USER MANUAL EN

QUBINO FLUSH ON/OFF THERMOSTAT

The Qubino Flush On/Off Thermostat is ideal for remotely controlling electric or water-based underfloor heating systems, electric water heaters, hot water pumps, electric radiators and similar.

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About Qubino

Qubino is a family of innovative Z-Wave devices, many of them the smallest of their kind. Numerous breakthrough innovations, 100% quality control, and responsive customer service make Qubino the number one choice for making your life more comfortable.

Qubino enables you to transform – inexpensively and invisibly – any traditional electric device into a smart, connected one that you can control with your smart phone. Qubino devices are simple to install and use, but also extremely versatile - they offer a wealth of additional features and parameters for you to play with.

We love helping people who enjoy creating new ideas for their home and then using their hard work and skill to turn those ideas into reality. We admire their passion and resourcefulness. We do our best to supply you with products that will enable you to create a unique and special home for yourself. We innovate so that you can be free to make the smartest home possible. With just a touch of magic.

"Simple is smart." We believe it is smart to make complex things simple. But only when this means simple for our customers, not for ourselves. We think a lot so that you won't have to when it comes to installing or using our devices.

For more information visit: www.qubino.com

About Z-Wave:

The Z-Wave protocol is an interoperable, wireless, RF-based communications technology designed specifically for control, monitoring, and status reading applications in residential and light commercial environments. Mature, proven, and broadly deployed (with over 50 million products sold worldwide), Z-Wave is by far the world market leader in wireless control, bringing affordable, reliable, and easy-to-use 'smart' products to millions of people in every aspect of daily life.

Source: www.z-wavealliance.org

Safety Information

For Qubino, safety is first, so we have prepared lots of safety tips and information that can be found throughout this manual.

To ensure your safety, please read this manual carefully before installing the device; follow the instructions exactly. The manufacturer (GOAP d.o.o. Nova Gorica) shall not be legally responsible for any equipment damage or personal injury caused by incorrect installation or operation other than that covered in this manual.
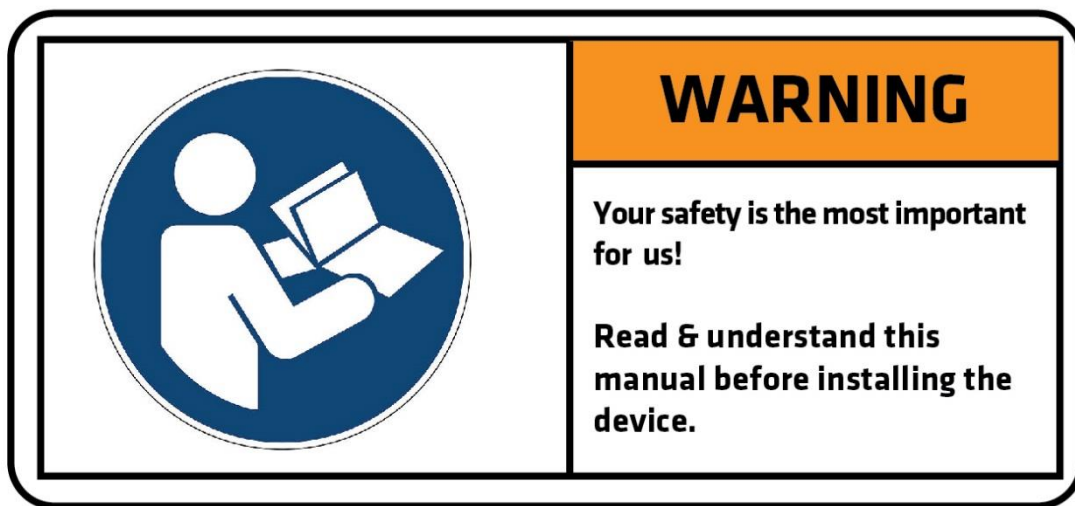
ⓘ Please check the Technical Specifications and Electrical Diagram chapters, as well as fuse requirements in the Installation chapter before installing the device.

Flush On/Off Thermostat - Available Frequencies

| ORDERING CODE (MODEL NUMBER)	POWER SUPPLY FREQUENCY	Z-WAVE FREQUENCY*
ZMNHID1	50/60 Hz	868,4 MHz
ZMNHID2	50/60 Hz	921,4 MHz
ZMNHID3	50/60 Hz	908,4 MHz
ZMNHID4	50/60 Hz	869,0 MHz
ZMNHID5	50/60 Hz	916,0 MHz
ZMNHID6	50/60 Hz	868,4 MHz
ZMNHID7	50/60 Hz	919,8 MHz
ZMNHID8	50/60 Hz	865,2 MHz
ZMNHID9	50/60 Hz	922,5 MHz
ZMNHIDA	50/60 Hz	919,7 – 921,7 – 923,7 MHz
ZMNHIDB	50/60 Hz	868,1 MHz
ZMNHIDC	50/60 Hz	868,1 MHz
ZMNHIDD	50/60 Hz	919,8 MHz
ZMNHIDE	50/60 Hz	920,9 MHz

*You can check the Z-Wave frequency in your country here:

https://z-wave.sigmadesigns.com/wp-content/uploads/Z-Wave_Frequency_Coverage-.pdf

Where To Buy

To find your nearest Qubino dealer visit: http://qubino.com/where-to-buy/

1. Introduction

The Qubino Flush On/Off Thermostat is ideal for directly controlling electric or water-based underfloor heating systems, electric water heaters, hot water pumps, electric radiators and similar.
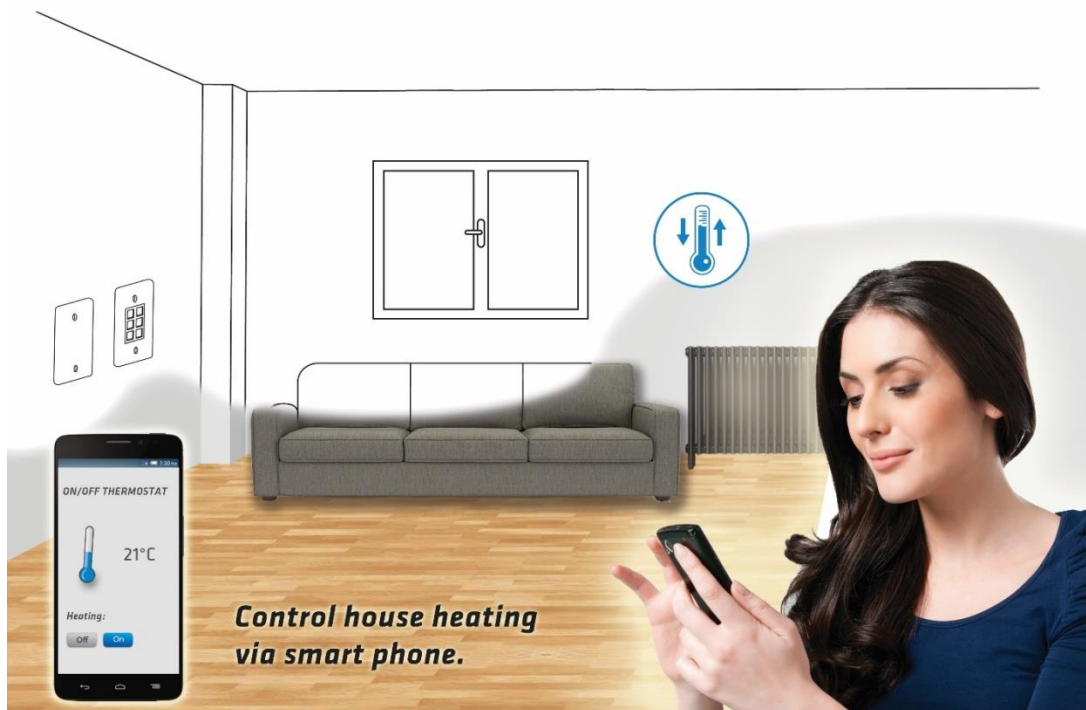

The Qubino Flush On/Off Thermostat can measure the power consumption of the connected electrical device and itself has an extremely low power consumption of just 0.4 W.

The Qubino Flush On/Off Thermostat can operate across a wide temperature range, from a chilly -10˚C to a scorching 40˚C (14˚–104˚F). It supports the connection of a digital temperature sensor, which means you can create complex scenes and switch any device relative to a set temperature range. The Qubino Flush On/Off Thermostat also acts as a Z-Wave repeater in order to improve the range and stability of the Z-Wave network.
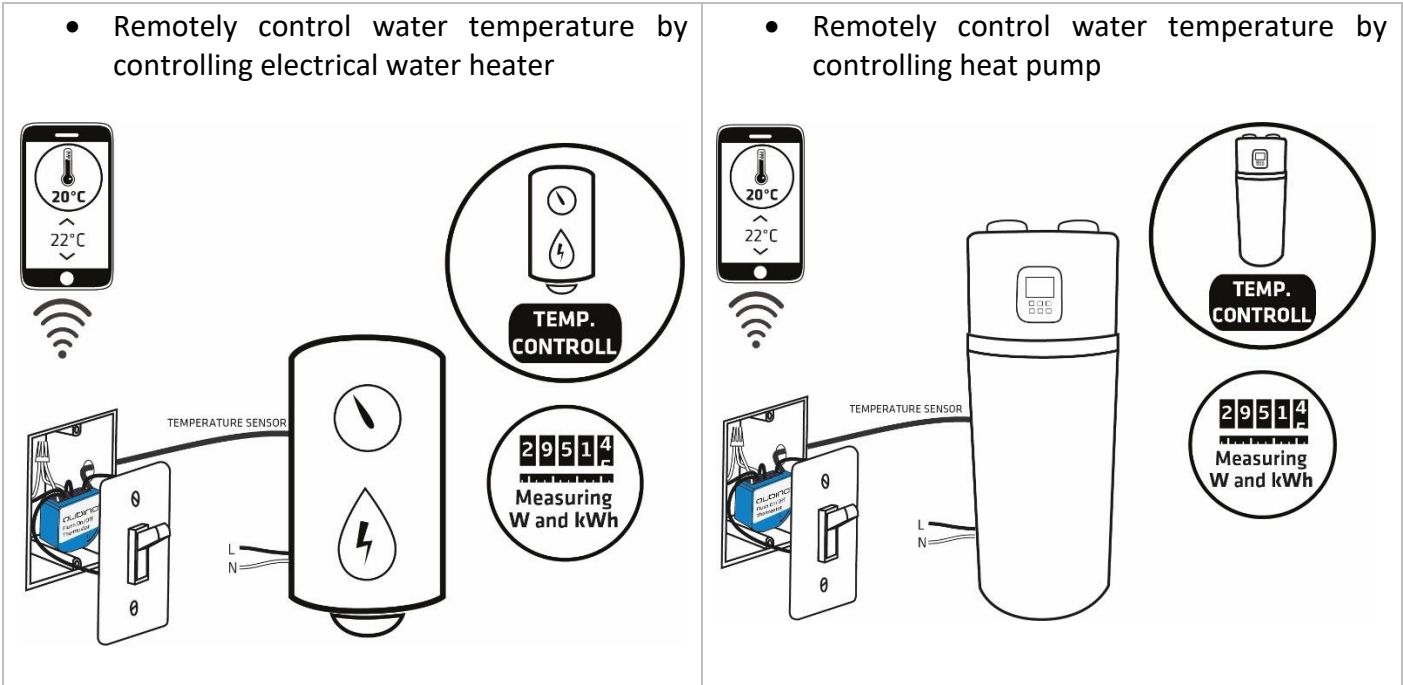
Flush On/Off Thermostat supported functions:

| Turn ON/OFF	W Measurement	kWh Measurement	Temperature Sensor Included	Associations	Z-Wave Repeater	Auto-inclusion
✓	✓	✓	✓	✓	✓	✓
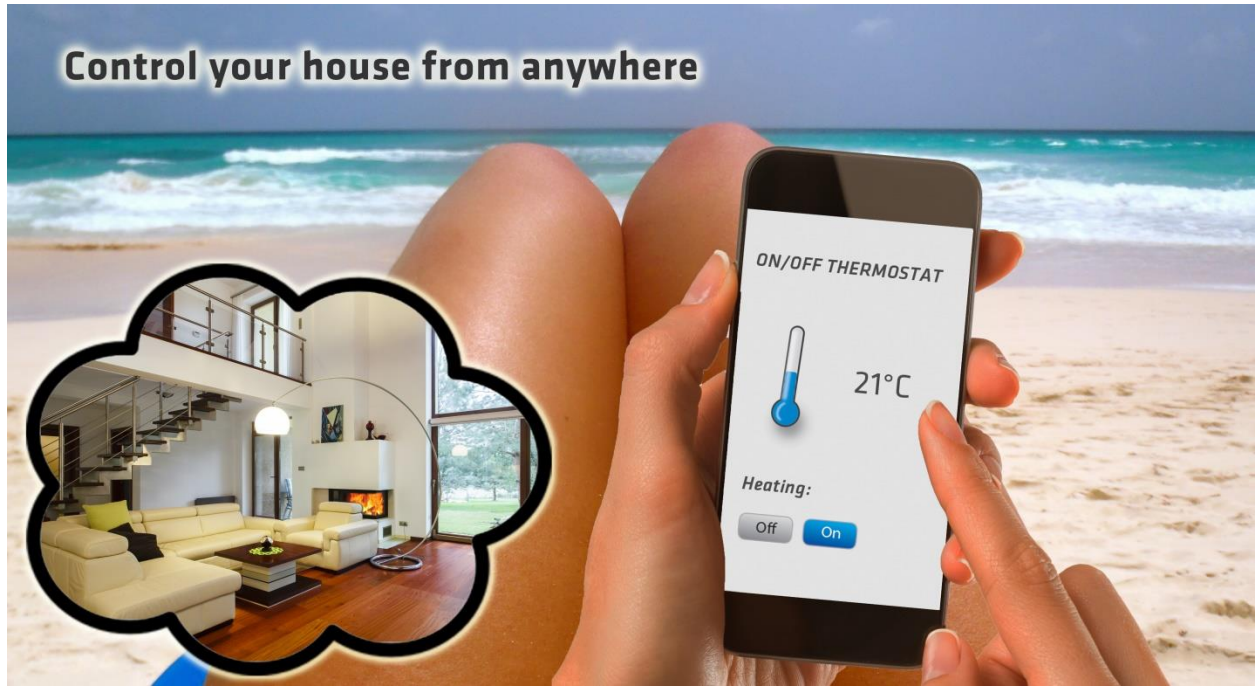
2. Use Cases

The Flush On/Off Thermostat can be used in many different scenes, which can help make your life more comfortable. We have prepared a few of them for you-so you can get an idea for your next smart home project. Of course, there are countless of other options for how to use Qubino Flush On/Off Thermostat to remotely control devices via your smartphone.

2.1. Installation examples where Flush On/Off Thermostat is installed behind a wall switch

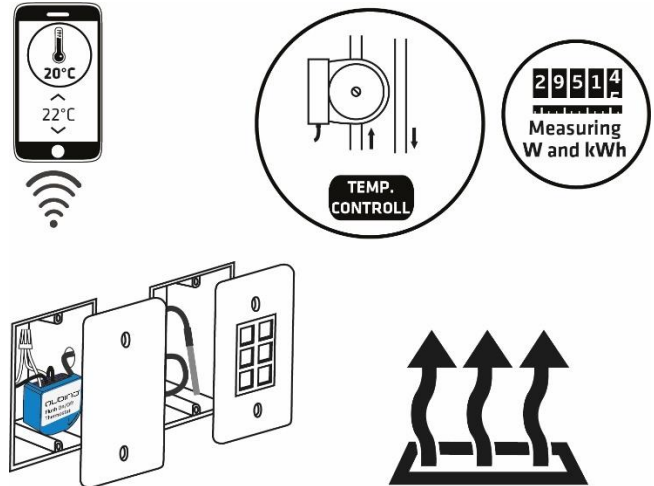| • Remotely control water temperature by controlling electrical water heater	• Remotely control water temperature by controlling heat pump

2.2. Installation examples where Flush On/Off Thermostat is installed in the switch box

- Remotely control room temperature by controlling circulation pumps for heating radiators
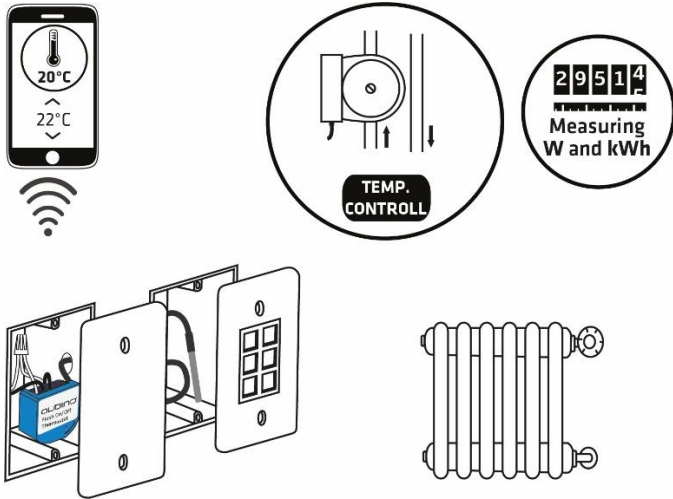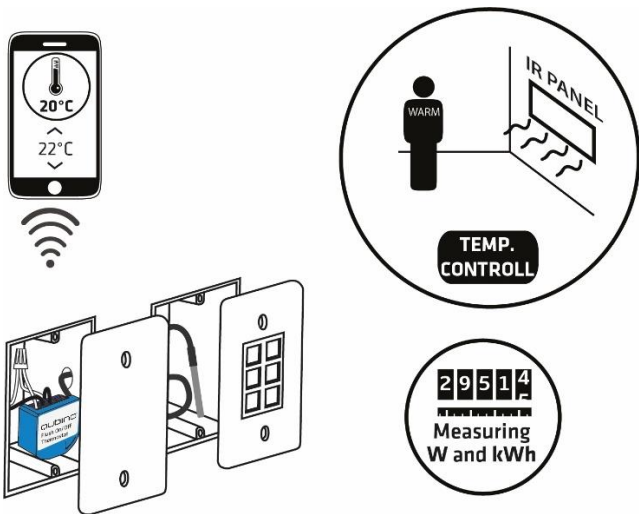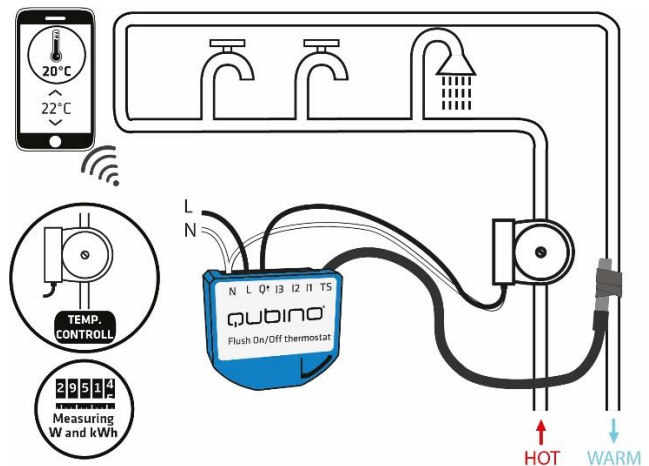

- Remotely control room temperature by controlling circulation pumps for underfloor heating systems
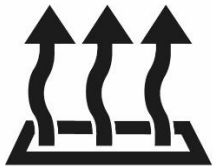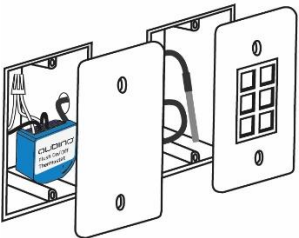

- Remotely control room temperature by controlling wall mounted infrared heating panel

- Remotely control water temperature by controlling sanitary hot water recirculation pump

- Remotely control room temperature by controlling valves for underfloor heating systems
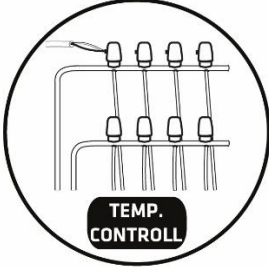
2.3. Additional features of Flush On/Off Thermostat which can make your life easier

- **Do you know how much energy you consume?**

- The Flush On/Off Thermostat monitors and reports energy consumption of connected devices in real time to your smart home app (your gateway (hub) needs to support this feature). Know how much power your heating system is using.

Measuring W and kWh
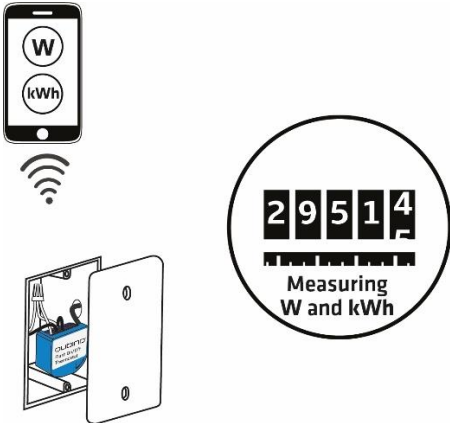
- **Want to control other devices in your Z-Wave network with the Flush On/Off Thermostat?**

- Connect the Flush On/Off Thermostat with other devices in your network to remotely and automatically trigger another Z-Wave device. And have other Z-Wave devices trigger your Qubino Flush On/Off Thermostat.
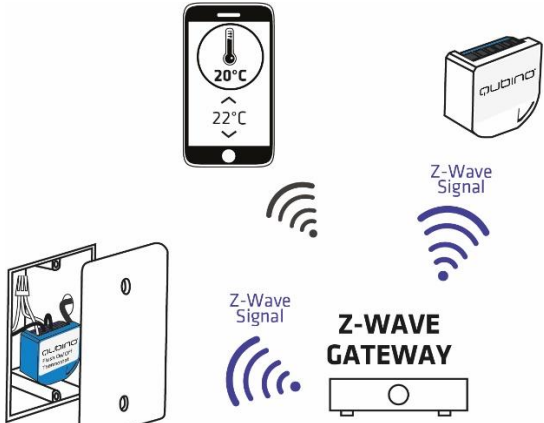
3. Qubino Flush On/Off Thermostat Advantages and Highlights

3.1. Advantages

- The Qubino Flush On/Off Thermostat allows the **easiest and quickest installation possible**. Because of its small size, it fits smoothly in even the smallest, most shallow and most crowded flush mounting boxes, which are stuffed with lots of electrical cables and where **every millimetre counts**. All this is possible because the Qubino Flush On/Off Thermostat is **the smallest Z-Wave thermostat in the world**.
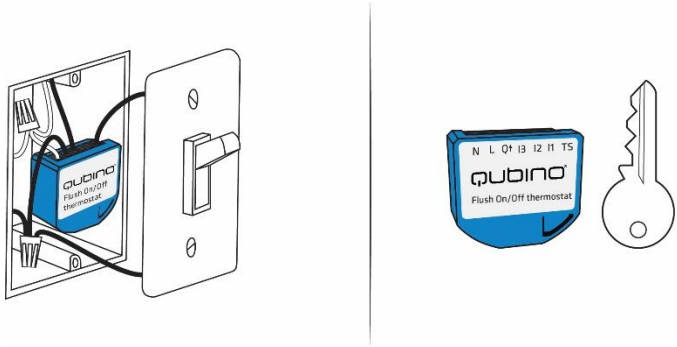
- Qubino guarantees **100% device quality**. Such high quality can be delivered because every Qubino goes through rigorous quality control standards throughout the production process. Every device has a unique serial number and part number, which are assigned to the device only after it goes through a strict testing procedure.

- By scanning the QR code on the back of your Qubino device, the serial and part numbers will be automatically copied on your mobile phone; they also provide **direct access to Qubino's technical support team**. The serial and part numbers of your device are given automatically every time you open an inquiry with our support team: this instantly shares the relevant device information we need to provide the best technical support possible. For details, please see the Device Information and Support chapter.

- The Qubino Flush On/Off Thermostat is **engineered and manufactured in the EU,** and contains only the highest quality components.

- The Qubino Flush On/Off Thermostat is certified by an independent European Institute and has CE, FCC, LVD and EMC certificates to ensure the highest safety standards.
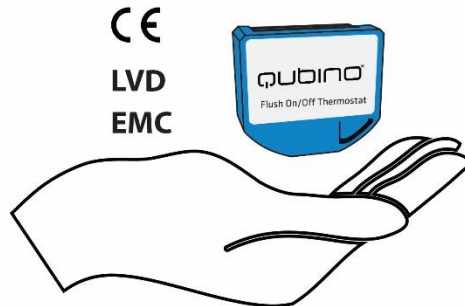
3.2. Highlights
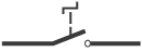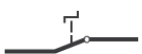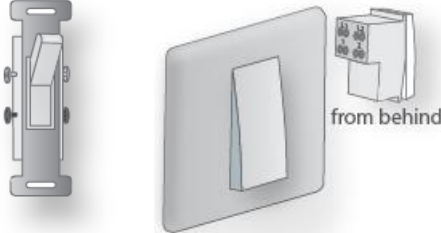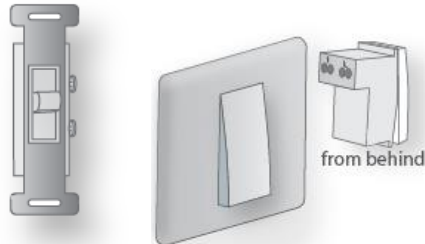
- Remote (via smartphone or PC) and local on/off control of valves for electric or water-based underfloor heating systems, electric water heaters, hot water pumps, electric radiators and similar
- Works with push-button (momentary switch) and toggle switch
- Capable of measuring the power consumption of the connected device in real time via smartphone, which allows you to save on electricity bills*
- Works on 110-240 VAC or 24-30 VDC
- Features one of the easiest and quickest installations of devices of this kind; fits in even the smallest flush mounting boxes
- Saves and restores the last status after a power failure
- Supports auto-inclusion mode for quick set up
- Automaticaly turn the device on/off based on Histeresis.
- Automatically turn the device on if temperature is too low (antifreeze).
- Supports additional parameters for expert users, which allows for advanced configuration*
- Acts as a signal repeater which improves the range and stability of your Z-Wave network
- Can be used to remotely control and trigger other devices in your Z-Wave network

*Your gateway (hub) needs to support advanced configuration and parameter input if you wish to use this feature

4. Package Contents

- Flush On/Off Thermostat Device
- Temperature Sensor
- Installation Manual

5. Technical Terms for Switches

Symbol	Switch example images	Definition	EU	USA	Qubino	Other names
	from behind	Single pole, single throw (SPST) - One switch controlling one light / circuit of lights	One-way switch	Two-way switch (regular switch)	Toggle switch	Switch; Bi-stable switch
	from behind	Single pole, double throw (SPDT) - Two switches controlling the same light / circuit of lights	Two-way switch	Three-way switch	Two-way switch	
	from behind	Used when you have three or more switches controlling the same light	Intermedi-ate switch	Four-way switch	Intermedi-ate switch	Crossover switch; Cross connection
	from behind	After being released, it goes back to its original state	Momentary switch		Momentary switch	Monostable switch; Push button

Qubino devices are installed into flush mounting boxes behind the switches. You can see some examples below:

For more information on how to install your device, please refer to the Installation chapter.

EU example:
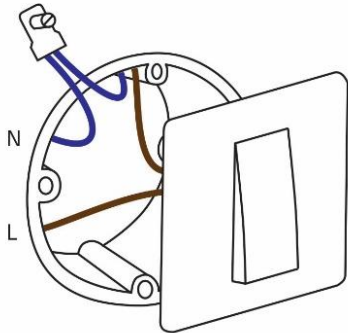
USA example:
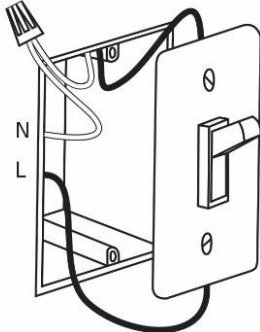
ITA/Brasil example:
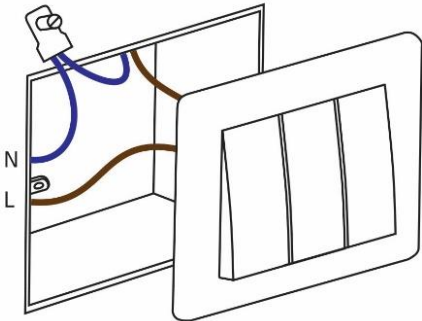
6. Compatibility with Z-Wave Gateways (hubs)

Please check compatibility with your Z-Wave gateway (hub) before you purchase this device. If you don't see your gateway (hub) in the table below, please contact us at: http://qubino.com/support/#email.

ⓘ Please note that the gateway (hub) compatibility was updated on 14.3.2018 and it may not include the latest testing data.

Flush ON/OFF thermostat	Heat	I1 updates UI	I2 updates UI	I3 updates UI	W	kWh	Temp	Comments
Domoticz V3.5877	✗	T	✗	✗	✓	✗	✓	
Fibaro HC Lite v 4.130	✓	O	O	O	✓	O	✓	To enable I2 and I3 updates set Multichannel association in group 1 for root device.
Vera edge v 1.7.2406	✗	T	✗	✗	✓	✗	✓	
zipato	✓	T	✗	✗	✓	✓	✓	
Zwave me	✓	T	✓	✓	✓	O	✓	Click »update« in the expert UI to display kWh
homeseer	✓	T	✗	✗	✓	✓	✓	
open zwave	✗	T	✗		✓	T	✓	
Pipper	✗	T	✗	✗	✗	✗	✗	
SmartThings	T	T	T	T	T	T	T	
NETIChome	T	T	T	T	T	T	T	
homey	T	T	T	T	T	T	T	
eedomus	✓	T	✓	✓	✓	✗	✓	
jeedom	✓	T	✓	✓	✓	✓	✓	
Zipatile	T	T	T	T	T	T	T	
Devolo	✗	✗	✗	✗	✓	T	✓	
Verbund	T		T	T	T	T	T	
Indigo 7	✓	✗	✗	✗	✓	T	✓	
imeriHome	✓	O	✗	✗	✗	T	✓	I1 updates UI only when parameter 11 is 1
OpenHab	✓	X	X	X	X	T	X	

Symbol	Explanation
✓	Works fully
✗	Not working
O	See comment
T	Testing in progress

7. Installation

Before installing the device, please read the following carefully and follow the instructions exactly:

(i) **Danger of electrocution!**

Installation of this device requires a great degree of skill and may be performed only by a licensed and qualified electrician. Please keep in mind that even when the device is turned off, voltage may still be present in the device's terminals.

(i) **Note!**

Do not connect the device to loads exceeding the recommended values. Connect the device exactly as shown in the provided diagrams. Improper wiring may be dangerous and result in equipment damage.

Electrical installation must be protected by directly associated overcurrent protection fuse 10A, gG or Time lag T, rated breaking capacity 1500A (ESKA 522.727) must be used according to wiring diagram to achieve appropriate overload protection of the device. The fuse must be installed in fuse holder type: Adele contact 503Si/1 DS according to the standard IEC60669-2-1.

7.1. Installing the device in the switch box

The installation process, tested and approved by professional electricians, consists of the following simple steps:

Step 1 – Turn OFF the fuse:

- To prevent electrical shock and/or equipment damage, disconnect electrical power at the main fuse or circuit breaker before installation and maintenance.
- Be aware that even if the circuit breaker is off, some voltage may remain in the wires — before proceeding with the installation, be sure no voltage is present in the wiring.
- Take extra precautions to avoid accidentally turning the device on during installation.
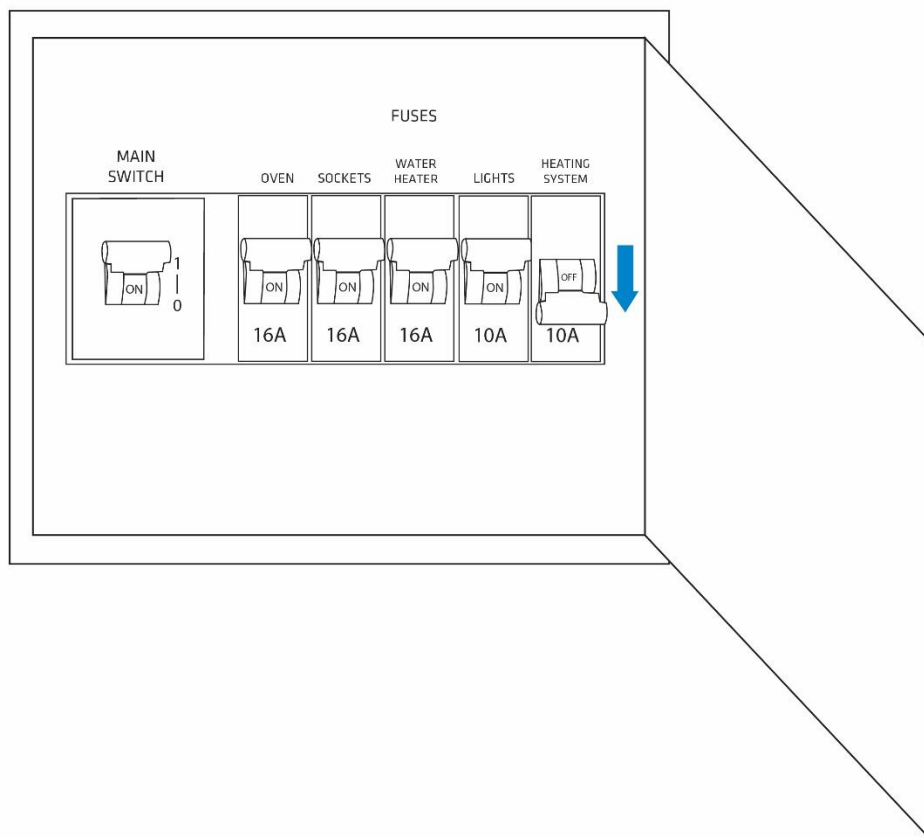
Step 2 – Installing the device:

- Connect the device exactly according to the diagrams shown below

STEP 2

Qubino installation

Installation example for circulation pump for radiators:
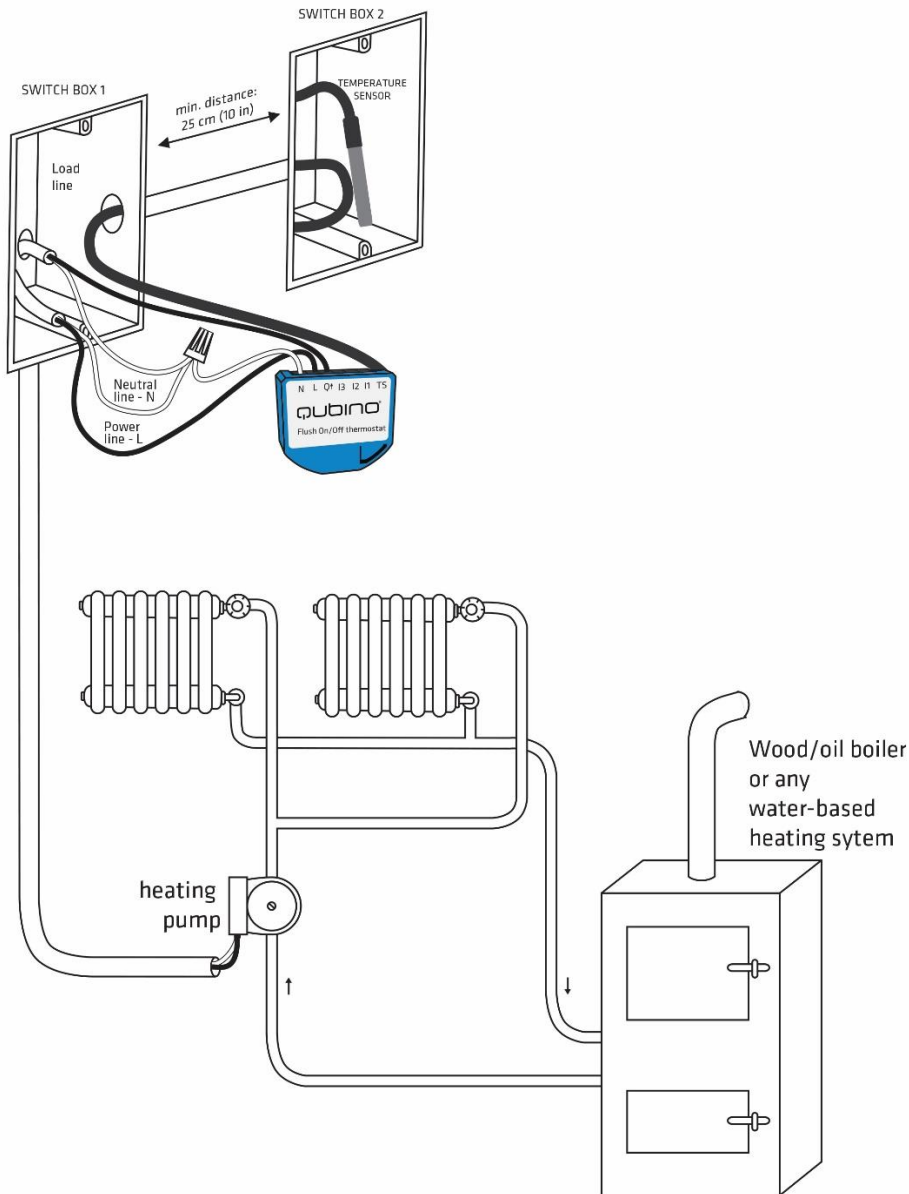
Installation and wire connections are the same in USA and EU.

After Qubino installation:
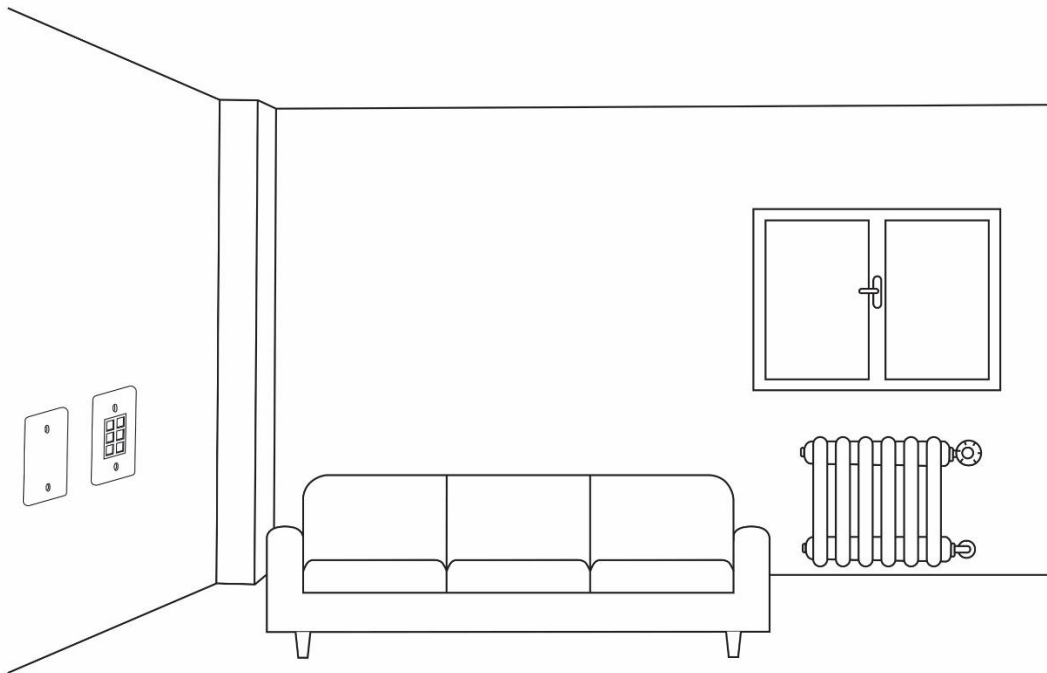
Installation in the switch box:

SWITCH BOX 1

BLANK COVER

SWITCH BOX 2

PERFORATED COVER
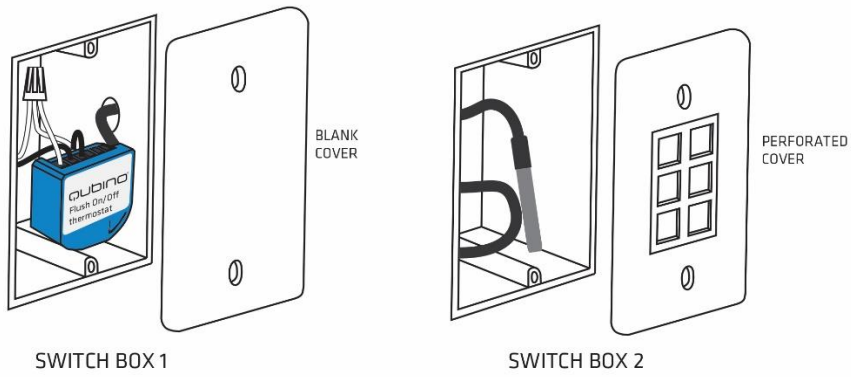
ⓘ **Note!**

- Place the antenna as far as possible from metal elements as they may cause signal interference.
- Do not shorten the antenna.

The device's antenna should be as upright as possible. This ensures the device's operational range is maximized (up to 98 feet (30 m) line of sight).

Connection of the temperature sensor:

The digital temperature sensor comes with a 1 m (3.3 ft) cord and a connector to attach it directly to a Qubino device.

1. To prevent electrical shock, make sure that no voltage is present on the temperature sensor cable.
2. When connected to Qubino device, the temperature sensor is under high voltage, which is very dangerous.
3. Goap d.o.o. does not take responsibility for any damage or electrical shock due to incorrect sensor assembly.
4. The above instructions and description apply to a temperature sensor compatible with Qubino products only.

NOTE: When Qubino is wired to 110-240VAC (high voltage) the temperature sensor must not be in direct contact with water.
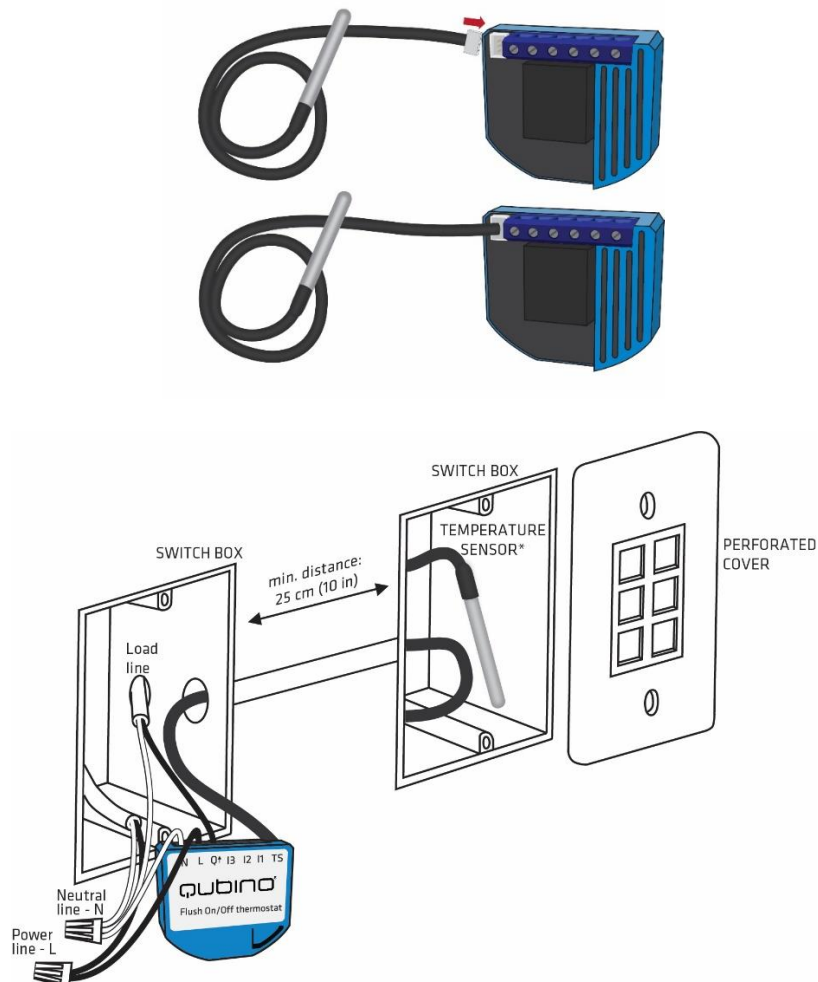
Step 3 – Turn ON the fuse:
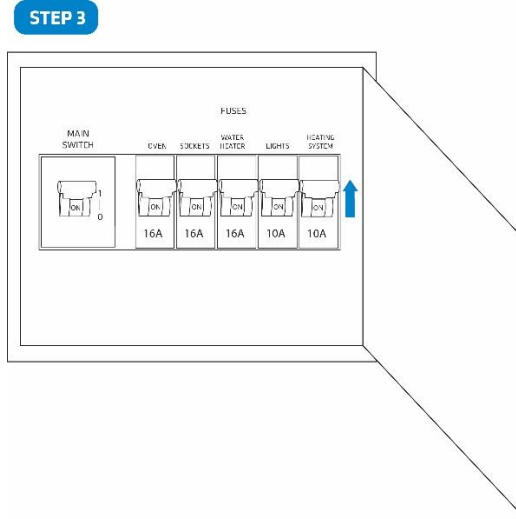
Step 4 – Add the device to your Z-Wave network:

- For more details on how to include the device, please refer to the Z-Wave Inclusion chapter.

Step 5 – The Installation is now complete. It's time to make your life more comfortable with the help of the Qubino Flush On/Off Thermostat
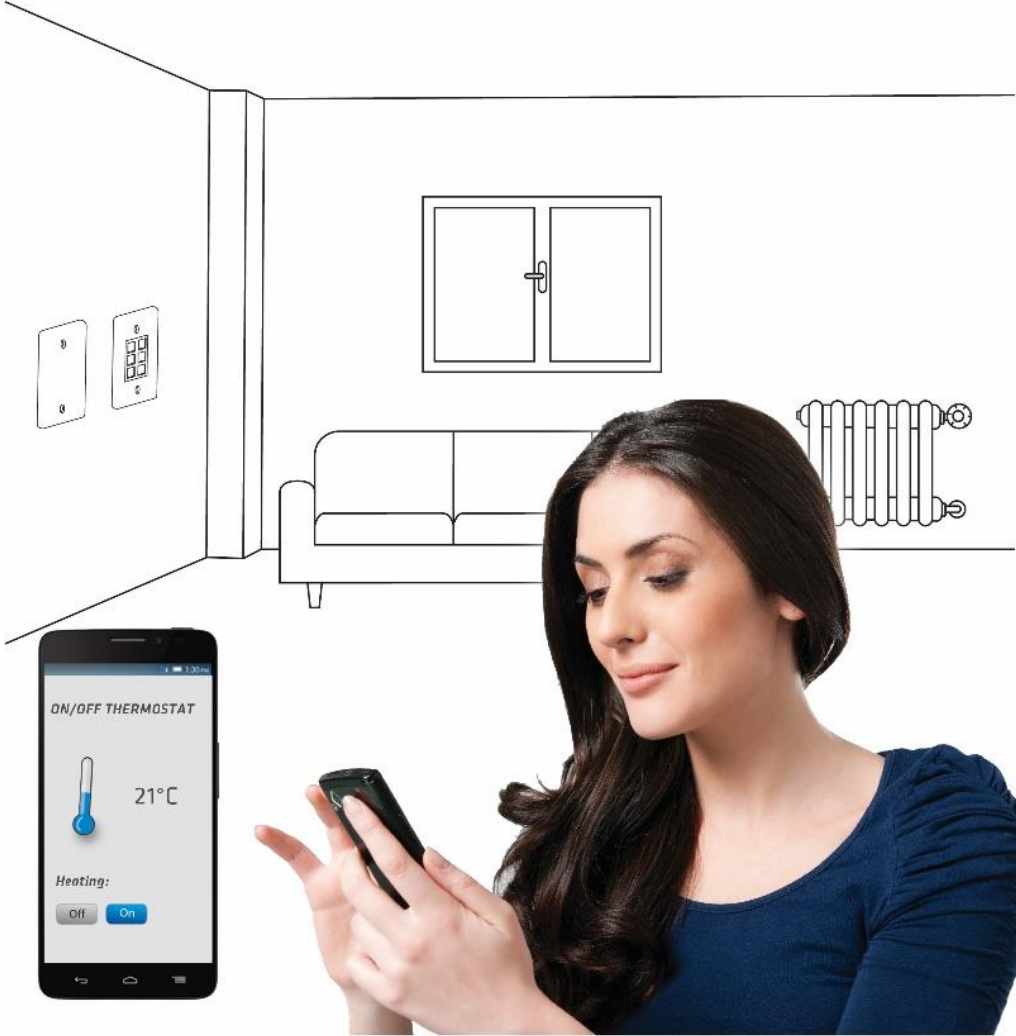
8. Device Information and Support

Did you know that Qubino offers Z-Wave devices with 100% quality control guaranteed throughout the production process? Every single unit is tested and examined before being approved for sale – a truly unique pledge in the industry.

Why is this important?

Every device has a dedicated serial number and part number, which is assigned to the device only after it goes through a strict testing procedure.

By scanning the QR code on the back of your Qubino, its device title, serial number, and part number are automatically copied to your mobile phone. You can also use the code for direct access to the device page for more information. If you still don't find what you're looking for, click on the link to Qubino technical support team. They will be able to automatically read the serial and part number from your device and quickly review the production log file containing the production date as well as any relevant device parameters and information. This process allows our team to immediately identify and address issues, giving you the best support possible.

GET SUPPORT IN 3 SIMPLE STEPS:

Based on customer and business partner feedback, we're proud to boast Qubino's support team as the best and fastest on the market. If you don't find the answers to your questions in this document, please contact our support team by scanning the QR code on your device or through our website: http://qubino.com/support/#email. We will try to help you as soon as possible.

9. Electrical Diagram (110 - 240VAC, 24VDC)
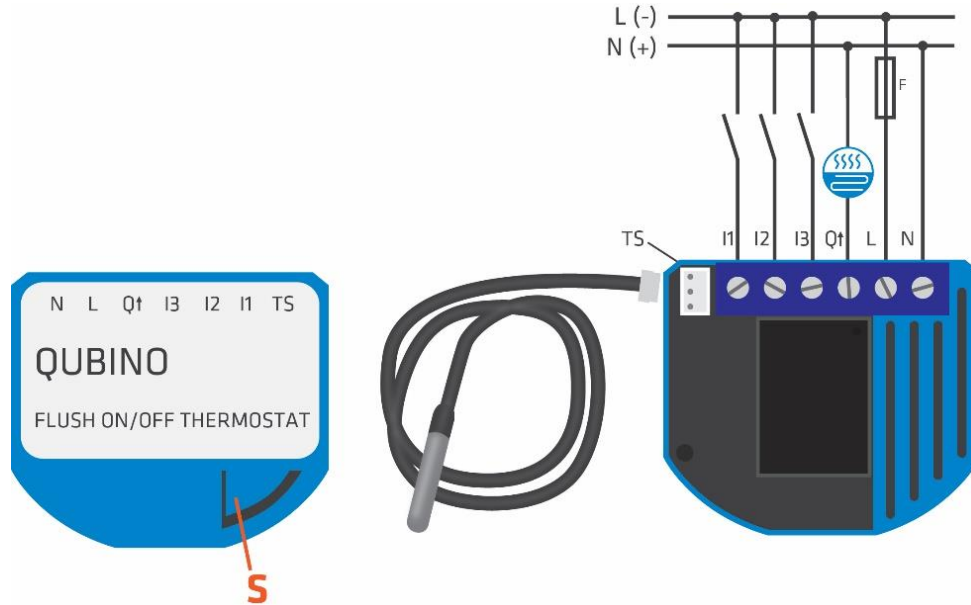
Notes for diagram:

N	Neutral wire (+VDC)
L	Live (line) wire (-VDC)
Q↑	Output for electrical device
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	Temperature sensor terminal
*	Wago 221-413 splicing connectors for L and N connection must be used only when connected to 240 VAC.
S	Service button

*For details please check parameters 11, 12 and 13 (see Chapter: Configuration Parameters)

WARNING:

The service (S) button **must NOT be used** when the device is connected to a 110-240V power supply.

The durability of the device depends on the applied load. For resistive loads (light bulbs, etc.) and 10A current consumption of an electrical device, the product's lifespan exceeds 100,000 toggles.

ⓘ   The temperature sensor should not be exposed to water.

10. Adding the device to a Z-Wave network (Inclusion)

AUTOMATICALLY ADDING THE DEVICE TO A Z-WAVE NETWORK (AUTO INCLUSION)

1. Enable add/remove mode on your Z-Wave gateway (hub)

2. Connect the device to the power supply (with the temperature sensor already connected).

3. Auto-inclusion will be initiated within 5 seconds of connection to the power supply and the device will automatically enrol in your network

MANUALLY ADDING THE DEVICE TO A Z-WAVE NETWORK (MANUAL INCLUSION)

1. Enable add/remove mode on your Z-Wave gateway (hub)

2. Connect the device to the power supply (with the temperature sensor already connected*)

3. Toggle the switch connected to the I1 terminal 3 times within 3 seconds

OR

If the device is powered by 24 V SELV supply, press and hold the S (Service) button between 2 and 6 seconds

4. A new multi-channel device will appear on your dashboard

*If connecting the temperature sensor, switch off the power supply and make sure the device is excluded from your network BEFORE connecting the sensor.

ⓘ   Make sure the device is excluded from your network before connecting the temperature sensor. Switch off the power supply, connect the temperature sensor, and re-include the device to your network.

ⓘ   If the device is included with parameters 100,101 or 102 (see Chapter: Configuration Parameters) with values that are different from default and the device reset in finished, please wait at least 30 seconds before next inclusion.

11. Removing the device from a Z-Wave network (Exclusion)

REMOVAL FROM A ZWAVE NETWORK (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 add/remove mode on your Z-Wave gateway (hub)

4. Toggle the switch connected to the I1 terminal 3 times within 3 seconds

OR

If the device is powered by 24 V SELV supply, press and hold the S (Service) button between 2 and 6 seconds

5. The device will be removed from your network but any custom configuration parameters will not be erased

FACTORY RESET

1. Connect the device to the power supply

2. Within the first minute (60 seconds) the device is connected to the power supply, toggle the switch connected to the I1 terminal 5 times within 3 seconds (5 times change switch state)

OR

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

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

12. Associations

Use associations for direct communication between the Flush On/Off Thermostat and other devices within your Z-Wave network without the need of your primary gateway (hub).

Association Groups:

- Group 1: Lifeline group (reserved for communication with the primary gateway (hub)), 1 node allowed.
- Group 2: Basic on/off (status change report for Q   load), 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 (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 8: Basic on/off (trigged by change of I3 if flood sensor functionality is selected by parameter no. 13) up to 16 nodes.
- Group 9: Sensor multilevel report (trigged 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.

13. 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. 2 – Input I2 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
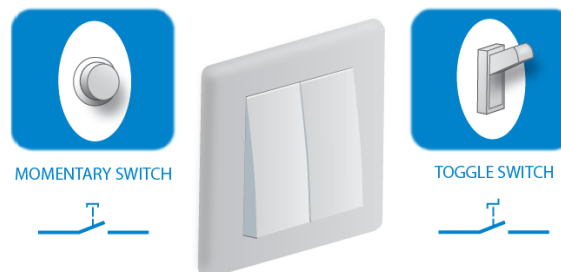
Parameter no. 3 – Input I3 switch type

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
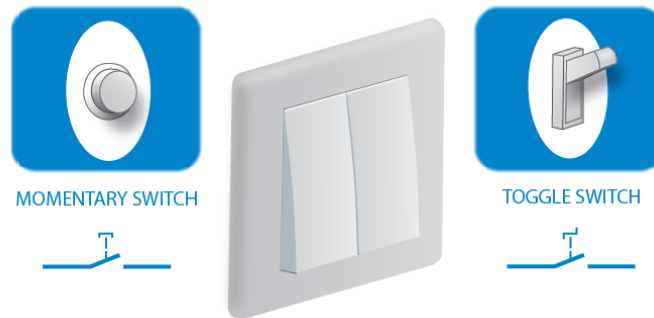
Parameter no. 4 – Input 1 contact type

This parameter determines how the sensor is connected (for example: door/window sensor) Set this parameter according to the type of sensor you use.

Values (size is 1 byte dec):

- default value 0
- 0 - NO (normally open) input type
- 1 - NC (normally close) input type
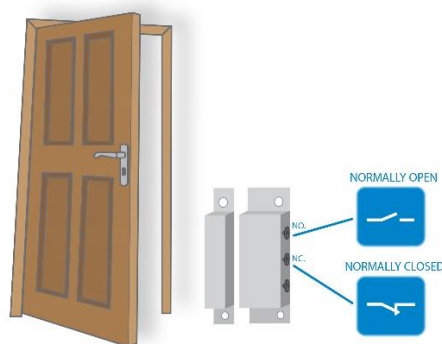
NOTE: This parameter has influence only when parameter no. 11 is set to the value "2". After setting this parameter, switch the window sensor once, so that the device can determine the input state.

Parameter no. 5 – Input 2 contact type

This parameter determines how the sensor is connected (for example: door/window sensor). Set this parameter according to the type of sensor you use.

Values (size is 1 byte dec):

- default value 0
- 0 - NO (normally open) input type
- 1 - NC (normally close) input type
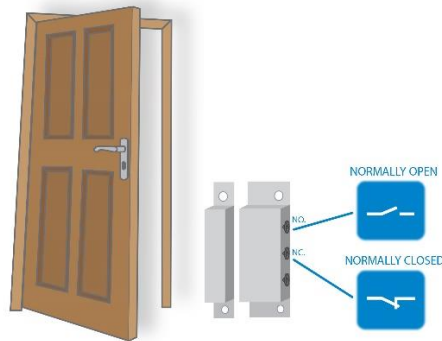
NOTE: This parameter has influence only when parameter no. 12 is set to the value "2000". After setting this parameter, switch the condense sensor once, so that the device can determine the input state.

Parameter no. 6 – Input 3 contact type

This parameter determines how the sensor is connected (for example: door/window sensor). Set this parameter according to the type of sensor you use.

Values (size is 1 byte dec):

- default value 0
- 0 - NO (normally open) input type
- 1 - NC (normally close) input type
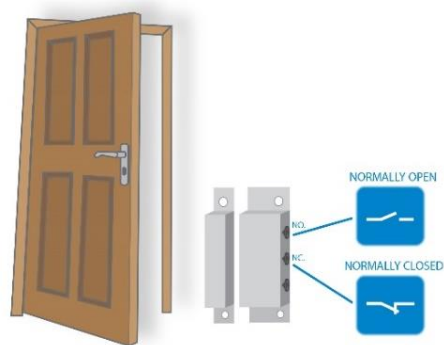
NOTE: This parameter has influence only when parameter no. 13 is set to the value "2". After setting this parameter, switch the flood sensor once, so that the device can determine the input state.

Parameter no. 10 - Activate / deactivate ALL ON / ALL OFF Functionality

Flush On/Off Thermostat device responds to commands ALL ON / ALL OFF that may be sent by the primary or secondary gateway (hub) within the Z-Wave network.

Values (size is 2 byte dec):

- default value 255
- 255 - ALL ON active, ALL OFF active.
- 0 - ALL ON not active, ALL OFF not active
- 1 - ALL ON not active, ALL OFF active
- 2 - ALL ON active, ALL OFF not active
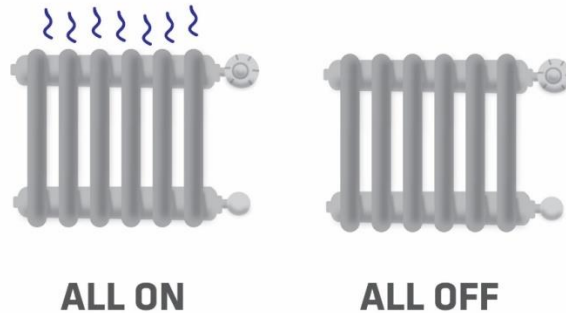
Parameter no. 11- I1 Functionality selection

Values (size 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

Values (size 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 device re-included!
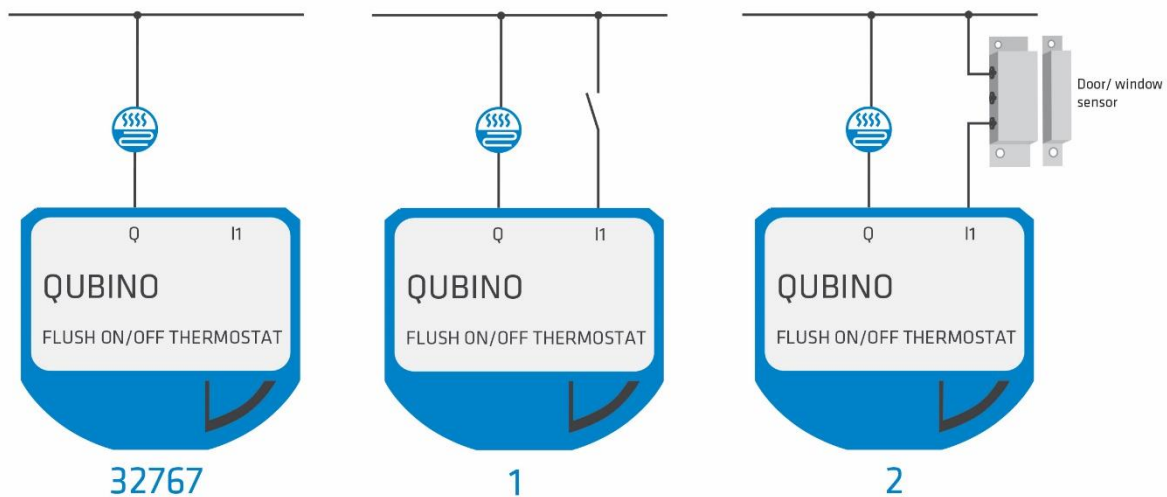
Parameter no. 13 – I3 Functionality selection

Values (size 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 device (without setting parameters to default value) and then re include the device!
- 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
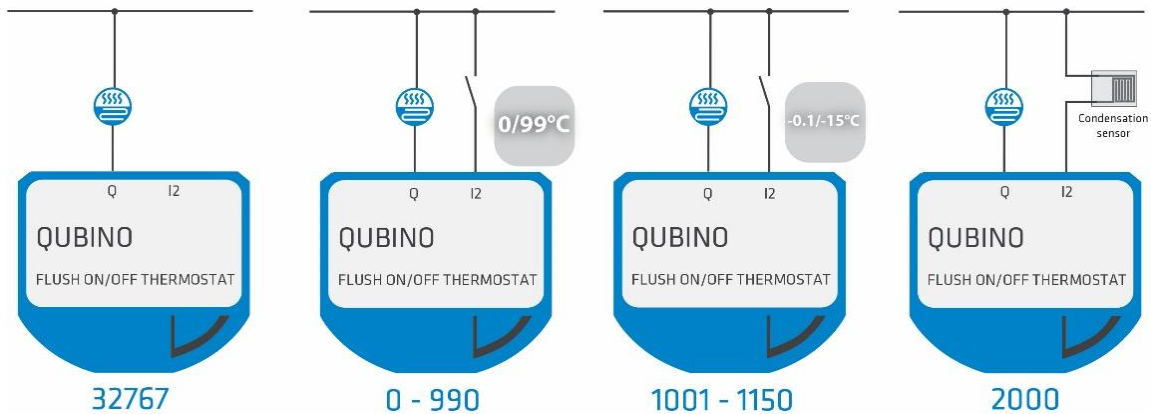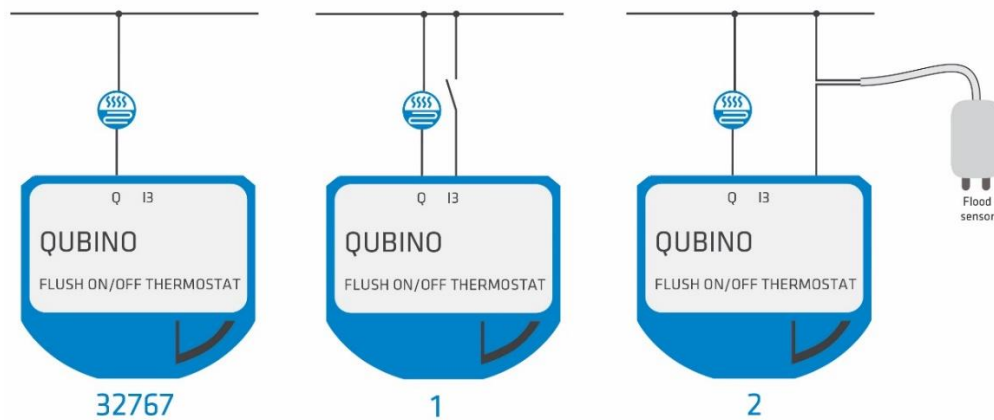

NOTE: If "Flood Sensor" selected (value set to "2"), parameter 102 (enable/disable endpoint) must be set to non-zero value and device re-included!

Parameter no. 40 – Watt Power Consumption Reporting Threshold for Q↑ 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 0
- 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.
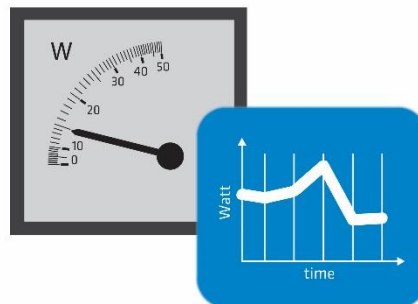
Parameter no. 42 – Watt Power Consumption Reporting Time Threshold for Q↑

Set value refers to the time interval with which power consumption in Watts is reported (0 – 32767 seconds). 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 0 (power report is disabled)
- 0 - Power consumption reporting disabled
- 1 - 32767 = 1 - 32767 seconds. Power consumption reporting enabled. Report is sent according to time interval (value) set here.
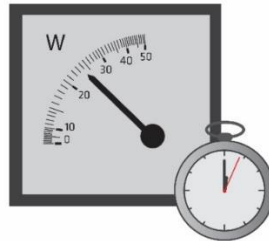
Parameter no. 43 – Hysteresis On

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

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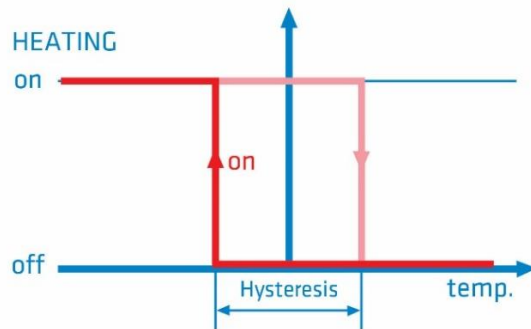
NOTE: Values set for Hysteresis On/Off are valid for Heat Mode. If Cool Mode is selected, values are inverted automatically.

Parameter no. 44 – Hysteresis Off

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

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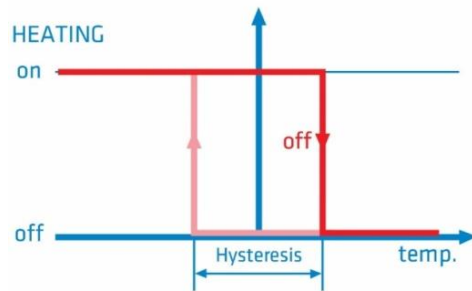
NOTE: Values set for Hysteresis On/Off are valid for Heat Mode. If Cool Mode is selected, values are inverted automatically.

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)
- 0 - 125 = 0.0 °C - 12.5 °C
- 1001 - 1126 = -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

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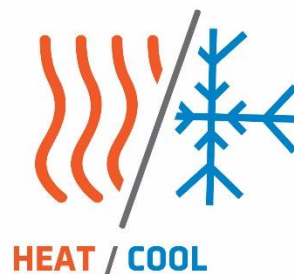
NOTE1: After parameter change, first exclude device (without setting parameters to default value) and then re include the device!

NOTE2:
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

NOTE3: When Cooling mode selected, the function of Hysteresis On and Hysteresis Off is inverted!

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)
- 1 - 1000 = 0.1 °C – 100.0 °C, step is 0.1 °C.
- 1001 – 1150 = -0.1 °C ~ – 15.0 °C
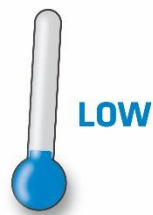
NOTE: Too low temperature limit is used with Association Group 4.

Parameter no. 61 – Too high temperature limit

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

Parameter no. 70 – Input 1 status on delay

This parameter specifies the delay before the device executes command, after input I1 is activated. For example, if you set the parameter to 30 seconds and close the window, heater will turn ON after 30 seconds.

Values (size 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, but the command will be sent after time set.

Parameter no. 71 – Input 1 status off delay

This parameter specifies the delay before the device executes command after input I1 is deactivated.

For example, if you set the parameter to 30 seconds and open the window, heater will turn OFF after 30 seconds.

Values (size 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.
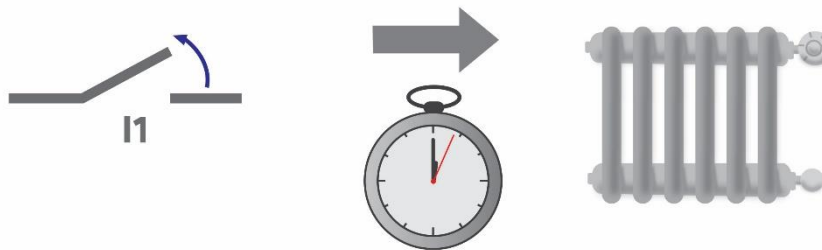
NOTE: Device status on UI change immediately but the command will be send after the set time.

Parameter no. 72 – Input 2 status on delay

This parameter specifies the delay before the device execute command after input I2 is activated.

Values (size is 2 byte dec):
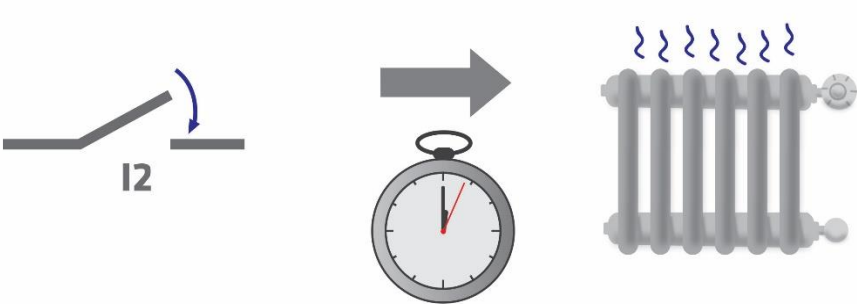
- default value 0
- 1 - 32000 seconds

NOTE: 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

This parameter specifies the delay before the device execute command after input I2 is deactivated.

Values (size is 2 byte dec):
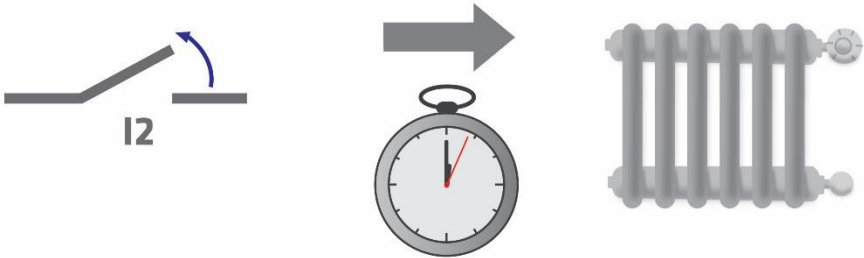
- default value 0
- 1 - 32000 seconds

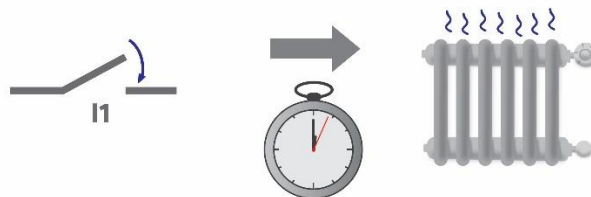NOTE: This parameter has influence only when the condense sensor functionality is selected by the parameter no. 12.

Parameter no. 74 – Input 3 status on delay

This parameter specifies the delay before the device execute command after input I3 is activated.

Values (size is 2 byte dec):
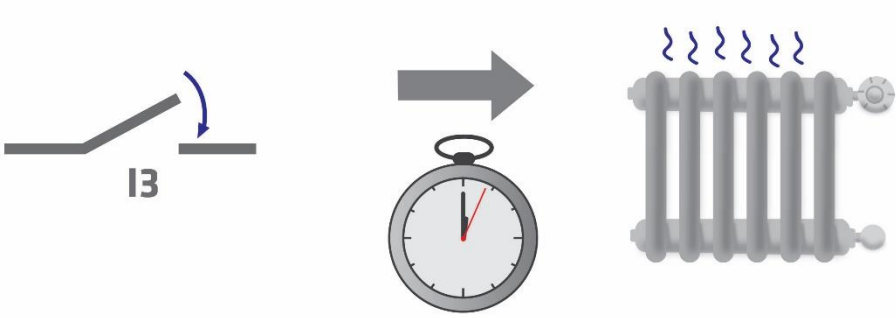
- default value 0
- 1 - 32000 seconds

NOTE: 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

This parameter specifies the delay before the device execute command after input I3 is deactivated.

Values (size is 2 byte dec):
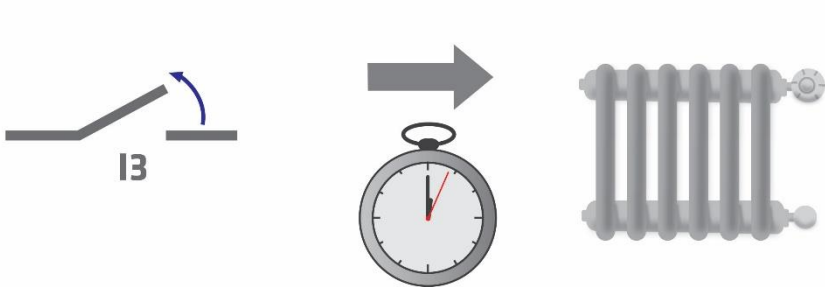
- default value 0
- 1 - 32000 seconds

NOTE: 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

Determinates the time interval of sending device status ON/OFF to the associated device.

Values (size 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).
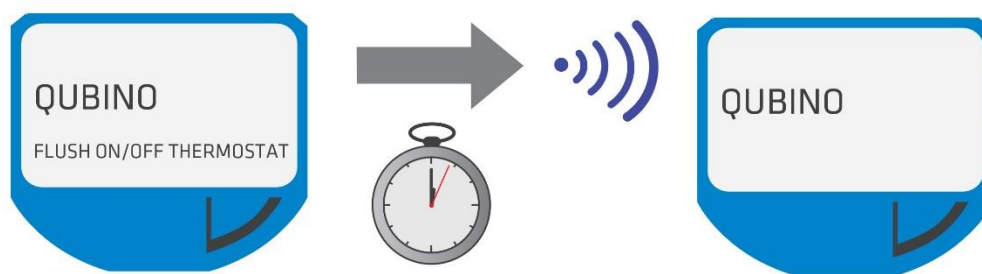
Parameter no. 77 – Association group 10 - delay before sending Basic Set ON

Set a time delay before sent Basic set ON to the associated device. The same time frame also applies for the Basic set OFF.

Values (size 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.
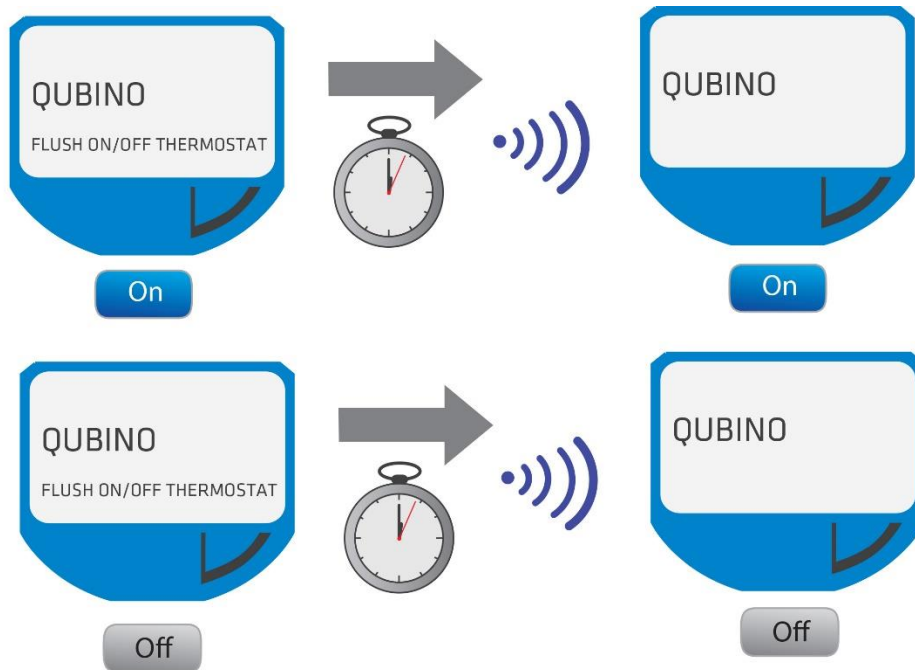
Parameter no. 78 – Scale Selection

This parameter determines in which measurement unit the device will report temperature - Fahrenheit or Celsius.

Values (size 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 Set point in all supported scales
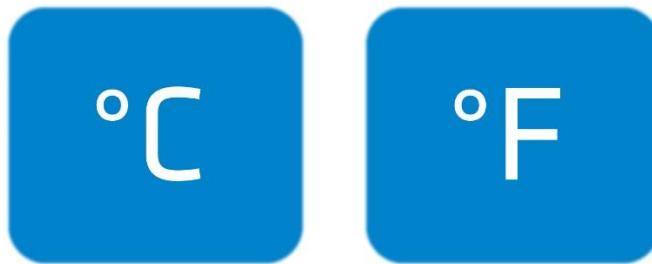
Parameter no. 100 – Enable / Disable Endpoint I1 or select the Notification Type and the Notification Event

Choose whether the Endpoint I1 is disabled (and not shown on the UI) or enabled (and displayed on the UI). By enabling this endpoint (setting it to be either a notification sensor or a binary sensor), the user also selects a Notification Type and a Notification Event for which notification reports will be sent (in case the endpoint is configured as a notification sensor).

Endpoint device type selection:

-notification sensor (1 - 6):

 GENERIC_TYPE_SENSOR_NOTIFICATION, SPECIFIC_TYPE_NOTIFICATION_SENSOR

Values (size is 1 byte dec):

- 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, I2 disabled

-sensor binary (9): GENERIC_TYPE_SENSOR_BINARY, SPECIFIC_TYPE_NOT_USED

Values (size is 1 byte dec):

- 9 - Sensor binary

NOTE1: After changing the values of the parameter, first exclude the device (without setting the parameters to their default values), then wait at least 30s and then re-include the device!

NOTE 2: When the parameter is set to the value 9 the notifications are sent for the Home Security notification type.

NOTE3: If "endpoint enabled" (value is set to 1-9), parameter 11 must be set to "2" as "Window Sensor" to determine how device input I1 will operate

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

Choose whether the Endpoint I2 is disabled (and not shown on the UI) or enabled (and displayed on the UI). By enabling this endpoint (setting it to be either a notification sensor or a binary sensor), the user also selects a Notification Type and a Notification Event for which notification reports will be sent (in case the endpoint is configured as a notification sensor).

Endpoint device type selection:

-notification sensor (1 - 6): GENERIC_TYPE_SENSOR_NOTIFICATION, SPECIFIC_TYPE_NOTIFICATION_SENSOR

Values (size is 1 byte dec):

- 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, I2 disabled

-sensor binary (9): GENERIC_TYPE_SENSOR_BINARY, SPECIFIC_TYPE_NOT_USED

Values (size is 1 byte dec):

- 9 - Sensor binary

NOTE: If "endpoint enabled" (value is set to 1-9), parameter 12 must be set to "2000" as "Condense Sensor" to determine how device input I2 will operate

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

Choose whether the Endpoint I3 is disabled (and not shown on the UI) or enabled (and displayed on the UI). By enabling this endpoint (setting it to be either a notification sensor or a binary sensor), the user also selects a Notification Type and a Notification Event for which notification reports will be sent (in case the endpoint is configured as a notification sensor).

Endpoint device type selection:

-notification sensor (1 - 6): GENERIC_TYPE_SENSOR_NOTIFICATION, SPECIFIC_TYPE_NOTIFICATION_SENSOR
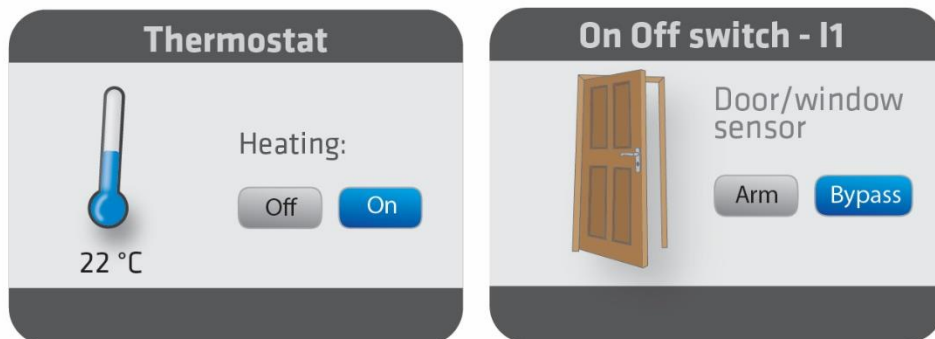
Values (size is 1 byte dec):

- 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, I2 disabled

-sensor binary (9): GENERIC_TYPE_SENSOR_BINARY, SPECIFIC_TYPE_NOT_USED

Values (size is 1 byte dec):

- 9 - Sensor binary

NOTE: If "endpoint enabled" (value is set to 1-9), parameter 13 must be set to "2" as "Flood Sensor" to determine how device input I3 will operate

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. This parameter only applies to the Celsius temperature unit (the Fahrenheit unit is currently not supported).

Values (size is 2 byte dec):

- default value 32536
- 32536 - Offset is 0 °C.
- 1 - 100 - Where 1 stands for 0.1°C and 100 stands for 10.00°C added to the actual measurement.
- 1001 - 1100 – Where 1001 stands for -0.1°C and 1100 stands for -10.0°C subtracted from the actual measurement.

NOTE: If the Parameter 78 is set to 1, the report will be in Fahrenheit, but offset setting must be done in Celsius.

Parameter no. 120 – Temperature Sensor Reporting Threshold

If an external digital temperature sensor is connected to the device, it reports temperature readings based on the threshold defined in this parameter. This parameter only applies to the Celsius temperature unit (the Fahrenheit unit is currently not supported).

Values (size is 1 byte dec):

- Default value 5 = 0.5°C
- 0 – Reporting disabled
  1 - 127 = Where 1 stands for 0.1 and 127 stands for 12.7 degrees

NOTE: If the Parameter 78 is set to 1, the report will be in Fahrenheit, but offset setting must be done in Celsius.

Parameter no. 121 – Digital temperature sensor / Set point selector

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

Values (size is 1 byte dec):

- default value 0
- 0 - internal digital temperature sensor is mounted, setpoint is set by gateway (hub)
- 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 device 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, device can grab measured temperature from external battery powered room sensor defined by this parameter.

Values (size 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 gateway (hub) and set parameter 122 immediately after sensor weak up (after button press on it etc.): This has to be done according to external battery powered sensor manual.

14. Technical Specifications

Power supply	110 - 240 VAC ±10% 50/60Hz, (24-30VDC)
Rated load current of AC/DC output (resistive load)*	1 X 10A (240VAC) / 1 X 10A / 30VDC
Output circuit power of AC/DC output (resistive load)	2300W (240VAC) / 240W (24VDC)
Power measurement accuracy	P=5-50W, +/-3W P>50W, +/-3%
Operation temperature	-10 ~ +40°C (14 ~ 104°F)
Z-Wave operation range	up to 30 m indoors (98 ft)
Dimensions (WxHxD) (package)	41,8x36,8x16,9 mm (115x96x22 mm) / 1,65x1,45x0,66 in (4,25x3,77x0,87 in) 41.8 mm x 36.8 mm x 15.4 mm (115x96x22)
Weight (with package)	48 g (64 g) / 1,69oz (2.26oz)
Electricity consumption	0,4W
For installation in boxes	∅ ≥ 60 mm (2,36 in) or 2M, depth≥ 60 mm (2,36 in)
Switching	Relay
Digital temperature sensor range	-50 ~ +125°C (-58 ~ 257°F), resolution 0.1°C
Digital temperature sensor cable length	1000 mm (39,37 in)
Z-Wave Repeater	Yes

* 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 φ=0,4 is 3A at 250VAC, 3A at 24VDC L/R=7ms.

Functionality:

Thermostat has 2 working modes, Off or Heat/Cool. Selection between Off and Heat/Cool is possible with I1 push button or with gateway (hub). When the thermostat is turned on it automatically regulates the temperate based on Hysteresis on and Hysteresis off parameter settings.
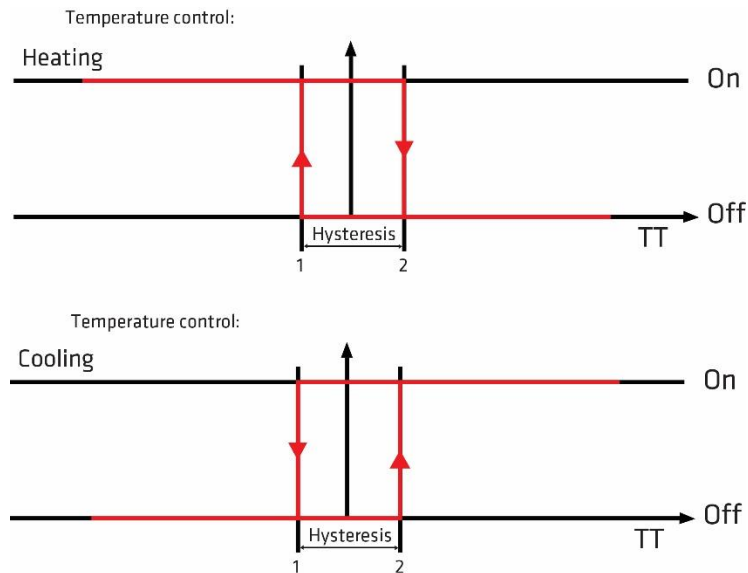
When the temperature is decreasing and reaches point 1 (defined by parameter 43), heating device is turned on and remains active until the temperature in the room is not increased to reach point 2 (defined by parameter 44). In this moment heating device is turned off.

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 or equal to the temperature set by parameter 45.

15. Z-Wave Command Classes

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 device. Basic SET can send the values 0xff which means Heat/Cool and 0x00 which means Off. Through the function basic GET is possible to read the mode of the device. The device 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).

COMMAND_CLASS_METER

- Default values:
    - Rate Type = 1 (Import)
    - Scale = 0 (kWh)

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.

16. 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 multi-channel devices. Contact us for help before returning the device: http://qubino.com/support/#email

17. 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.

18. Regulations

FCC COMPLIANCE STATEMENT:

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.

Legal Notice

This user manual is subject to change and improvement without notice. GOAP d.o.o. Nova Gorica reserves all rights to revise and update all documentation without any obligation to notify any individual or entity.

Declaration of Conformity

Qubino Flush On/Off Thermostat device is in compliance with the essential requirements and other relevant provisions of the Low voltage (LVD) Directive (2014/35/EU), Electromagnetic Compatibility (EMC) Directive (2014/30/EU), Radio Equipment Directive (2014/53/EU), Directive RoHS 2 (2011/65/EU) and Directive ErP (2009/125/EC).

WEEE

According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

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

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DON'T MISS OTHER INVENTIONS FROM QUBINO– CLICK HERE AND CHECK OUT QUBINO'S COMPLETE PORTFOLIO