



# Aeotec Nano Shutter User Manual

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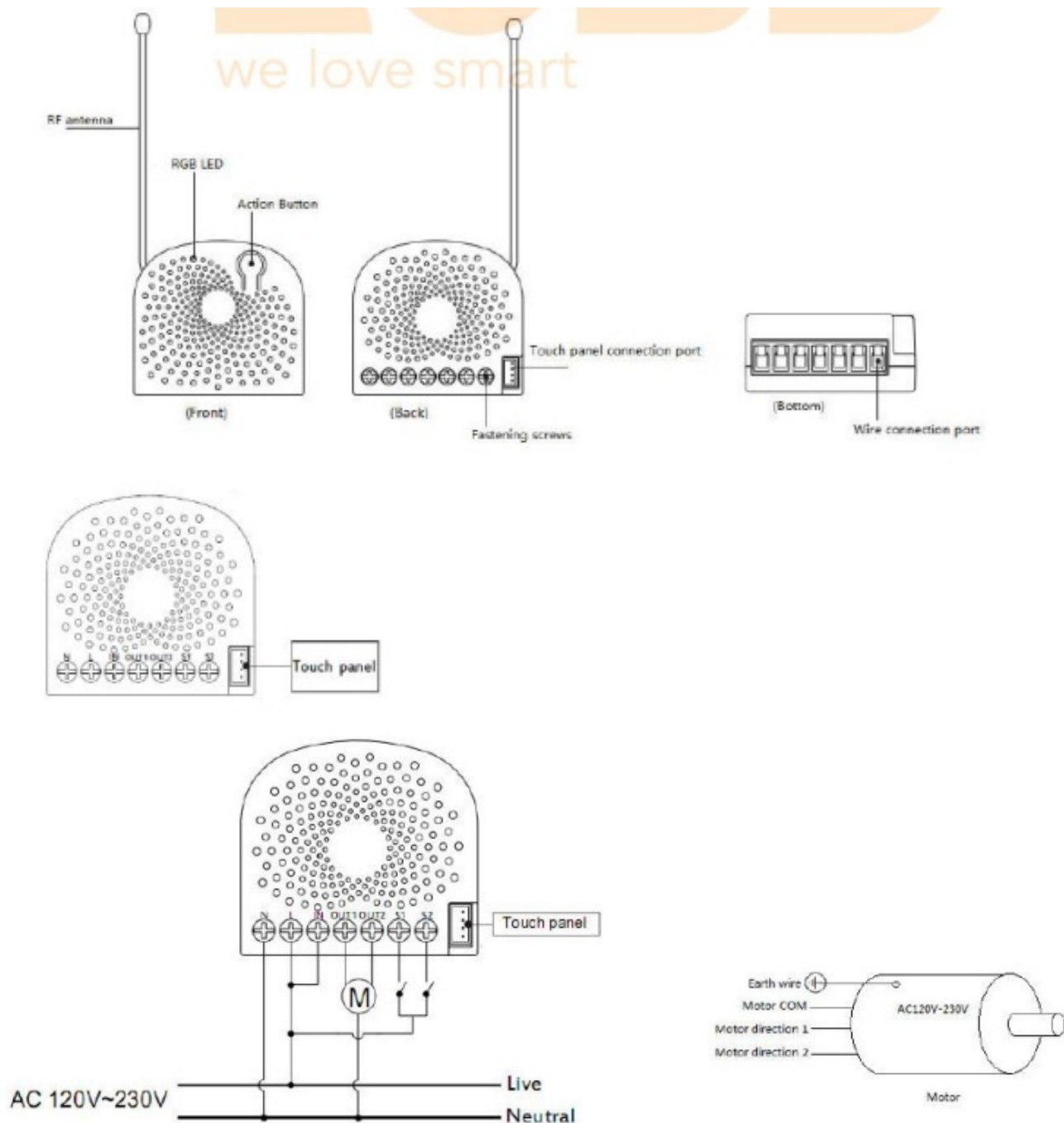
## Aeotec Nano Shutter



### **Aeotec Nano Shutter.**

- Aeotec Nano Shutter is a Z-Wave motor controller specifically used to enable Z-Wave command and control (up/down/stop) for existing window covering motors.
- It can connect to 2 external manual switches/buttons to control the motor up/down/stop independently. Its surface has a pin socket, which can be used for connecting to the touch panel, so you can also use the touch panel to control the Nano Shutter.
- The wireless module is powered from the mains supply. In the event of power failure, non-volatile memory retains all programmed information relating to the units operating status.
- Nano Shutter is also a security Z-Wave plus device and supports Over The Air (OTA) feature for the products firmware upgrade.
- It can be a repeater in the Z-Wave network. Acting as a bridge for communication, it will forward Z-Wave command messages to their destinations if the originating controller is out of range from the destination node.
- By taking advantage of the Z-Wave mesh network, commands can be routed to their destination via intermediary “listening” Z-Wave products. Products that are Z-Wave certified can be used and communicate with other Z-Wave certified devices.

### **Familiarise yourself with your Nano Shutter**



### Notes for the wire connection ports:

- N – Power input for neutral
- L – Power input for live
- IN – Input for load power supply
- OUT1 – Output for Motor direction 1
- OUT2 – Output for Motor direction 2
- S1 – External Switch/button 1 control for Motor S2 – External Switch/button 2 control for Motor

### Quick start

Aeotec Nano Shutter must be paired (included) into a Z-Wave network before it can receive Z-Wave commands to turn on/off. The Motor Controller can only communicate to devices in the same Z-Wave network. Let your Nano Shutter to be connected to the AC power supply. The following instructions tell you how to link your Nano Shutter to your Z-Wave network. If you are using other products as your main Z-Wave controller, such as a Z-Wave

gateway, please refer to the part of their respective manual that tells you how add new devices to your network.

1. Set your Z-Wave controller into pairing mode.
2. Press the Action Button on the Nano Dimmer or toggle the external manual switch once, the green LED (non-secure indication) will blink to indicate the Nano Dimmer is entering into pairing mode.
3. If the Nano Dimmer has been successfully added to your Z-Wave network, its RGB LED will be solid. If the pairing was unsuccessful, the red LED will be on for 2 seconds and then remain a colourful gradient, repeat the instructions above from step 1.

With your Nano Shutter now working as a part of your smart home, you'll be able to configure it from your home control software. Please refer to your software's user guide for precise instructions on configuring Nano Shutter to your needs.

## **Removing your Nano Shutter from a Z-Wave network.**

Your Nano Dimmer can be removed from your Z-Wave network at any time. You'll need to use your Z-Wave network's main controller. To set your Z-Wave controller/gateway into removal mode, please refer to the respective section within your controller instruction manual.

1. Set your Z-Wave controller into removal mode.
2. Press the Action Button 6 times on the Nano Dimmer or toggle the external manual switch 2 times in fast succession.
3. If the Nano Dimmer has been successfully removed from your Z-Wave network, its RGB LED will remain colourful gradient. If the removal was unsuccessful, the RGB LED will still be solid (following the state of the output load), repeat the instructions above from step 1.

## **Controlling the Nano Shutter.**

- Use any of the below methods to control the Nano Shutter.
- Pressing the button on the external (Wall) switch will be able to spin the motor up/down/stop.

Through the usage of Z-Wave commands built into Z-Wave certified controllers and gateways. (The specific Z-Wave commands supporting this function are the Basic Command Class and Multilevel Switch Command Class.) Please consult the operation manual for these controllers for specific instructions on controlling the Motor Controller. A short press on the button on the Motor Controller will spin the motor up/down/stop.

## **Change Mode on the External Switch/Button Control**

Nano Shutter by default is set to be controlled via 2-state (flip/flop) external wall switch. Pushing the button 6 times in quick succession on the Nano Shutter will swap between this default mode and the momentary push button external wall switch mode

## **Reset your Nano Shutter**

If at some stage, your primary controller is missing or inoperable, you may wish to reset all of your Nano Shutter's settings to their factory defaults. To do this, press and hold the Action Button for 20 seconds and then release it. Your Nano Shutter will now be reset to its original settings, and the green LED will be solid for 2 seconds and then remain the colourful gradient status as a confirmation.

## Technical Specifications

**Module Number:** ZW141.

**Operating Temperature:** 0 to 40 .

**Operating Distance:** Up to 100feet/30 metres indoors and 427feet/130 metres outdoors. AC input:

Version	Input	Working band
AU	230V 50Hz, Max: 2.5A	921.42MHz
BR	220V 60Hz, Max: 2.5A	921.42MHz
CN	220V 50Hz, Max: 2.5A	868.42 MHz
EU	230V 50Hz, Max: 2.5A	868.42 MHz
IN	230V 50Hz, Max: 2.5A	865.22 M Hz
UK	230V 50Hz, Max: 2.5A	868.42 MHz
US	120V 60Hz, Max: 2.5A	908.42 MHz

## Association information

Nano Shutter supports 2 association groups and Max 5 nodes for every group.

Association Group	Nodes	Send Mode	Send commands
Group 1	[1,5]	Single Cast	When the state of Nano Shutter (turn on/off the load ) is changed:  1. Set Configuration parameter 80 to 0: Send nothing (default).  2. Set Configuration parameter 80 to 1: Send the Basic Report.
Group 2	[1,5]	Single Cast	Forward the Basic Set, Binary set, Scene Activation Set to associated nodes in Group 2 when the Nano Shutter receives the Basic Set, Binary set, Scene Activation Set commands from main controller.  (E.g. Send/forward Basic Set to control the other nodes in association Group 2)

## Configuration parameters information

Parameter Number Hex / Decimal	Description	Default Value	Size
0x23 (35)	Set the moving time from up (left) to down (right) for curtain.	30	1
0x50 (80)	<p>To set which report would be sent to the associated nodes in a ssociation group 1 when the state of output load is changed.</p> <p>0 = Nothing 1 = Basic Report CC</p> <p><i>Note:</i> When just only one channel load state is changed, the report message Basic Report CC would be Multi Channel encapsulated.</p>	0	1

0x55 (85)	<p>Set the operation mode of external switch. 0 = Operation Mode 1.</p> <p>1 = Operation Mode 2.</p> <p>For detailed instructions for Operation Mode 1 and 2, see end of this table.</p>	0	1
0x78 (120)	<p>Set the external switch mode of S1 0 = Unidentified mode.</p> <p>1 = Reserved.</p> <p>2 = 3 way switch mode 3 = Push button mode</p> <p>4 = Enter automatic identification mode (The blue Led will fast blink).</p> <p><i>Note:</i> When the switch mode of S1 is determined or identified or configured, this mode value will not be reset after exclusion.</p>	0	1
0x79 (121)	<p>Set the external switch mode of S2 0 = Unidentified mode.</p> <p>1 = Reserved</p> <p>2 = 3 way switch mode 3 = push button mode</p> <p>4 = enter automatic identification mode (The green Led will fast blink).</p> <p><i>Note:</i> When the switch mode of S2 is determined or identified or configured, this mode value will not be reset after exclusion.</p>	0	1
0xFC (252)	<p>Enable/disable the configuration parameters to be locked.</p> <p>0 = disable.</p> <p>1 = enable.</p>	0	1
0xFF (255)	<p>1, Value = 0x55555555 Default = 1 Size = 4</p> <p>Reset to factory default settings and removed from the Z-Wave network</p>	N/A	4
	<p>2, Value = 0 Default = 1 Size = 1</p> <p>Reset all configuration parameters to factory default settings</p>	N/A	1

#### Operation Mode 1:


	Extern button 1			Extern button 2		
Current state	Stop	Moving to 100%	Moving to 0%	Stop	Moving to 0%	Moving to 100%

Press the button once	Moving to 100%	Stop	NC	Moving to 0%	Stop	NC
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## Operation Mode 2:

Extern button 1 / Extern button 2									
Current state	At 0%		Moving 0%	to	Moving 100%	to	At 100%		Stop
Press the button once	Moving 100%	to	Stop		Stop		Moving 0%	to	Toggle

## Documents / Resources

	<a href="#">Aeotec Nano Shutter</a> [pdf] User Manual Nano Shutter, Shutter
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