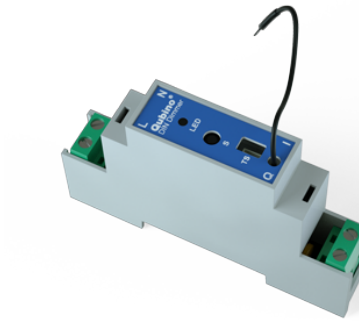


Qubino

DIN Dimmer

SKU: GOAEZMNHSD1

Quickstart

This is a **DIN Dimmer** for **Europe**. To run this device please connect it to your mains power supply. To add this device to your network execute the follo action:

- press service button S for more than 2 second or
- press push button I three times within 3s (3 times change switch state within 3 seconds)

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

This Z-Wave module is used for dimming the bulb or to manage the speed of a fan. The module can be controlled either through a Z-Wave netwo through the wall switch. The module is designed to be mounted inside an electrical cabinet onto DIN rail. Module measures power consumption or fan and supports connection of digital temperature sensor. It is designed to act as repeater in order to improve range and stability of Z-wave

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 recommend 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

- press service button S for more than 6 seconds or
- press push button I five times within 3s (5 times change switch state within 3 seconds) in the first 60 seconds after the module is connected to the powe

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.

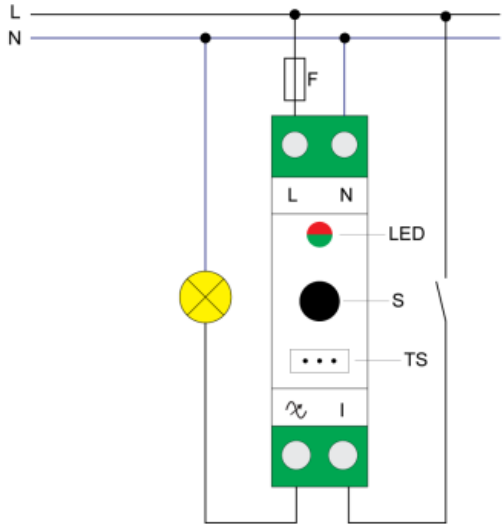
Installation

- 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.

Note!

Do not connect the module to loads exceeding recommended values. Connect the module only in accordance to the below diagrams. Improper connections dangerous.

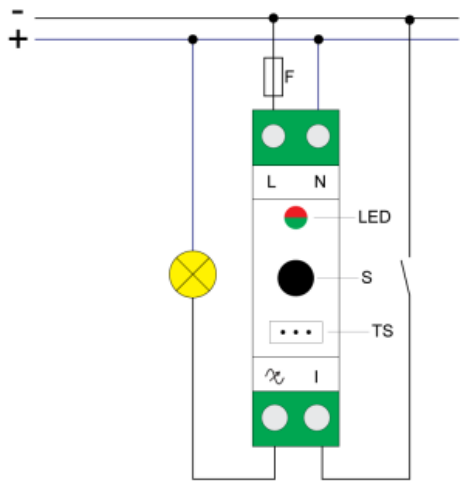
Electrical diagram 230VAC



Notes for the diagram:

N	Neutral lead
L	Live lead
⌁	Output for electrical device
I	Input for push button/switch
LED	Red – overload, Green - Power on (solid) / no ID (blinking slow 1s)
TS	Terminal for digital temperature sensor (only for DIN Dimmer module compatible digital temperature sensor, which must be ordered separately).
S	Service button (used to add or remove module from the Z-Wave network).

Electrical diagram 24VDC



Notes for the diagram:

N	+VDC
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I	Input for push button/switch
LED	Red – overload, Green - Power on (solid) / no ID (blinking slow 1s)
TS	Terminal for digital temperature sensor (only for DIN Dimmer module compatible digital temperature sensor, which must be ordered separately).
S	Service button (used to add or remove module from the Z-Wave network).

NOTE:

When overload is detected, module automatically switches off the output. At the same time red led become solid on. In this case check if the load is according to specifications and if connections are according diagram. To recover module in normal state, you need to power cycle the module.

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 I three times within 3s (3 times change switch state within 3 seconds)

Exclusion

- press service button S for more than 6 seconds or
- press push button I five times within 3s (5 times change switch state within 3 seconds) in the first 60 seconds after the module is connected to the powe

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

Description of switch function:

Switch toggles (parameter 1 set to 1) the state of the light bulb between the last dimming value and 0. If last dimming value is 0 then the light is turned 100% switch changes its state.

Bulb types which support dimming function:

- The classical incandescent bulbs.
- Halogen bulbs operated by 230 V AC (High Voltage Halogen).
- Low voltage halogen bulbs with electronic or conventional transformer.
- Dimmable compact fluorescent bulb (CFL). If the bulb at low intensities flushes, it is recommended to set parameter 60 (minimum dimming value) to 30
- Dimmable LED bulbs.

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
2	16	basic on/off
3	16	start level change/stop level change
4	16	multilevel set
5	16	multilevel sensor report (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 switch type

Size: 1 Byte, Default Value: 0

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

Parameter 5: Working mode

With this parameter is possible to change the module presentation on the user interface.

***NOTE**: After parameter change, first exclude module (without setting parameters to default value) then wait at least 30s and then re include the module!*
Size: 1 Byte, Default Value: 0

Setting	Description
0	Dimmer mode
1	Switch mode

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

Size: 2 Byte, Default Value: 255

Setting	Description
255	ALL ON active, ALL OFF active.
0	ALL ON is not active, ALL OFF is not active
1	ALL ON is not active, ALL OFF active
2	ALL ON active, ALL OFF is not active DIN Dimmer module responds to commands ALL ON / ALL OFF t sent by the main controller or by other controller belonging to the system.

Parameter 11: Automatic turning off output after set time

Size: 2 Byte, Default Value: 0

Setting	Description
0	Auto OFF disabled
1 - 32536	1 second - 32536 seconds Auto OFF enabled with define time, step is 1 second.

Parameter 12: Automatic turning on output after set time

Size: 2 Byte, Default Value: 0

Setting	Description
0	Auto ON disabled
1 - 32535	1 second - 32535 seconds Auto ON enabled with define time, step is 1 second

Parameter 21: Enable/Disable Double click function

If Double click function is enabled, a fast double click on the push button will set dimming power at maximum dimming value.
Size: 1 Byte, Default Value: 0

Setting	Description
0	double click disabled
1	double click enabled

Parameter 30: Saving the state of the device after a power failure

Size: 1 Byte, Default Value: 0

Setting	Description
0	DIN Dimmer module saves its state before power failure (it returns to the last position saved before a po failure).
1	DIN Dimmer module does not save the state after a power failure, it returns to off position.

Parameter 40: Power reporting in Watts on power change

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

NOTE: *if power changed is less than 1W, the report is not send (pushed), independent of percentage set.*
Size: 1 Byte, Default Value: 5

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%.

Parameter 42: Power reporting in Watts by time interval

Set value means time interval (0 – 32767) in seconds, when power report is send.
Size: 2 Byte, Default Value: 0

Setting	Description
0	reporting disabled
1 - 32767	1 second - 32767 seconds. Reporting enabled. Power report is send with time interval set by entered va Please note, that too fast reporting can cause too much Z-Wave traffic resulting in Z-Wave poor respons

Parameter 60: Minimum dimming value

NOTE: *The minimum level may not be higher than the maximum level! 1% min. dimming value is defined by Z-Wave multilevel device class*
Size: 1 Byte, Default Value: 1

Setting	Description
1 - 98	1% - 98%, step is 1%. Minimum dimming values is set by entered value.

Parameter 61: Maximum dimming value

NOTE*: The maximum level may not be lower than the minimum level! 99% max. dimming value is defined by Z-Wave multilevel device class.*
Size: 1 Byte, Default Value: 99

Setting	Description
2 - 99	2% - 99%, step is 1%. Maximum dimming values is set by entered value.

Parameter 65: Dimming time (soft on/off)

Set value means time of moving the DIN Dimmer between min. and max. dimming values by short press of push button I or controlled through UI (BasicSe
Size: 2 Byte, Default Value: 100

Setting	Description
50 - 255	500 mseconds - 2550 mseconds (2,55s), step is 10 mseconds

Parameter 66: Dimming time when key pressed

Time of moving the DIN Dimmer between min. and max dimming values by continues hold of push button I or associated device.
Size: 2 Byte, Default Value: 3

Setting	Description
1 - 255	1 second - 255 seconds

Parameter 67: Ignore start level

This parameter is used with association group 3. A receiving device SHOULD respect the start level if the Ignore Start Level bit is 0. A receiving device MU the start level if the Ignore Start Level bit is 1.

Size: 1 Byte, Default Value: 0

Setting	Description
0	respect start level
1	ignore start level

Parameter 68: Dimming duration

This parameter is used with association group 3. The Duration field MUST specify the time that the transition should take from the current value to the new value. A supporting device SHOULD respect the specified Duration value.

Size: 1 Byte, Default Value: 0

Setting	Description
0	dimming duration according to parameter 66
1 - 127	from 1 to 127 seconds

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 °C to 10.0 °C is added to actual measured temperature.
1001 - 1100	value from -0.1 °C to -10.0 °C is subtracted to actual measured temperature.

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°C - 12,7°C, step is 0,1°C

Technical Data

Dimensions	0.0600000x0.0940000x0.0180000 mm
Weight	51.55 gr
Hardware Platform	ZM5202
EAN	3830062070386
IP Class	IP IP 20
Voltage	230 V
Load	200 W
Device Type	DIN Dimmer
Generic Device Class	Multilevel Switch
Specific Device Class	Routing Multilevel Switch
Firmware Version	01.01
Z-Wave Version	04.05
Z-Wave Product Id	0x0159.0x0001.0x0052
Frequency	Europe - 868,4 Mhz
Maximum transmission power	5 mW

Supported Command Classes

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

Controlled Command Classes

- Basic
- Switch Multilevel

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.
