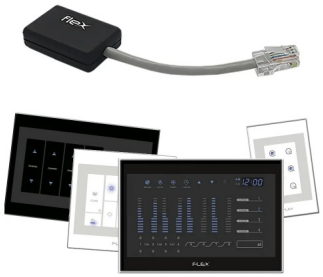

FLEX AUTOMATION FlexNET Dongle Z-FlexNET Dongle Manual

Contents

FLEX AUTOMATION

FlexNET Dongle

SKU: Z-FlexNET Dongle


Z-WAVE
PLUS
SECURE V2


flex


DIMMING
DIMMING
SCENE
ALL
alarm
secu
fade
clock
AM
PM
12:00
SCENE 1
SCENE 2
SCENE 3
SCENE 4
1 DIM 2 DIM 3 DIM 4
5 6 7 8
all
FLEX

Quickstart

This is a
secure
Light Dimmer
for
Brazil.

To run this device please connect it to your mains power supply.

To add this device to your network execute the following action:
1. Enter your Z-Wave Controller into Inclusion/Add Mode.2. Press the Lighting Panel “Scene1” button more than 3 times within 1 second.OR, to use NWI:1. Enter your Z-Wave Controller into Inclusion/Add Mode.2. Power on the FlexNET Dongle. It will be active during 4 seconds.

Please refer to the
Manufacturers Manual for more information.

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, importer, 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 this 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 sources.

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 section.

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

FlexNET Dongle is a device that converts FlexNET Protocol (RS-485) to Z-Wave Protocol. This Device controls a total of 16+ Flex Lighting Panels via Z-Wave. FlexNET Dongle is Universal (One fits All). Using this device, you

can control all functions of our Panels. It is a fully compatible with any Z-Wave enabled network. Z-Wave enabled devices displaying the Z-Wave logo can also be used with it regardless of the manufacturer. And ours can also be used in other manufacturer's Z-Wave enabled networks since FlexNET Dongle is used together with Flex Panels.This Device is designed to act as a repeater. Repeaters will re-transmit the RF signal to ensure the signal is received by its intended destination by routing the signal around obstacles and radio dead spots.

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 can do this by performing an Exclusion operation as described below in the manual. Every Z-Wave controller is able to perform this operation however it is recommended to use 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 inoperable.

To Reset to Factory Default send the following parameter:Parameter: 15Bytes: 01Value: 255Note: Please use this procedure only when the network primary controller is missing or otherwise inoperable.

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

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 with the 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 network. This controller is turned into exclusion respective inclusion mode. Inclusion and Exclusion is then performed doing a special manual action right on the device.

Inclusion

1. Enter your Z-Wave Controller into Inclusion/Add Mode.2. Press the Lighting Panel “Scene1” button more than 3 times within 1 second.OR, to use NWI:1. Enter your Z-Wave Controller into Inclusion/Add Mode.2. Power on the FlexNET Dongle. It will be active during 4 seconds.

Exclusion

1. Enter your Z-Wave Controller into Exclusion/Remove Mode.2. Press the Lighting Panel “Scene1” button more than 3 times within 1 second.

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 different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, …). In case the event happens all devices stored in the respective association group will receive the same wireless command wireless command, typically a ‘Basic Set’ Command.

Association Groups:

Group NumberMaximum NodesDescription

1	5	Z-Wave Plus LifelineThis is the Z-Wave Plus Lifeline group. It can hold up to five devices.
2	5	Scene 01Group responsible for the Scene Button 01 which can hold five Devices. Is possible to choose between Basic Set Command and Scene Activation. This command will be sent when pressed the u002 2Scene 01u0022 button.
3	5	Scene 02Group responsible for the Scene Button 02 which can hold five Devices. Is possible to choose between Basic Set Command and Scene Activation. This command will be sent when pressed the u002 2Scene 02u0022 button.
4	5	Scene 03Group responsible for the Scene Button 03 which can hold five Devices. Is possible to choose between Basic Set Command and Scene Activation. This command will be sent when pressed the u002 2Scene 03u0022 button.
5	5	Scene 04Group responsible for the Scene Button 04 which can hold five Devices. Is possible to choose between Basic Set Command and Scene Activation. This command will be sent when pressed the u002 2Scene 04u0022 button.

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 further 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 the desired value minus 256. For example: To set a parameter to 200â€ˆit may be needed to set a value of 200 minus 256 = minus 56. In case of a two byte value the same logic applies: Values greater than 32768 may needed to be given as negative values too.

Parameter 1: Set Buzzer

Turn On or Off the Flex Panel Buzzer
Size: 1 Byte, Default Value: 1

SettingDescription

0 – 1	00 – Turn Off Buzzer / 01 – Turn On Buzzer

Parameter 10: Dimmer Minimum Level Channel 02

Is possible to set up a minimum value for Dimmer Channels to fix a u0022Lighting Rangeu0022.Note: Never set the Minimum value to be higher than the Maximum Value. This command will be ignored.
Size: 1 Byte, Default Value: 29

SettingDescription

29 – 99	29 – Minimum Limit / 99 – Maximum Limit

Parameter 11: Dimmer Minimum Level Channel 03

Is possible to set up a minimum value for Dimmer Channels to fix a u0022Lighting Rangeu0022.Note: Never set the Minimum value to be higher than the Maximum Value. This command will be ignored.
Size: 1 Byte, Default Value: 29

SettingDescription

29 – 99	29 – Minimum Limit / 99 – Maximum Limit

Parameter 12: Dimmer Minimum Level Channel 04

Is possible to set up a minimum value for Dimmer Channels to fix a u0022Lighting Rangeu0022.Note: Never set the Minimum value to be higher than the Maximum Value. This command will be ignored.
Size: 1 Byte, Default Value: 29

SettingDescription

29 – 99	29 – Minimum Limit / 99 – Maximum Limit

Parameter 13: Dimmer Minimum Level Channel 05

Is possible to set up a minimum value for Dimmer Channels to fix a u0022Lighting Rangeu0022.Note: Never set the Minimum value to be higher than the Maximum Value. This command will be ignored.
Size: 1 Byte, Default Value: 29

SettingDescription

29 – 99	29 – Minimum Limit / 99 – Maximum Limit

Parameter 14: Dimmer Minimum Level Channel 06

Is possible to set up a minimum value for Dimmer Channels to fix a u0022Lighting Rangeu0022.Note: Never set the Minimum value to be higher than the Maximum Value. This command will be ignored.
Size: 1 Byte, Default Value: 29

SettingDescription

29 – 99	29 – Minimum Limit / 99 – Maximum Limit

Parameter 15: Reset to Factory Default

Reset the device to the factory default. It will delete all previous device configuration.
Size: 1 Byte, Default Value: 0

SettingDescription

0 – -1	-1 (0xFF) – Reset the Device

Parameter 2: Set Clock

Configure Panel Hour and Minute
Size: 2 Byte, Default Value: 0

SettingDescription

0 – 23	First Byte – Hour
0 – 59	Second Byte – Minute

Parameter 3: Eco Mode Channel 01

Save energy, increase bulb life and reduce your bill by limiting the maximum brightness of each channel.(Only use for Dimmer Channels)Note: To set the Eco Mode value, firstly you should turn off the respective channel.
Size: 1 Byte, Default Value: 100

SettingDescription

30 – 100	30 – Minimum Limit / 100 – Maximum Limit

Parameter 4: Eco Mode Channel 02

Save energy, increase bulb life and reduce your bill by limiting the maximum brightness of each channel.(Only use for Dimmer Channels)Note: To set the Eco Mode value, firstly you should turn off the respective channel.
Size: 1 Byte, Default Value: 100

SettingDescription

30 – 100	30 – Minimum Limit / 100 – Maximum Limit

Parameter 5: Eco Mode Channel 03

Save energy, increase bulb life and reduce your bill by limiting the maximum brightness of each channel.(Only use for Dimmer Channels)Note: To set the Eco Mode value, firstly you should turn off the respective channel.
Size: 1 Byte, Default Value: 100

SettingDescription

30 – 100	30 – Minimum Limit / 100 – Maximum Limit

Parameter 6: Eco Mode Channel 04

Save energy, increase bulb life and reduce your bill by limiting the maximum brightness of each channel.(Only use for Dimmer Channels)Note: To set the Eco Mode value, firstly you should turn off the respective channel.
Size: 1 Byte, Default Value: 100

SettingDescription

30 – 100	30 – Minimum Limit / 100 – Maximum Limit

Parameter 7: Eco Mode Channel 05

Save energy, increase bulb life and reduce your bill by limiting the maximum brightness of each channel.(Only use for Dimmer Channels)Note: To set the Eco Mode value, firstly you should turn off the respective channel.
Size: 1 Byte, Default Value: 100

SettingDescription

30 – 100	30 – Minimum Limit / 100 – Maximum Limit

Parameter 8: Eco Mode Channel 06

Save energy, increase bulb life and reduce your bill by limiting the maximum brightness of each channel.(Only use for Dimmer Channels)Note: To set the Eco Mode value, firstly you should turn off the respective channel.
Size: 1 Byte, Default Value: 100

SettingDescription

30 – 100	30 – Minimum Limit / 100 – Maximum Limit

Parameter 9: Dimmer Minimum Level Channel 01

Is possible to set up a minimum value for Dimmer Channels to fix a u0022Lighting Rangeu0022.Note: Never set the Minimum value to be higher than the Maximum Value. This command will be ignored.
Size: 1 Byte, Default Value: 29

SettingDescription

29 – 99	29 – Minimum Limit / 99 – Maximum Limit

Technical Data

Hardware Platform	ZM5202
Device Type	Light Dimmer Switch
Network Operation	Always On Slave
Firmware Version	HW: 1 FW: 1.01:01.00
Z-Wave Version	6.71.01
Certification ID	ZC10-18036054
Z-Wave Product Id	0x002C.0x0002.0x0007
Firmware Updatable	Updatable by Manufacturer Representative
Communications Connections	RS-485 (Serial)
Communications Protocol	Manufacturer’s Open/Documented Protocol
Z-Wave Scene Type	Scene
Security V2	S2_UNAUTHENTICATED
Frequency	XXfrequency
Maximum transmission power	XXantenna

Supported Command Classes

- Association Grp Info V3
- Association V2
- Basic
- Clock
- Configuration
- Firmware Update Md V4
- Manufacturer Specific V2
- Multi Channel Association V3
- Multi Channel V4
- Node Naming
- Powerlevel
- Scene Activation
- Scene Controller Conf
- Security
- Security 2
- Supervision
- Switch Binary
- Switch Multilevel
- Transport Service V2
- Version V2
- Zwaveplus Info V2

Controlled Command Classes

- Basic
- Multi Channel Association V3
- Scene Activation
- Security 2
- Supervision
- Switch Binary
- Switch Multilevel
- Transport Service V2

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.