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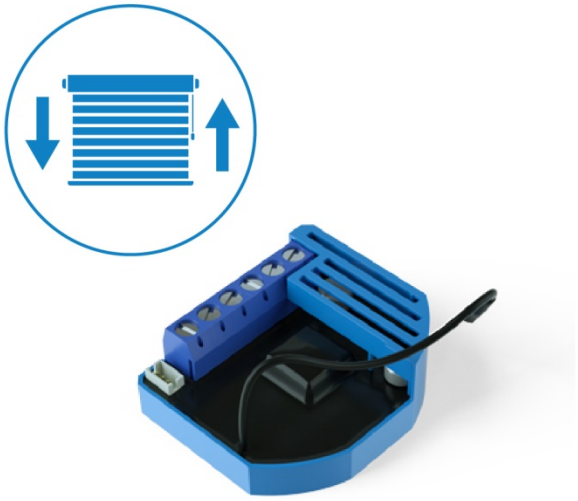
Your little magic for the smartest home.

USER MANUAL EN

QUBINO FLUSH SHUTTER DC



The Qubino Flush Shutter DC module is ideal for remotely controlling 12–24V DC motors of blinds, rollers, shades, venetian blinds and similar sunscreens.

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About Qubino

Qubino is a family of innovative Z-Wave modules, many of them the smallest of their kind in the world. Numerous breakthrough innovations, 100% quality control and responsive customer service make Qubino the number one choice for ambitious DIYers.

Qubino enables you to transform – inexpensively and invisibly – any traditional electric device into a smart, connected one which you can control with your smart phone. Qubino modules are simple to install and use, but also extremely versatile - if you are a demanding and ambitious DIYer, there is also a wealth of additional features and parameters for you to play with.

What we really love to do is help dedicated DIYers – people who enjoy creating new ideas for their home and then using their hard work and skill to turn ideas into reality. We admire your 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 DIYers won't have to when it comes to installing or using our modules.

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 many millions of people in every aspect of daily life.

Source: www z-wavealliance.org

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Safety Information

To ensure your safety, please read this manual carefully before device installation and follow the instructions herein. The manufacturer (GOAP d.o.o. Nova Gorica) shall not be legally responsible for any equipment damage or personnel injury caused by incorrect installation or operation other than that covered in this manual.

Flush Shutter DC - Available Frequencies

ORDERING CODE	Z-WAVE FREQUENCY
ZMNHOD1	868,4 MHz
ZMNHOD2	921,4 MHz
ZMNHOD3	908,4 MHz
ZMNHOD4	869,0 MHz
ZMNHOD5	916,0 MHz
ZMNHOD8	865,2 MHz

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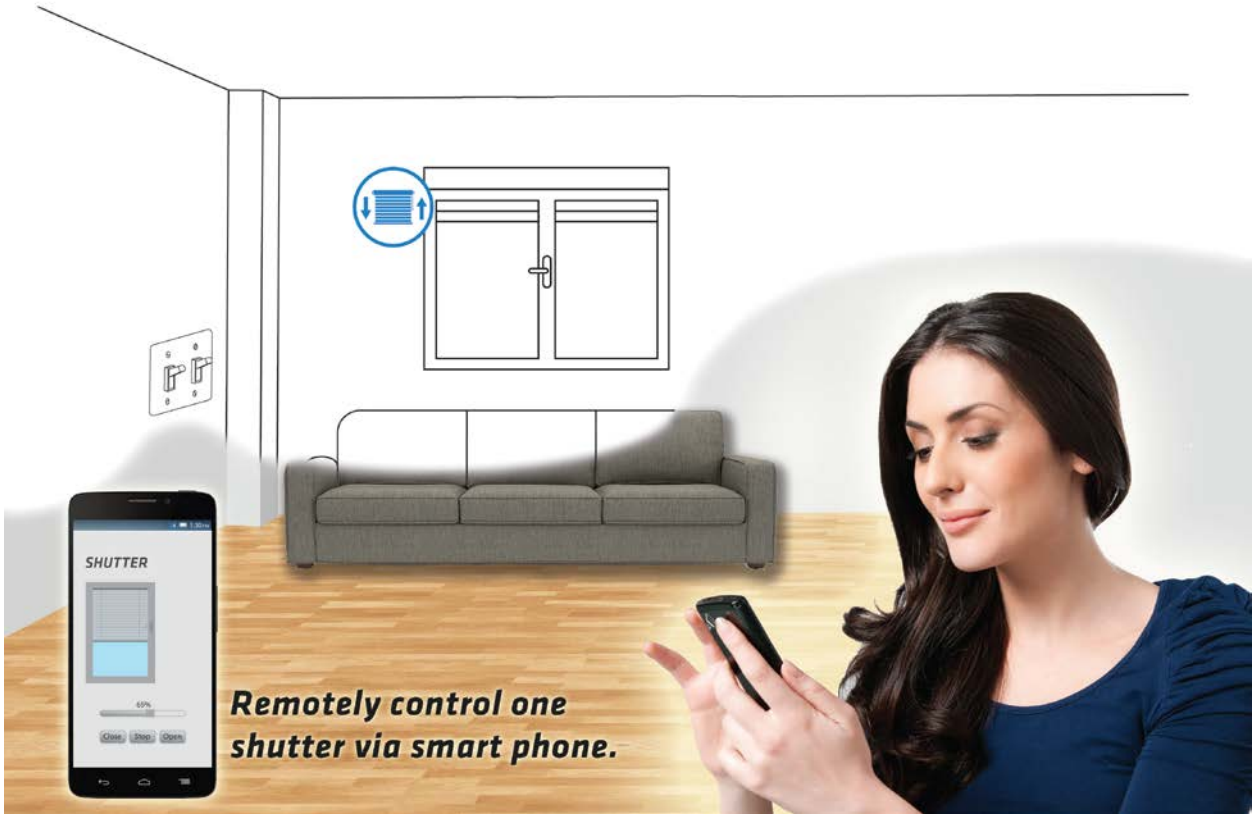
1. Introduction

The Flush Shutter DC is a module that controls 12–24V DC motors of blinds, rollers, shades, venetian blinds and similar sunscreens. It can be paired with a digital temperature sensor (sold separately). It supports push-button/momentary switches and toggle switches (default).



The Qubino Flush Shutter DC module can measure the power consumption of both connected electrical devices separately and itself has an extremely low power consumption of less than 0.4 W.

The Qubino Flush Shutter DC module 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 scenarios and switch any device relative to a set temperature range. Every module also acts as a repeater in order to improve the range and stability of the Z-Wave network.

2. Qubino Flush Shutter DC Advantages and Highlights

- With the Qubino Flush Shutter DC Module which allows you to remotely and automatically control your 12–24V DC motors of blinds, rollers, shades, venetian blinds and other motorized sunscreens. It's the only Z-Wave module in the world which is able to control 12-24V DC motors.

- Qubino Flush Shutter DC allows the easiest and quickest installation. It fits smoothly even in the smallest, most shallow and most crowded flush mounting boxes which are stuffed with lots of electrical cables. All this is possible because Qubino Flush Shutter DC is the smallest Z-Wave shutter in the world.

- Qubino Flush Shutter DC has the option to connect a (separately bought) temperature sensor, through which users can monitor the temperature of the air or water. It's the only Z-Wave switch in the world, which offers that possibility. With sensor connected, the user can carry out accurate measurements of the room temperature, pool water temperature etc. and adapt the relevant scenarios accordingly. Qubino Flush Shutter DC with temperature sensor is connected directly to the power supply. It is an install and forget product, so users don't need to worry about the changing the batteries at least once a year, like with battery powered temperature sensors.

- Every Qubino module has guaranteed 100% quality control throughout the production process. Every product has a unique a serial number and a part number, which are assigned to the module only after it goes through strict testing procedure.

- By scanning the QR code on the back of your Qubino, the serial and part number of the module are automatically copied on user's mobile device and they can have direct access to Qubino's technical support team. With the help of serial and part number, the support team can check the production log file, which contains the date of production as well as all the relevant product parameters and information, so they are able to give the best support possible.

- Qubino Flush Shutter DC is engineered and manufactured entirely in the EU and contains only the highest quality components such as OMRON relay.

- Qubino Flush Shutter DC is safety certified by an independent European Institute and has LVC and EMC certificates.

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ADDITIONAL PRODUCT HIGHLIGHTS:

- Precise Z-Wave and manual control of motorized blinds, shades, shutters, and sunscreens
- Allows control of venetian blinds and changing vertical position and angle of the shades
- Calibrates positioning automatically from your smart home UI and locally
- Works with push-button (momentary) and toggle switches
- Works with motors controlled by mechanical and electronic wall switches
- Straightforward installation
- Remembers and restores its state after power outage
- Comes with auto-inclusion mode for the quickest set-up possible (add it to your Z-Wave network with one click)
- Equipped with over a dozen advanced parameters for further customization*
- Features energy monitoring for your motorized blinds which allows automatically calibrations and an overview of energy consumption
- Equipped with strong signal repeater powered by Z-Wave Plus technology

*Your controller needs to support advanced configuration and parameter input to display these features.

3. Package Contents

- Flush Shutter DC Module
- Installation Manual

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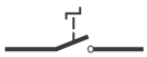
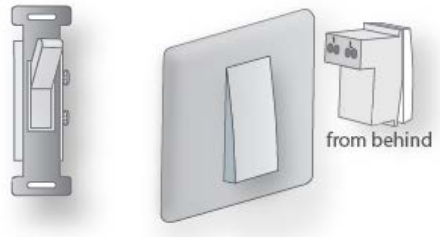
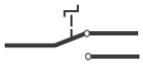
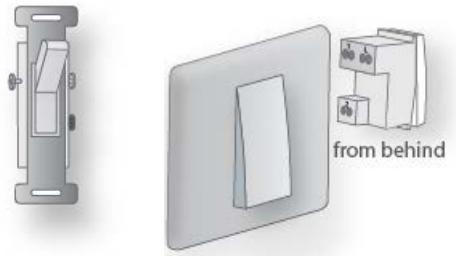
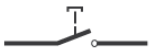
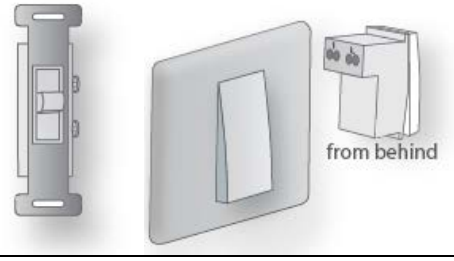
4. Technical Terms Used In the Manual

Symbol	Switch example images	Definition	EU	USA	Qubino	Other names
		Single pole, single throw (SPST)	One-way switch	Two-way switch (regular switch)	Toggle switch	Switch; Bi-stable switch
		Single pole, double throw (SPDT)	Two-way switch	Three-way switch	Two-way switch	
		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
		After relasing it goes back to original state	Momentary switch		Momentary switch	Monostable switch; Push button

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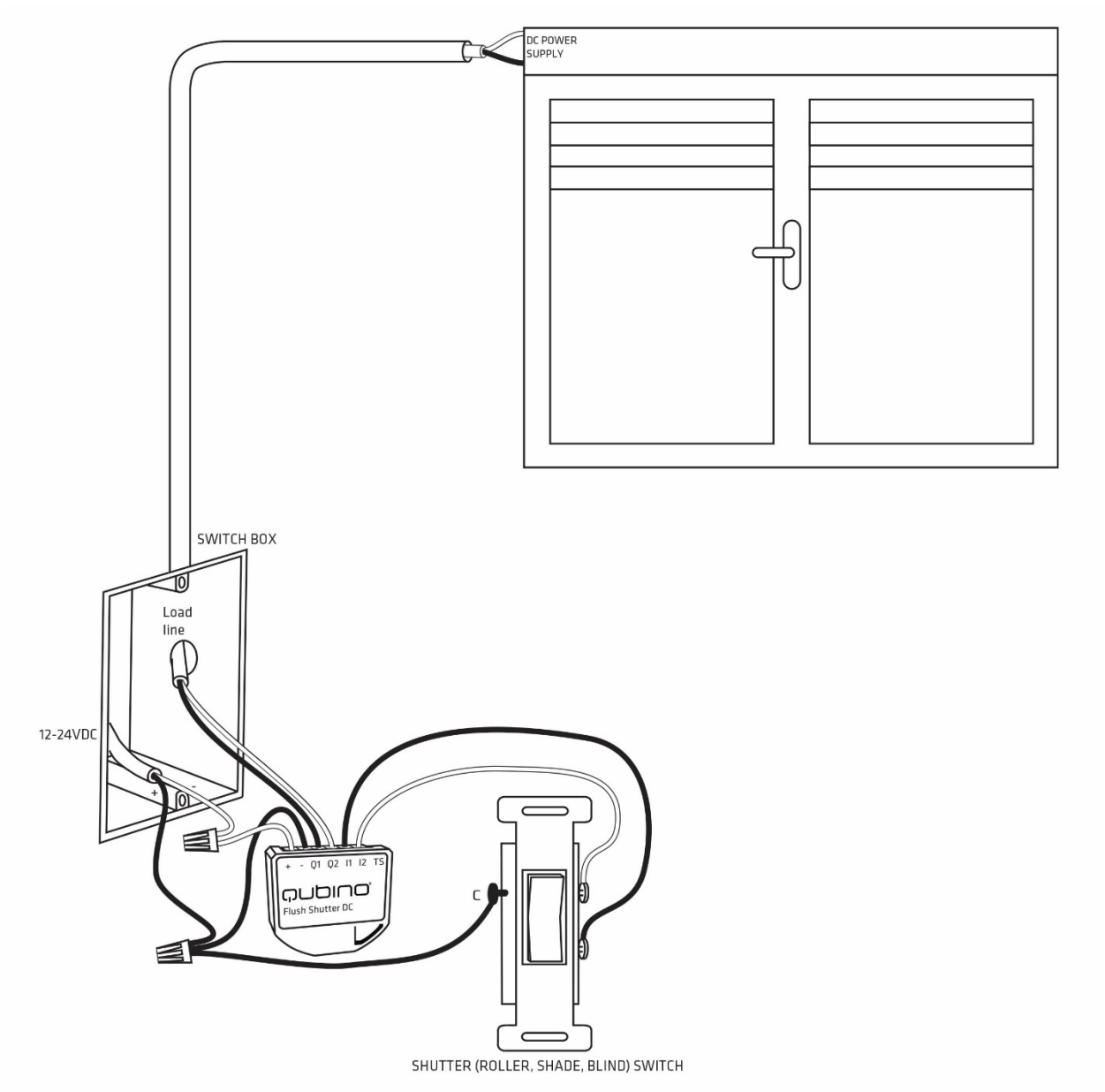
5. Installation

After Qubino installation:



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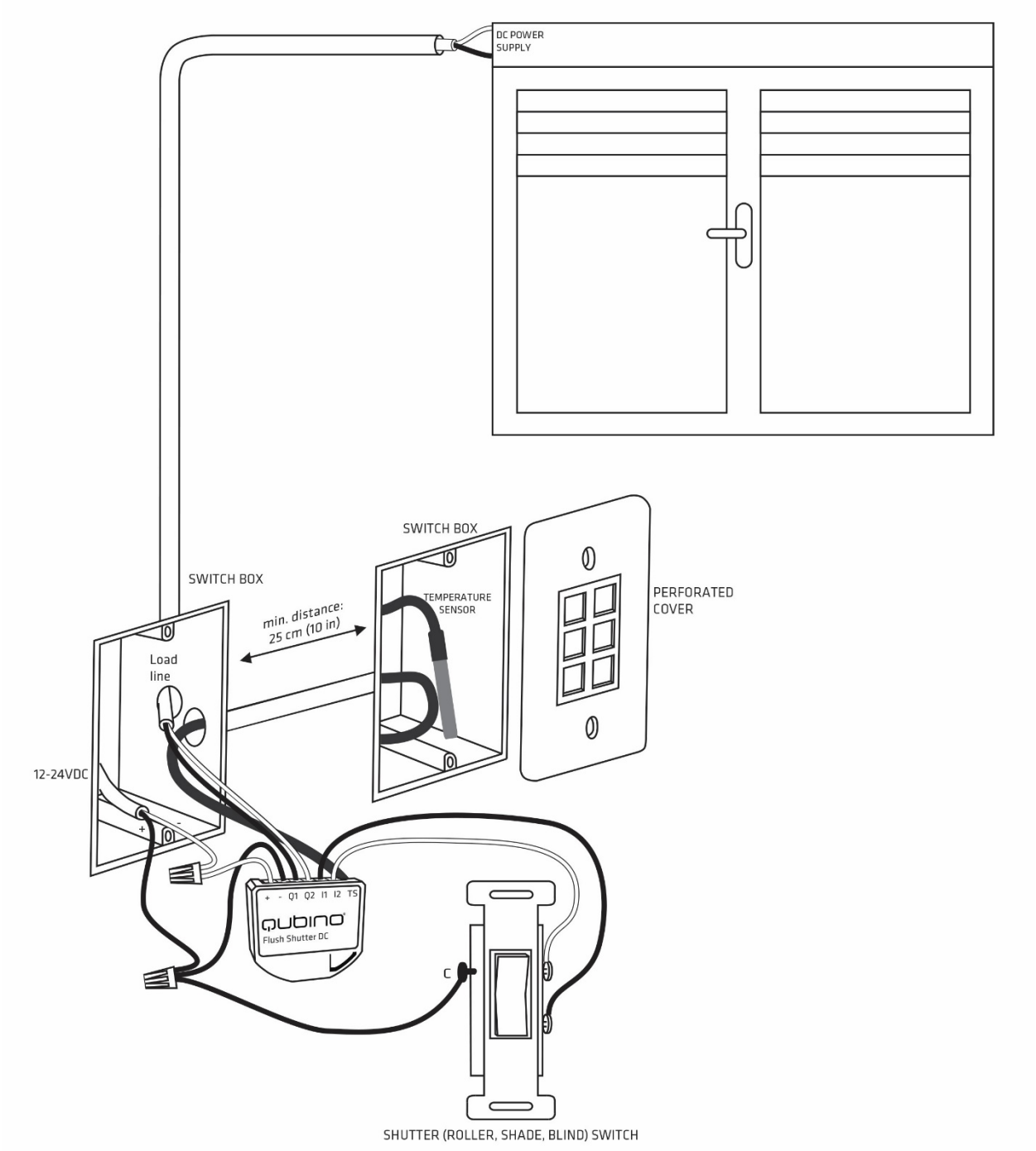
Temperature sensor installation:



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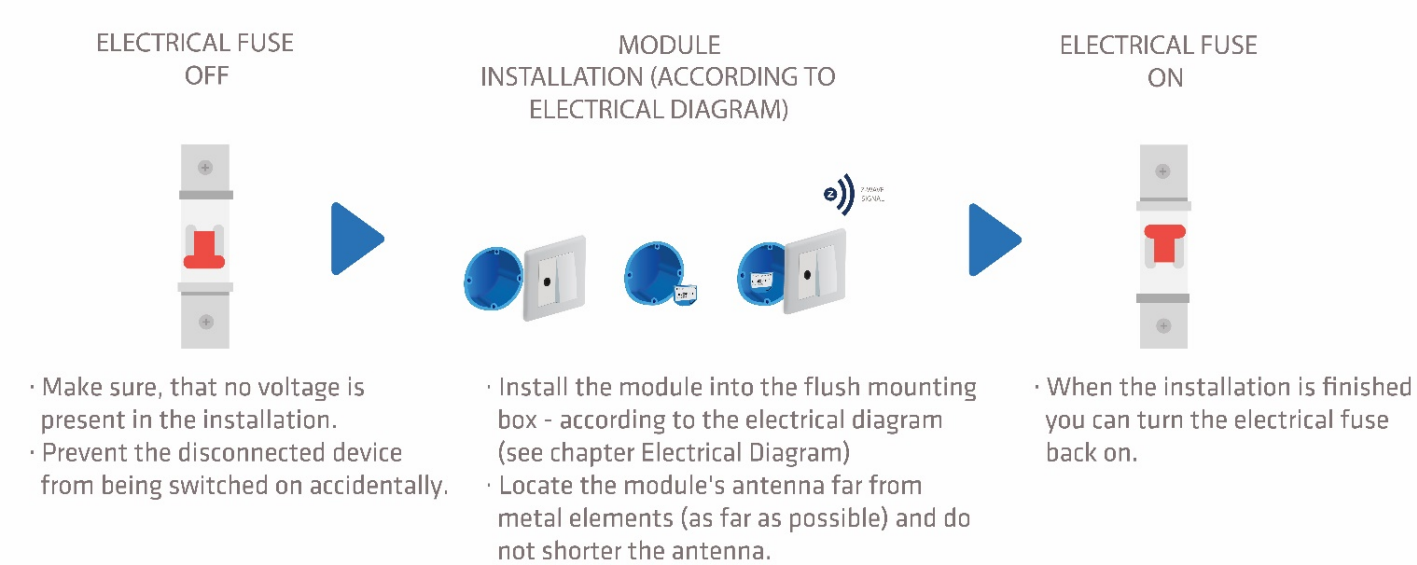
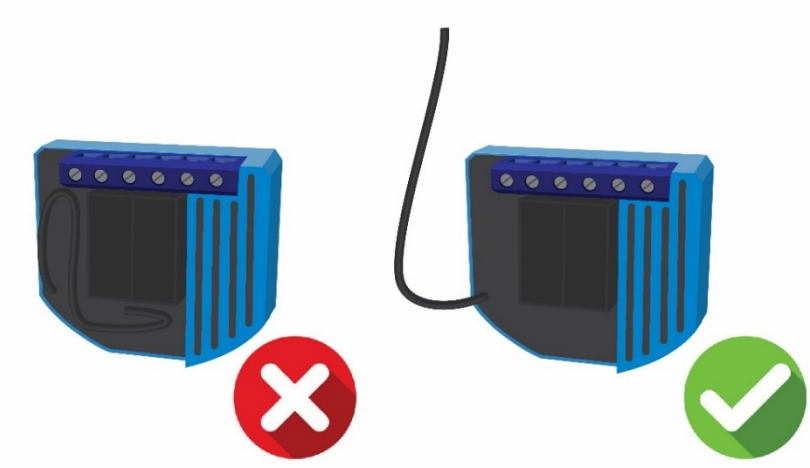
The installation process, tested and approved by professional electricians, consists of the following simple steps:

1. To prevent electrical shock and/or equipment damage, disconnect electrical power at the main fuse or circuit breaker before installation and maintenance.
2. 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.
3. Take extra precautions to avoid accidentally turning on the device during installation.
4. Connect the module exactly according to the diagram.
5. Place the antenna as far as possible from metal elements as they may cause signal interference.
6. Do not shorten the antenna.



The module's antenna should be as upright as possible. This way the Z-wave operational range can be wider (up to 30m indoors (98ft)).



Danger of electrocution!

Installation of this module 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 module is turned off, voltage may still be present in the module's terminals.

Note!

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

For overload protection use fuse F (ESKA 522.724 5A 250V) connected according to the electrical diagram. The fuse installation is according to the standard IEC 60950-1. This standard is used in Europe only.

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6. Product Information And Support

Did you know that Qubino offers Z-Wave modules with guaranteed 100% quality control 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 product has a dedicated a serial number and a part number, which is assigned to the module only after it goes through a strict testing procedure.

By scanning the QR code on the back of your Qubino module, its product title, serial number, and part number are automatically copied to your mobile device. You can also use the code for direct access to the module's product 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 module and quickly review the production log file containing 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.

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 or through our website: http://qubino.com/support/#email. We will try to help you as soon as possible.

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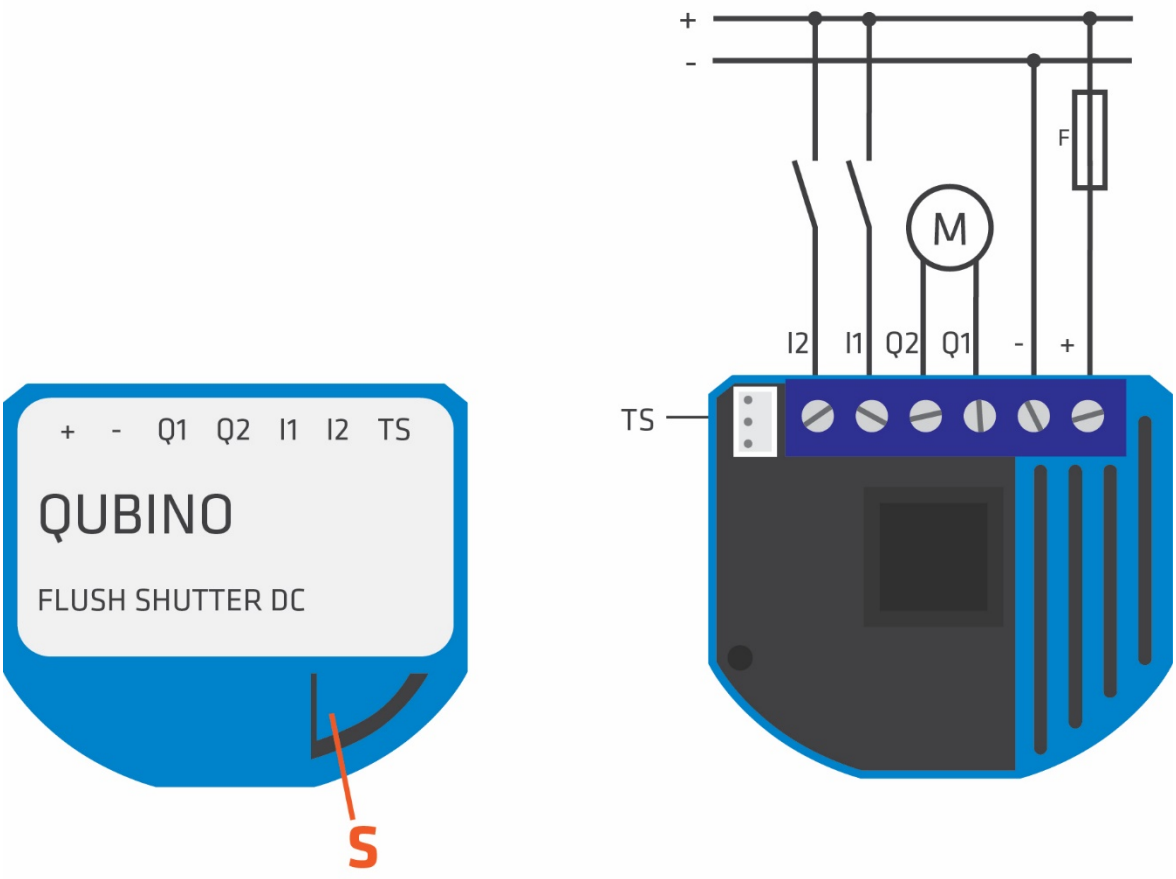
7. Electrical Diagram (12-24 VDC)



Notes for diagram:

+	+VDC (12-24 VDC)
-	-VDC (0V)
Q1↑	Output for motor UP (open)
Q2↑	Output for motor DOWN (close)
I2	Input for switch/push button DOWN (close)
I1	Input for switch/push button UP (open)
TS	Temperature sensor terminal
S	Service button (used to add or remove module from the Z-Wave network)

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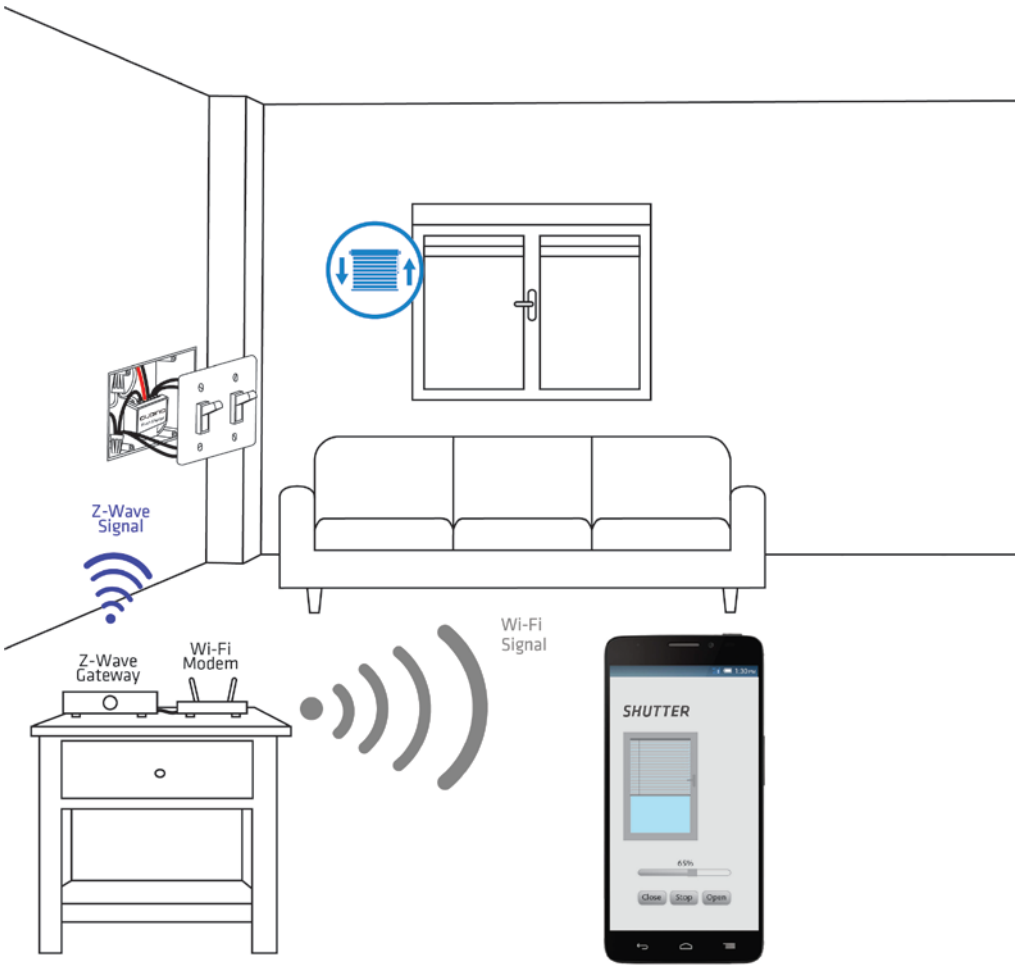
8. Z-Wave Inclusion



AUTO-INCLUSION

1. Enable inclusion mode on your Z-Wave controller

2. Connect the module to the power supply (with the temperature sensor already connected*). If the sensor is not connected before the connection of the power supply it will not work.

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

*the temperature sensor is sold separately

MANUAL INCLUSION

1. Connect the module to the power supply (with the temperature sensor already connected – see the Note below)

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

OR

Press and hold the S (Service) button for at least 2 seconds

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

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

9. Z-Wave Exclusion

Z-WAVE EXCLUSION

1. Connect the module to the power supply

2. Make sure the module is within direct range of your Z-Wave controller or use a hand-held Z-Wave remote to perform exclusion

3. Enable exclusion mode on your Z-Wave controller

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

OR

Press and hold the S (Service) button for 2 to 6 seconds

5. The module will be excluded from your network but any custom configuration parameters will not be erased.

FACTORY RESET

1. Connect the module to the power supply

2. Within the first minute the module is connected to the power supply, toggle the switch connected to the I1 terminal 5 times within 3 seconds

OR

Press and hold the S (Service) button for at least 6 seconds

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

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

10. Associations

Use associations for direct communication between the Flush Shutter module and other devices within your Z-Wave network without the need to use the primary controller.

Association Groups:

Root device:

- Group 1: Lifeline group (reserved for communication with the primary controller), 1 node allowed.
- Group 2: Basic on/off (status change report for I1 input) up to 16 nodes.
- Group 3: Basic on/off (status change report for I2 input) up to 16 nodes.
- Group 4: Basic on/off (status change report for sensing roller moving: up=FF, down=0) up to 16 nodes.
- Group 5: Basic on/off (status change report at reaching roller position: bottom=FF, top=0) up to 16 nodes.
- Group 6: Basic on/off (status change report at reaching roller position: bottom=FF, not bottom=0) up to 16 nodes
- Group 7: Multilevel set (status change report for Flush Shutter DC position), up to 16 nodes.
- Group 8: Multilevel set (triggered at changes of value of slats tilting position) up to 16 nodes.
- Group 9: Multilevel sensor report (triggered at change of temperature sensor) up to 16 nodes.

End point 1:

- Group 1: Lifeline group, 0 nodes allowed.
- Group 2: Basic on/off (status change report for I1 input), up to 16 nodes.
- Group 3: Basic on/off (status change report for I2 input), up to 16 nodes.
- Group 4: Basic on/off (triggered at sensing moving direction of roller: up=FF, down=0) up to 16 nodes.
- Group 5: Basic on/off (triggered at reaching roller position: bottom=FF, top=0) up to 16 nodes.
- Group 6: Basic on/off (triggered at reaching roller position: bottom=FF, not bottom=0) up to 16 nodes.
- Group 7: Multilevel set (triggered at changes of value of the Flush Shutter DC position) up to 16 nodes.

End point 2:

- Group 1: Lifeline group, 0 nodes allowed.

- Group 2: Multilevel set (status change report slats tilting position), up to 16 nodes.

End point 3 (External Temperature Sensor):

- Group 1: Lifeline group, 0 nodes allowed.
- Group 2: Multilevel sensor report (external temperature sensor report – sensor sold separately), up to 16 nodes.

11. Flush Shutter DC Calibration

Automatic calibration

Automatic calibration is a process during which the Flush Shutter DC learns the position of the limit switches.

Shutter positioning calibration

(par. 71 set to 0)

There are two options to calibrate the device:

- **Calibration through main controller UI**

1) Include the module into the Z-wave network according to the instructions for inclusion.

2) Set the parameter 78 (Forced Flush Shutter DC calibration) value to 1.

3) Flush Shutter DC performs the calibration process, completing full cycle - up, down and up again.

4) Set the parameter 78 (Forced Flush Shutter DC calibration) value to 0.

- **Calibration through the inputs I1 and I2**

1) Include the module into the wireless network, according to the instructions for inclusion.

2) Quick press the switch/push-button connected to I1 input and wait until the Shutter DC reaches the upper limit switch.

3) Quick press the switch/push-button connected to I2 input and wait until the Shutter DC reaches the lower limit switch.

4) Quick press the switch/push-button connected to I1 input and wait until the Shutter DC reaches the upper limit switch.

Slates tilting position calibration

(par. 71 set to 1)

When enabling venetian blind mode, position calibration for slats titling must be done. After doing this, position and angle of slates can be set. By default, full turn time for slates is set to 1.5s. This value can be changed with parameter 72.

1) Include and make module calibration according to section ‘Shutter positioning calibration’.

2) Set parameter 71 to 1 'Venetian blinds'.

3) Exclude the module (without reset!).

4) Include the module.

5) After module inclusion beside main Shutter widget, another widget for slates control will appear on UI.

6) By default full turn movement is set to 1.5s. If this time is too long (if after slates full cycle Shutter starts moving up or down), decrease this time defined with parameter 72. If this time is to short (if slats will not turn for a full cycle), increase this time defined with parameter 72.

Manual operation for Shutter

(par. 71 set to 0)

The user can connect a push-button (mono-stable) or a switch (bi-stable) to I1 and I2 terminals.

Pressing the push-button for less than 2 seconds, which is connected to I1 (up), initiates up movement.

Pressing the push-button for less than 2 seconds, which is connected to I2 (down), initiates down movement.

If the Shutter is moving, any press (of any push-button) will stop the movement.

Keeping the push-button, connected to I1 (up), pressed for more than 2 seconds initiates up movement, until the push-button is released.

Keeping the push-button, connected to I2 (down), pressed for more than 2 seconds, initiates down movement, until the push-button is released.

Manual operation for venetian blinds

(par. 71 set to 1)

Slates on start position - 0 degree

Clicking the push-button (for time < full turn slates time-par.72) connected to I1 (up), initiates slates turning towards end - 180 degree position, until push-button is released.

Clicking the push-button (for time < full turn slates time-par.72) connected to I2 (down), initiates Shutter down movement.

If the Shutter is moving, any click (of any push-button), will stop the movement.

Keeping the push-button pressed (for time > full turn slates time-par.72) connected to I1 (up), initiates full slates turn and up movement, until the push-button is released.

Keeping the push-button pressed (for time > full turn slates time-par.72) connected to I2 (down), initiates Shutter down movement, until the push-button is released.

Keeping the push-button pressed (for time > (full turn slates time +2s)) connected to I1 (up), initiates up movement, until the push-button is released.

Slates on end position - 180 degree

Clicking the push-button (for time < full turn slates time-par.72) connected to I1 (up), initiates Shutter up movement.

Clicking the push-button (for time < full turn slates time-par.72) connected to I2 (down), initiates slates turning towards start - 0 degree position, until the push-button is released.

If the Shutter is moving, any click (of any push-button), will stop the movement.

Keeping the push-button (for time > full turn slates time-par.72), connected to I1 (up), pressed, initiates the Shutter up movement, until the push-button is released.

Keeping the push-button (for time > full turn slates time-par.72), connected to I2 (down), pressed, initiates full slates turn and down movement, until the push-button is released.

Keeping the push-button (for time > (full turn slates time +2s)), connected to I2 (down), pressed, initiates down movement, until push-button is released.

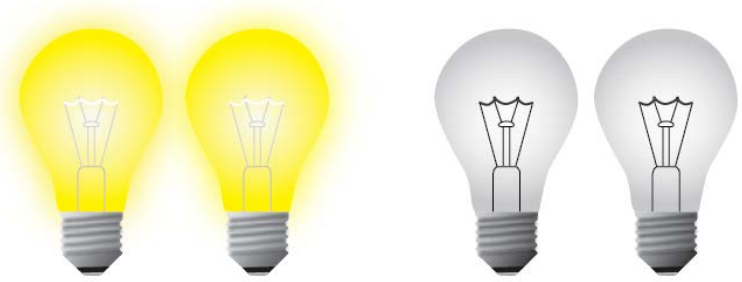
12. Configuration Parameters

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

Flush Shutter DCs module responds to commands ALL ON / ALL OFF that may be sent by the primary or secondary controller 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



ALL ON ALL OFF

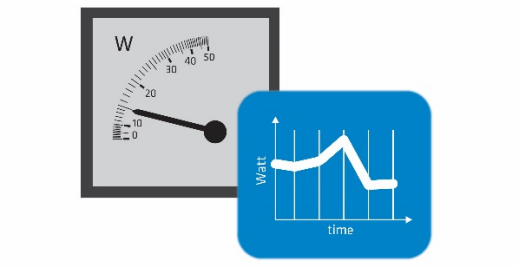
Parameter no. 40 – Watt Power Consumption Reporting Threshold for Q1 Load

Choose by how much power consumption needs to increase or decrease to be reported. Values correspond to percentages so if 10 is set (by default), the module 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.

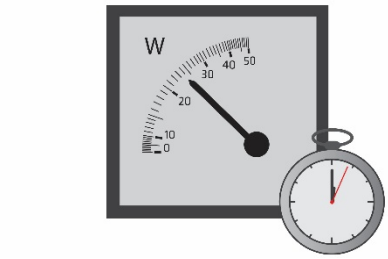


Parameter no. 42 – Power reporting in Watts by time interval for Q1 or Q2

The set value refers to the time interval with which the power consumption in Watts is reported (0 – 32767 seconds). If 0 is entered (by default), energy consumption reports will not be sent to the controller.

Values (data type is 2 byte dec):

- default value 0 = reporting disabled
- 0 - reporting disabled
- 1 - 32767 = 1 second - 32767 seconds. Reporting enabled, power report is send with time interval set by entered value.



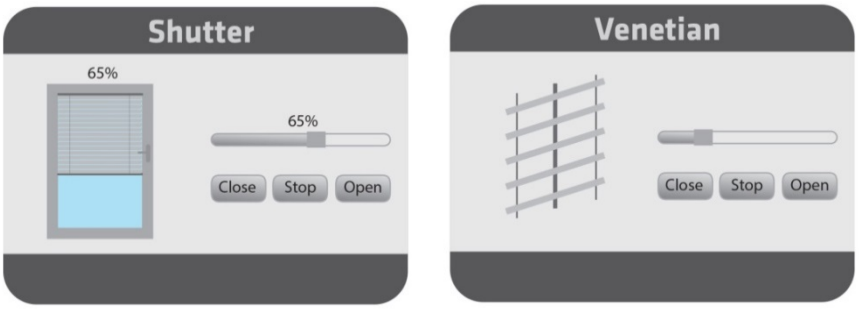
Parameter no. 71 – Operating modes

Choose between the two operating modes. If the venetian mode is selected, an additional widget/endpoint will be displayed on the UI interface, which can be used to control the tilt position of the slats. If the Shutter mode is selected, this additional endpoint is hidden.

Values (data type is 1 byte dec):

- default value 0
- 0 - Shutter mode
- 1 - venetian mode (up/down and slate rotation)

NOTE1: After the value of this parameter is changed, first exclude module (without setting parameters to their default values), wait at least 30s and then reinclude the module!



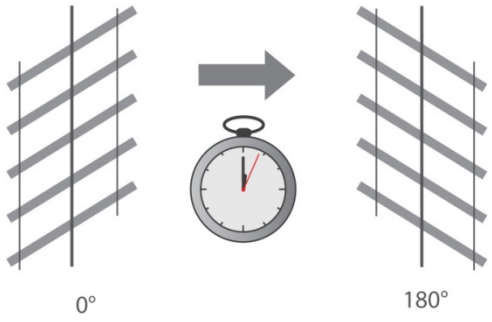
Parameter no. 72 – Slats tilting full turn time

Set the time, required by the slats, to make a full turn (180 degrees).

Values (data type is 2 byte dec):

- default value 150 = 1.5 seconds
- 0 - tilting time disabled
- 1 - 32767 = 0,01seconds – 327.67 seconds

NOTE: If the set time is too long and a full turn was already performed, the device will start to move up or down for the remaining time.

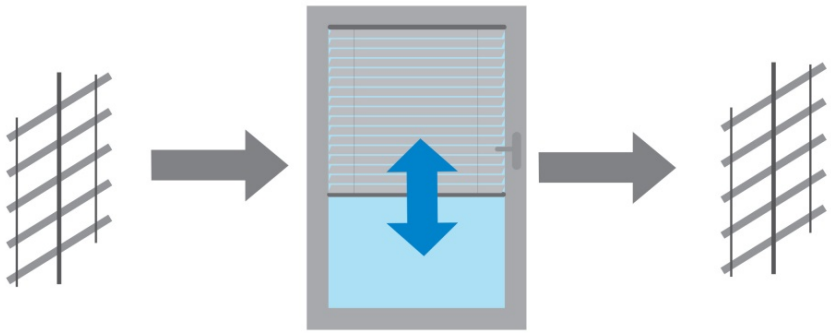


Parameter no. 73 – Slats position

Choose the position of the slats after up/down movement (activated through the Z-Wave controller or the push-buttons) is completed.

Values (data type is 1 byte dec):

- default value 1
- 0 - Slats return to the previously set position only after being activated via the Z-Wave controller (not valid for limit switch positions).
- 1 - Slats return to the previously set position in case they were activated via the Z-Wave controller, push-button operation or when the lower limit switch is reached.



Parameter no. 74 – Motor moving up/down time

This parameter defines the time, required by the Shutter DC motor, to completely open or completely close the attached shutters.

Values (data type is 2 byte dec):

- default value 0
- 0 – moving time disabled (working with limit switches)
- 1 - 32767 = 0.1seconds – 3276.7 seconds

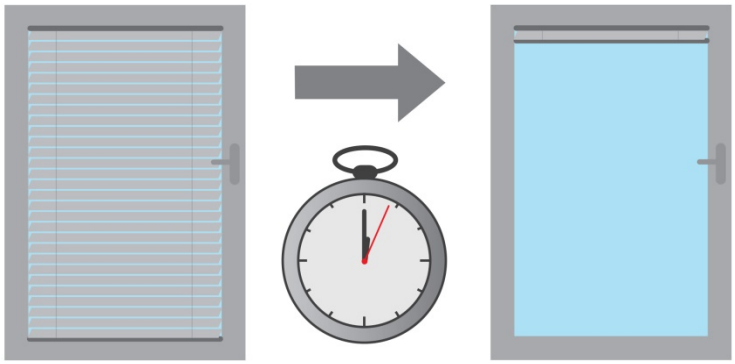
After the set time passes, the motor stops (relay goes to the off state).

NOTE: It is important that the reference position, for setting the moving time, is always when the Shutter is at its lowest position!

Set parameter 74 to 0 and move the Shutter (using the up/down push-buttons or the main controller UI) to the lowest desired position. When the Shutter reaches this position, set the parameter 74 to the duration, required by the Shutter, to completely open or completely close the attached shutters. At this point the Shutter can be moved up (open), but can't be moved down, because this position is already set as its lowest position.

To change the defined lowest position of the Shutter below the one, which is already defined (manual recalibration), the parameter 74 must be set to 0 and the procedure, which is described above, should be repeated.

In case the Shutter operates using limit switches, but the user still wants to control the opening/closing position with time, this is still possible. If a time duration, which is longer than the opening/closing time of the shutters in real time (limited by the limit switches), is set, the Shutter will stop at the limit switches, but the module relay will switch it off after a defined time, not by the limit switch of the Shutter. Take into consideration that in this condition, positioning the shutters with the slider (through the UI) will not display the correct position of the Shutter.

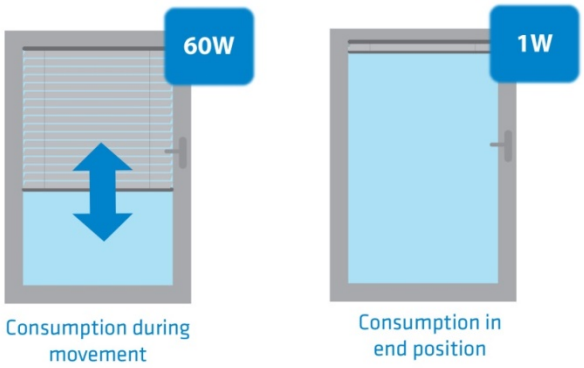


Parameter no. 76 - Motor operation detection

Define the power consumption threshold at the end positions. Based on this value, the device will know, that the shutters reached the limit switches.

Values (data type is 1 byte dec):

- default value 30 = 30W
- 0 - 127 = 1-127 W. The value 0 means that reaching a limit switch will not be detected.

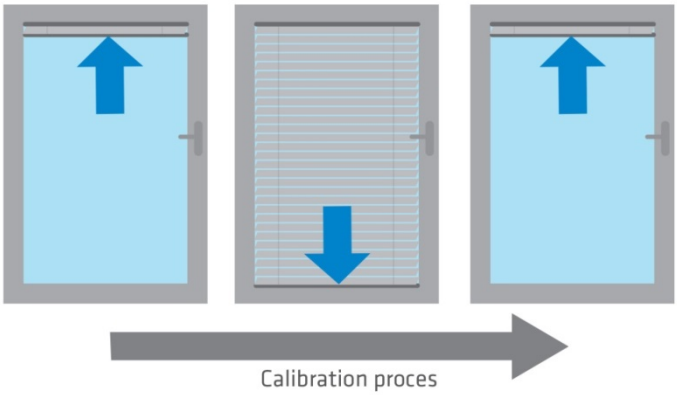


Parameter no. 78 - Forced Shutter calibration

By changing the value of this parameter from 0 to 1, the Shutter enters the calibration mode. For further information about the calibration process, please see section 9.

Values (data type is 1 byte dec):

- default value 0
- 1 - Start the calibration process. When the calibration process finishes (completing the full cycle - up, down and up again), set the value of the parameter 78 (Forced Shutter calibration) back to 0.

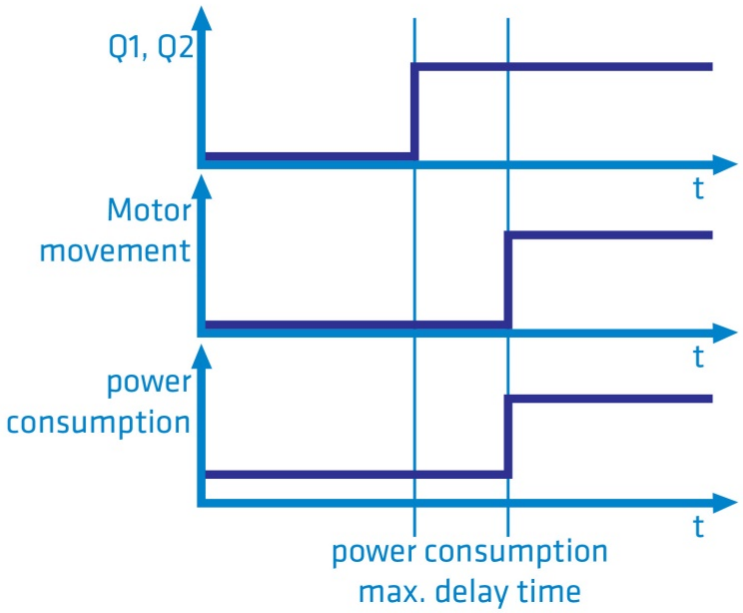


Parameter no. 85 – Power consumption max delay time

Define the maximum time before the power consumption of the motor, after one of the relays is switched ON, is read from the device. If there is no power consumption during the set time (motor not connected, damaged or requires longer time to start, motor at the end position), the relay will switch OFF. This time is defined by entering it manually.

Values (data type is 1 byte dec):

- default value 30 = 3s
- 0 = time is set automatically
- 3 - 50 = 0.3seconds - 5seconds (100ms resolution)

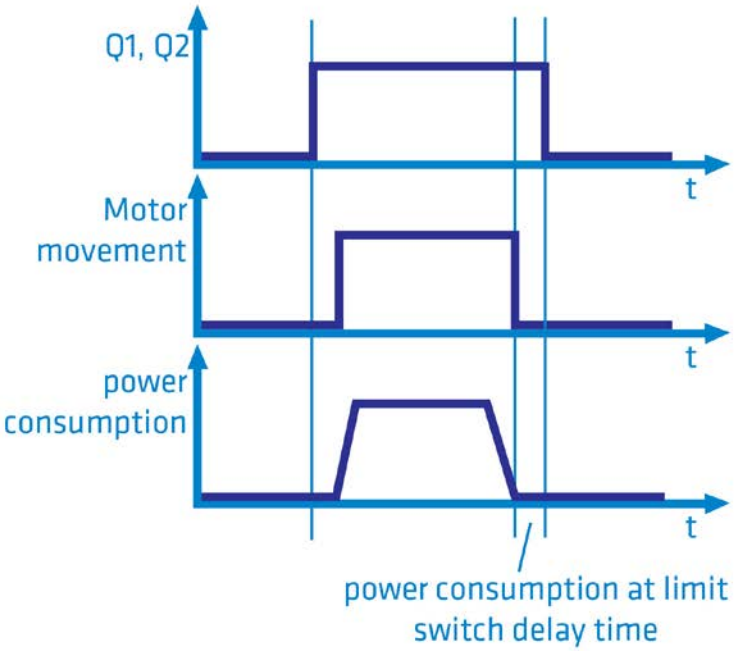


Parameter no. 86 – Power consumption at limit switch delay time

This parameter defines the maximum time after which the active output will switch off, due to reaching a limit switch. When power consumption is below the specified power threshold, defined in the parameter no. 76, the set time duration will have to pass in order for the output to turn off.

Values (data type is 1 byte dec):

- default value 8 = 800ms
- 3 - 50 = 0.3seconds - 5seconds (100ms resolution)

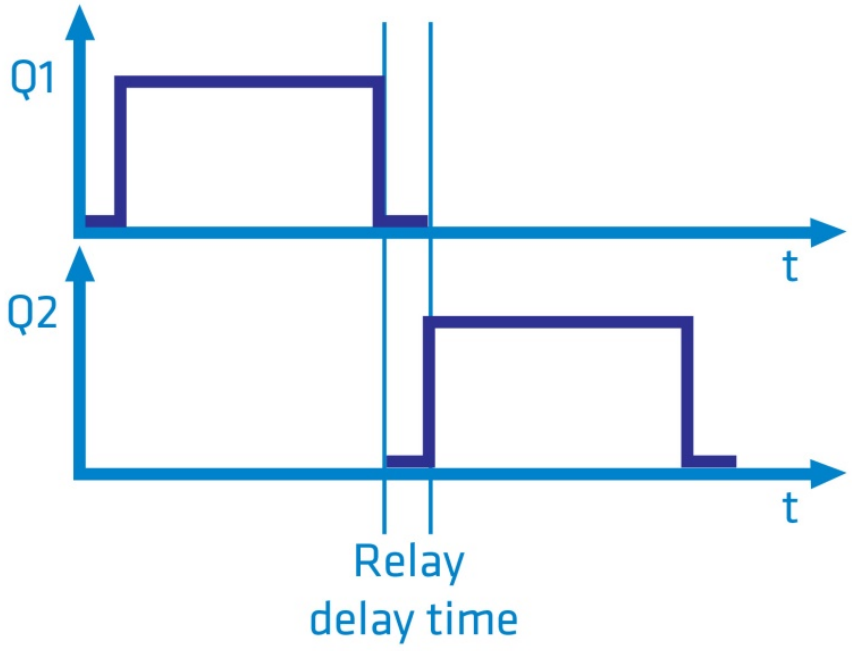


Parameter no. 90 – Time delay for next motor movement

This parameter defines the minimum time duration between successive motor movements (minimum time after which the motor is switched off and on again).

Values (data type is 1 byte dec):

- default value 5 = 500ms
- 1 - 30 = 0.1seconds - 3seconds (100ms resolution)

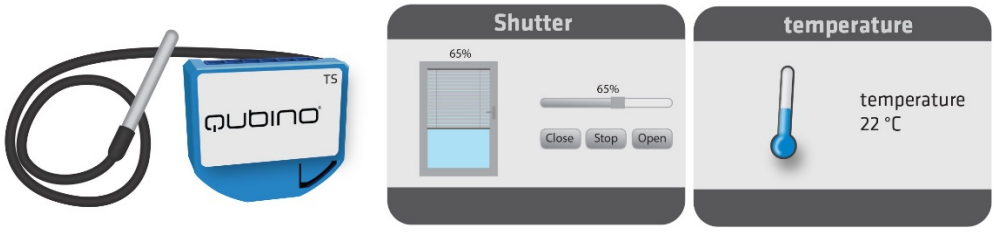


Parameter no. 110 – Temperature Sensor Offset Settings

Set value is added to or subtracted from the actually measured value to adjust the temperature report sent by an external sensor (sold separately). This parameter only applies to the degrees temperature unit (the Fahrenheit unit is currently not supported).

Values (size is 2 byte dec):

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



Parameter no. 120 – Temperature Sensor Reporting Threshold

If an external digital temperature sensor (sold separately) is connected to the module, it reports temperature readings based on the threshold defined in this parameter. This parameter only applies to the degrees 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

Parameter No. 250 – Unsecure / Secure Inclusion

Flush Shutter DC supports secure and unsecure inclusion. Even if the controller does not support security command classes, a dimmer could be included as unsecure and keep all the functionality.

Values (size is 1 byte dec):

- default value 0
- 0 – unsecure Inclusion
- 1 – secure Inclusion

13. Technical Specifications

Power supply	12-24VDC +/-10%*
Rated load current	2A
Overcurrent protection	5A
Output circuit power of DC output (resistive load)	48W (24VDC)
Power measurement accuracy	+/-5%
Digital temperature sensor range	-50 ~ +125°C (-58 ~ 257°F)
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 (79x52x22 mm) / 1,65x1,45x0,66 in (3,11x2,05x0,87 in)
Weight (with package)	28g (34g) / 0.97oz (1.20oz)
Electricity consumption	0,4W
For installation in boxes	Ø ≥ 60 mm (2,36 in)or 2M (78,74 in), depth≥ 60 mm (2,36 in)
Switching	H bridge
Z-Wave Repeater	Yes

*SELV Type

14. Z-Wave Command Classes

COMMAND_CLASS VERSION_V2

COMMAND_CLASS_DEVICE_RESET_LOCALLY_V1

COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2

COMMAND_CLASS_POWERLEVEL_V1

COMMAND_CLASS_SECURITY

Securely Supported Command Classes:

COMMAND_CLASS_SWITCH_ALL_V1

COMMAND_CLASS_SWITCH_BINARY_V1

COMMAND_CLASS_SENSOR_BINARY_V1

COMMAND_CLASS_SWITCH_MULTILEVEL_V3

COMMAND_CLASS_METER_V4

COMMAND_CLASS_SENSOR_MULTILEVEl_V7

COMMAND_CLASS_NOTIFICATION_V5

COMMAND_CLASS_MULTI_CHANNEL_V4

COMMAND_CLASS_ASSOCIATION_2

COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3

COMMAND_CLASS_ASSOCIATION_GRP_INFO_V2

COMMAND_CLASS_CONFIGURATION_V1

COMMAND_CLASS_MARK

COMMAND_CLASS_BASIC_V1

COMMAND_CLASS_SWITCH_MULTILEVEL_V3

Endpoint1:

Device Class:

BASIC_TYPE_ROUTING_SLAVE

GENERIC_TYPE_SWITCH_MULTILEVEL

SPECIFIC_TYPE_CLASS_C_MOTOR_CONTROL

Command Classes:

COMMAND_CLASS_ZWAVEPLUS_INFO_V2

COMMAND_CLASS_SECURITY

COMMAND_CLASS_SWITCH_ALL_V1

COMMAND_CLASS_SWITCH_BINARY_V1

COMMAND_CLASS_SWITCH_MULTILEVEL_V3

COMMAND_CLASS_METER_V4

COMMAND_CLASS_NOTIFICATION_V5

COMMAND_CLASS_ASSOCIATION_V2

COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3

COMMAND_CLASS_ASSOCIATION_GRP_INFO_V2

COMMAND_CLASS_MARK

COMMAND_CLASS_SWITCH_MULTILEVEL_V3

Endpoint2:

Device Class:

BASIC_TYPE_ROUTING_SLAVE

GENERIC_TYPE_SWITCH_MULTILEVEL

SPECIFIC_TYPE_CLASS_C_MOTOR_CONTROL

Command Classes:

COMMAND_CLASS_ZWAVEPLUS_INFO_V2

COMMAND_CLASS_SECURITY

COMMAND_CLASS_SWITCH_ALL

COMMAND_CLASS_SWITCH_BINARY_V1

COMMAND_CLASS_SWITCH_MULTILEVEL_V3

COMMAND_CLASS_ASSOCIATION_V2

COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3

COMMAND_CLASS_ASSOCIATION_GRP_INFO_V2

COMMAND_CLASS_MARK

COMMAND_CLASS_SWITCH_MULTILEVEL_V3

Endpoint 3:

Device Class:

GENERIC_TYPE_SENSOR_MULTILEVEL

SPECIFIC_TYPE_ROUTING_SENSOR_MULTILEVEL

Command Classes:

COMMAND_CLASS_ZWAVEPLUS_INFO_V2

COMMAND_CLASS_SECURITY

COMMAND_CLASS_SENSOR_MULTILEVEL_V7

COMMAND_CLASS_ASSOCIATION_V2

COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3

COMMAND_CLASS_ASSOCIATION_GRP_INFO_V2

NOTE: The above list is valid for the product with a temperature sensor connected to TS terminal at the time of inclusion. In case the sensor is not connected then the following command class and endpoint 3 are not supported:

COMMAND_CLASS_SENSOR_MULTILEVEL_V7

Endpoint 2 is supported by the module only when the parameter no. 71 is set to the value 1 and the module is excluded and re-included into the network.

COMMAND_CLASS_BASIC:

- The module will be turned ON or OFF after receiving the BASIC_SET command. To be turned ON: [Command Class Basic, Basic Set, Basic Value = 0x01~0x63 in percentage; FF set to last value]

- To be turned OFF: [Command Class Basic, Basic Set, Basic Value = 0x00]

In case of an overload, the device will send an overload notification (COMMAND_CLASS_NOTIFICATION_V5) towards the controller with the "Notification type" field set to 0x08 (POWER MANAGEMENT) and the "Event" field set to 0x08 ("Over load detected").

This Security Enabled Z-Wave Plus 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. Security Enabled Z-Wave Controller must be used in order to fully utilize the product.

15. Important Disclaimer

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

16. 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.

17. 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 radi-ate 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.

EN

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 Shutter Module DC is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/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 module with SW version S6 (SW version is part of P/N)!
Example: P/N: ZMNHODx HxS6Px

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