Water /Electrical Heating Thermostat

1000081X-13X

Introduction

Simon Water / Electrical Heating Thermostat is a Z-Wave Plus™ enabled device for indoor temperature control. 1000081X-13X is mainly applied to control wall mounted boiler, water valve/pump etc. , while 1000081X-13X is for electrical heating system. The device is of high reliability and practicability, which can be included and operated in any Z-Wave™ network with other Z-Wave™ certified devices from any other manufacturers. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

Features：

- Capacitive touch buttons
- Tempered glass panel, PC alloy enclosure
- Precise temperature calibration function
- Attractive appearance
- Clear display, easy to operate

Specification

- Power Supply：AC85-260V, 50/60HZ
- Output: 10000810-13X ≤5A ; 10000811-13X≤ 16A
- Self Consumption：≤1W
- External Temp. Sensor(optional): NTC R25℃=15KΩ B25℃/50℃=3550K
- Working Environment：0-50℃； 0-90% RH（Non-condensation)
- Temperature Setting：5-37 ℃（41-99℉）（Adjustable）
- Dimension：86* 86*15mm
- Hole Pitch：60-61mm

Safety Information

To protect yourself and others from danger and to protect the device from damage, please read the safety information before using it.

Important!

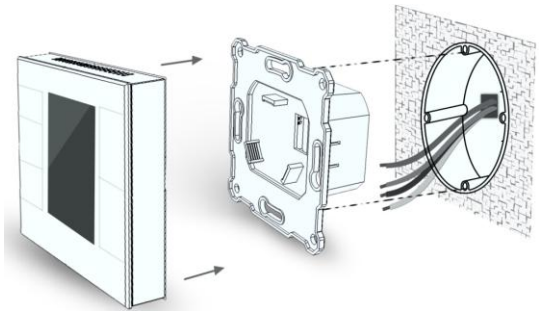
- A qualified electrician with the understanding of wiring diagrams and knowledge of electrical safety should complete installation following the instructions.
- Before installation, please confirm the real voltage complying with the device's specification. Cut off any power supply to secure the safety of people and device.
- During installation, protect the device from any physical damage by dropping or bumping. If happens, please contact the supplier for maintenance.
- Keep the device away from acid-base and other corrosive solids, liquids, gases, to avoid damage.
- Avoid overexertion during operation, to protect device from mechanical damage.
- Read all instructions and documentation and save for future reference.

Installation & Wiring

Location:

Thermostat is suggested to be installed indoor, a place with around 1.5m height above the floor where represents the average room temperature. It should be away from direct sunlight, any cover, or any heat source, to avoid false signal for temperature control.

CAUTION: Cut off power supply at circuit breaker or fuse before installation to avoid fire, shock or death!

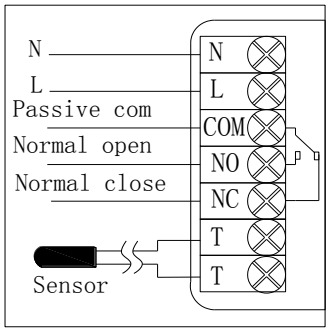


Step 1: Separate the device into two parts: the display panel and the bottom.

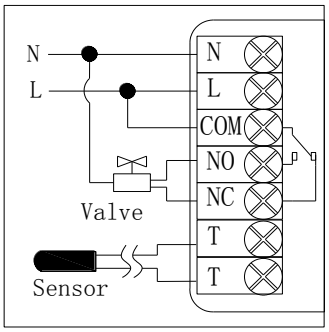
Step 2: Insert all wires into the right terminals and tighten screws. Wiring diagrams are shown below.

Step 3: Push the bottom into the junction box and secure it with two screws, and then mount the touch panel back.

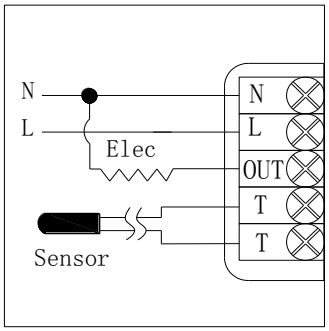
Step 4: Confirm the device is well mounted, power on and it is ready to operate.



（1)Passive Wall-boiler



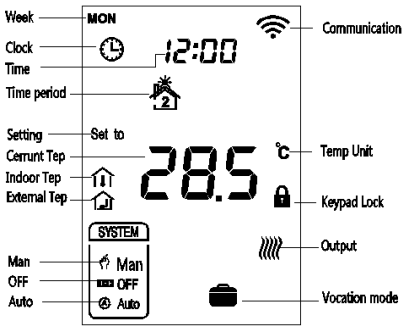
（2）Active normal close valve



（3）Electrical Heating

Model	Terminals	Control devices	Wiring instructions	Contact capacity
10000810-13X	N、L、COM、NO、NC	Thermostatic valve/electric ball valve/pump	For passive control, follow wiring diagram (**1);** For active control, follow wiring diagram (**2)**	10A
10000811-13X	N、L、OUT、T、T	Heating film、electric radiator，heating cable etc	TT terminal is to be connected with an external sensor with high temperature protection function	16A
10000810-13X-WT15	N、L、COM、NO、NC、T、T	Thermostatic valve/electric ball /pump	TT terminal is to be connected with an external ambient temperature sensor	10A
10000811-13X-WT15	N、L、OUT、T、T	Heating film、electric radiator，heating cable etc	TT terminal is to be connected with an external ambient temperature sensor	16A

Button & Display



Operation

On/Off operation

When power on, thermostat displays "OFF"， all outputs are forced off. Touch S3 button to switch (manual/off/auto) mode, then press S2 to confirm and proceed power on/off setting. After power on, device displays current week, local time, working mode, current temperature, output status etc.

Note: After the backlit goes out, please press the button to light up the backlit first, then press the button again for corresponding operation.

Temperature setting

In normal working status, press S4 or S5 button will enter into temperature setting interface. The setting range is 5-37 ℃（41-99℉）. Then press S4 or S5 can adjust the value. Press S3 or wait 25 seconds without any key operation will save the setting and return back to the normal operation interface.

Auto Mode: The changed value only valid in the current time period for this time, and the device will not affect the preset time period value .

Manual Mode: The changed value will be valid until next setting.

Vacation Mode: The changed value will be valid until next setting.

Key lock function

In normal operating interface, long press S1+S4 button, icon appear that indicates the button is locked, at this time all buttons are disabled; When long press S1+S4 button again, icon disappear that indicates the button is unlocked, all buttons back to normal work.

Control specifications

10000810-13X

- Detection temperature < setting temperature - 0.5℃, output turns on, and output icon displays.

- Detection temperature ≥ setting temperature + 0.5℃, output turns off, and output icon disappears.

10000811-13X

- Detection temperature < setting temperature - 1.5℃, output turns on, and output icon displays.
- Detection temperature ≥ setting temperature , output turns off, and output icon disappears.

Manual / Auto mode setting

In normal display interface, touch S3 button can switch between Manual and Auto mode. Choose the mode you may need and press S2 button to save the setting.

Auto Mode: Device will follow the preset time periods and temperature to control heating system automatically.

Manual Mode: Device will follow the manual setting temperature to control the heating system.

Vacation mode setting

- In normal working interface, if vocation mode is not activated, long press S2 button to enter vacation mode temperature setting. The default temperature is 10 ℃, and setting range is 5-37 ℃(41-98℉). Press S4 or S5 to adjust the value, then press S3 or wait 25 seconds to save the setting and return to the normal working interface. In this time vacation mode icon displays and device will follow the setting.

- Long press S2 again will end vacation mode and resume to normal work, vacation mode icon will be disappeared.

Local Time Setting

- In normal working interface, long press S1 to enter into local time setting interface.
- In local time setting interface, press S4 or S5 button to set the "week, hour & minute" parameter, and press S1 button can switch among the "week, hour & minute".
- After finish the local time setting, press S1 or wait 25 seconds without any key operation will save the setting and return to normal display.

Auto Mode Time Periods Parameter Setting

- In normal working interface, short press S1 to enter into time periods setting. Four time periods can be set for each day of the whole week.
- Press S2 can switch among "Hours, Minutes, Temperature value". Press S4 or S5 can change the value.
- After finished the setting of 4 time periods on Monday, press S1 and follow the same way to set periods of next days.
- After all periods set, press S1 /S2 or wait 25 seconds without any key operation will save the setting and return to normal display. Device will operate in accordance with the new setting.

The default setting is as follow:

Week\Periods	Period 1	Period 2	Period 3	Period 4
Mon~Fri	5:00 28℃	7:00 24℃	17:00 28℃	22:00 24℃
Sat~Sun	5:00 28℃	9:00 24℃	17:00 28℃	22:00 24℃

High temperature protection (For 10000811-13X Electrical Heating ONLY)

When external temperature sensor detect the temperature value≥55℃, device will open high temperature protection, electric heating will be forced off, and high temperature protection icon displays.

When external temperature sensor detect the temperature value＜50 ℃, device will return to normal work, high temperature protection icon disappears.

Anti-freeze protection function: (Optional)

In shutdown interface:

 When the built-in temperature sensor detect the temperature value≤5℃, device will open anti-freeze protection, electric heating will be forced open, and anti-freeze protection icon displays.

When the built-in temperature sensor detect the temperature value＞8 ℃, device will turn off anti-freeze protection and return to normal work, anti-freeze icon disappears.

Note: If thermostat do not connect with an external temperature sensor, it will only display the indoor temperature icon; If thermostat connect with an external temperature sensor, it will display the indoor temperature and high temperature protection icon; When it is under high temperature protection, high temperature protection icon flickers.

Humidity display operation

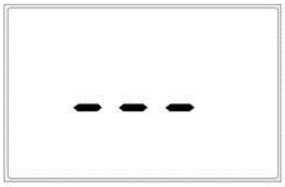
In normal working interface, long press S1+S5 buttons and enter into humidity display interface, when press S1+S5 buttons again, it will back to the normal interface.

Z-Wave Operation

- **Adding & Removing of Z-Wave network**

In normal working interface, press & hold S4 to enter interface for adding or removing of Z-Wave network. Before device added into network, "- - -" will display on the screen. Then press S4 once, device will enter learning mode to get a node ID. If adding is succeed, a node ID will display on the screen in a few seconds.

A node ID can always inform us whether the device is in the network or not.



Before Inclusion (No Node ID)

After Inclusion (Node ID is 007)

Note: Follow the same steps to remove the device from the network. When removed, the device will restore its factory setting.

After adding, turn off the device and then turn it on. Now the device is ready to be operated by controller/ gateway in Z-Wave network.

- **Association Group**

Thermostat supports 1 association group (0x01), which can include only one Node ID.

A gateway is suggested to associate with this group. Then if any changes happen, such as: temperature, working mode, fan state etc., the thermostat will report to this associated device (gateway). Association Group 1 is the Lifeline group.

- **Command Class supported by the device:** (All CC supports S2 unauthenticated level)

COMMAND_CLASS_VERSION,
COMMAND_CLASS_MANUFACTURER_SPECIFIC,
COMMAND_CLASS_POWERLEVEL,
COMMAND_CLASS_ASSOCIATION,
COMMAND_CLASS_ASSOCIATION_GRP_INFO,
COMMAND_CLASS_BASIC,
COMMAND_CLASS_SENSOR_MULTILEVEL_V5,
COMMAND_CLASS_THERMOSTAT_SETPOINT,
COMMAND_CLASS_THERMOSTAT_MODE,
COMMAND_CLASS_THERMOSTAT_OPERATING_STATE,
COMMAND_CLASS_SUPERVISION,
COMMAND_CLASS_FIRMWARE_UPDATE_MD_V2,

- **Command Class supported by the device:** (Not supports S2)

COMMAND_CLASS_ZWAVEPLUS_INFO
COMMAND_CLASS_TRANSPORT_SERVICE
COMMAND_CLASS_SECURITY_2
COMMAND_CLASS_FIRMWARE_UPDATE_MD

Note: Basic CC is used to control energy saving mode and comfort mode:

- Basic Set (Value = 0x00) = Set Off Mode
- Basic Set (Value = 0xFF) = Set Energy Saving Mode
- Basic Get = Get Report
- Basic Report (Value = 0x00) = Report off Mode
- Basic Report (Value = 0xFF) = Report other Modes

Note: This device supports 4 kinds of modes in Z-Wave: **Off** mode; **Heating** mode (Manual); **Energy Saving heating** mode (Auto) ; **Away heating** mode (Vacation).

Users can set these 4 modes via COMMAND_CLASS_THERMOSTAT_MODE. And COMMAND_CLASS_BASIC can switch among Heating mode & Energy saving heating mode.

COMMAND_CLASS_THERMOSTAT_SETPOINT can be used to set the heating temperature threshold value in Heating mode or Energy saving heating mode.

1-year Limited Warranty

MCOHome warrants this product to be free from defects in material and workmanship under normal and proper use for one year from purchase date of the original purchaser. MCOHome will, at its option, either repair or replace any part of its products that prove defective by reason of improper workmanship or materials. THIS LIMITED WARRANTY DOES NOT COVER ANY DAMAGE TO THIS PRODUCT THAT RESULTS FROM IMPROPER INSTALLATION, ACCIDENT, ABUSE, MISUSE, NATURAL DISASTER, INSUFFICIENT OR EXCESSIVE ELECTRICAL SUPPLY, ABNORMAL MECHANICAL OR ENVIRONMENTAL CONDITIONS, OR ANY UNAUTHORIZED DISASSEMBLY, REPAIR OR MODIFICATION. This limited warranty shall not apply if: (i) the product was not used in accordance with any accompanying instructions, or (ii) the product was not used for its intended function. This limited warranty also does not apply to any product on which the original identification information has been altered, obliterated or removed, that has not been handled or packaged correctly, that has been sold as second-hand or that has been resold contrary to Country and other applicable export regulations.

Secret Menu

In shutdown state, long press S3+S5 synchronically can enter into secret menu. Press S4 or S5 to enter code 1234. Touch S3 to enter setting interface. Following are parameters which can be set.

Item	Explain	Default	Range	Remark
P01	Temp. Setting upper limit	37.0℃（99℉）	00-99.5℃（32-211℉）	Always confirm the upper limit ＞ bottom limit
P02	Temp. Setting bottom limit	5℃（41℉）	00-99.5℃（32-211℉）	
P03	Slave Address	1 96	1~64 12~576	Reserved
P04	Time format	24	12/24	hours
P05	Electrical Heating negative deadband	1.5℃（3℉）	0.0-10.0℃（0-18℉）	
	Water Heating negative deadband	0.5℃（1℉）	0.0-10.0℃（0-18℉）	
P06	Electrical Heating positive deadband	0.0℃(00℉)	0.0-10.0℃（0-18℉）	
	Water Heating Temp positive deadband	0.5℃（1℉）	0.0-10.0℃（0-18℉）	
P07	Anti-freeze temperature setting	5℃（41℉）	0-30℃（32-86℉）	
P08	Protection temperature	55℃（131℉）	45-95℃（113-203℉） OFF	10000811-13X
		OFF		10000811-13X -WT15
P09	Power on state after power failure	OFF	OFF/ OPN/ PRU	= OFF device turn to OFF state，= OPN device turn to ON state，= PRU device return to last state
P10	The time of temperature change	2	0-99	2*30s=1min
P11	Indoor temperature calibration	0.0℃(00℉)	-9.5-9.5℃（-16-16℉）	
P12	Beep volume	3	OF/0-9	
P13	Backlit level	2	1-8/ON/OFF	
P14	Outdoor temperature calibration	0.0℃(00℉)	-9.5-9.5℃（-16-16℉）	
	Control based on	OFF	ON/OFF	1000081X-13X

P15	external temperature	ON	ON/OFF	1000081X-13X-WT15
P16	Display based on external temperature	OFF	ON/OFF	1000081X-13X
		ON	ON/OFF	1000081X-13X -WT15
P17	Temp. format	OC	OC/OF	=OC，Celsius； =OF，Fahrenheit
P18	Restore factory setting	Display:53 Password: 55	00-99	Change 53 to 55, and press S3 to confirm

* Note: For item P18, please use this procedure only when the network primary controller is missing or otherwise inoperable.

* After power failure:

0 indicates device will be in shutdown state (“OFF”) when power on again;

1 indicates device will be in working interface when power on again;

2 (default) indicates device will stay the status before power failure when power on again.