

SAS908FHL-0/B FLOOR HEATING
ROOM THERMOSTAT

INSTRUCTION

908FHL-0/B Thermostat for floor heating

908FHL-0/B is a programmable thermostat designed for floor warming application or helping to limit floor temperature. This thermostat can be used for hot water radiant heating systems and electric heating cable system.

SPECIFICATION:

Power source	230VAC
Relay contact:.....	230VAC 16A
Room temperature setting range.....	5 to 35
Floor temperature control range.....	5 to 60
Accuracy.....	± 1 or ± 0.5
Dimensions.....	115mm X 90mm X16mm
Selection of control mode.....	Room temperature control or Mix room temperature and floor temperature control mode.
Color.....	White

FEATURE:

- Large LCD display
 - The screen displays the set temperature and the room temperature simultaneously
 - Permanent user setting and program setting retention during power loss,
 - Optional temperature display of Celsius or Fahrenheit scale
 - 2-sensor control mode. MODE 1: Room sensor control mode, MODE 2: Mix room temperature and floor temperature control mode.
 - Optional display floor temperature
 - Display temperature recalibrates
 - Optional remote control
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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

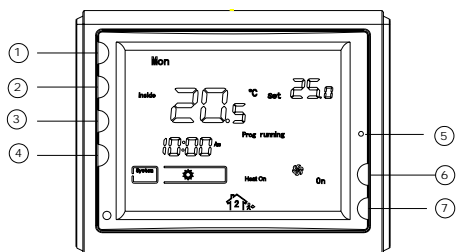


Figure 1

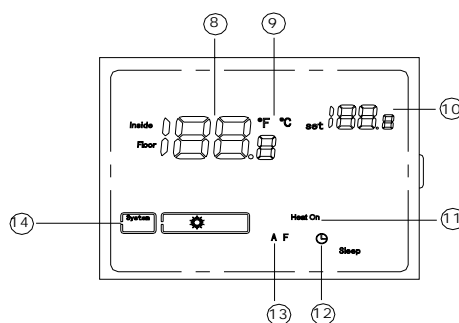


Figure 2

- Power on/off button
- Alternative inquiry button for room temperature and floor temperature
- Shift button for or readout
- Sleep mode button
- Reset button
- Raise Temperature setting button
- Lower Temperature setting button
- Shows current room temperature.
- Shows temperature display in or
- Setting temperature
- Shows the thermostat is calling for heat
- Shows when the thermostat is in sleeping mode.
- A: Shows when thermostat is in the room temperature control mode
- AF: Shows when thermostat is in Mix room temperature and floor temperature control mode.
- Shows current system mode.

INSTALL THE THERMOSTAT

ATTACH THERMOSTAT BASE TO WALL

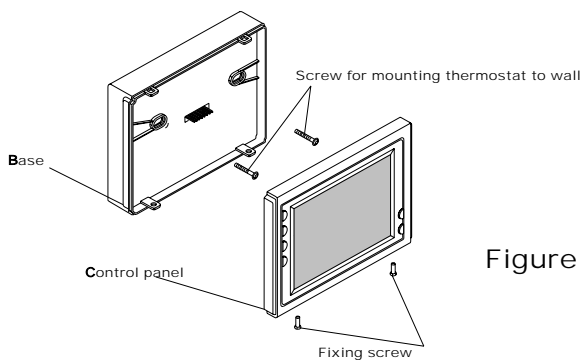


Figure 3

1. Remove 2 screws from the bottom of thermostat. Gently pull the control panel straight off the base. Forcing or prying on the thermostat will cause damage to the unit.
2. The floor sensor cable must be installed to terminal block 1 and 2. (See figure 4) If the floor sensor does not installed in AF mode, display will show **Er** when inquiry for the floor temperature and thermostat will shut down heating output.
3. Connect the rear thermostat wires (figure 5) to the power and to the load using solderless connectors for copper wires.
4. Using two 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.)
5. Install two fresh “AA” alkaline batteries in battery compartment. Be sure to match positive (+) ends of batteries with positive (+) battery terminals in the battery compartment.
6. Replace control panel on the power base and fix power base and control panel by removed two screws.

WIRING DIAGRAM

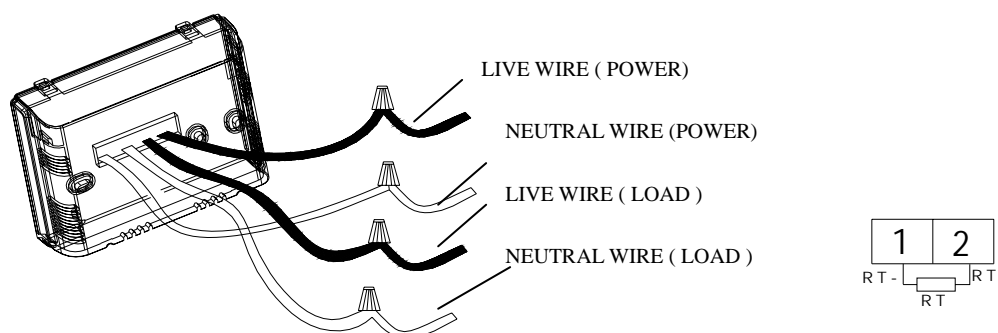


Figure 4

CHECK THERMOSTAT OPERATION

There are two operation modes, which can be selected in configuration menu item 7

MODE A: Room temperature control mode.

The unit will be controlled via air sensor in the thermostat and the thermostat will determine to activate/deactivate floor heating system or other heating system by comparing set temperature with room temperature. Press **▲** to adjust thermostat setting above room temperature 1 **▲** in fast heating mode or 3 **▲** in slow heating mode, See configuration menu item 8. The heating should begin to operate immediately

MODE AF: Mix room temperature and floor temperature control mode.

MODE AF means room temperature control with floor limiter. This mode is used in floor heating system. The floor sensor cable must be installed to terminal block 1 and 2. If the floor sensor does not installed in AF mode, thermostat will shut down heating output and display will show **Alarm**. Display will show **Er** when inquiry for the floor temperature if floor sensor is not connected.

The thermostat will determine to activate or deactivate floor heating system by comparing set temperature and room temperature and preset floor temperature limitation and actual floor temperature. Please refer to configuration menu 5 about floor temperature limitation setting. Suppose the floor temperature is not over floor limitation. Press **▲** to adjust thermostat setting above room temperature 1

in fast heating mode or 3 in slow heating mode, See configuration menu item 8. The heating should begin to operate immediately. If the floor temperature is over floor limitation, thermostat will shut down heating no matter there is a call for heating.

OPERATION

1. Configuration Menu

The configuration menu allows you to set certain thermostat operating characteristics to your system or personal requirements. Shortly press button to make sure the thermostat is in off mode. Hold button for 3 seconds to enter the configuration menu. The display will show the first item in the configuration menu. Press button to shift to the next menu item. Use , to select. To exit the menu , press button revert to the off mode . If no buttons are pressed within 1 minute the thermostat will exit the menu. To revert to factory default setting , push , button in a same time for 3 seconds. Display will show “DEF” blinking 3 times and return to Menu item 1 indicates all the configuration setting has reverted to factory default setting.

The configuration menu chart summarizes the configuration options. An explanation of each option as follows:

Step	Press buttons	Displayed (factory default)	Press , to select	Descriptions
1		01 (0)	-3 --- +3	Select temperature display adjustment higher or lower
2		02 (35)	18 —35	Select maximum room setting temperature for heating
3		03 (5)	5 —22	Select minimum floor temperature limitation
4		04 (28)	22 -60	Select maximum floor temperature limitation
5		05 (rd)	rd,rE	Memorize option before power failure.
6		06 (1)	1 , 2 , 3	Select display backlight mode
7		07 (AF)	AF/A	Control mode option : A : Room temperature control mode AF : Mix room temperature and floor temperature control mode.
8		08 (SL)	FA/SL	Select fast heating or slow heating
9	Press button revert to the program operation			

1) Select temperature recalibrates Adjustment 3 LO to 3 HI –

You can adjust the room temperature display up to 3 higher or lower. Your thermostat was accurately calibrated at the factory but you have the option to change the display temperature to match your previous thermostat. The current or adjusted room temperature will be displayed on the right side of the display.

2) Select maximum temperature setpoint

This feature provides a maximum setpoint temperature. The default setting is 35 , It can be changed between 18 to 35

3) Select minimum floor temperature limitation.

This feature provides a minimum setpoint temperature. The default setting is 5 , It can be changed between 22 . If actual floor temperature is below minimum floor temperature limitation in AF mode, thermostat will activate heating even when the room temperature is higher than set point.

4) Select maximum floor temperature limitation

Press to select you desire floor temperature limitation. It can be changed between 22 -60 . If the floor temperature is over maximum floor temperature limitation in AF mode, the thermostat will shut down the heating even when the room temperature is lower than set point.

5) Memorize option before power failure

re” means the thermostat will Memorize its ON or OFF status before power loss. After power supply comes to normal again, the thermostat will remain ON or OFF according to what it is before power loss. “rd” means no matter the thermostat is switched on or off before power loss, after the power supply comes to normal again the thermostat will keep power off.

6) Select display backlight mode

The display backlight improves display contrast in low lighting conditions. Select 1 the light will be on when any button of the thermostat is touched. Select 2 the display will keep the light on continuously. Select 3 the display will keep the light off. Factory default is 1.

7) Select temperature control mode.

There are 2 temperature control modes: Mode A and Mode AF. Mode A is room temperature control mode.

Mode AF is mix temperature control and floor temperature control mode.

8) Select fast heating or slow heating

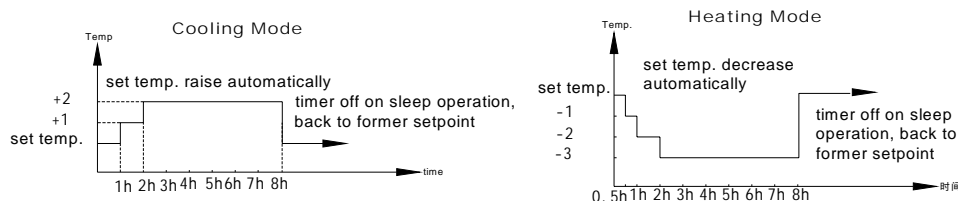
Select FA to start heating immediately when the setpoint is 1 above the room temperature. Select SL to start heating only when the setpoint is 3 above the room temperature.

2. Manual Operation

1) Sleep operation

Push sleep operation button , appears indicate during the following 8 hours, the thermostat will control heating or cooling according to following curve. Push sleep operation button again,

disappears indicate the sleep operation feature is canceled.



2) Inquiry for the floor temperature.

If you have selected mix temperature control mode (See configuration menu item 7), momentarily press button , room temperature and floor temperature will be display alternatively. If the floor sensor is not connected, display will show **Er** and thermostat will show down heating system. If you have selected room temperature control mode, floor temperature will not be show when you press button .

3) Select or readout

You can select or readout by pushing button .

4) Reset operation

If the display is abnormal, press the Reset button by using a fine probe such as a straightened paper clip to gently push the Rest button. This will reset the thermostat.

CUSTOMER ASSISTANCE

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

