



Note: In case of S2 Security inclusion a dialog will appear prompting you to enter the corresponding PIN number (5 underlined digits) that are written on the module label and the label inserted in the packaging (check the example picture).



IMPORTANT: The PIN code must not be lost

Z-WAVE EXCLUSION/RESET

Z-WAVE EXCLUSION

1. Connect the device to the power supply.
2. Make sure the device is within direct range of your Z-Wave gateway (hub) or use a hand-held Z-Wave remote to perform exclusion.
3. Enable exclusion mode on your Z-Wave gateway (hub).
4. Toggle the switch connected to the I1 terminal 3 times within 3 s.
5. Exclusion with the switch connected to I1 terminal is not limited by time.

OR

If the device is powered by 24 Vdc SELV supply, press and hold the S (Service) button between 3 and 6 s.

6. The device will be excluded from your network but any custom configuration parameters will not be erased.

NOTE1: LEARN MODE state allows the device to receive network information from the controller.

NOTE2: After device is excluded you should wait 30 s before performing re-inclusion.

FACTORY RESET

1. Connect the device to the power supply.
2. Within the first minute the device is connected to the power supply, toggle the switch connected to the I1 terminal 5 times within 5 s.

OR

If the device is powered by 24 Vdc SELV supply, press and hold the S (Service) button for more than 6 s.

By resetting the device, all custom parameters previously set on the device will return to their default values, and a node ID will be deleted. Use this reset procedure only when the gateway (hub) is missing or otherwise inoperable.

NOTE: See extended manual for custom settings and parameters available for this device.

IMPORTANT DISCLAIMER

Z-Wave wireless communication is not always 100 % reliable. This device should not be used in situations in which life and/or valuables are solely dependent on its functioning. If the device is not recognized by your gateway (hub) or shows up incorrectly, you may need to change the device type manually and make sure your gateway (hub) supports Z-Wave Plus™ devices. Contact us for help before returning the product: <http://qubino.com/support/#email>

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 ones, the retailer is legally obligated to take back your old appliance for disposal free of charge.

NOTIFICATION COMMAND CLASS

The device supports the following notifications:

In case the current exceeds 10 A for 6 s or more the output is turned off automatically and overload notification is sent.

Notification Type: Management (0x08) Notification Event: Power Overload detected (0x08)

CONFIGURATION PARAMETERS

Parameter no. 1 – Input I1 switch type

With this parameter, you can select between push-button (momentary) and on/off toggle switch types.

Values (size is 1 byte dec):

- default value 1
- 0 - push-button (momentary)
- 1 - on/off toggle switch

Parameter no. 4 – Input 1 contact type

This parameter determines how the switch or push-button is connected.

Values (size is 1 byte dec):

- default value 0

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

Parameter no. 40 – Watt Power Consumption Reporting Threshold for Q1 Load

Choose by how much power consumption needs to increase or decrease to be reported. Values correspond to percentages so if 10 is set, for example, the device will report any power consumption changes of 10 % or more compared to the last reading.

Values (size is 1 byte dec):

- default value 10
 - 0 - Power consumption reporting disabled
 - 1 - 100 = 1 % - 100 % Power consumption reporting enabled. New value is reported only when Wattage in real time changes by more than the percentage value set in this parameter compared to the previous Wattage reading, starting at 1% (the lowest value possible).
- NOTE:** Power consumption needs to increase or decrease by at least 1 Watt to be reported, REGARDLESS of percentage set in this parameter.

Parameter no. 42 – Watt Power Consumption Reporting Time Threshold for Q1

Set value refers to the time interval with which power consumption in Watts is reported (30 – 32767 seconds) starting from time of last Watts reported. If for example 300 is entered, energy consumption reports will be sent to the gateway (hub) every 300 seconds (or 5 minutes).

Values (size is 2 byte dec):

- default value 600 (600 seconds = 10 minutes)
- 0 - Power consumption reporting disabled
- 30 - 32767 = 30 - 32767 seconds. Power consumption reporting enabled. Report is sent according to time interval (value) set here.

EXAMPLE: If we set value to 30 s and the device reports Watts because of percent change of power (parameter 40 - Watt Power Consumption Reporting Threshold) at time = 5 seconds, then the device will send next meter report at time = 35 s (assuming the device has not sent report within interval 5 to 35 seconds).

Parameter no. 43 – Hysteresis Upper temperature offset

This parameter defines minimum temperature difference between real measured temperature and set-point temperature to turn device on in heat mode or turn device off in cool mode.

Values (size is 2 byte dec):

- default value 5 (0.5 °C)
- 0 - 450

NOTE1: If configuration parameter 78 (Scale selection) is set to Celsius, then valid interval is 0 – 250 (0.0 °C – 25.0 °C, resolution 0.1 °C)
NOTE2: If configuration parameter 78 (Scale selection) is set to Fahrenheit, then valid interval is 0 – 450 (0.0 °F – 45.0 °F, resolution 0.1 °F)
NOTE3: If configuration parameter 78 (Scale selection) is set to Fahrenheit, note that Fahrenheit values will be converted to Celsius degrees. Due to conversion algorithm please be advised that configuration value could drift when converting values back and forth.

Parameter no. 44 – Hysteresis Lower temperature offset

This parameter defines minimum temperature difference between real measured temperature and set-point temperature to turn device off in heat mode or turn device on in cool mode.

Values (size is 2 byte dec):

- default value 5 (0.5 °C)
- 0 - 450

NOTE1: If configuration parameter 78 (Scale selection) is set to Celsius, then valid interval is 0 – 250 (0.0 °C – 25.0 °C, resolution 0.1 °C)
NOTE2: If configuration parameter 78 (Scale selection) is set to Fahrenheit, then valid interval is 0 – 450 (0.0 °F – 45.0 °F, resolution 0.1 °F)
NOTE3: If configuration parameter 78 (Scale selection) is set to Fahrenheit, note that Fahrenheit values will be converted to Celsius degrees. Due to conversion algorithm please be advised that configuration value could drift when converting values back and forth.

Parameter no. 45 – Antifreeze

Set value determines at which temperature the device will be turned on even (if the thermostat was manually set to off).

Values (size is 2 byte dec):

- default value 50 (5.0 °C)
- -125 – 545
- 1000 - Antifreeze functionality disabled

NOTE1: Antifreeze is activated only in heating mode and it uses hysteresis of ±0.5 °C.

NOTE2: If configuration parameter 78 (Scale selection) is set to Celsius, then valid interval is -125 – 125 (-12.5 °C – 12.5 °C, resolution 0.1 °C)

NOTE3: If configuration parameter 78 (Scale selection) is set to Fahrenheit, then valid interval is 95 – 545 (9.5 °F – 54.5 °F, resolution 0.1 °F)

NOTE4: If configuration parameter 78 (Scale selection) is set to Fahrenheit, note that Fahrenheit values will be converted to Celsius degrees. Due to conversion algorithm please be advised that configuration value could drift when converting values back and forth.

Parameter no. 59 – Thermostat mode

This parameter determines how the device will operate if it will operate in the heating mode or in the cooling mode. The range of the hysteresis will remain the same, only operation will change from heating to cooling and vice versa

Values (size is 1 byte dec):

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

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

Parameter no. 60 – Too low temperature limit

This parameter determines the temperature at which the device sends a command to the associated device - to turn ON device or to turn OFF device.

Values (size is 2 byte dec):

- Default value 50 (Too low temperature limit is 5.0 °C)
- -150 – 2120

NOTE1: Too low temperature limit is used with Association Group 3.

NOTE2: If configuration parameter 78 (Scale selection) is set to Celsius, then valid interval is -150 – 1000 (-15.0 °C – 100.0 °C, resolution 0.1 °C)

NOTE3: If configuration parameter 78 (Scale selection) is set to Fahrenheit, then valid interval is 50 – 2120 (5.0 °F – 212.0 °F, resolution 0.1 °F)

NOTE4: If configuration parameter 78 (Scale selection) is set to Fahrenheit, note that Fahrenheit values will be converted to Celsius degrees. Due to conversion algorithm please be advised that configuration value could drift when converting values back and forth.

Parameter no. 61 – Too high temperature limit

This parameter determines the temperature at which the device sends a command to the associated device, to turn ON device or to turn OFF device.

Values (size is 2 byte dec):

- default value 700 (too high temperature limit is 70.0 °C)
- 1 – 2120

NOTE1: Too high temperature limit is used with Association Group 3.

NOTE2: If configuration parameter 78 (Scale selection) is set to Celsius, then valid interval is 1 – 1000 (0.1 °C – 100.0 °C, resolution 0.1 °C)

NOTE3: If configuration parameter 78 (Scale selection) is set to Fahrenheit, then valid interval is 322 – 2120 (32.2 °F – 212.0 °F, resolution 0.1 °F)

NOTE4: If configuration parameter 78 (Scale selection) is set to Fahrenheit, note that Fahrenheit values will be converted to Celsius degrees. Due to conversion algorithm please be advised that configuration value could drift when converting values back and forth.

Parameter no. 63 – Output switch selection

Set value determines the type of the device connected to the on/off output. The output type can be normally open (NO) or normally closed (NC).

Values (size is 1 byte dec):

- default value 0
- 0 - When switch/device is off the output is 0 V (NC).
- 1 - When switch/device is off the output is 240 Vac or 24 Vdc (NO).

Parameter no. 78 – Scale Selection

This parameter determines in which measurement unit the device will report temperature (Fahrenheit or Celsius) and determines the scale the configuration parameters (43, 44, 44, 45, 60, 61, 110, 120) are interpreted as.

Values (size is 1 byte dec):

- Default value 0 = degrees Celsius
- 0 = degrees Celsius
- 1 = degrees Fahrenheit

NOTE1: This scale has influence on Temperature reporting. The device is capable of receiving a Set point in all supported scales.

NOTE2: This configuration parameter has impact on configuration parameters 43, 44, 44, 45, 60, 61, 110, 120. If scale is set to degrees Fahrenheit configuration values at parameters 43, 44, 44, 45, 60, 61, 110, 120 will be converted to degrees Celsius. Please note that converted values could drift when converting values back and forth.

Parameter no. 110 – Temperature Sensor Offset Settings

Set value is added to or subtracted from the actually measured value to adjust the temperature report sent by an external sensor.

Values (size is 2 byte dec):

- default value 0
- -270 – 270

NOTE1: If configuration parameter 78 (Scale selection) is set to Celsius, then valid interval is

-150 – 150 (-15.0 °C – 15.0 °C, resolution 0.1 °C)

NOTE2: If configuration parameter 78 (Scale selection) is set to Fahrenheit, then valid interval is -270 – 270 (-27.0 °F – 27.0 °F, resolution 0.1 °F)

NOTE3: If configuration parameter 78 (Scale selection) is set to Fahrenheit, note that Fahrenheit values will be converted to Celsius degrees. Due to conversion algorithm please be advised that configuration value could drift when converting values back and forth.

Parameter no. 120 – Temperature Sensor Reporting Threshold

This configuration parameters sets reporting threshold between reported temperature and actual temperature for reporting temperature at association group 4.

Values (size is 2 byte dec):

- Default value 5 = 0.5 °C
- 0 – Reporting disabled
- 0 – 270

NOTE1: If configuration parameter 78 (Scale selection) is set to Celsius, then valid interval is

0 – 150 (0 °C – 15.0 °C, resolution 0.1 °C)

NOTE2: If configuration parameter 78 (Scale selection) is set to Fahrenheit, then valid interval is 0 - 270 (0 °F – 27.0 °F, resolution 0.1 °F)

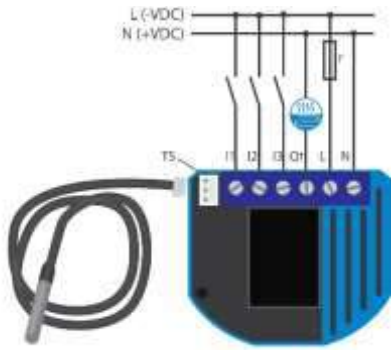
NOTE3: If configuration parameter 78 (Scale selection) is set to Fahrenheit, note that Fahrenheit values will be converted to Celsius degrees. Due to conversion algorithm please be advised that configuration value could drift when converting values back and forth.

ASSOCIATION PARAMETERS

Group ID	Name	Allowed nodes	Description
1	Lifetime	5	Supports the following commands: <ul style="list-style-type: none"> • Device Reset Locally: triggered upon request, • Sensor multilevel report: triggered upon temperature change, • Meter report: triggered upon energy consumption change according to configuration parameters 40, 42, • Notification report: triggered upon current overload detection, • Thermostat mode: triggered upon thermostat mode change • Thermostat operating state: triggered upon thermostat operating state (Idle, Heating, Cooling)
2	Change of output Q	5	Supports the following command: <ul style="list-style-type: none"> • Basic set: triggered by change of output Q
3	Basic on/off too high too low T	5	Supports the following command: <ul style="list-style-type: none"> • Basic set: triggered when actual temperature reaches Too High or Too Low temperature limit; Heat mode: when temperature reaches Too High Temperature Limit reports OFF (0x00), when temperature reaches Too Low Temperature Limit reports ON (0x0F); Cool mode: when temperature reaches Too High Temperature Limit reports ON (0x0F), when temperature reaches Too Low Temperature Limit reports OFF (0x00). Thermostat off mode: reports OFF (0x00) on both limits reached. Hysteresis is 1 °C.
4	Sensor multilevel report	5	Supports the following command: <ul style="list-style-type: none"> • Sensor multilevel report: triggered by change of temperature for threshold defined in configuration parameter 120

EN

ELECTRICAL DIAGRAM (110 - 240 Vac, 24 Vdc)



Notes for diagram/

- N Neutral lead (+ Vdc)
- L Live lead (- Vdc)
- Q ↑ Output for electrical device (load) no. 1
- I1 Input to control electrical device (in-wall switch) no.1
- T5 Temperature sensor terminal

EN *Wago 221-413 splicing connectors for L and N connections must be used only when connected to 240 Vac.

EN WARNING:

The S (Service) button **must NOT** be used when the device is connected to a 110-240 Vac power supply.
The durability of the device depends on the applied load. For resistive loads (light bulbs, etc.) and 10 A current consumption of an electrical device, the product's lifespan exceeds 100,000 toggles.

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TECHNICAL SPECIFICATIONS

Power supply	110 - 240 Vac $\pm 10\%$ 50/60 Hz / 24-30 Vdc
Rated load current of AC/DC output (resistive load)*	1 X 10 A (240 Vac) / 1 X 10 A / (24 Vdc)
Output circuit power of AC/DC output (resistive load)	2400 W (240 Vac) / 1100 W (110 Vac)/ 240 W (24 Vdc)
Power measurement accuracy	P=5-50 W, +/-3 W P>50 W, +/-3 %
Digital temperature sensor range	-25 °C ~ +80 °C (-13 °F ~ 176 °F)
Operation temperature	-10 °C ~ +40 °C (14 °F ~ 104 °F)
Z-Wave operation range	up to 30 m indoors (98 ft)
Dimensions (WxHxD) (package)	41,8x36,8x16,9 mm (74x86x43 mm) / 1,65x1,45x0,66 in (2,91x3,39x1,69 in)
Weight (with package)	50 g (76 g) / 1.77 oz (2.69 oz)
Electricity consumption	0,4 W
For installation in boxes	$\varnothing \geq 60$ mm (2,36 in) / 2M
Switching	Relay
Digital temperature sensor cable length	1000 mm (39,37 in)
Z-Wave Repeater	Yes

EN *In case of loads other than resistive loads, please pay attention to the value of cos ϕ . If necessary, connect loads less powerful than what they're rated for – this applies to all motor loads. Max current for cos $\phi=0,4$ is 3 A at 240 Vac, 3 A at 24 Vdc L/R=7 ms.

ORDERING CODE AND FREQUENCIES

EN ZMNKIXY – X, Y values define product version per region. Please check online extended manual or catalogue for the right version.

EN Get a real Qubino Z-Wave bible! How-to install, use cases, illustrations and more. Scan the QR code/follow the link below:

NOTE:

This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

<https://qubino.com/products/flush-on-off-thermostat-2-2/>



FCC compliance statement (applies only in the US):

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: — Reorient or relocate the receiving antenna. —Increase the separation between the equipment and receiver. —Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. —Consult the dealer or an experienced radio/ TV technician for help.

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

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