SRE04F FLOATING/MODULATING THERMOSTAT

DESCRIPTION

SRE04F floating/modulating thermostat is mainly used in central air-conditioning and heating system. With NTC temperature transmitter, it can provide temperature control for central air-conditioning fan coil cool/heat motorized valve or other actuators by the way of proportional and integral. It can also control the operation of the fan of fan coil unit and adjust the fan speed at the same time. When the electronic thermostat is power off (OFF), it can output return signal to make the motorized valve or other actuators return.

CHARACTERISTICS

- ◆With system switch and fan speed switch
- ◆Inside or outside long-distance temperature sensitive element (NTC thermistor)
- ◆Cool/heat switching-over---clockwise or anti-clockwise direction signal output (summer or winter)
- ◆External or internal temperature adjustment for optional
- ◆Auto-return function when turn off
- ◆Overtime protection function by output action signal
- ◆Proportional and modulating
- ◆Power surge and instant pulse protection
- ◆With ABS fireproof plastic cover, compliance with UL-94 standard
- ◆With flexible installation and convenient wire connection

TECHNICAL DATA

PRODUCT NAME	SRE04F-C1	SRE04F-C4
POWER SUPPLY	AC24V	AC220V/230V
OUTPUT VOLTAGE	AC24V (1A)	AC220V/230V (1A)
POWER CONSUMPTION	2VA	12VA
FAN VOLTAGE	AC24V 3(1A)	AC220V/230V 3(1A)
CONTROL PRECISION	1℃/2℃, Ex-factory setting is 1℃	
CONTROL RANGE	10℃ - 30℃	
INTERNAL TEMPERATURE ADJUST RANGE	0~6 point, Factory setting: 3 (See corresponding temperature value at Function Selection Diagram)	
RETURN TIME	≥70s or ≥320s (for optional)	
OVERTIME PROTECITION TIME	≥70s or ≥320s (for optional)	
SENSITIVE ELEMENT	NTC thermistor 10KΩ (when at 25 ℃)	
WORKING TEMPERATURE	0 – 55 ℃	
STORAGE TEMPERATURE	-40 – 55 ℃	
AMBIENT HUMIDITY	90% RH maximum	

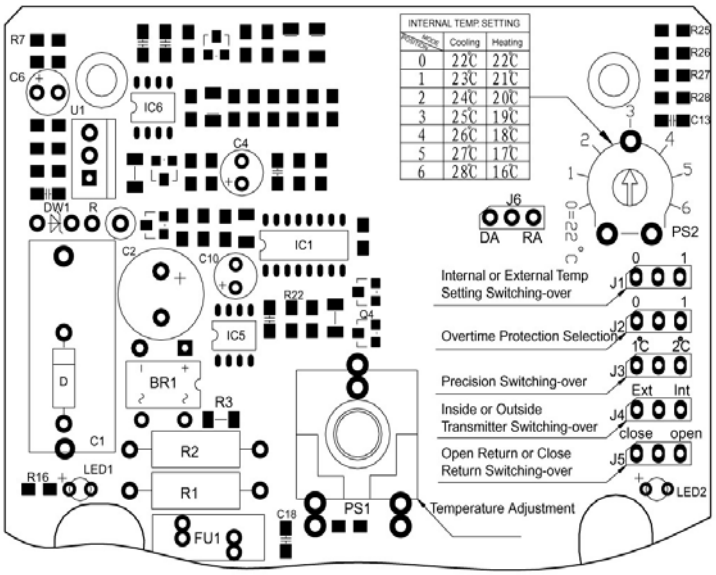
FUNCTION DESCRIPTION

1. **Sensor:** The NTC thermistor is set inside the thermostat. When using, put the jumper J4 to “Int” position; if the NTC thermistor sensor is to be connected outside, the sensor wire will be connected with the RX-G0 on terminal P3, and put the J4 jumper to “Ext” position.
2. **Switch:** SW1 is the system power switch and cool/heat (summer and winter) switch. When the switch moves to “COOL” position, the system power will be on, and the action signal will be output in clockwise direction. When the switch moves to “HEAT” position, the system power will be on, and the action signal will be output in anti-clockwise direction. When the switch moves to “OFF” position, the system will be return and power off.
3. **Return function:** When the thermostat is turn off, it will output a ⩾70s or ⩾320s return signal, the actuator will return to the original state, and then the whole system will be power off. Customers can select the proper return time according to the fully stroke time of the actuator (Please indicate when placing orders.) Select the return signal position phase by jumper J5. (Factory setting: “CLOSE”)
4. **Proportional adjustment:** Change the jumper J3，can select 1℃ or 2 ℃ temperature control proportional range (Control precision).

5. **Temperature adjustment:** When choosing the external temperature adjustment, move the jumper J1 to "0" position. Adjust the temperature according to the external knob scale of the thermostat. At this time, the internal temperature adjustment potentiometer PS2 doesn't work. When choosing the internal temperature adjustment, move the jumper J1 to "1" position. Adjust the PS2 potentiometer; select the temperature scale (0-6), the external temperature adjustment potentiometer PS1 doesn't work. (J1 is set to "0" position when ex-factory). See the temperature value corresponding to the temperature scale at Function Selection Diagram.
6. **Output signal:** The "Y-G0" on terminal P3 is the 0~10VDC output signal; the "C-COM–O" on terminal P4 is the action output signal. It is to control the bi-direction motorized valve or other actuators.
7. **Output signal overtime protection:** When the signal of the actuator continuously outputs and exceeds the time setting limit (⩾70s or ⩾320s), this signal will be cut off automatically to prevent the motor overtime working. Customers can select the proper overtime protection time according to the fully stroke time of the actuator (Please indicate when placing orders.) And Jumper J2 can be used to select or cancel the overtime protection function. When J2 is at "1" position, it means select the overtime protection function; when J2 is at "0" position, it means cancel this function. (Factory setting: "1")
8. **Fan:** The HIGH-MED-LOW on terminal P1 is the power supply for the fan at HIGH, MEDIUM, LOW speed.

FUNCTION SELECTION DIRGRAM

PS1—External temperature adjustment potentiometer
PS2—Internal temperature adjustment potentiometer
Position: 0 1 2 3 4 5 6
Cooling mode：22 23 24 25 26 27 28℃
Heating mode：22 21 20 19 18 17 16℃
J1—Internal / External temperature adjustment selection
J2—Overtime protection selection
J3—Proportional band selection (control precision)
J4—Inside / outside connecting temperature sensor (NTC thermistor) selection
J5—Return signal phase selection



WIRING DIAGRAM