

SAS816FHL-0 Thermostat for floor heating

SAS816FHL-0 room thermostat is a non-programmable thermostat designed for hot water radiant heating systems and electric heating cable system. The thermostat can be controlled by build-in sensor or remote sensor.

SPECIFICATION

Power source	100~240VAC 50/60HZ
Load current:.....	250VAC 16A
Room temperature setting range.....	5°C~30°C (41°F~90°F)
Floor temperature setting range.....	5°C~ 40°C(41°F~99°F)
Accuracy.....	±1°C or ±1°F
Dimensions.....	86mm×86mm×32mm
Color.....	White

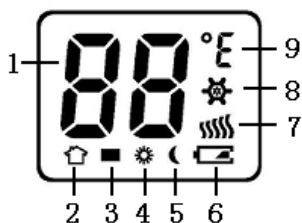
FEATURE

- LCD display shows room temperature
 - Optional economic operation or comfort operation
 - Optional temperature display of Celsius or Fahrenheit scale
 - Optional detective sensor: Build in sensor or external floor sensor.
-

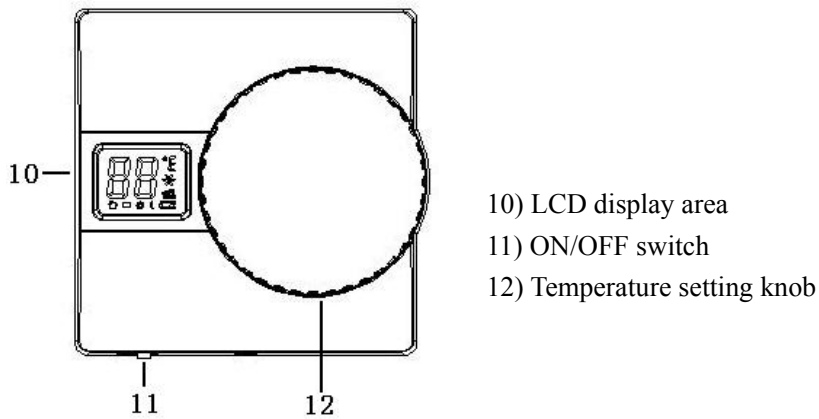
IMPORTANT SAFETY INFORMATION

- Always turn off power at the main power source by unscrewing fuse or switching circuit breaker to the off position before installing, removing, cleaning, or servicing this thermostat.
 - Read all of the information in this manual before installing this thermostat.
 - Only a professional contractor should install this thermostat.
 - All wiring must conform to local and national building and electrical codes and ordinances.
 - This thermostat has a removable fuse to protect the system from damage. If system is not operating properly, check wiring and replace fuse if necessary.
 - Use this thermostat only as described in this manual.
-

KEYBOARD, DISPLAY AND SWITCH DESCRIPTION



- 1) Shows current temperature, when it is flashing, it shows set temperature
- 2) Shows room temperature mode
- 3) Shows floor temperature mode; (Point 2&3 Shows room thermostat with floor limitation sensor control mode)
- 4) Shows comfort mode, it indicate saving energy.
- 5) Shows saving energy mode(sleep mode).
- 6) Low battery indication.
- 7) Heating output indication
- 9) °C and °F readout



MOUNTING AND WIRING DIAGRAM

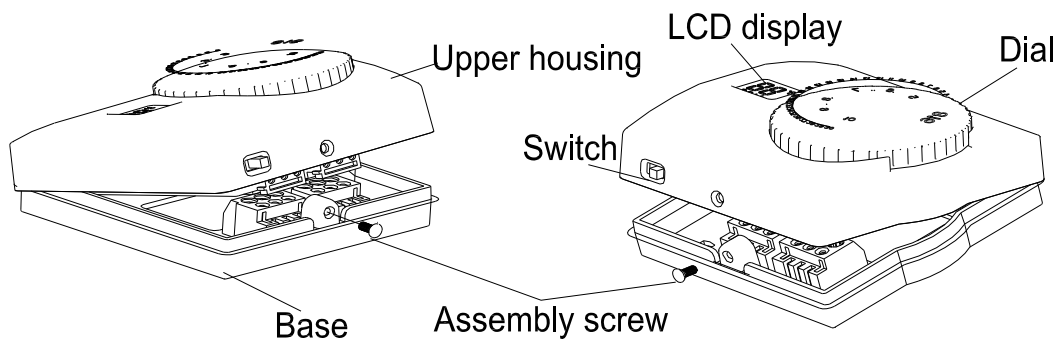


Figure 1

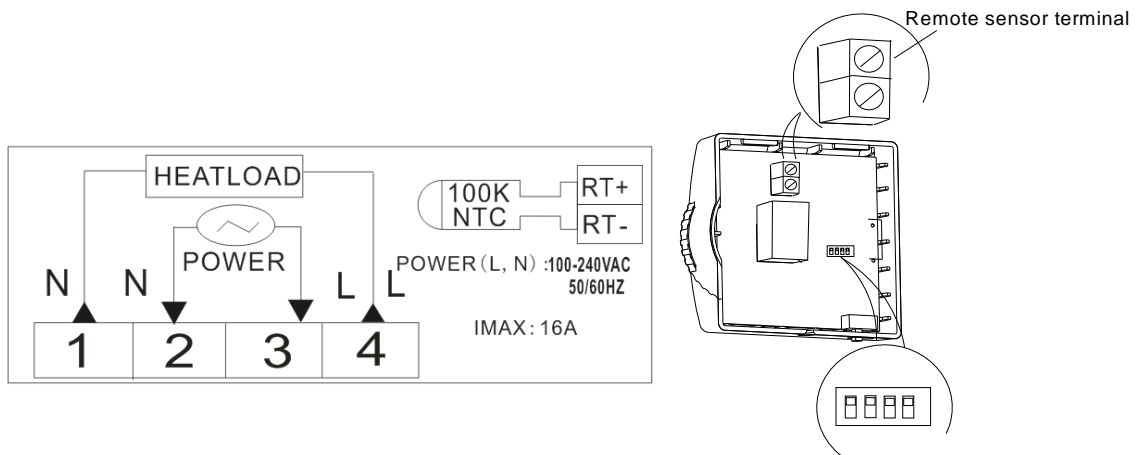


Figure 2

Figure 3

1. Remove assembly screws from the base of thermostat. Gently pull the upper housing straight off the base. Forcing or prying on the thermostat will cause damage to the unit. See fig.1.
2. Connect wires beneath terminal screws on the base using appropriate wiring schematic. See fig.2.
3. The floor sensor cable must be installed to terminal block. (See fig.2) in heating type F or RF, otherwise thermostat will shut down heating out put and display will show **E2** indicate floor sensor problem.
4. Push power base into wall.

5. Using mounting screws mount the power base to the wall. Place a level against bottom of base, adjust until level, and then tighten screws. (Leveling is for appearance only and will not affect thermostat operation.)
6. Replace the upper housing on the base and fix the upper housing by removed assembly screw

CONFIGURATION DIL SWITCH SETTINGS

Slide the DIL switches to the settings required

Using following approach to set the configuration switch.. (see Figure 4)

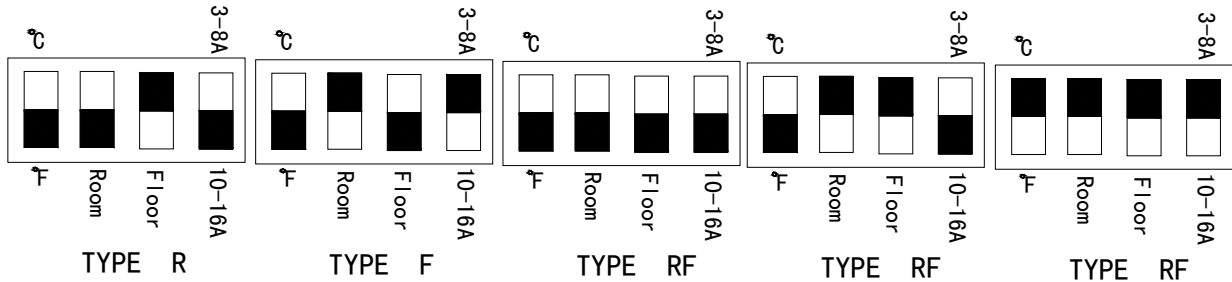


Figure 4

OPERATION

1. Select °C and °F readout

Set the switch to °C, temperature in the display will be shown in °C readout.

Set the switch to °F, temperature in the display will be shown in °F readout.

2、3. Select type of heating

When installing the thermostat you need to choose the type of heating and thus which sensors should be used. See Figure 4. You have three options:

Set the switch to Room, indicates the thermostat is in TYPE R.

Set the switch to Floor, indicates the thermostat is in TYPE F.

Set the switch 2、3 in the same direction, indicates the thermostat is in TYPE RF

- **Type R: Room Thermostat**

Application: A floor sensor is not present, and cannot be installed. The unit will be controlled via room sensor in the thermostat and the thermostat will determine to activate/deactivate heating system by comparing set temperature with room temperature. When room temperature reached or lower than setting temperature, the thermostat will start heat mode. When room temperature reached or higher than setting temperature, it will stop heating.

- **Type F: Floor Thermostat**

Application: Constant temperature on the floor in bathrooms and other rooms where a comfortable warm surface is required. The unit will be controlled via external floor sensor. It will determine to activate/deactivate heating system by comparing set temperature with actual floor temperature. When floor temperature reached or lower than setting temperature, the thermostat will start heat mode. When floor temperature reached or higher than setting temperature, it will stop heating.

- **Type RF: Room thermostat with floor limitation**

Application: Control of room temperature in living rooms etc. The thermostat will determine to activate or deactivate heating system by comparing set temperature with the actual room temperature and comparing the preset floor temperature limitation with actual floor temperature. The maximum floor limitation is 40°C and the minimum floor limitation is 5 °C. On condition that the floor temperature is between minimum limitation and the maximum floor temperature limitation, When floor temperature $\leq 5^{\circ}\text{C}$ (41°F), the thermostat will start heat until the temperature $> 5^{\circ}\text{C}$ (41°F); When floor temperature $\geq 40^{\circ}\text{C}$ (99°F), the thermostat will stop heating until the temperature $< 40^{\circ}\text{C}$ (99°F) ..Then it is working smoothly. In normal operating conditions, When room temperature reached or lower than setting temperature, the thermostat will start heat mode. When room temperature reached or higher than setting temperature, it will stop heating.

4. Select the output of load compensation

Set the switch to 3-8A, indicates the load compensation is 3-8A.

Set the switch to 10-16A, indicates the load compensation is 10-16A.

5. Setting temperature mode

Turn on the thermostat ,rotate the setting knob, then enter the temperature setting mode, the temperature flashing is current setting in LCD .No rotation within 5s, thermostat displays room or floor temperature automatically.

5. Error Code

E1 flashing in the display: Room sensor short circuit. Thermostat shut down all output

E2 flashing in the display: Room sensor broken. Thermostat shut down all output.

E3 flashing in the display: Floor sensor short circuit. Thermostat shut down all output

E4 flashing in the display: Floor sensor broken. Thermostat shut down all output

CUSTOMER ASSISTANCE

After reading this guide, if you have any question about the operation of your thermostat, please contact your installer or service provider.