

## Flush On/Off thermostat

ORDERING CODE	Z-WAVE FREQUENCY
ZMNHID1	868,4 MHz
ZMNHID2	921,4 MHz
ZMNHID3	908,4 MHz
ZMNHID4	869,0 MHz
ZMNHID5	916,0 MHz
ZMNHID8	865,2 MHz

This Z-Wave module is used to regulate temperature. Regulation is done using full wave on/off technology. The module can be controlled either through Z-Wave network or through the wall switch.

The module is designed to be mounted inside a "flush mounting box" and is hidden behind a traditional wall switch. Module measures power consumption of connected device. It is designed to act as repeater in order to improve range and stability of Z-Wave network.

### Supported switches

Module supports **mono-stable** switches (push button) and **bi-stable** switches. The module is factory set to operate with bi-stable switches.

### Installation

- To prevent electrical shock and/or equipment damage, disconnect electrical power at the main fuse or circuit breaker before installation or any servicing.
- Make sure, that no voltage is present in the installation.
- Prevent the disconnecting device from being switched on accidentally.
- Connect the module according to electrical diagram.
- Locate the antenna far from metal elements (as far as possible).
- Do not shorten the antenna.

### Danger of electrocution!

- Module installation requires a great degree of skill and may be performed only by a qualified and licensed electrician.
- Even when the module is turned off, voltage may be present on its terminals.

### Note!

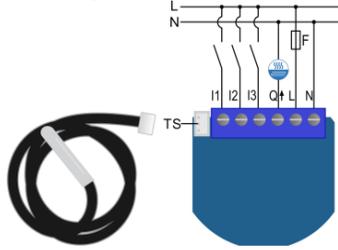
Do not connect the module to loads exceeding recommended values. Connect the module only in accordance to the below diagrams. Improper connections may be dangerous.

**Electrical installation must be protected by directly associated over current protection fuse 10 A, gG or Time lag T, rated breaking capacity 1500 A (ESKA 522.727) must be used according to wiring diagram to achieve appropriate overload protection of the module.**The fuse must be installed in fuse holder: Adels contact 503 Si / 1DS

### Package contents:

- Flush on/off thermostat + Temperature sensor

### Electrical diagram 230VAC

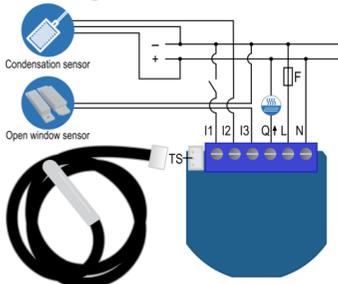


#### Notes for the diagram:

- N** Neutral lead
- L** Live lead
- Q** Output
- I3** Input for switch/push button or sensor\*
- I2** Input for switch/push button or sensor\*
- I1** Input for switch/push button or sensor\*
- TS** Terminal for digital temperature sensor (only for Flush on/off thermostat module compatible digital temperature sensor).

\*For details please check parameters 11, 12 and 13

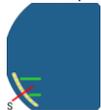
### Electrical diagram 24VDC



#### Notes for the diagram:

- N** + VDC
- L** - VDC
- Q** Output
- I3** Input for switch/push button or sensor\*
- I2** Input for switch/push button or sensor\*
- I1** Input for switch/push button or sensor\*
- TS** Terminal for digital temperature sensor (only for Flush on/off thermostat module compatible digital temperature sensor).

\*For details please check parameters 11, 12 and 13



- S** Service button (used to add or remove module from the Z-Wave network in case of 24 V SELV power supply).

**WARNING:** Service button S **must NOT be used** when module is connected to 110-230 V power supply. Durability of the module depends on applied load. For resistive load (light bulbs, etc.) and 10 A current consumption of each individual electrical device, the durability exceeds 100.000 switches of each individual electrical device.

Warning: the temperature sensors should not be exposed to water.

### Module Inclusion (Adding to Z-Wave network)

- Connect module to power supply (with temperature sensor connected),
- enable add/remove mode on main controller
- auto-inclusion (works for about 5 seconds after connected to power supply) or

- press push button I1 three times within 3 s (3 times change switch state within 3 seconds) or
- press service button **S** (only applicable for 24 V SELV supply voltage) for more than 2 second.

**NOTE 1:** For auto-inclusion procedure, first set main controller into inclusion mode and then connect module to power supply.

**NOTE 2:** When connecting temperature sensor to module that has already been included, you have to exclude module first. Switch off power supply, connect the sensor and re-include the module.

### Module Exclusion/Reset (Removing from Z-Wave network)

- Connect module to power supply
- bring module within maximum 1 meter (3 feet) of the main controller,
- enable add/remove mode on main controller
- press push button I1 five times within 3 s (5 times change switch state within 3 seconds) in the first 60 seconds after the module is connected to the power supply or
- press service button **S** (only applicable for 24 V SELV supply voltage) for more than 6 second.

By this function all parameters of the module are set to default values and own ID is deleted.

If push button I1 is pressed three times within 3 s (or service button S is pressed more than 2 and less than 6 seconds) module is excluded, but configuration parameters are not set to default values.

**NOTE:** If the module is included with parameters 100,101 or 102 with values different to default and module reset is done, wait at least 30 s before next inclusion.

### Association

Association enables Flush on/off thermostat module to transfer commands inside Z-Wave network directly (without main controller) to other Z-Wave modules.

### Associated Groups:

- Group 1: Lifeline group (reserved for communication with the main controller), 1 node allowed.
- Group 2: basic on/off (triggered at change of the output Q state and reflecting its state) up to 16 nodes.
- Group 3: SENSOR\_MULTILEVEL\_GET (triggered once per minute if Parameter 121 is not 0) up to 16 nodes.
- Group 4: basic on/off (triggered when actual temperature reach Too high or Too Low temperature limit, it sends FF/00 in Cool Mode, 00/FF in Heat Mode and 00 when thermostat is off; hysteresis is 1°C) up to 16 nodes.
- Group 5: THERMOSTAT\_SETPOINT\_GET (triggered once per minute if Parameter 121 is not 0) up to 16 nodes.
- Group 6: basic on/off (triggered by change of I1 if window sensor functionality is selected by parameter no. 11) up to 16 nodes.
- Group 7: basic on/off (triggered by change of I2 if condense sensor functionality is selected by parameter no. 12) up to 16 nodes.
- Group 8: basic on/off (triggered by change of I3 if flood sensor functionality is selected by parameter no. 13) up to 16 nodes.
- Group 9: sensor multilevel report (triggered by change of temperature) up to 16 nodes.
- Group 10: Basic on/off (triggered by change of the output Q state and reflecting its state), up to 16 nodes, Basic Set ON/OFF command is delayed for the time defined in parameter no. 77.

### Configuration parameters

#### Parameter no. 1 – Input I1 switch type

Available config. parameters (data type is 1 Byte DEC):

- default value 1
- 0 - mono-stable switch type (push button)
- 1 - bi-stable switch type

#### Parameter no. 2 – Input I2 switch type

See parameter 1 (valid for I2 instead of I1)

#### Parameter no. 3 – Input I3 switch type

See parameter 1 (valid for I3 instead of I1)

#### Parameter no. 4 – Input I contact type

Available config. parameters (data type is 1 Byte DEC):

- default value 0
- 0 - NO (normally open) input type
- 1 - NC (normally close) input type

**NOTE:** This parameter has influence only when parameter no. 11 is set to the value "2". After setting this parameter, switch the window sensor once, so that the module could determine the input state.

#### Parameter no. 5 – Input 2 contact type

See parameter 4 (valid for I2 instead of I1)

**NOTE:** This parameter has influence only when parameter no. 12 is set to the value "2000". After setting this parameter, switch the condense sensor once, so that the module could determine the input state.

#### Parameter no. 6 – Input 3 contact type

See parameter 4 (valid for I3 instead of I1)

**NOTE:** This parameter has influence only when parameter no. 13 is set to the value "2". After setting this parameter, switch the flood sensor once, so that the module could determine the input state.

#### Parameter no. 10 - Activate / deactivate functions ALL ON/ALL OFF

Available config. parameters (data type is 2 Byte DEC):

- default value 255
- 255 - ALL ON active, ALL OFF active.
- 0 - ALL ON is not active ALL OFF is not active
- 1 - ALL ON is not active ALL OFF active
- 2 - ALL ON active ALL OFF is not active

Flush on/off thermostat module responds to commands ALL ON / ALL OFF that may be sent by the main controller or by other controller belonging to the system.

#### Parameter no. 11- I1 Functionality selection

Available config. parameters (data type is 2 Byte DEC):

- default value 1
- 32767 - input I1 doesn't influence on the Heat/Cool process
- 1 - input I1 changes the mode of the thermostat between Off and Heat/Cool. In this case function on window sensor is disabled
- 2 - input I1 influences on heating/cooling valves according to status of window sensor. In this case function of Off and Heat/Cool selection by I1 is disabled.

**NOTE:** If "Window Sensor" selected (value set to "2"), parameter 100 (enable/disable endpoint) must be set to non-zero value and module re-included!

#### Parameter no. 12 – I2 Functionality selection

Available config. parameters (data type is 2 Byte DEC):

- default value 32767
- 32767 - input I2 does not influence on the Heat/Cool process
- From 0 to 990 - Temperature set point from 0.0 °C to 99.0 °C. When I2 is pressed, it automatically set temperature setpoint according to value defined here. In this case function of condense sensor is disabled
- From 1001 to 1150 - Temperature set point from -0.1 °C to -15.0 °C. When I2 is pressed, it automatically set temperature setpoint according to value defined here. In this case function of condense sensor is disabled
- 2000 - Input I2 influences on the heating/cooling valve according to status of condense sensor, In this case function of setpoint selection with I2 is disabled. This option has influence only when Parameter no. 59 is in Cool mode.

**NOTE:** If "Condense Sensor" selected (value set to "2000"), parameter 101 (enable/disable endpoint) must be set to non-zero value and module re-included!

#### Parameter no. 13 – I3 Functionality selection

Available config. parameters (data type is 2 Byte DEC):

- default value 32767
- 32767 - input I3 does not influence on the Heat/Cool process
- 1 - input I3 changes the mode of the thermostat between Heat and Cool and override parameter 59. In this case function on flood sensor is disabled **NOTE:** After parameter change, first exclude module (without setting parameters to default value) and then re include the module!
- 2 - input I3 influences on cooling and heating valves according to status of flood sensor. In this case function of Heat and Cool selection by I3 is disabled

**NOTE:** If "Flood Sensor" selected (value set to "2"), parameter 102 (enable/disable endpoint) must be set to non-zero value and module re-included!

#### Parameter no. 40 – Power reporting in Watts on power change

Set value means percentage, set value from 0 – 100 = 0 %

- 100 %. Available configuration parameters (data type is 1 Byte DEC):

- default value 0
- 0 - reporting disabled
- 1 - 100 = 1 % - 100 % Reporting enabled. Power report is sent (pushed) only when actual power in Watts in real time changes for more than set percentage comparing to previous actual power in Watts, step is 1 %.

**NOTE:** If power changed is less than 1 W, the report is not send (pushed), independent of percentage set.

#### Parameter no. 42 – Power reporting in Watts by time interval

Set value means time interval (0 – 32767) in seconds, when power report is sent. Available config. parameters (data type is 2 Byte DEC):

- default value 0 (power report is disabled)
- 0 - reporting disabled
- 1 - 32767 = 1 second - 32767 seconds. Reporting enabled. Power report is sent with time interval set by entered value.

#### Parameter no. 43 – Hysteresis On

This parameter defines temperature min difference between real measured temperature and set-point temperature to turn device on.

**NOTE:** Values set for Hysteresis On/Off are valid for Heat Mode. If Cool Mode is selected, values are inverted automatically!

Available config. parameters (data type is 2 Byte DEC):

- default value 1005 (-0.5 °C)
- 0 - 255= 0.0 °C ... 25.5°C
- 1001 - 1255 = -0.1°C ~ -25.5 °C

#### Parameter no. 44 – Hysteresis Off

This parameter defines temperature min difference between real measured temperature and set-point temperature to turn device off.

**NOTE:** Values set for Hysteresis On/Off are valid for Heat Mode. If Cool Mode is selected, values are inverted automatically!

Available config. parameters (data type is 2 Byte DEC):

- default value 5 (+0.5 °C)
- 0 - 255 = 0.0 °C - 25.5 °C
- 1001 - 1255 = -0.1 °C ~ -25.5 °C

#### Parameter no. 45 – Antifreeze

Set value means at which temperature the device will be turned on even if the thermostat was manually set to off. Available config. parameters (data type is 2 Byte DEC):

- default value 50 (5.0 °C)
- 0 - 125 = 0.0 °C - 12.5 °C
- 1001 - 1127 = -0.1°C ~ -12.6 °C
- 255 - Antifreeze functionality disabled
- NOTE:** Antifreeze is activated only in heating mode and it uses hysteresis of ±0.5°C .

#### Parameter no. 59 – Thermostat mode

Available config. parameters (data type is 1 Byte DEC):

- default value 0
- 0 - Heat mode
- 1 - Cool mode

**NOTE:** After parameter change, first exclude module (without setting parameters to default value) and then re include the module!

**NOTE:** To enable hysteresis in Heat mode: Value of Parameter no. 44 > Value of Parameter no. 43 To enable hysteresis in Cool mode:

Value of Parameter no. 43 > Value of Parameter no. 44 **NOTE:** When Cooling mode selected, the function of Hysteresis On and Hysteresis Off is inverted!

#### Parameter no. 60 – Too low temperature limit

Available configuration parameters (data type is 2 Byte DEC):

- Default value 50 (Too low temperature limit is 5.0 °C)
- 1 - 1000 = 0.1 °C – 100.0 °C, step is 0.1 °C.
- 1001 - 1150: -0.1 °C ~ -15.0 °C

**NOTE:** Too low temperature limit is used with Association Group 4.

#### Parameter no. 61 – Too high temperature limit

Available config. parameters (data type is 2 Byte DEC):

- default value 700 (too high temperature limit is 70.0 °C)
- 1 - 1000 = 0.1 °C - 100.0 °C, step is 0.1 °C. Too high temperature limit is used with Association Group 4.

### Parameter no. 63 – Output Switch selection

Set value means the type of the device that is connected to the on/off output. The device type can be normally open (NO) or normally close (NC).

- Available config. parameters (data type is 1 Byte DEC):
- default value 0
- 0 - When system is turned off the output is 0 V.
- 1 - When system is turned off the output is 230 V.

### Parameter no. 70 – Input 1 status on delay

- Available config. parameters (data type is 2 Byte DEC):
- default value 0
- 1 - 32000 seconds

If the value of parameter is different to 0, means that the influence of this input to heating or cooling will react after inserted time. This parameter has influence only when the window sensor functionality is selected by the parameter no. 11.

NOTE: Device status on UI change immediately

### Parameter no. 71 – Input 1 status off delay

- Available config. parameters (data type is 2 Byte DEC):
- default value 0
- 1 - 32000 seconds

If the value of parameter is different to 0, means that the influence of this input to heating or cooling will react after inserted time. This parameter has influence only when the window sensor functionality is selected by the parameter no. 11.

NOTE: Device status on UI change immediately

### Parameter no. 72 – Input 2 status on delay

See parameter 70 (valid for I2 instead of I1)  
This parameter has influence only when the condense sensor functionality is selected by the parameter no. 12.

### Parameter no. 73 – Input 2 status off delay

See parameter 71 (valid for I2 instead of I1)  
This parameter has influence only when the condense sensor functionality is selected by the parameter no. 12.

### Parameter no. 74 – Input 3 status on delay

See parameter 70 (valid for I3 instead of I1)  
This parameter has influence only when the flood sensor functionality is selected by the parameter no. 13.

### Parameter no. 75 – Input 3 status off delay

See parameter 71 (valid for I3 instead of I1)  
This parameter has influence only when the flood sensor functionality is selected by the parameter no. 13.

### Parameter no. 76 – Association group 2, 10 - reporting on time interval

- Available config. parameters (data type is 1 Byte DEC):
- Default value 30 = 30 minutes
- 0 = Reporting disabled
- 1-127 = 1 minute – 127 minutes, reporting enabled

NOTE: If the Association groups 2 or 10 are set, the device is reporting its state (Basic Set ON/ OFF) on change and on time interval (if this parameter is set).

### Parameter no. 77 – Association group 10 - delay before sending Basic Set ON

- Available config. parameters (data type is 2 Byte DEC):
- Default value 180 = 3 minutes
- 0 = Reports with no delay
- 1-32767 = 1 second– 32767 seconds, reporting enabled

NOTE: If this parameter is set, Basic Set ON/OFF Report is delayed for the time defined in this parameter.

### Parameter no. 78 – Scale Selection

- Available config. parameters (data type is 1 Byte DEC):
- Default value 0 = degrees Celsius
- 0 = degrees Celsius
- 1 = degrees Fahrenheit

NOTE: This scale has influence on Temperature reporting and scale reporting. The device is capable of receiving a Setpoint in all supported scales

### Parameter no. 100 – Enable / Disable Endpoint I1 or select Notification Type and Event

Enabling I1 means that Endpoint (I1) will be present on UI. Disabling it will result in hiding the endpoint according to the parameter set value. Additionally, a Notification Type and Event can be selected for the endpoint. Available configuration parameters (data type is 1 Byte DEC):  
Endpoint device type selection:

- notification sensor (1 - 6):  
GENERIC\_TYPE\_SENSOR\_NOTIFICATION,  
SPECIFIC\_TYPE\_NOTIFICATION\_SENSOR  
default value 0
- 1 - Home Security; Motion Detection, unknown location.
- 2 - CO; Carbon Monoxide detected, unknown location.
- 3 - CO2; Carbon Dioxide detected, unknown location.
- 4 - Water Alarm; Water Leak detected, unknown location.
- 5 - Heat Alarm; Overheat detected, unknown location.
- 6 - Smoke Alarm; Smoke detected, unknown location.
- 0 - Endpoint, I1 disabled
- sensor binary (9): GENERIC\_TYPE\_SENSOR\_BINARY,  
SPECIFIC\_TYPE\_NOT\_USED
- 9 - Sensor binary

NOTE1: After parameter change, first exclude module (without setting parameters to default value) and then re include the module!

NOTE2: When the parameter is set to value 9 the notifications are send for Home Security.

NOTE3: If "endpoint enabled" (value set to 1..9), parameter 11 must be set to "2" as "Window Sensor"!

### Parameter no. 101 – Enable / Disable Endpoint I2 or select Notification Type and Event

See parameter 100 (valid for I2 instead of I1)  
NOTE: If "endpoint enabled" (value set to 1..9), parameter 12 must be set to "2000" as "Condense Sensor"!

### Parameter no. 102 – Enable / Disable Endpoint I3 or select Notification Type and Event

See parameter 100 (valid for I3 instead of I1)  
NOTE: If "endpoint enabled" (value set to 1..9), parameter 13 must be set to "2" as "Flood Sensor"!

### Parameter no. 110 – Temperature sensor offset settings

Set value result in adding or subtracting that value to actual measured value by sensor.

- Available config. parameters (data type is 2 Byte DEC):
- default value 32536
- 32536 – offset is 0.0 °C
- From 1 to 100 – value from 0.1 °C to 10.0 °C is added to actual measured temperature.
- From 1001 to 1100 – value from -0.1 °C to -10.0 °C is subtracted to actual measured temperature.

### Parameter no. 120 – Digital temperature sensor reporting

If digital temperature sensor is connected, module reports measured temperature on temperature change defined by this parameter.

- Available config. parameters (data type is 1 Byte DEC):
- default value 5
- 0 – Reporting disabled
- 1-127 = 0.1 °C – 12.7 °C, step is 0.1 °C

### Parameter no. 121 – Digital temperature sensor / setpoint selector

If digital temperature sensor is not connected, module can grab measured temperature from external secondary module.

- Available config. parameters (data type is 1 Byte DEC):
- default value 0
- 0 - internal digital temperature sensor is mounted, setpoint is set by controller
- 1 - (bit 0) temperature is grabbed from external always on sensor with sensor\_multilevel\_get sent by association 3
- 2 - (bit 1) temperature is grabbed from external battery powered room sensor declared in parameter 122
- 4 - (bit 2) setpoint is grabbed from external always on module with thermostat\_setpoint\_get sent by association 5
- 8 - (bit 3) setpoint is grabbed from external battery powered room sensor declared in parameter 122.
- 10 – (bit 1 and bit 3) temperature AND setpoint are grabbed from external battery powered room sensor declared in parameter 122

### Parameter no. 122 – Node ID of external battery powered room sensor

If digital temperature sensor is not connected, module can grab measured temperature from external battery powered room sensor defined by this parameter.

- Available config. parameters (data type is 1 Byte DEC):
- default value 0
- 0 – external battery powered room sensor not in function

- 1 - 254 = Node ID of external battery powered room sensor

NOTE: Get sensor Node ID from controller and set parameter 122 immediately after sensor weak up (after button press on it etc.)

### Technical Specifications

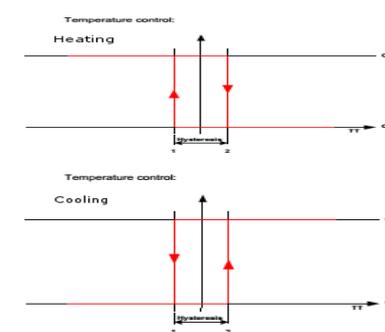
Power supply	110-230 VAC ±10 % 50/60 Hz, 24-30 VDC
Rated load current of AC output (resistive load)	1 X 10 A/230 VAC
Rated load current of DC output (resistive load)	1 X 10 A/30 VDC
Output circuit power of AC output (resistive load)	2300 W (230 VAC)
Output circuit power of DC output (resistive load)	240 W (24 VDC)
Power monitoring accuracy	P = 5 – 50 W, +/-3 W; P > 50 W, +/-3 %
Operation temperature	-10 °C – 40 °C
Distance	up to 30 meters indoors (depending on building materials)
Dimensions (WxHxD) (package)	41.8 mm x 36.8 mm x 15.4 mm (115x96x22)
Weight (Brutto with package)	48 g (64 g)
Electricity consumption	0.4 W
For installation in boxes	Ø ≥ 60 mm or 2M
Switching	relay
Digital temperature sensor range	-50.0 °C – 125.0 °C, resolution 0.1 °C
Digital temperature sensor cable length	1000 mm

\* In case of load other than resistive, pay attention to the value of cos φ and if necessary apply load lower than the rated load. Max current for cos φ = 0.4 is 3 A at 250 VAC, 3 A at 24 VDC L/R = 7 ms.

Max Power Limit is automatically set by software. If max power is surpassed, the output is turned off up to next restart of the module.

### Functionality

Thermostat has 2 working mode, Off or Heat/Cool. Selection between Off and Heat/Cool is possible to select with I1 push button or from gateway. When the module is turned on it automatically regulate the temperate based on Hysteresis on and Hysteresis off parameters settings.



When the temperature is decreasing and reaches point 1 (defined by parameter 43), heating device is turned on and remains active until the temperature in the room is not increased to reach point 2 (defined by parameter 44). In this moment heating device is turned off. When heating device is turned off, then it is working in antifreeze regime. The antifreeze regime turns on heating device when the temperature is lower of equal to the temperature set by parameter 45.

- Z-Wave Device Class:  
ZWAVEPLUS\_INFO\_REPORT\_ROLE\_TYPE\_SLAVE\_ALWAYS\_ON  
GENERIC\_TYPE\_THERMOSTAT  
SPECIFIC\_TYPE\_THERMOSTAT\_GENERAL\_V2
- Z-Wave supported Command Classes  
COMMAND\_CLASS\_ZWAVEPLUS\_INFO\_V2  
COMMAND\_CLASS\_VERSION\_V2  
COMMAND\_CLASS\_ASSOCIATION\_V2  
COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO\_V2  
COMMAND\_CLASS\_DEVICE\_RESET\_LOCALLY  
COMMAND\_CLASS\_POWERLEVEL  
COMMAND\_CLASS\_BASIC  
COMMAND\_CLASS\_SWITCH\_ALL  
COMMAND\_CLASS\_SENSOR\_BINARY  
COMMAND\_CLASS\_THERMOSTAT\_MODE\_V2  
COMMAND\_CLASS\_THERMOSTAT\_SETPOINT\_V2  
COMMAND\_CLASS\_NOTIFICATION\_V5  
COMMAND\_CLASS\_METER\_V4  
COMMAND\_CLASS\_SENSOR\_MULTILEVEL\_V7  
COMMAND\_CLASS\_MULTI\_CHANNEL\_V4  
COMMAND\_CLASS\_ASSOCIATION\_V2  
COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION\_V3  
COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO\_V2  
COMMAND\_CLASS\_CONFIGURATION\_V2  
COMMAND\_CLASS\_MARK  
COMMAND\_CLASS\_BASIC
- Endpoint1

- Device Class:  
GENERIC\_TYPE\_THERMOSTAT  
SPECIFIC\_TYPE\_THERMOSTAT\_GENERAL\_V2
- Command Classes:  
COMMAND\_CLASS\_ZWAVEPLUS\_INFO\_V2  
COMMAND\_CLASS\_VERSION\_V2  
COMMAND\_CLASS\_BASIC\_V2  
COMMAND\_CLASS\_SWITCH\_ALL  
COMMAND\_CLASS\_THERMOSTAT\_MODE\_V2  
COMMAND\_CLASS\_THERMOSTAT\_SETPOINT\_V2  
COMMAND\_CLASS\_METER\_V4  
COMMAND\_CLASS\_ASSOCIATION\_V2  
COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION\_V3  
COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO  
COMMAND\_CLASS\_MARK  
COMMAND\_CLASS\_BASIC
- Endpoint 2 (I1):

- Device Class:  
GENERIC\_TYPE\_SENSOR\_BINARY  
SPECIFIC\_TYPE\_NOT\_USED
- Command Classes:  
COMMAND\_CLASS\_ZWAVEPLUS\_INFO\_V2  
COMMAND\_CLASS\_VERSION\_V2  
COMMAND\_CLASS\_BASIC\_V2  
COMMAND\_CLASS\_SENSOR\_BINARY  
COMMAND\_CLASS\_NOTIFICATION\_V5  
COMMAND\_CLASS\_ASSOCIATION\_V2  
COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION\_V3  
COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO  
COMMAND\_CLASS\_MARK  
COMMAND\_CLASS\_BASIC\_V2
- Endpoint 3 (I2):

- Device Class:  
GENERIC\_TYPE\_SENSOR\_BINARY  
SPECIFIC\_TYPE\_NOT\_USED
- Command Classes:  
COMMAND\_CLASS\_ZWAVEPLUS\_INFO\_V2  
COMMAND\_CLASS\_VERSION\_V2  
COMMAND\_CLASS\_BASIC\_V2  
COMMAND\_CLASS\_SENSOR\_BINARY  
COMMAND\_CLASS\_NOTIFICATION\_V5  
COMMAND\_CLASS\_ASSOCIATION\_V2  
COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION\_V3  
COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO  
COMMAND\_CLASS\_MARK  
COMMAND\_CLASS\_BASIC\_V2
- Endpoint 4 (I3):

- Device Class:  
GENERIC\_TYPE\_SENSOR\_BINARY  
SPECIFIC\_TYPE\_NOT\_USED
- Command Classes:  
COMMAND\_CLASS\_ZWAVEPLUS\_INFO\_V2  
COMMAND\_CLASS\_VERSION\_V2  
COMMAND\_CLASS\_BASIC\_V2  
COMMAND\_CLASS\_SENSOR\_BINARY  
COMMAND\_CLASS\_NOTIFICATION\_V5  
COMMAND\_CLASS\_ASSOCIATION\_V2  
COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION\_V3  
COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO  
COMMAND\_CLASS\_MARK  
COMMAND\_CLASS\_BASIC\_V2
- Endpoint 5 (SENSOR MULTILEVEL):

- Device Class:  
GENERIC\_TYPE\_SENSOR\_MULTILEVEL  
SPECIFIC\_TYPE\_ROUTING\_SENSOR\_MULTILEVEL
- Command Classes:  
COMMAND\_CLASS\_ZWAVEPLUS\_INFO\_V2  
COMMAND\_CLASS\_VERSION\_V2  
COMMAND\_CLASS\_SENSOR\_MULTILEVEL\_V7

- COMMAND\_CLASS\_ASSOCIATION\_V2  
COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION\_V3  
COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO  
COMMAND\_CLASS\_BASIC
- The basic command class supports the functions BASIC SET and BASIC GET. Through the function basic SET is possible to set the mode of the module. Basic SET can send the values 0xff which means Heat/Cool or 0x00 which means Off. Through the function basic GET is possible to read the mode of the module. The module returns 0xff which means Heat/Cool or 0x00 which means Off.
- COMMAND\_CLASS\_SENSOR\_MULTILEVEL  
Flush On/off thermostat supports reading of actual temperature which is 2 bytes long, scale is °C and its precision is 1 (it means 0.1°C).
- COMMAND\_CLASS\_THERMOSTAT\_MODE  
Flush On/off thermostat supports the following modes:

- Mode Off
- Mode Heat/Cool (see parameter 59.)
- COMMAND\_CLASS\_THERMOSTAT\_SETPOINT  
Flush On/off thermostat supports temperature set point, which is 2 bytes long, scale is °C and its precision is 1 (it means 0.1°C).
- This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from any other manufacturers. All constantly powered nodes in the same network will act as repeaters regardless of the vendor in order to increase reliability of the network.

### Important disclaimer

Z-Wave wireless communication is inherently not always 100% reliable, and as such, this product should not be used in situations in which life and/or valuables are solely dependent on its function.

### Warning!

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being. When replacing old appliances with new once, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

This user manual is subject to change and improvement without notice.

NOTE: User manual is valid for module with SW version S5 (SW version is part of P/N!)  
Example: P/N: ZMNHIDx HXS5PX

**Qubino**  
Goap d.o.o. Nova Gorica  
Ulica Klementa Juga 007  
5250 Solkan  
Slovenia  
E-mail: [info@qubino.com](mailto:info@qubino.com)  
Tel: +386 5 335 95 00  
Web: [www.qubino.com](http://www.qubino.com)  
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