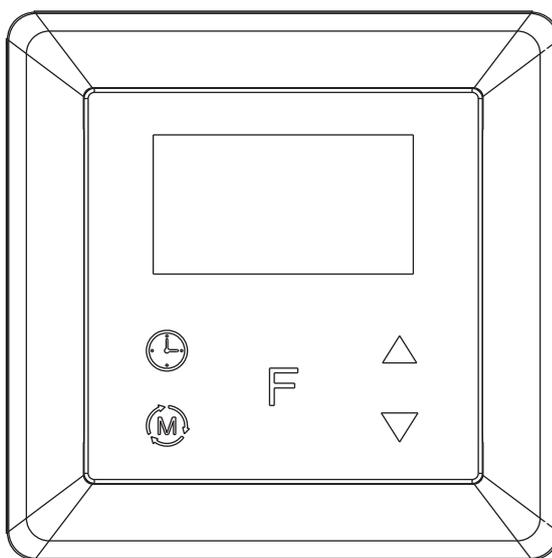
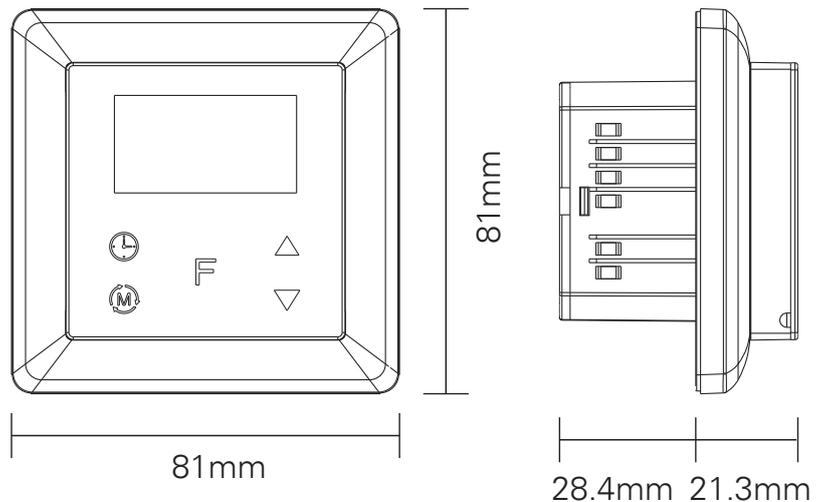


NAMRON TERMOSTAT TOUCH Z- WAVE 16A



INSTRUCTION MANUAL

Namron termostat touch Z-Wave 16A



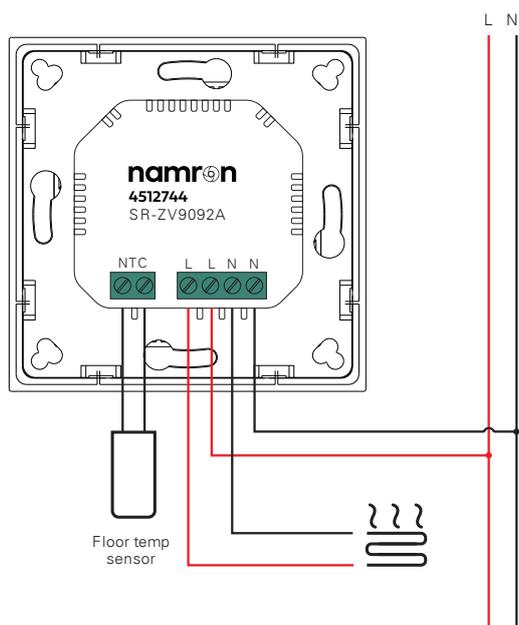
Technical data

| | |
|-------------------------|---|
| Z-Wave frequency | 868.42MHz (EU) |
| Operation voltage | 220-240V, 50/60Hz |
| Maximum load | 16A |
| Power consumption | <2W |
| Ambient temperature | 0°C to 40°C (during operation) |
| Temperature range | 0°C to 40°C |
| Hysteresis | 0.5°C to 2°C (default 0.5°C) |
| Floor sensor | NTC R25=10K±1%@25°C, B25/50=3950K±1%, (3m included) |
| Floor sensors supported | NTC R25=10K±1%@25°C, B25/50=3950K±1% (factory setting) NTC R25=12K±1%@25°C, B25/50=3950K±1%) NTC R25=15K±1%@25°C, B25/50=3950K±1% NTC R25=50K±1%@25°C, B25/50=3950K±1% NTC R25=100K±1%@25°C, B25/50=3950K±1% |
| Control modes | 1. Away 2. Auto 3. Manual 4. Drying 5. Off |
| Control types | Room sensor (factory default) Floor sensor Room + floor sensor This parameter can also be configured through advance config parameter 10 |
| IP rating | IP21 |
| Relative humidity | 8% to 80% |
| Standard | EN 60730-1:2016;A1, EN IEC 60730-2-9:2019;A1 EN IEC 61000-3-2:2019, EN 61000-3-3:2013+A1:2019, EN 60730-1:2016+A1:2019, EN 60730-2-19:2019+A1:2019+A2:2020, EN 50663:2017;ETSI EN 301 489-1V2.2.3, ETSI EN301 489-3V2.1.1 ETSI EN300 220-1 v3.1.1., ETSI EN300 220-2 V3.2.1 RED:2014/53/EU |
| Certificate | Z-Wave plus, CE, RED |

Installation

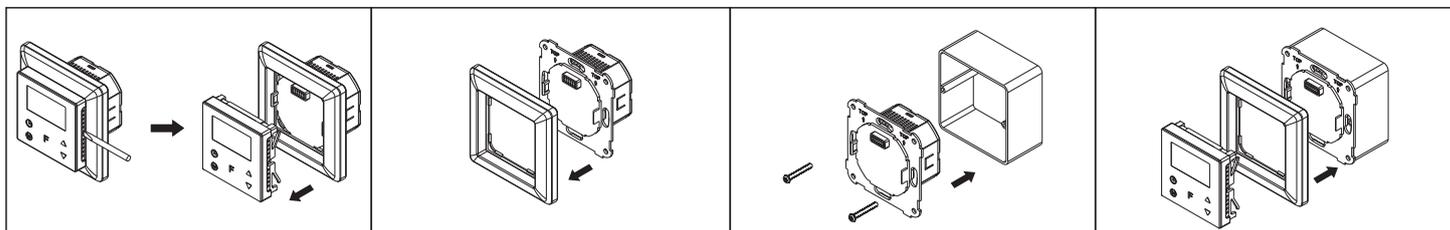
- a. Installation must be done by a qualified electrician.
- b. Power supply must be turned off during installation.

(1) Wiring diagram

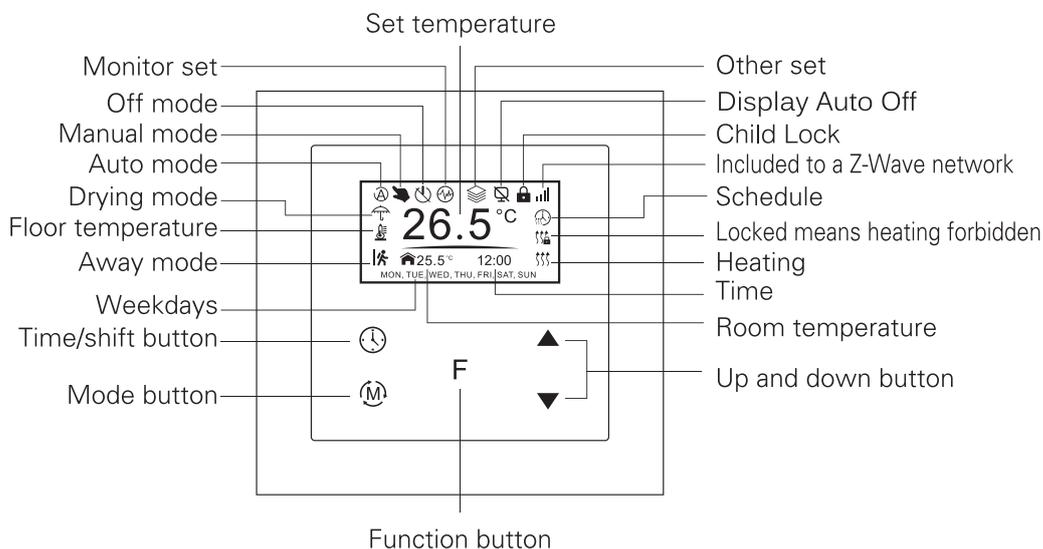


(2) Mounting

- a. Remove the display unit and front cover by using a small screwdriver.
- b. Insert the wires to the correct terminals as presented in the wiring diagram above. Suggested wire-stripping length is 8-10mm.
- c. Fix the thermostat into the connection box by tightening the screws. Make sure that the thermostat is fixed without deformation. Suggested torque is 0.2-0.4Nm (2.0-4.1kgf.cm).



Symbol overview



Settings Menu

How to enter settings menu:

1. Under Home Interface, meanwhile the device is at OFF mode  , press and hold up and down buttons at the same time for over 5 seconds to enter Settings Menu.
2. Short press move up and down button to select a settings item, then short press button F to enter selected item.
3. Settings menu include, Preview menu, Z-Wave settings, Schedule, Monitor settings, Time/Date settings, Other settings.

Time Setting

Select TIME/DATE on Home Interface to enter into TIME/DATE SET interface as follow:



Short press button  to select the item you would like to modify, then short press up and down buttons to modify value of selected item, then short press button F to save and quit, short pressing button  only quits without saving.

2. Preview interface

On Home Interface, user can enter into PREVIEW  interface, the interface will display some basic configurations, energy consumption, date, floor temperature etc.

Control Mode

Short press  button on Home Interface to switch operation modes: the icons of Away, Auto, Manual, Drying, Off modes will be displayed alternatively for 3 seconds and last displayed mode will be selected, or just short press F button to select a desired mode when the modes' icon displayed alternatively. Press and hold  button on Home interface for over 3 seconds to select Away mode directly, then Press and hold  button for 3 seconds to quit Away mode.

1. Away Mode: the device will control the heating system according to the set temperature within the set period.

User can set time to leave home and time to go home according to the requirements of themselves, and set how the device will control the temperature during this period.

1.1. If away mode has already been activated, the end time for away mode is valid, the device will execute Away Mode Temperature Schedule before the end time.

1.2. If away mode has already been activated, the values of end time for away mode are set as 0, the device will always execute current set temperature with no time limitation. The device will consider the mode as anti-freeze mode, the recommended temperature setting is 4-10°C.

2. Auto Mode: the device will control the heating system according to the configured time schedule or Z-Wave protocol Energy_Save_Heating Setpoint.

2.1. When configuration parameter 8 value set as 1, the device will control the temperature of energy save mode according to the temperature set by Command Class Energy_Save_Heating Setpoint or set by using the move up and down buttons, following mentioned schedule will be invalid.

2.2. When configuration parameter 8 value set as 0, the temperature set by Command Class Energy_Save_Heating Setpoint and set by using the move up and move down buttons will both be invalid, Energy Save Mode will control temperature according to following user schedule.

For instance, if user would like to keep room temperature at 18C during 18:00-23:00 on every Monday, and keep room temperature at 20C after 22:30 on every Monday, then user can set schedule by himself.

Schedule setting method 1: user can enter into schedule on Z-Wave Set Interface, the schedule interface is as follows:



Short press button to select "Auto Schedule", then short press button **F** Schedule weekly setting interface.



Schedule setting method 2: on Home Interface, meanwhile the device is under Auto Mode , short press button to enter into Auto Mode Schedule weekly setting interface quickly:
On Auto Mode Schedule weekly setting interface, use buttons and **F** to enter into schedule setting of a certain week as follows:



On Auto Day Schedule interface, short press button to select the time or temperature that you would like to modify, then short press move up and down buttons to modify value, then short press button **F** to save and quit, short pressing button only quits without saving.

For each schedule, the latter time should be later than the former time, otherwise saving will fail with the error remind "Time setting error!!!". The default time schedules are as follows:

| | | | |
|---------------|---------------------|-----------------|---------------------|
| Monday-Friday | 7:30,24C-12:00,20C | Saturday-Sunday | 7:30,24C-12:00,20C |
| | 18:00,16C-22:30,18C | | 18:00,18C-22:30,18C |

3. Manual Mode: the device will control the heating system according to current set temperature. The temperature can be set by move up and move down button on the Home interface, or configured by Z-Wave gateway.

4. Drying Mode: The device will judge the set temperature for heating within a short period of time. I.e.: in order to dry the water in the bathroom in a short time, the device could be set to quickly heat to dry the floor. Enter the configuration interface as follow:

- Duration: set how long the dry mode should lasts
- After Mode: set the mode after the drying mode ends
- Remain: shows the remaining time of the drying mode

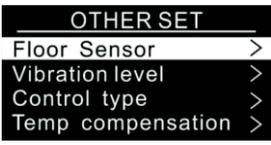


For configuration method and modification, please refer to Automatic Mode (Energy Save Mode) Schedule:

5. Off Mode: this mode only enables the device to turn on the heating system when anti freezing mode is enabled and the device meets all required conditions, otherwise the device will not work, meanwhile the standby interface will only show room temperature.

| | | |
|--------------------|--|--|
| Monitor Set | | <p>The function of monitor set is real time monitor of over current, over heat and freezing. On Home Interface, short press MONITOR SET to enter into monitor set interface as follows: Short press button to select the item would like to modify, then short press move up and down buttons to modify value of selected item, then short press F button to save and quit, short pressing button only quits without saving.</p> |
|--------------------|--|--|

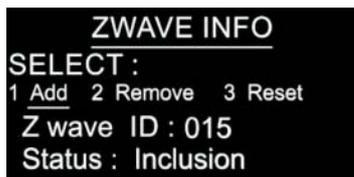
| | | |
|--------------------------------------|---|--|
| <p>Over-current Alarm</p> | | <p>If current is over the set value, the relay will be forced to off by the device, and the state will be reported to the gateway. The over current alarm function can be disabled, which can be set directly through the device, or can be configured through Advance Config parameter 2 by setting the value as 0 to disable the function, please refer to the part “Advance Config”.</p> <p>Note: When over current alarm is triggered, the beeper will beep, to cancel the alarm, just press and hold button  for over 3 seconds or reset power of the device. After cancel manually, the relay will show heating forbidden icon  within 120 seconds, but other operations are allowed.</p> |
| <p>Max floor temp</p> |  | <p>This function is similar to the function of “Internal Over Heat Protection” described in chapter 9. When the control type is configured as “Room+Floor sensor”, this function will be valid:</p> <p>The alarm will be triggered when the floor sensor temperature > Max floor temp, the relay will be forced to off by the device, and the state will be reported to the gateway. The following indication figure will prompt on the display.</p> <p>After the floor sensor temperature < (Max floor temp - Hysteresis), the alarm will be cancelled automatically and the device will restore to previous operation mode.</p> <p>To cancel the alarm manually, just press and hold button  for over 3 seconds, but the relay will show heating forbidden icon  within 120 seconds and the alarm will not be triggered again, after 120 seconds expire, the device will restore to previous operation mode and continue to detect alarm temperature.</p> <p>This function can be disabled, which can be configured directly through the device, or can be configured through Advance Config parameter 6 by setting the value as 0 to disable the function, please refer to the part “Advance Config”.</p> |
| <p>Hysterersis</p> | | <p>To prevent the undulation of sensor temperature when the sensor temperature is approaching the set temperature, which will cause that the controller may keep switching on/off the relay. Here hysteresis enables the controller to control the relay only when the sensor temperature is lower than the set temperature minus the hysteresis value , this value can be set.</p> <p>For instance, when hysteresis is set as 0.5 degree, then only when current sensor temperature < (the set temperature - 0.5 degree), will the controller heat.</p> <p>This value can also be configured through Advance Config parameter 7, please refer to the part “Advance Config”.</p> |
| <p>Key Vibration Set</p> | | <p>Set the level of vibration sensor under the buttons or buzzer level.</p> <p>OFF: vibration or buzzer off Low Level, High Level: low vibration or buzzer level, high vibration or buzzer level. The level can also be configured through Advance Config parameter 03.</p> |
| <p>Display Brightness Set</p> | | <p>The OLED display brightness when operate the device.</p> <p>High Level, Mid Level, Low Level.</p> <p>This parameter can also be configured through Advance Config parameter [22].</p> |
| <p>Display Auto Off</p> | | <p>Once the device goes to standby interface, if there is no operation within 30s, the display will go off automatically.</p> |

| | | |
|--|---|---|
| <p>Display Temperature Set</p> | | <p>This parameter defines which sensor temperature will be displayed on Home page. Floor Temp: floor temperature (external sensor) . Home Temp: indoor air temperature. This parameter can also be configured through Advance Config parameter [23].</p> |
| <p>Other Set</p> |  | <p>Select  OTHER SET on Home Interface to enter into OTHER SET interface as follow: Short press button  to select the item you would like to modify, then short press move up and down buttons to modify value of selected item, then short press button F to save and quit, short pressing  button only quits without saving.</p> |
| <p>Temperature Compensation</p> | | <p>The displayed temperature may has big tolerance caused by the sensor or other factors, so it is necessary to do temp compensation to room sensor and floor sensor. Compensation range is -5 ~ +5°C, stepping is 0.5°C. This parameter can a lso be configured through Advance Config parameter [11] and [12] .</p> |
| <p>Re-power Status</p> | | <p>Device state after reset power of the device. If set as “last status”, device will go to the status before power failure after power on again. If set as “default”, device will go to default mode after power on again. This parameter can also be configured through Advance Config parameter [4].</p> |
| <p>Internal Over Heat Protection</p> | | <p>To ensure the safety of the device, if the internal temperature of the device (not displayed on the interface) is over a certain value during heating process, the device will execute a short temporary action to turn off the relay, and the icon  will appear on the interface, after the temperature decreases to a certain value, the device will recover to work.</p> |
| <p>Child Lock</p> | | <p>Press and hold F and  buttons for over 10S, then the child lock can be activated or cancelled. When child lock is activated, then icon  will appear on the display.</p> |
| <p>Display Auto Off Function Activation</p> | | <p>On the Home Interface, press and hold both F and  buttons for over 10S, during the process, the icon  will flash slowly, the Display Auto OFF function can be enabled or disabled, when the function is enabled, the icon  will be displayed, otherwise the icon will not be displayed. This parameter can also be configured through Advance Config parameter [27] .</p> |

Z-Wave Set Introduction

1.Z-Wave Network Management

Select  ZWAVE INFO on Home Interface to enter into Z-Wave network management interface as follow:



Adding to a Z -Wave Network (Inclusion)

Method 1: Select "Add", then short press button , the device will send out inclusion request, "Status" will show "Inclusion...". If there is no response from a gateway within 30 seconds, or inclusion failed, "Status" will show "Fail". If included successfully "Status" will show "Inclusion OK" and device ID.

Method 2: Operate the gateway into inclusion mode, make sure the device is already removed from previous network, reset power of the device, the device will be included to the gateway automatically.

Smart Start

If the user's gateway also supports smartstart, add the device by scanning the QR code, Smartstart allows users to quickly add devices to the gateway by scanning the device's QR code.

After scanning to add the device, reset power of the device or waiting for a while, the device will be added to the gateway automatically. Please find the QR code on the casing of the device.

Removing from a Z-Wave Network (Exclusion)

Select "Remove", then short press button **F** , the device will send out exclusion request, "Status" will show "Exclusion... If ". there is no response from a gateway within 30 seconds, or exclusion failed, "Status" will show "Fail". If excluded successfully "Status" will show "Exclusion OK" and device ID will be showed as 0.

Factory Reset (Reset)

Factory resetting will reset all Advance Config parameters to default value, and the device will be removed from the Z-Wave network.

Select "Reset", then short press button **F** , the device will start reset, "Status" will show "Reset...". If there is no response from a gateway within 6 seconds, or exclusion failed, "Status" will show "Fail". If reset successfully, "Status" will show "Reset OK".

Note 1: if the device is excluded or reset successfully, the Auto Mode Schedule will be reset to default value.

Note 2: the sent frame of inclusion and exclusion is INFO frame.

2.Basic set command class

Set the device operation mode as Comfort Mode (Manual Mode) by sending command class basic set = 0XFF. Set the device operation mode as OFF mode by sending command class basic set = 0x00

Z-Wave Technical Specifications

1.Supported Notification Report and Sensor Type

| Notfication Type | Triggering Event | Description |
|------------------|---------------------------------------|--------------------|
| POWER_MANAGEMENT | POWER_MANAGEMENT_OVERCURRENT_DETECTED | Over Current Alarm |
| Heat Alarm | Overheat detected | Over Heat Alarm |

| SENSOR MULTILEVEL Type support | Scale |
|--------------------------------|----------------|
| Air temperature | Celsius (°C) |

2. Technical Specifications

| Item | Definition |
|------------------------|------------|
| SDK | 6.82.00 |
| Explorer Frame Support | Yes |

| | |
|-----------------------|----------------------------------|
| Device Type | Thermostat(HVAC) |
| Generic Device Class | GENERIC_TYPE_THERMOSTAT |
| Specific Device Class | SPECIFIC_TYPE_THERMOSTAT_HEATING |
| Role Type | Always On Slave (AOS) |
| Routing | Yes |

Thermostat Related Specifications

| Command | Support |
|--------------------|---|
| ThermostatMode | ThermostatMode_OFF(off) ThermostatMode_HEAT(UI displays Manual) ThermostatMode_DRY ThermostatMode_EnergyHeat(UI displays Auto) ThermostatMode_Away(UI displays Away) |
| ThermostatSetPoint | ThermostatSetPointType_Heating(set manual temperature) ThermostatSetPointType_Energy_Save_Heating(set auto temperature) ThermostatSetPointType_DRY ThermostatSetPointType_Away_Heating(set away temperature) |

3. Supported Command Class

Root Device

| Support Command class | | Support S2/s0 |
|--|----|---------------|
| COMMAND_CLASS_ZWAVEPLUS_INFO | V2 | |
| COMMAND_CLASS_SECURITY | V1 | |
| COMMAND_CLASS_SECURITY_2 | V1 | |
| COMMAND_CLASS_TRANSPORT_SERVICE | V2 | |
| COMMAND_CLASS_SUPERVISION | V1 | |
| COMMAND_CLASS_THERMOSTAT_MODE | V3 | YES |
| COMMAND_CLASS_THERMOSTAT_OPERATING_STATE | V1 | YES |
| COMMAND_CLASS_THERMOSTAT_SETPOINT | V2 | YES |
| COMMAND_CLASS_ASSOCIATION | V2 | YES |
| COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION | V3 | YES |
| COMMAND_CLASS_ASSOCIATION_GRP_INFO | V1 | YES |
| COMMAND_CLASS_VERSION | V3 | YES |
| COMMAND_CLASS_MANUFACTURER_SPECIFIC | V2 | YES |
| COMMAND_CLASS_DEVICE_RESET_LOCALLY | V1 | YES |
| COMMAND_CLASS_POWERLEVEL | V1 | YES |
| COMMAND_CLASS_TIME_PARAMETERS | V1 | YES |
| COMMAND_CLASS_CONFIGURATION | V1 | YES |
| COMMAND_CLASS_NOTIFICATION | V8 | YES |
| COMMAND_CLASS_METER | V3 | YES |
| COMMAND_CLASS_MULTI_CHANNEL | V4 | YES |
| COMMAND_CLASS_FIRMWARE_UPDATE_MD | V4 | YES |

| Controlled command class | | Support S2/s0 |
|-----------------------------------|----|---------------|
| COMMAND_CLASS_THERMOSTAT_MODE | V3 | YES |
| COMMAND_CLASS_THERMOSTAT_SETPOINT | V2 | YES |

Note: the EndPoint01 mirrors equivalent effect root endpoint.

EndPoint1 command list:

| Support command class | | Support S2/s0 |
|--|----|---------------|
| COMMAND_CLASS_ZWAVEPLUS_INFO | V2 | |
| COMMAND_CLASS_SECURITY | V1 | |
| COMMAND_CLASS_SECURITY_2 | V1 | |
| COMMAND_CLASS_SUPERVISION | V1 | |
| COMMAND_CLASS_SENSOR_MULTILEVEL | V5 | YES |
| COMMAND_CLASS_ASSOCIATION | V2 | YES |
| COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION | V3 | YES |
| COMMAND_CLASS_ASSOCIATION_GRP_INFO | V1 | YES |
| COMMAND_CLASS_THERMOSTAT_MODE | V3 | YES |
| COMMAND_CLASS_THERMOSTAT_OPERATING_STATE | V1 | YES |
| COMMAND_CLASS_THERMOSTAT_SETPOINT | V2 | YES |
| COMMAND_CLASS_METER | V3 | YES |

EndPoint2 (floor temperature sensor) command list:

| Support command class | | Support S2/S0 |
|---|----|---------------|
| COMMAND_CLASS_ZWAVEPLUS_INFO | V2 | |
| COMMAND_CLASS_SECURITY | V1 | |
| COMMAND_CLASS_SECURITY_2 | V1 | |
| COMMAND_CLASS_SUPERVISION | V1 | |
| COMMAND_CLASS_SENSOR_MULTILEVEL | V5 | YES |
| COMMAND_CLASS_ASSOCIATION | V2 | YES |
| COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION | V3 | YES |
| COMMAND_CLASS_ASSOCIATION_GRP_INFO | V1 | YES |

5.Association

Root device

| Group ID | NAME | Profile | Max nodes | Description |
|----------|----------|-----------------------------------|-----------|---|
| 1 | Lifeline | AGI_LIFE_LINE (0x0001) | 5 | 1.Send Command Class DEVICE_RESET_LOCALLY_NOTIFICATION to associated devices of this group when factory reset the device. 2.Send Command Class THERMOSTAT_SETPOINT_REPORT, THERMOSTAT_MODE_REPORT, THERMOSTAT_OPERATING_STATE_REPORT to associated devices of this group When operation mode and temperature change. 3.Send Command Class NOTIFICATION_REPORT to associated devices of this group when over current, over heat detected 4.Send Command Class METER_REPORT to associated devices of this group to report metering parameters. |
| 2 | Heat Set | AGI_CONTROL_ KEY01 (0x2001) | 5 | Transfer Command Class THERMOSTAT_SETPOINT_SET THERMOSTAT_MODE_SET to control other temperature control devices when operation changes |

EndPoint01 :

| Group ID | NAME | Profile | Max nodes | Description |
|----------|----------|---------------------------|-----------|------------------|
| 1 | Lifeline | AGI_LIFE_LINE (0x0001) | 0 | Lifeline(0x0001) |

Note: the EndPoint01 has equivalent effect of root function.

EndPoint02

| Group ID | NAME | Profile | Max nodes | Description |
|----------|----------|---------------------------|-----------|------------------|
| 1 | Lifeline | AGI_LIFE_LINE (0x0001) | 0 | Lifeline(0x0001) |

6.Advance Config Parameters

| Parameter | Size | Description | Default Value | Parent Menu |
|-----------|------|--|---------------|-------------------|
| 0x02(2) | 1 | Over current detection max. value, unit is A. When detected current is over this value, the device will turn off the relay and send NOTIFICATION CC. 0, disable over current detection 5-16, over current detection max. value | 16 | Monitor Set |
| 0x03(03) | 1 | Vibration level and buzzer level triggered by pressing buttons 0, disable vibration and buzzer 1, Low Level 2, High Level | 1 | Other Set |
| 0x04(4) | 1 | Whether to recover to settings before power failure or power reset 0, use default settings 1, recover to settings before power failure or power reset | 1 | Other Set |
| 0x06(6) | 1 | Floor temperature detection max. value, unit is °C , when floor temperature sensor is higher than this value, the device will turn off the relay and send NOTIFICATION CC. 0, disable this function 1-35, the high temperature value | 27 | Monitor Set |
| 0x07(7) | 1 | Temperature control hysteresis value setting, setting range 0.5°C-5°C. value range is 5-50, unit is 0.1°C | 5 | Monitor Set |
| 0x08(8) | 1 | Auto mode (Energy save mode) temperature schedule 0, use schedule set by user 1, use Energy_Save_Heating temperature set by THERMOSTAT_SETPOINT_SET | 0 | None |
| 0x09(9) | 1 | Select floor temperature sensor type 1, NTC/10K B(25/50°C)=3950 2, NTC/15K B(25/50°C)=3950 3, NTC/50K B(25/50°C)=3950 4, NTC/100K B(25/50°C)=3950 5, NTC/12K B(25/50°C)=3950 | 1 | Other Set |
| 0x0A(10) | 1 | Temperature control reference selection 1, room sensor 2, floor sensor 3, room+floor sensor | 1 | Other Set |
| 0x0B(11) | 1 | ROOM SENSOR temperature compensation setting -10~10, unit is 0.5°C | 0 | Other Set |
| 0x0C(12) | 1 | FLOOR S ENSOR temperature compensation setting -10~10, unit is 0.5°C | 0 | Other Set |
| 0x0D(13) | 1 | Set how long the drying mode lasts 5~100, unit is minute | 30 | Dry Mode Schedule |
| 0x0E(14) | 1 | Set the mode a fter the drying mode ends 0x00 = OFF 0x01 = Manual mode (comfort mode) 0x02 = Auto mode (energy save mode) 0x03 = Away mode | 2 | Dry Mode Schedule |
| 0x10(16) | 1 | When to report temperature relative change threshold value actively, unit is 0.1°C 0, d isab le t o r ep or t 2- 10, rep or t when t he threshold v alue i s 2- 10 | 2 | None |

| | | | | |
|----------|---|--|-----------------|-----------|
| 0x11(17) | 1 | Time interval value for periodic report of temperature, humidity, unit is S 0, disable to report 30~28800, report when time interval value is 30~28800 | 300 (5mins) | None |
| 0x12(18) | 1 | When to report power change absolute threshold, unit is W 0, disable to report 1~100, report when absolute threshold is 1~100 | 5 | None |
| 0x13(19) | 1 | When to report current change absolute threshold, unit is 0.1A 0, disable to report 1~10, report when absolute threshold is 1~10 | 10 | None |
| 0x14(20) | 1 | When to report voltage change absolute threshold, unit is 1 V 0, disable to report 1~10, report when absolute threshold is 1~10 | 2 | None |
| 0x15(21) | 4 | Time interval value for periodic active report of Meter 60-2678400 (31 days) , unit is S | 600 (10mins) | None |
| 0x16(22) | 1 | The OLED display brightness when operate the device. 0, low level 1, mid level 2, high level | 1 | Other Set |
| 0x17(23) | 1 | This parameter defines which sensor temperature will be displayed on Home page. 0x00: indoor a ir temperature 0x01: external temperature (floor temperature) | 0 | Other Set |
| 0x18(24) | 1 | The time zone that the time parameters command adopts is UTC, the time zone need to be set: +12 ~ -12 | 0 | Other Set |
| 0x1B(27) | 1 | Enable or disable Display Auto Off function when the interface is standby interface. 0, disbaled 1, enabled | 0 | |

namron
the smarter choice

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