Qubino

The **INNOVATIVE** and **SMALLEST**

Z-WAVE PLUS

Flush Heat & Cool Thermostat

ORDERING CODE	Z-WAVE FREQUENCY
ZMNHKD1	868,4 MHz
ZMNHKD2	921,4 MHz
ZMNHKD3	908,4 MHz
ZMNHKD4	869,0 MHz
ZMNHKD5	916,0 MHz
ZMNHKD8	865,2 MHz

This Z-Wave module is used to regulate temperature in heating and cooling mode. 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 4A, gG or Time lag T, rated breaking capacity 1500A (ESKA 522.723) 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

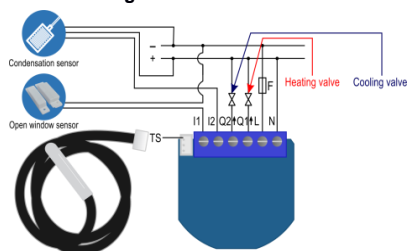- Flush Heat & Cool Thermostat + Temperature sensor

Electrical diagram 230VAC
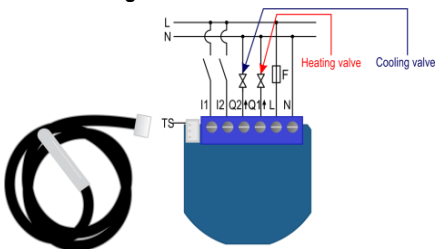
Notes for the diagram:

N	Neutral lead
L	Live lead
Q1	Output for Heating valve
Q2	Output for Cooling valve
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 Heat & Cool thermostat module compatible digital temperature sensor).

*For details please check parameters 11 and 12

Electrical diagram 24VDC

Notes for the diagram:

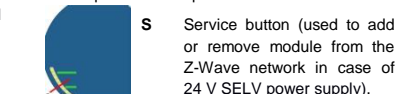|	
N	+ VDC
L	- VDC
Q1	Output for Heating valve
Q2	Output for Cooling valve
I2	Input for switch /push button or sensor*
I1	Input for switch /push button or sensor*
TS	Terminal for digital temperature sensor (only for Flush Heat & Cool thermostat module compatible digital temperature sensor).

*For details please check parameters 11 and 12

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 110-230V power supply.

Durability of the device depends on applied load. For resistive load (light bulbs, etc.) and 4A current consumption of each individual electrical device, the durability exceeds 70.000 switches of each individual electrical device.

Module Inclusion (Adding to Z-wave network)

- Connect module to power supply (with temperature sensor connected),
- auto-inclusion (works for about 5 seconds after connected to power supply) or
- press push button I1 three times within 3s (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.

NOTE1: For auto-inclusion procedure, first set main controller into inclusion mode and then connect module to power supply.

NOTE2: 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 3s (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 3s (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 or 101 with value different to default and module reset is done, wait at least 30s before next inclusion.

Association

Association enables Flush Heat & Cool 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 Q1 or Q2 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 by Too high temperature limit, it send 0x00, triggered by To Low temperature, it send 0xFF) 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 (trigged by change of I1 if window sensor functionality is selected by parameter no. 11) up to 16 nodes.

Group 7: basic on/off (trigged by change of I2 if condense sensor functionality is selected by parameter no. 12) up to 16 nodes.

Group 9: sensor multilevel report (trigged by change of temperature) up to 16 nodes.

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. 4 – Input 1 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. 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 Heat & Cool 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 Auto. In this case function on window sensor is disabled
- 2 - input I1 influences on cooling and heating valves according to status of window sensor. In this case function of Off and Auto 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 Heat and Cool temperature setpoints 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 cooling valve according to status of condense sensor, In this case function of setpoint selection with I2 is disabled

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. 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 send (push) 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 1W, 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 send. 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 send with time interval set by entered value.

Parameter no. 43 – Hysteresis Heating On

This parameter defines temperature difference between measured temperature and set-point temperature to turn heating on. Available configuration parameters (data type is 2 Byte DEC):
- default value 1010 (-1.0 °C)
- 0 - 255 = 0,0°C to 25,5 °C

- 1001 - 1255 = - 0,1°C to - 25,5 °C

Parameter no. 44 - Hysteresis Heating Off

This parameter defines temperature difference between measured temperature and set-point temperature to turn heating off. Available configuration parameters (data type is 2 Byte DEC):
- default value 2 (+0.2 °C)
- 0 - 255 = 0,0°C to 25,5 °C
- 1001 - 1255 = - 0,1°C to - 25,5 °C

Parameter no. 45 – Hysteresis Cooling On

This parameter defines temperature difference between measured temperature and set-point temperature to turn cooling on. Available configuration parameters (data type is 2 Byte DEC):
- default value 5 (+0.5 °C)
- 0 - 255 = 0,0°C to 25,5 °C
- 1001 - 1255 = - 0,1°C to - 25,5 °C

Parameter no. 46 – Hysteresis Cooling Off

This parameter defines temperature difference between measured temperature and set-point temperature to turn cooling off. Available configuration parameters (data type is 2 Byte DEC):
- default value 1002 (-0.2 °C)
- 0 - 255 = 0,0°C to 25,5 °C
- 1001 - 1255 = - 0,1°C to - 25,5 °C

Parameter no. 47 – 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 - 127 = 0,0°C to 12,7 °C
- 1001 - 1127 = - 0,1°C to - 12,7 °C
- 255 - Antifreeze functionality disabled

NOTE: Antifreeze is activated only in heating mode. It uses a hysteresis determined in parameters no. 43 and 44.

Parameter no. 60 – Too low temperature limit

Available config. 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 to -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. 64 – Output Switch selection Q1

Set value means the type of the device that is connected to the Q1 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. 65 – Output Switch selection Q2

Set value means the type of the device that is connected to the Q2 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. 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.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 0.0C
- 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 temp. 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. para. (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 PAR.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	110-230VAC ±10% 50/60Hz, 24-30VDC
Rated load current of AC output (resistive load)	2 X 4A / 230VAC

Rated load current of DC output (resistive load)	2 X 4A / 30VDC
Output circuit power of AC output (resistive load)	2 X 920W (230VAC)
Output circuit power of DC output (resistive load)	2 X 96W (24VDC)
Power monitoring accuracy	P=0-200W, +/-2W; P>200W, +/-3%
Operation temperature	-10 ~ 40°C
Distance	up to 30 meters indoors (depending on building materials)
Dimensions (WxHxD) (package)	41,8x36,8x16,9mm (115x96x22)
Weight (Brutto with package)	48g (64g)
Electricity consumption	0,4W
For installation in boxes	Ø ≥ 60mm or 2M
Switching	Relay (2x)
Digital temperature sensor range	-50.0 ~ 125.0°C, resolution 0.1°C
Digital temperature sensor cable length	1000mm

* 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 2A at 250VAC, 3A at 24VDC.Max Power Limit is automatically set by a software. If max power is exceeded, the output is turned off up to next restart of the module.

Functionality

Thermostat has 2 working mode, Off or Auto. Selection between Off and Auto is possible to select with I1 push button or from gateway. When the thermostat is turned On, it automatically regulates temperature according to picture below:
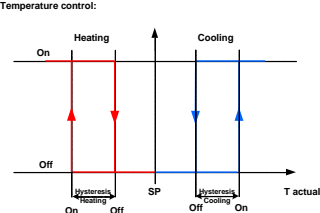
When the temperature is decreasing and reaches point 'Heating On' (defined by parameter 43), heating is turned on and remains active until the temperature in the room is not increased to reach 'Heating Off' (defined by parameter 44). At this point heating and cooling valve are turned off – deadband zone. If the temperature rises over 'Cooling On' (defined by parameter 45) point the cooling valve will switch on. The consequence will be temperature dropping, and when temperature drops below 'Cooling Off' (defined by parameter 46) cooling valve will switch off.

When the thermostat is turned off, then it is working in antifreeze regime. The antifreeze regime turns on heating when the temperature is lower or equal to the temperature set by parameter 47 (default 5.0C).

Energy saving mode:

If parameter 11 is set to value 2 and if the state of the input I1 is active (window opened active) both outputs (Q1 and Q2) are turned off.

Condensation:

If parameter 12 is set to value 2000 and if the state of the input I2 is active (condensation sensor active) Q2 output (cooling) is turned off.

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_MANUFACTURER_SPECIFIC_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 Auto and 0x00 which means Off. Through the function basic GET is possible to read the mode of the module. The module returns 0xff which means Auto or 0x00 which means Off.

COMMAND_CLASS_SENSOR_MULTILEVEL

Flush Heat & Cool 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 Heat & Cool thermostat supports the following modes:

- Mode Off
- Mode Auto

COMMAND_CLASS_THERMOSTAT_SETPOINT

Flush Heat & Cool 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: ZMNHKDx H1**S5**P1