ar	Ar	80	0-100	Integral overshoot suppression (P==0 does not display)
T	T	20	1-100	The cycle (P==0 does not display)
SC	SC	0	-199-199	Sensor correction value
LCK	LCK	0	0-111(BIN)	Password lock: 000(Bin) All parameters can be modified 001(Bin) SV AL1 AL2 modifiable 011(Bin) SV modifiable 111(Bin) All non modifiable All other can not be modified

5.Instrument Engineer parameter menu

After the instrument is energized, the "SET" key is pressed down with the "two" key at the same time, After about 3 seconds, the "Cod" is displayed in the PV display. In the "Cod" =001, press the "SET" button in turn to get and display the following parameters circularly:

Display character	Parameters	Default value	Adjustable range	Explain
Sn	SN	K	B,S,R,T,K,N,J,E,PT,Cu	Graduation
SLL	SLL	-50	Sensor corresponding measurable range	Display lower limit
SLH	SLH	999	Sensor corresponding measurable range	Display upper limit
SuL	SUL	-50	The set value corresponds to the settable range	Display lower limit
SuH	SUH	999	The set value corresponds to the settable range	Display upper limit
oud	OUD	0	0-1	Control mode:0-heating 1-refrigeration
ouK	OUK	0	0-1	Output mode:0-switch 1-continuous (1-5V or 4-20mA needs corresponding module support)
AC1	AC1	1	0-6	AL1 alarm mode : 0- without alarm 1 up deviation alarm 2 lower deviation alarm 3 up and down deviation alarm 4 up and down deviation internal alarm 5 process value upper limit alarm 6 process value lower limit alarm
AC2	AC2	0	0-6	AL1 alarm mode : 0- without alarm 1 up deviation alarm 2 lower deviation alarm 3 up and down deviation alarm 4 up and down deviation internal alarm 5 process value upper limit alarm 6 process value lower limit alarm
AH1	AH1	2	1-100	1 error of alarm
AH2	AH2	2	1-100	2 error of alarm
Unit	UNIT	0	0-1	Unit: 0-℃ 1-℉
dF	DF	50	0-100	Filter coefficient
Cot	COT	0.4	0.00-10.0	Display inhibition
FAC	FAC	0	0-100 Overtemperature display limit	0-shutoff function Other values, beyond the set value. The portion of the excess is displayed proportionately Display value = SV + (PV - SV)/FAC

When the Cod is changed to 911, the factory value menu can be restored.

S	S	-50～999(Customized)
r	R	-50～999(Customized)
t	T	-50～999(Customized)
K	K	-50～999
n	N	-50～999
J	J	-50～999
E	E	-50～800
Pt	PT100	-50～800(Customized)
CU	Cu50	-50～150(Customized)

6.Error display function

When the meter does not work properly, the instrument will display message prompts after self diagnosis.

Message	Explain	Elimination method
Err	Instrument failure	Please send and repair
ooo	Input broken line, polarity connection or beyond the input range	Please check whether the input signal is wrong
uuu	Input broken line, polarity connection or beyond the input range	Please check whether the input signal is wrong

7.Matters of attention

1. Check whether the instrument graduation number and power supply voltage are the same as the instrument.

2. Correct wiring according to the wiring diagram.

3. For thermocouple input signal, please use compensating wire with the same material as thermocouple wire.

4.For the thermal resistance input signal,use the same specification of low resistance wire, and the three line. The length is the same as possible.

*5. Pay special attention to the power input line and sensor signal input line can not be confused. Otherwise, the whole instrument is burnt out and can not be repaired. The output terminal can not be strong, The current is short circuited.

6. the instrument power line and signal line should be separated from the high current output line as far as possible. The effect of less electromagnetic radiation on instruments is unavoidable. Select the shield line.

7. When ordering, please note:
① Instrument model
② Distribution number of sensor
③ Instrument output type
④ Measuring range
⑤ Other special technical and functional requirements.

8. ⚠ WARNING

The product is strictly inspected before the factory is out of the factory,such as the product itself that has the right of responsibility for one year because of the quality problems, and does not bear any other joint liability. Damage caused by self dismantled or improper use is not within the scope of warranty.

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n	N	-50～999
J	J	-50～999
E	E	-50～800
Pt	PT100	-50～800(Customized)
CU	Cu50	-50～150(Customized)

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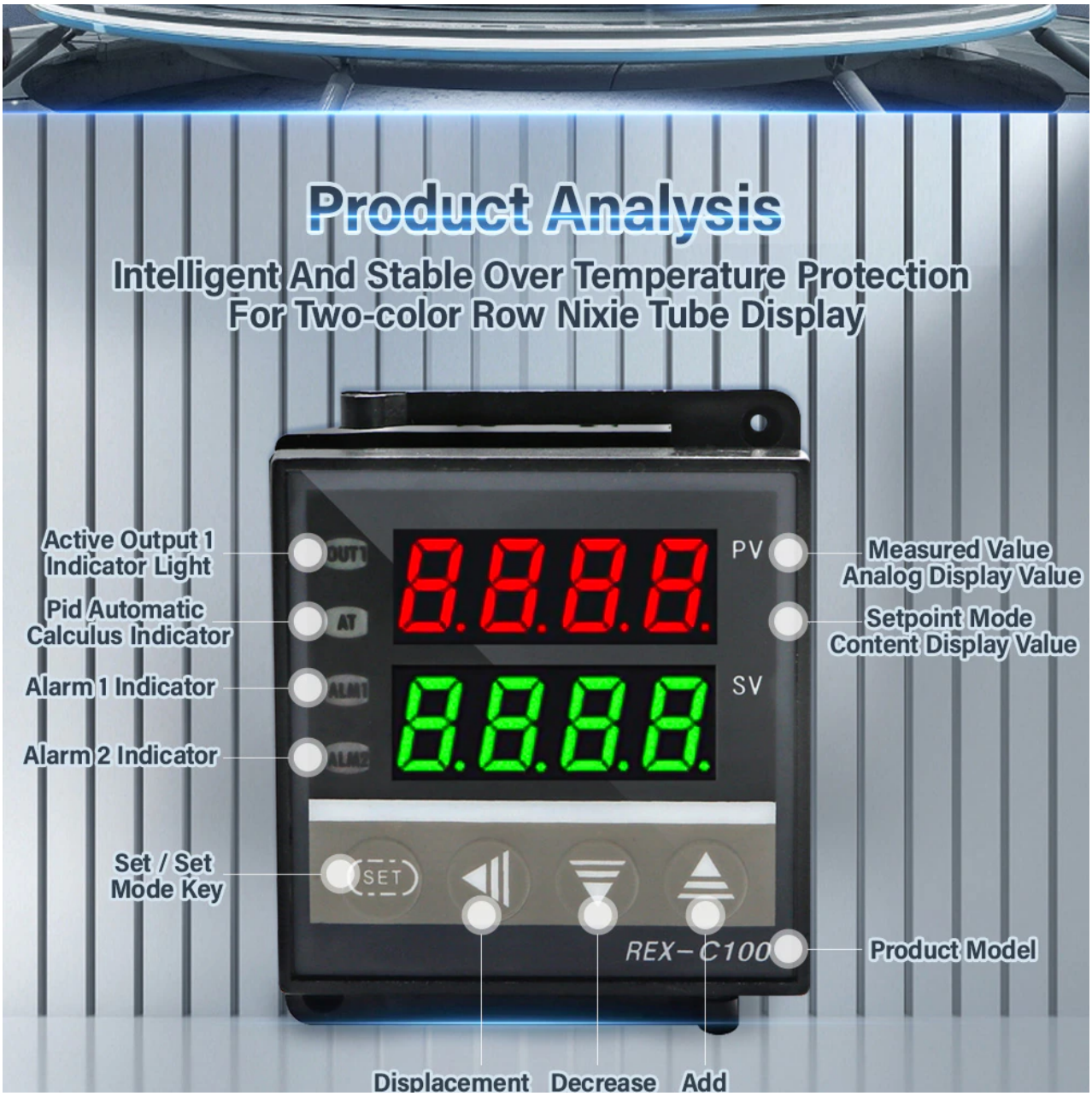
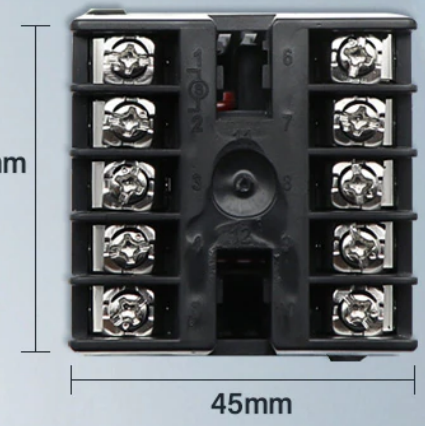
Industrial Anti-Interference
High Air Control Precision, Compact Structure, Good Anti-interference Performance,Long Service Life and Automatic Protection Function
OUT
AT
ALM1
ALM2
PV
SV
SET
REX-C100
10KA
GR Edhtp
±2KV
Fast Transient Burst
1KV
Radiation Resistance
8KA
Electrostatic Discharge Protection
2KV
Lightning Protection


Product Analysis
Intelligent And Stable Over Temperature Protection
For Two-color Row Nixie Tube Display
Active Output 1 Indicator Light
Pid Automatic Calculus Indicator
Alarm 1 Indicator
Alarm 2 Indicator
Set / Set Mode Key
PV
Measured Value Analog Display Value
Setpoint Mode Content Display Value
SV
REX-C100
Product Model
Displacement
Decrease
Add

Key Key Keys



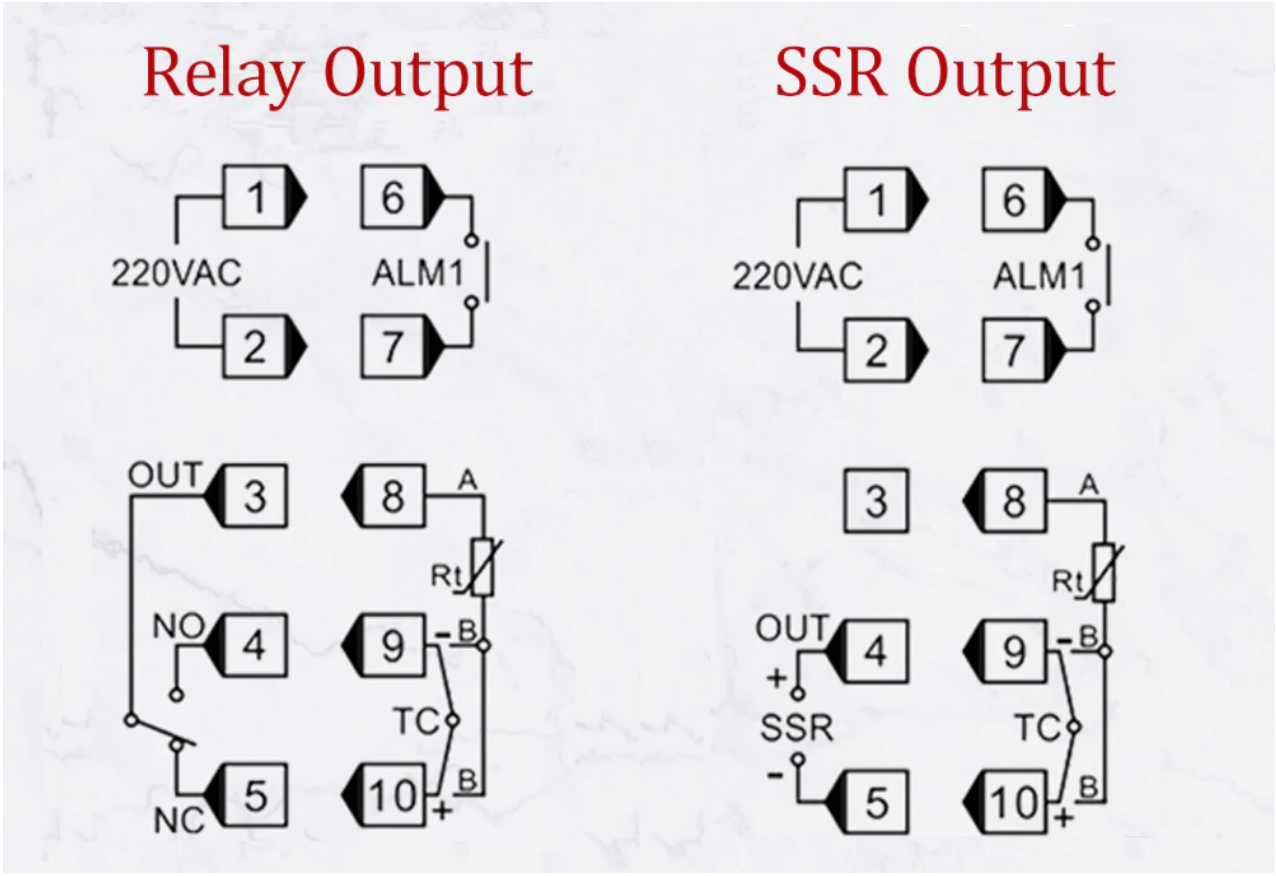
Basic Product Information | Intelligent Temperature Controller

Product Model: Rex Series
Working Voltage: 100-240V AC 50hz / 60hz
Input Method: Pt100, Cu50, K, S, E, J (Universal Input)
Output Mode: Relay Solid State Relay (Ssr) Optional
Alarm Range: Full Range Free Setting
Main Function: Temperature Control And Constant Temperature
Service Environment: 0 ~ 50°C, 30 ~ 85% Rh Non Corrosive Gas Occasions
Insulation Strength: 1500vac / Min

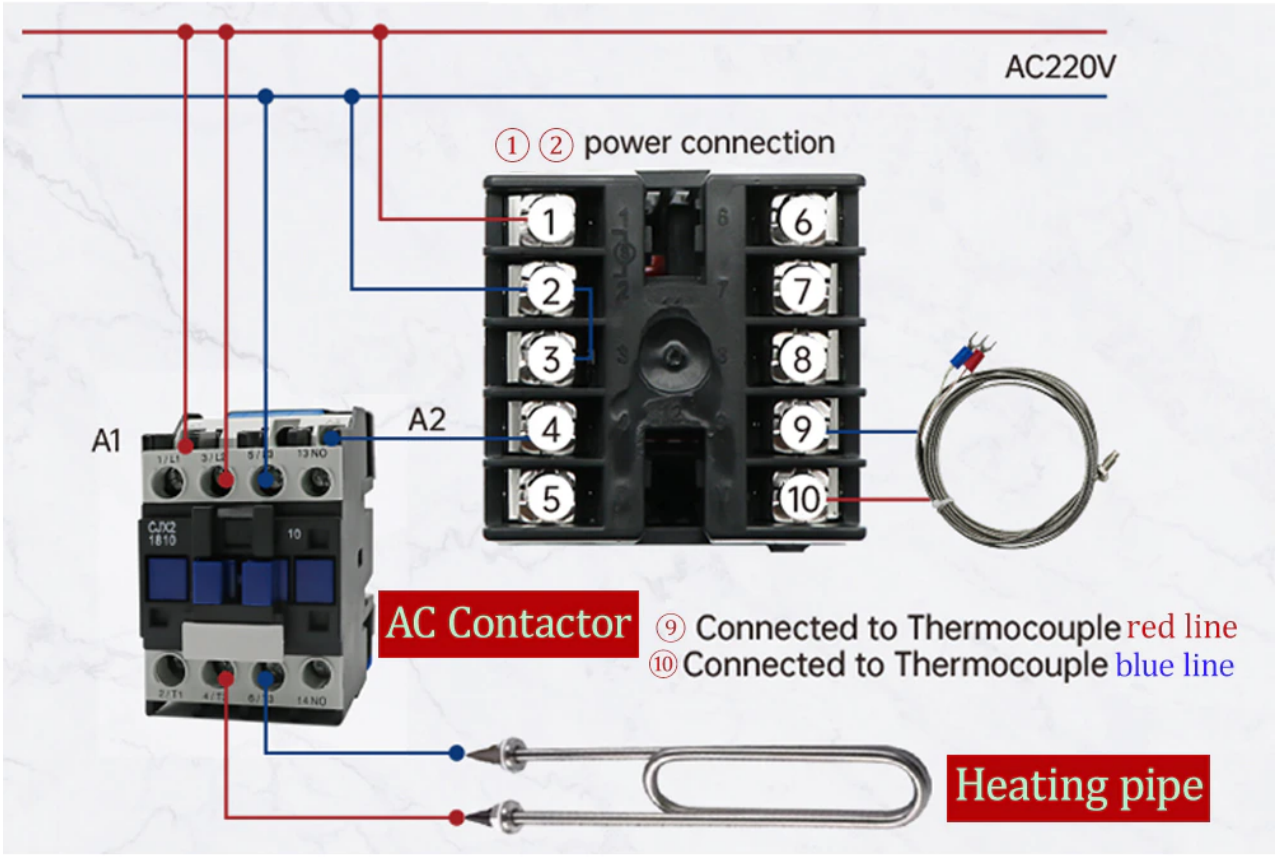
PID Control


PID Control
OUT1
AT
ALM1
ALM2
PV
SV
SET
REX-C100
Temperature Control And Stability
Strong Adaptability
Accurate Data
Feel Comfortable
Removable Housing
High Quality Transformer With


Double-layer Circuit Board
REX-C100FK02-V*AN
0-400℃
SSR
K
2021N028557
220V AC 50/60Hz
INSTRUMENT INC
TS
PV
SV
Product Wiring

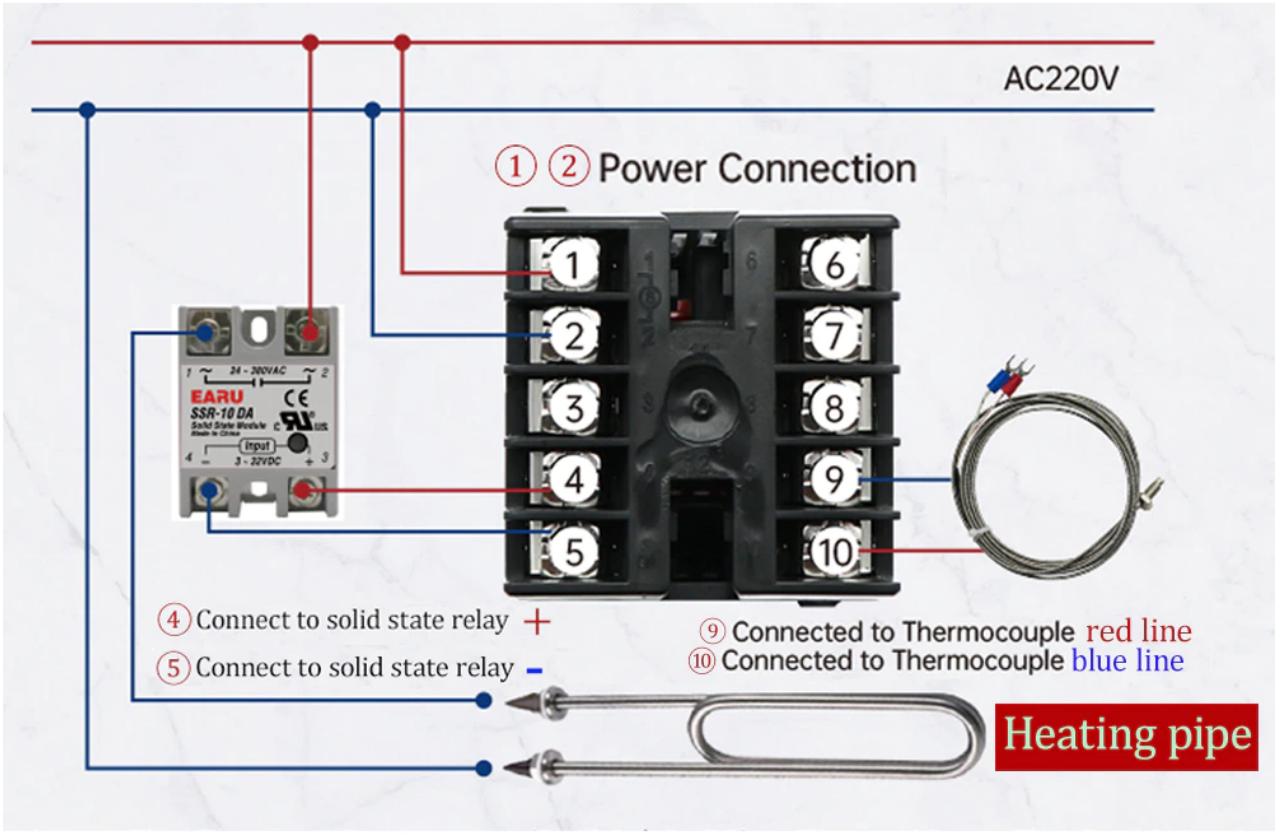

Relay Output
1
6
220VAC
ALM1
2
7
OUT
3
8
A
Rt
NO
4
9
B
TC
NC
5
10
B
SSR Output
1
6
220VAC
ALM1
2
7
3
8
A
Rt
OUT
4
9
B
SSR
TC
5
10
B

Relay Wiring Diagram



Note: The thermal resistance (PT100/Cu50) has three wires, the red wire is connected to ⑧, and the other two wires are connected to ⑨ and ⑩ at will.

SSR Wiring Diagram



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OUT1
AT
ALM1
ALM2
PV
SV
SET
REX-C100

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