REX Series Temperature Controller User Manual

Before using this product, please carefully read the instructions for the proper use and proper preservation。
(Please read the operating manual for the proper use of this product before using.)

Wiring warning

．To prevent instrument damage or failure, the choice of the appropriate fuse protected power cord and input / output lines to prevent the current impact。

．To prevent electric shock or instrument failure, power only after the completion of all the wiring work.Do not use near flammable gases.

．Fire, explosion or damage to the instrument, flammable, explosive gas, vapor emissions places isprohibited.Do not modify the instrument.

．To prevent the accident or instrument failure, non-altered instrument.

SUMMARY

REX-C □ □ □ Series Intelligent industrial accommodometer / temperature controller is dedicated microprocessor multifunction regulating instruments.It uses a switching power supply and surface mount technology (SMT), and thus the instrument is compact, reliable performance, unique self-diagnostic function, the self-tuning function and intelligent control functions, so that the operator can get good results by a simple operation.Main features:Multiple thermocouple, RTD, analog signal free to enter, free to set the range, the software tune zero full-scale, cold end separate temperature measurement, auto-zeroing amplifier accuracy of better than 0.5% FS. Fuzzy theory combined with conventional PID control fast and smooth, state-of-the-art setting program.Output optional: relay contact, logic level, SCR single-phase, three-phase over zero or phase shift trigger pulse, analog, attach Road definable alarm contact output.

The main technical indicators

1.Measurement Precision: ± 0.5%FS

2. Cold junction Compensation error: ± 2℃ (0-50 ℃ within the software correction)

3. Resolution: 14bit

4. Sampling Period: 0.5 Secretary

5. Power Supply: AC 85-265V 50Hz

6. Control Mode: industrial-grade expert self-tuning PID technology, compared with the traditional PID control with rapid temperature control, fast response, small overshoot, high precision control

7. Insulation Resistance: > 500m Ω (500VDC)

8. Dielectric Strength: 1500VCA/min

9. Power Sonsumption: < 10VA

10. Occasions Environment :0-50 ℃ ,30-85% RH non-corrosive gases

Model defined selection

Model Identification

REX-C □ □ □ – □ □ □ □ – □ * □ □
　　　　①　②　　③　　④　⑤⑥

①Meter Size (see Table 1)
②Control Mode
　F:PID control and automatic speech inverse action
　D: PID control automatically play a positive action
③Input Type and Range (see Table 2)
④Main Output
　N: No output
　M: Relay contact output
　V: the voltage pulse output (SSR)
　8 : Current output
　T: SCR zero output
　G : SCR shift like pulse output
⑤The First Channel Alarm Type (ALM1)
　N: not set alarm
　A: upper limit deviation alarm
　B: lower limit deviation alarm
　C: up and down significant deviation alarm
　D: range alarm
　E: with standby limit deviation alarm
　F: lower limit deviation alarm with standby
　G: lower limit deviation alarm with standby
　H: upper limit input value alarm
　J: lower limit input value alarm
　K: upper limit input alarm with standby
　L: lower limit input alarm with standby
⑥Second Channel Alarm Type ALM2 (same as ALM1)

Table 1　　　　　　　　　　　　　　　　　　　Unit: mm

Model	Surface frame (W xH)	Shape (W x H x D)	Hole size (W x H)
REX-C100	48x48	44x44x100	(44+1) x (44+1)
REX-C400	48x96	44x92x100	(44+1) x (92+1)
REX-C700	72x72	68x68x100	(68+1) x (68+1)
REX-C900	96x96	92x92x100	(92+1) x (92+1)

Table 2　Input Scope Table

	Input	MeasureScope	Code	Measure Scope	Code	Measure Scope	Code
Thermo Couple	K	0-200℃	K01	0-400℃	K02	0-600℃	K03
		0-800℃	K04	0-1000℃	K05	0-1200℃	K06
		0-1372℃	K07	0-100℃	K13	0-300℃	K14
	J	0-200℃	J01	0-400℃	J02	0-600℃	J03
		0-800℃	J04	0-1000℃	J05	0-1200℃	J06
	R #1	0-1600℃	R01	0-1769℃	R02	0-1350℃	R03
	S #1	0-1600℃	S01	0-1769℃	S02		
	B #1	400-1800℃	B01	0-1769℃	B02		
	E	0-800℃	E01	0-1000℃	E02		
	N	1-1300℃	N01	0-1300℃	N02		
	T #2	-199.9-400.0℃	T01	-199.9-100.0℃	T02	-199.9-200.0℃	T03
		0-350.0℃	T04				
Thermal Resistance	Pt100	-199.9-649.0℃	D01	-199.9-200.0℃	D02	-100-50℃	D03
		-100-100℃	D04	-100-200.0℃	D05	0.0-50.0℃	D06
		0.0-100℃	D07	0.0-200.0℃	D08	0.0-300.0℃	D09
		0.0-500℃	D10				
	Cu50	-50.0-150℃	P01	0.0-150.0℃	P02	0.0-100.0℃	P03
		0.0-50.0℃	P04	-50.0-100.0℃	P05	-50.0-50.0℃	P06
		-50-150℃	P07	0-150℃	P08	0-100℃	P09
		0-50℃	P10				
Standard ignal	0-5VDC	0.0-100.0℃	401				
	1-5VDC	0.0-100.0℃	601				
	0-20Ma#3	0.0-100.0℃	701				
	4-20Ma#3	0.0-100.0℃	801				

#1 Can not guarantee the accuracy scope of 0-399 ℃.
#2 To ensure accuracy in the scope of -199-100 ℃.
#3 A resistor of 250Ω is needed between the input terminals external

INSTALLATION

Precautions

1.Instrumentation installed In the following environments
●Atmospheric Pressure: 86-106kpa
●Ambient Humidity: 0-50℃
●Ambient temperature: 45-85% RH
2. Installation hould pay attention to the following circumstances
●Drastic changes in the ambient humidity may cause condensation
●Corrosive, flammable gas
●Direct vibration or shock theme structure
●Water, oil, chemicals, smoke or steam pollution
●Excessive dust, salt, or metal powders
●Air conditioning blowing straight
●Direct sunlight
●The accumulation of heat radiation

Installation Process

1. Panel cutout disk played a the rectangular square hole to install the meter.
2. Multiple instrument installation, the distance between the left and right holes should be greater than 25mm, up and down two holes distance should be greater than 30 mm.
3. Embedded in the instrument panel cutout within.
4. Instrument mounting hole into the mounting bracket.
5.Pushed tight mounting bracket to the instrument with the disk is firmly bonded to tighten the screws.

Wire Connection

Wiring

(1) thermocouple input, you should use the corresponding compensation wire.

(2) RTD input, you should use the same cross-sectional area of the low resistance, the same material, the same length of three wire.

(3) input signal line should be away from the instrument power cord, power supply and load lines to avoid noise

(4) The instrument power cord is usually not the power supply line interference, such as interference, noise filter must be used, and using a noise filter should note the following:

　1) shorten the power cord plug full twist pitch, the shorter the distance, the better.

　2) install a noise filter on the dashboard and grounded to minimize the the short noise filter output erminals, the wiring distance

　3) Do not install insurance, and switch the noise filter output, this will reduce the effect of the noise filter

(5) The power is turned on after 5-6 seconds preparation time meter relay output external connection loop signal use, and with a time delay relay.

(6) Do not over tighten the terminal screws, use the appropriate terminal screw lug.

Twisted twist pitch / INSTRUMENT POWER / Noise filter / Eequipment Power Terminal / Shorten the spacing / Keep the shortest distance