Qubino

Flush 2 relays

SKU: GOAEZMNHBD1

Quickstart

This is a **On/Off Power Switch** for **Europe**. To run this device please connect it to your mains power supply. Auto-inclusion procedure, first set main co into inclusion mode and then connect module to power supply.
NOTE: When connecting temperature sensor to module that has already been included, you have to exclude module first. Switch off power supply , cor sensor and re-include the module.

Important safety information

Please read this manual carefully. Failure to follow the recommendations in this manual may be dangerous or may violate the law. The manufacturer, impor distributor and seller shall not be liable for any loss or damage resulting from failure to comply with the instructions in this manual or any other material. Use equipment only for its intended purpose. Follow the disposal instructions. Do not dispose of electronic equipment or batteries in a fire or near open heat sou

What is Z-Wave?

Z-Wave is the international wireless protocol for communication in the Smart Home. This device is suited for use in the region mentioned in the Quickstart s

Z-Wave ensures a reliable communication by reconfirming every message (**two-way communication**) and every mains powered node can act as a repeater for other nodes (**meshed network**) in case the receiver is not in direct wireless range of the transmitter.

This device and every other certified Z-Wave device can be **used together with any other certified Z-Wave device regardless of brand and origin** as long as both are suited for the same frequency range.

If a device supports **secure communication** it will communicate with other devices secure as long as this device provides the same or a higher level of security. Otherwise it will automatically turn into a lower level of security to maintain backward compatibility.

For more information about Z-Wave technology, devices, white papers etc. please refer to www.z-wave.info.

Product Description

Flush 2 relays module is used for switching on or off two electrical devices (e.g. lights, fans, etc ...). The module can be controlled either through Z-Wave ne through the wall switches.
The module is designed to be mounted inside a “flush mounting box”, hidden behind a traditional wall switch.
Module measures power consumption of two electrical devices and supports connection of digital temperature sensor. It is designed to act as repeater in or improve range and stability of Z-wave network.

Prepare for Installation / Reset

Please read the user manual before installing the product.

In order to include (add) a Z-Wave device to a network it **must be in factory default state.** Please make sure to reset the device into factory default. You c by performing an Exclusion operation as described below in the manual. Every Z-Wave controller is able to perform this operation however it is recommenc the primary controller of the previous network to make sure the very device is excluded properly from this network.

Reset to factory default

This device also allows to be reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inope

If the service button S is pressed for mor ethan 6 seconds the module will be reset to the factory defoult state

Safety Warning for Mains Powered Devices

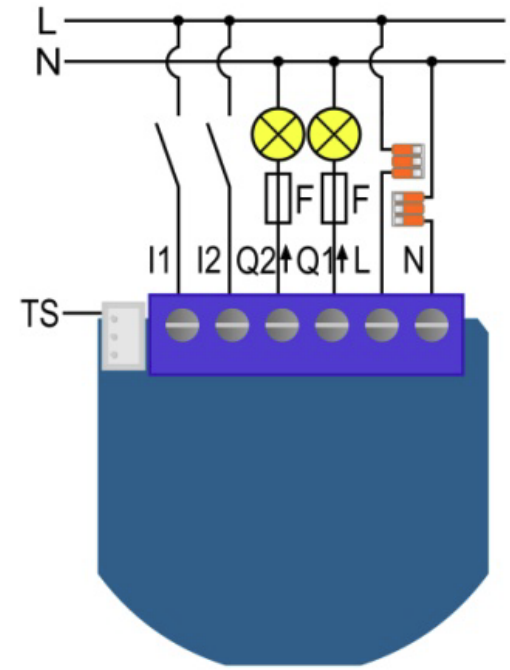
ATTENTION: only authorized technicians under consideration of the country-specific installation guidelines/norms may do works with mains power. Prior to

assembly of the product, the voltage network has to be switched off and ensured against re-switching.

Installation

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

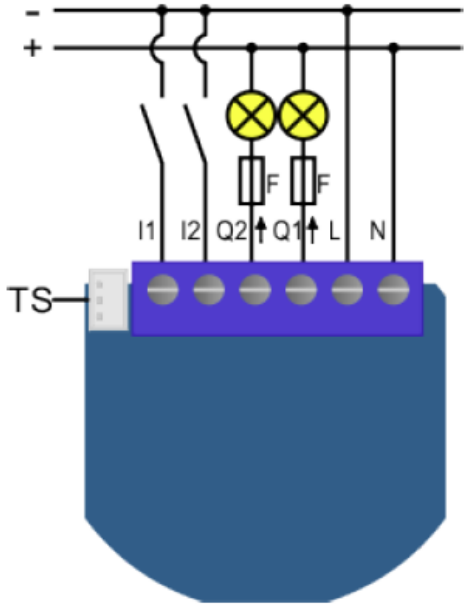
Electrical diagram 230VAC



Notes for the diagram:

N	Neutral lead
L	Live lead
Q1	Output for electrical device no. 1
Q2	Output for electrical device no. 2
I2	Input for switch to control electrical device no.2
I1	Input for switch to control electrical device no.1
TS	Terminal for digital temperature sensor (only for Flush 2 Relays module compatible digital temperature sensor, which must be ordered separately).

Electrical diagram 24VDC



Notes for the diagram:

N	+VDC
L	-VDC
Q1	Output for electrical device no. 1
Q2	Output for electrical device no. 2
I2	Input for switch to control electrical device no.2
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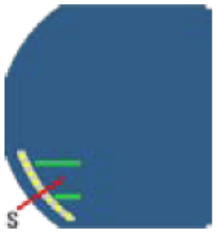
TS	Terminal for digital temperature sensor (only for Flush 2 Relays module compatible digital temperature sensor, which must be ordered separately).



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

Inclusion/Exclusion

On factory default the device does not belong to any Z-Wave network. The device needs to be **added to an existing wireless network** to communicate wi devices of this network. This process is called **Inclusion**.

Devices can also be removed from a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave netwo controller is turned into exclusion respective inclusion mode. Inclusion and Exclusion is then performed doing a special manual action right on the device.

Inclusion

• Press service button S for more than 2 second or press push button I1 three times within 3s (3 times change switch state within 3 seconds).

Exclusion

• Press service button S for more than 6 second or press push button I1 five times within 3s (5 times change switch state within 3 seconds) in the first 60 s the module is connected to the power supply.

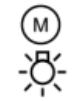
Note: By this function all parameters of the module are set to default values and own ID is deleted. If service button S is pressed more than 2 and less thar module is excluded, but configuration parameters are not set to default values

Auto-Inclusion

Beside the standard inclusion this devices supports the so called **auto inclusion**. Right after powering up the device remains in inclusion state and can be (any) gateway without further actions on the device itself. The auto inclusion mode will time out after some time.

Product Usage

Supported loads:



Electric motor

Conventional incandescent and halogen lights

LED bulb, compact fluorescent bulb (CFL), low voltage halogen bulbs with electronic transformer

Low voltage halogen bulbs with conventional transformer

Quick trouble shooting

Here are a few hints for network installation if things dont work as expected.

1. Make sure a device is in factory reset state before including. In doubt exclude before include.
2. If inclusion still fails, check if both devices use the same frequency.
3. Remove all dead devices from associations. Otherwise you will see severe delays.
4. Never use sleeping battery devices without a central controller.
5. Dont poll FLIRS devices.
6. Make sure to have enough mains powered device to benefit from the meshing

Association - one device controls an other device

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a di device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they a related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will rece same wireless command wireless command, typically a 'Basic Set' Command.

Association Groups:

Group Number	Maximum Nodes	Description
1	1	Lifeline group (reserved for communication with the main controller).
2	16	basic on/off (triggered at change of the output Q1 state and reflecting its state)
3	16	switch binary report (triggered at change of the output Q1 state and reflecting its st
4	16	power meter report (triggered at change of the output Q1 state)
5	16	basic on/off (triggered at change of the output Q2 state and reflecting its state)
6	16	switch binary report (triggered at change of the output Q2 state and reflecting its st
7	16	power meter report (triggered at change of the output Q2 state)
8	16	multilevel sensor report (triggered at change of temperature sensor)

Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion, however certain configuration can adapt the function better to user needs or unlock fu enhanced features.

IMPORTANT: Controllers may only allow configuring signed values. In order to set values in the range 128 ... 255 the value sent in the application shall be value minus 256. For example: To set a parameter to 200 it may be needed to set a value of 200 minus 256 = minus 56. In case of a two byte value the sar applies: Values greater than 32768 may needed to be given as negative values too.

Parameter 1: Input 1 switch type

Input 1 switch type

Size: 1 Byte, Default Value: 1

Setting	Description
0	mono-stable switch type (push button)
1	bi-stable switch type

Parameter 2: Input 2 switch type

Input 2 switch type

Size: 1 Byte, Default Value: 1

Setting	Description
0	mono-stable switch type (push button)
1	bi-stable switch type

Parameter 10: Activate / deactivate functions ALL ON/ALL OFF

Activate / deactivate functions ALL ON/ALL OFFFlush 2 relays module responds to commands ALL ON / ALL OFF that may be sent by the main controller controller belonging to the system.

Size: 2 Byte, Default Value: 255

Setting	Description
0	ALL ON is not active ALL OFF is not active
1	ALL ON is not active ALL OFF active
2	ALL ON active ALL OFF is not active
255	ALL ON active, ALL OFF active

Parameter 11: Automatic turning off output Q1 after set time

When relay Q1 is ON it goes automatically OFF after time defined by this parameter. Timer is reset to zero each time the module receive ON command reg from where it comes (push button, associated module, controller,..).

Size: 2 Byte, Default Value: 0

Setting	Description
0	Auto OFF disabled
1 - 32535	1second (0,01s) - 32535 seconds (325,35s) Auto OFF enabled with define time, step is 1s or 10ms acc parameter nr.15

Parameter 12: Automatic turning on output Q1 after set time

When relay Q1 is OFF it goes automatically ON after time defined by this parameter. Timer is reset to zero each time the module receive OFF command re from where it comes (push button, associated module, controller,..).

Size: 2 Byte, Default Value: 0

Setting	Description
0	Auto ON disabled
1 - 32535	1second (0,01s) - 32536 seconds (325,35s) Auto ON enabled with define time, step is 1s or 10ms acco parameter nr.15

Parameter 13: Automatic turning off output Q2 after set time

When relay Q2 is ON it goes automatically OFF after time defined by this parameter. Timer is reset to zero each time the module receive ON command reg from where it comes (push button, associated module, controller,..).

Size: 2 Byte, Default Value: 0

Setting	Description
0	Auto OFF disabled
1 - 32535	1second (0,01s) - 32535 seconds (325,35s) Auto OFF enabled with define time, step is 1s or 10ms acc parameter nr.15

Parameter 14: Automatic turning on output Q2 after set time

When relay Q2 is OFF it goes automatically ON after time defined by this parameter. Timer is reset to zero each time the module receive OFF command re from where it comes (push button, associated module, controller,..).

Size: 2 Byte, Default Value: 0

Setting	Description
0	Auto ON disabled
1 - 32535	1second (0,01s) - 32536 seconds (325,35s) Auto ON enabled with define time, step is 1s or 10ms accor parameter nr.15

Parameter 15: Automatic turning off / on seconds or milliseconds selection

Automatic turning off / on seconds or milliseconds selectionNote that parameter is valid for both outputs Q1, Q2 and is the same for turning off or on.

Size: 1 Byte, Default Value: 0

Setting	Description
0	seconds selected
1	milliseconds selected

Parameter 30: Saving the state of the relays Q1 and Q2 after a power failure

Saving the state of the relays Q1 and Q2 after a power failure

Size: 1 Byte, Default Value: 0

Setting	Description
0	Flush 2 relays module saves its state before power failure (it returns to the last position saved before a p failure)
1	Flush 2 relays module does not save the state after a power failure, it returns to "off" position

Parameter 40: Power reporting in Watts on power change for Q1

Set value means percentage, set value from 0 - 100 = 0% - 100%.

Size: 1 Byte, Default Value: 10

Setting	Description
0	Reporting Disabled
1 - 100	1% - 100% Reporting enabled. Power report is send (push) only when actual power in Watts in real time for more than set percentage comparing to previous actual power in Watts, step is 1%. NOTE: if power less than 1W, the report is not send (pushed), independent of percentage set.

Parameter 41: Power reporting in Watts on power change for Q2

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

Size: 1 Byte, Default Value: 10

Setting	Description
0	Reporting Disabled
1 - 100	1% - 100% Reporting enabled. Power report is send (push) only when actual power in Watts in real time for more than set percentage comparing to previous actual power in Watts, step is 1%. NOTE: if power less than 1W, the report is not send (pushed), independent of percentage set.

Parameter 42: Power reporting in Watts by time interval for Q1

Set value means time interval (0 - 32535) in seconds, when power report is send.

Size: 2 Byte, Default Value: 300

Setting	Description
0	Reporting Disabled
1 - 32535	= 1 second - 32535 seconds. Reporting enabled, Power report is send with time interval set by entered

Parameter 43: Power reporting in Watts by time interval for Q2

Set value means time interval (0 - 32535) in seconds, when power report is send.

Size: 2 Byte, Default Value: 300

Setting	Description
0	Reporting Disabled
1 - 32535	= 1 second - 32535 seconds. Reporting enabled, Power report is send with time interval set by entered v

Parameter 63: Output Q1 Switch selection
Set value means the type of the device that is connected to the Q1 output. The device type can be normally open (NO) or normally close (NC).
Size: 1 Byte, Default Value: 0

Setting	Description
0	When system is turned off the output is 0V (NC).
1	When system is turned off the output is 230V (NO).

Parameter 64: Output Q2 Switch selection
Set value means the type of the device that is connected to the Q2 output. The device type can be normally open (NO) or normally close (NC).
Size: 1 Byte, Default Value: 0

Setting	Description
0	When system is turned off the output is 0V (NC).
1	When system is turned off the output is 230V (NO).

Parameter 110: Temperature sensor offset settings
Set value is added or subtracted to actual measured value by sensor.
Size: 2 Byte, Default Value: 32536

Setting	Description
1 - 100	value from 0.1 deg.C to 10.0 deg.C is added to actual measured temperature.
1001 - 1100	value from -0.1 deg.C to -10.0 deg.C is subtracted to actual measured temperature.
32536	offset is 0.0 deg.C

Parameter 120: Digital temperature sensor reporting
If digital temperature sensor is connected, module reports measured temperature on temperature change defined by this parameter.
Size: 1 Byte, Default Value: 5

Setting	Description
0	Reporting disabled
1 - 127	0,1 deg.C - 12.7 deg.C. - step is 0,1 deg.C

Technical Data

Dimensions	42x37x16 mm
Weight	28 gr
Hardware Platform	ZM5202
EAN	3830062070119
IP Class	IP 20
Voltage	230 V
Load	2x 4A
Device Type	On/Off Power Switch
Network Operation	Always On Slave
Z-Wave Version	6.51.06
Certification ID	ZC10-15100010
Z-Wave Product Id	0x0159.0x0002.0x0051
Frequency	Europe - 868,4 Mhz
Maximum transmission power	5 mW

Supported Command Classes

- Switch All
- Association
- Association Group Information
- Basic
- Configuration
- Device Reset Locally
- Manufacturer Specific
- Meter
- Multi Channel Association
- Sensor Multilevel
- Powerlevel
- Switch Binary
- Version
- Zwaveplus Info

Controlled Command Classes

- Basic

Explanation of Z-Wave specific terms

- **Controller** — is a Z-Wave device with capabilities to manage the network. Controllers are typically Gateways,Remote Controls or battery operated wall controllers.
- **Slave** — is a Z-Wave device without capabilities to manage the network. Slaves can be sensors, actuators and even remote controls.
- **Primary Controller** — is the central organizer of the network. It must be a controller. There can be only one primary controller in a Z-Wave network.
- **Inclusion** — is the process of adding new Z-Wave devices into a network.
- **Exclusion** — is the process of removing Z-Wave devices from the network.

- **Association** — is a control relationship between a controlling device and a controlled device.
- **Wakeup Notification** — is a special wireless message issued by a Z-Wave device to announces that is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.
