MASA SMART DIMMER

SZWRBF196

INTRODUCTION

This user guide is designed for the alfanar MASA DIMMER range of dimmer switches, which utilize Z-Wave® communication. The range includes 1G models with push-button operation. These dimmers can connect to the alfanar Smart platform for remote monitoring and control.

A MASA smart dimmer is a wireless switch that uses Z-Wave communication topology to connect and control lighting devices in smart home or building automation systems.

This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

PRODUCT FEATURES

MASA smart dimmers are designed primarily for lighting control applications and can be used with a variety of light sources, including conventional incandescent & LED lamps. Operation can be performed via a physical push (toggle) button or remotely through alfanar Smart Home (mobile application) connected to an alfanar Z-Wave enabled gateway (or alfanar listed gateway).

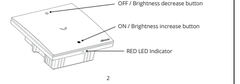
The dimmer uses Z-Wave 800-series communication technology, operating on a mesh network with AES-128 encryption, ensuring a secure connection with an indoor range of up to 30 meters.

This product includes built-in features such as short circuit protection, input overvoltage protection, thermal protection and surge protection. Additionally, it is equipped with SmartStart and Zero crossing detection for enhanced performance.

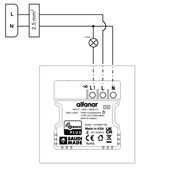
TECHNICAL SPECIFICATIONS

Power supply	AC 240V~, 50/60 Hz
Standby power consumption	< 1 W
Product Category	Smart Dimmer - Lighting Application
Radio Protocol	Z-Wave® (800 Series)
Certifications	CE, Z-Wave Plus & RoHS
Dimming Type	Trailing Edge Soft Start
Z-Wave frequency	868.4 MHz
Z-Wave Network Type	Mesh
Encryption method	AES128
Network security	S0, S2 Unauthenticated, S2 Authenticated
Range	Up-to 30m Indoor
Inbuilt Protection	Short Circuit / Input Overvoltage / Thermal/ Surge
Rated LOAD (@240V)	150W - Incandescent 110W - LED (MAX 10 lamps)
Dimension(L*W*H)	86 × 87 × 35 mm
Operating Condition	Temp: -20°C to 60°C, Humid: 20% ~ 85%

DEVICE LAYOUT



WIRING DIAGRAM



INSTALLATION

IMPORTANT: **Refer to safety Instruction before commencing work.**

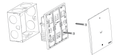
1. Turn Off the mains electricity supply.
2. Select an appropriate flush-mounting wall box for the module (minimum depth of 35 mm required).
   NOTE When using a box with four mounting lugs, you may need to flatten the top and bottom lugs.
3. Ensure the product is mounted on a flat, even surface in the vertical orientation.

4. The recommended conductor size is 2.5 mm². Strip back the outer cable sheath and trim the inner cables to the appropriate length so the cable ends can reach the terminals. Carefully strip the inner cable insulation to expose 8 mm of wire.
5. Make the connection as per the wiring diagram provided.

1-Neutral Terminal. 2-Live Terminal. 3-Load.

6. Dismantle rocker clip-on from the product by using screwdriver to mount. (shown in image below).

7. Screw the product in the Mounting box as shown in below picture. Screw size: M3.5 x 30mm



8. For module inclusion refer, device configuration.
9. Check the working operation of the dimmer module.

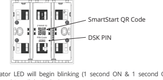
DEVICE CONFIGURATION

1. Z-Wave Inclusion (Adding dimmer module to the network)

1.1 Manual Inclusion

To add the device to the Z-Wave network manually:

a. Place the device within the direct range of your Z-Wave gateway.
b. Power ON the device.
c. Set the main gateway to (Security/Non-Security Mode) and enable the Add/Inclusion mode (refer to the gateway's manual for instructions).
d. Press push button for 3 consecutive clicks.
e. If adding Security S2 Authenticated mode, enter the DSK PIN or scan the SmartStart QR code (located on the as shown below image).



f. The indicator LED will begin blinking (1 second ON & 1 second OFF simultaneously) until the inclusion process is complete.

g. The Z-Wave gateway will confirm successful inclusion. (Check update in the gateway APP).

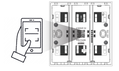
1.2 SmartStart

SmartStart-enabled products can be included in a Z-Wave network by scanning the SmartStart QR code on the product with a gateway that supports SmartStart inclusion.

Products with SmartStart will be automatically added to the network within 10 minutes of being powered ON and within range of the network.

To add the device to the Z-Wave network using SmartStart:

a. The gateway must support Security S2 (refer to the gateway's manual).
b. Enter the full DSK string code into your gateway. If your gateway supports QR scanning, scan the SmartStart QR code on the dimmer module.
c. Ensure power supply for the dimmer module.
d. Wait for the inclusion process to begin (this may take a few minutes). The dimmer module will automatically connect to the gateway.
e. The Z-Wave gateway will confirm successful inclusion. (Check update in the gateway APP).



Note:
In case of any issue to include the device with Z-Wave network, factory reset the dimmer module and include again in the network.

2. Z-Wave Exclusion (Removing dimmer module from the network)

To remove the device from the Z-Wave network:

a. Set the main Z-Wave Gateway into exclusion/remove mode (see the gateway's manual).
b. Press push button for 3 consecutive clicks.
c. The indicator LED will begin blinking (1 second ON & 1 second OFF simultaneously) until the exclusion process to complete.
d. The Z-Wave gateway will confirm successful exclusion.

Also, Factory Reset will remove devices from the Z-Wave Network.

3. Factory Reset

To do a factory reset, press any button for 10 consecutive clicks.
The indicator LED will blink **three** times to show the successful Reset.

Once the Reset, the dimmer module will exclude from the Z-Wave network & all configuration & parameters to set to default value.

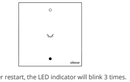
Note:
In the event of an issue with inclusion, reset the dimmer to its factory settings. Please use this procedure only when the network's primary controller is missing or otherwise inoperable.

4. Dimmer Operations

4.1 Dimmer Control

The dimmer can be locally controlled using the toggle (rocker) switch.
Dimmer **ON**: Press and release Bottom rocker will turn ON the dimmer.
Dimmer **OFF**: Press and release Top rocker will turn OFF the dimmer.
Increase Brightness Long press (> 3 sec) Bottom rocker.
Decrease Brightness Long press (> 3 sec) Top rocker.

Any local action performed on the dimmer will be communicated to the gateway via the Z-Wave network.



- During the power restart, the LED indicator will blink 3 times.
- The dimmer brightness level will be retained as it was when turned off.
- The indicator LED will light up only when the dimmer is in the ON state.

4.2 Notification

Value	Type	EVENT	EVENT/STATE
0x0	NOTIFICATION _EVENT_POWER _MANAGEMENT	NOTIFICATION_EVENT_POWER _MANAGEMENT_NO_EVENT	State
0x7		NOTIFICATION_EVENT_POWER _MANAGEMENT_OVERVOLTAGE _DETECTION	State
0x0	NOTIFICATION _TYPE_HEAT _ALARM	NOTIFICATION_EVENT_HEAT _ALARM_NO_EVENT	State
0x2		NOTIFICATION_EVENT_HEAT _ALARM_OVERHEAT_DETECTED	State
0x5	NOTIFICATION _TYPE_SYSTEM	NOTIFICATION_EVENT_SYSTEM _HEARTBEAT	Event

4.3 Association Information

ID	Name	Node Count	Profile	Function
1	Lifeline	5	General:Lifeline	Device Reset Locally Notification Indicator Report SWITCH_MULTILEVEL_REPORT

4.4 Command Classes

Command Class	Version	Required Security Class
Device Reset Locally Command Class	1	Highest granted Security Class
Firmware Update Meta Data Command Class V5	5	Highest granted Security Class
Multi Channel Association Command Class V3	3	Highest granted Security Class
Security 0 Command Class	1	None
Security 2 Command Class	2	None
Z-Wave Plus Info Command Class V2	2	None
Version Command Class V3	3	Highest granted Security Class
Manufacturer Specific Command Class V2	2	Highest granted Security Class
Indicator Command Class V3	3	Highest granted Security Class
Basic Command Class V2	2	Highest granted Security Class
Multi Channel Command Class V4	4	Highest granted Security Class
Transport Service Command Class	2	None
Supervision Command Class	1	None
Association Command Class V2	2	Highest granted Security Class
Association Group Information (AGI) Command Class V3	3	Highest granted Security Class
Configuration Command Class V4	4	Highest granted Security Class
Multilevel Switch Command Class	4	Highest granted Security Class

4.5 Configuration Information

Parameter Number	Function	Byte	Default	Options
1	Over-Temp Protection Threshold	4	100	Over-Temp Protection Threshold in °C 0: Disable 1..120: Over-Temp Protection Threshold
2	Over-Voltage Protection Threshold	4	270	Over-Voltage Protection Threshold in volt 0: Disable 1..270: Over-Voltage Protection Threshold
3	Minimum Brightness Level	4	15	Minimum Brightness Level,1~95 (Default: 15)
4	Maximum Brightness Level	4	95	Maximum Brightness Level,10~95 (Default: 95)
5	Restore state after power failure	1	0	0: Disable 1: Enable
6	Indicator LED Enable /Disable	1	1	0: Disable 1: Enable
7	LED Indicator Mode	1	0	0: Switch state (Turn On LED when Load is On, Turn Off LED when Load is Off) 1: 1-Locator Mode (Turn On LED when the load is Off, Turn Off LED when the load is On)
8	Factory Reset dimmer	1	0	Write 0x55(85) to restore factory setting
9	Disable Local Control	1	0	0: Local Control Active 1: Local control Disable
10	Disable Remote control	1	0	0: Remote Control Active 1: Remote control Disable
11	Enable/Disable the double click	1	0	0:double click disabled 1:double click enabled

12	Dimming time (soft on/off)	1	1	Choose the time during which the device will move between the min. and max. dimming values by a short press of the push-button I 1 or through the U I controls (BasicSet): 1~127 = 1 second ~127 seconds
13	Dimming time when key pressed	1	3	Choose the time during which the Dimmer will move between the min. and max. dimming values during a continuous press of the push-button I 1 or by an associated device. 1~127 = 1 second ~127 seconds
14	Turn Load Off Automatically with Timer	4	0	If Load is ON, you can schedule it to turn OFF automatically after a period of time defined in this parameter. The timer is reset to zero each time the device receives an ON command, either remotely (from the gateway (hub) or associated device) or locally from the switch. 1 ~ 32535 = 1 ~ 32535 seconds Auto OFF enabled 0 Auto OFF disable
15	Turn Load On Automatically with Timer	4	0	If Load is OFF, you can schedule it to turn ON automatically after a period of time defined in this parameter. The timer is reset to zero each time the device receives an OFF command, either remotely (from the gateway (hub) or associated device) or locally from the switch. 1 ~ 32535 = 1 ~ 32535 seconds Auto ON enabled 0 Auto On disbale

4.6 Indicator Command Class

The indicator (red color) will flashes according the indicator set command received fromn HUB.

Indicator ID	Property ID
0x50 (NODE IDENTIFY)	0x03 (ON OFF PERIOD)
0x50 (NODE IDENTIFY)	0x04 (ON OFF CYCLES)
0x50 (NODE IDENTIFY)	0x05 (ONE TIME ON OFF PERIOD)

4.7 BASIC Command Class

Basic Command Class is set to endpoint channel map to the Multilevel Switch command class

SAFETY INSTRUCTIONS

WARNINGS (Electrical Shock Hazard) **Read the instructions before installing the unit.**

1. To reduce the risk of electrocution, always turn OFF the mains electricity supply before starting any installation work on this product.
2. This product is intended for indoor use only. Do not expose it to moisture, water or other liquids. Avoid direct sunlight and heat exposure.
3. To ensure safe installation, a qualified electrician must install this product in accordance with the following instructions and be familiar with wiring regulations (e.g., BS 7671):
   - If the mounting box includes an earth terminal, it must be connected to the circuit's protective (earth) wire. All bare earth wires must be covered with insulating tape.
   - It is essential that all connections are made as instructed, the cable is not under stress, and the terminal screws are fully tightened.

⚠ **CAUTION (Improper Use Can Cause Product Failure)**

4. The use of non-standard cables and connectors may lead to device malfunctions. Always use original, high-quality cables and connectors to prevent issues.
5. Failure to follow the recommendations in this manual may result in safety hazards or legal violations. The manufacturer, importer, distributor, and seller are not responsible for any loss or damage caused by non-compliance with the instructions in this manual or any other provided materials.

   Use this equipment only for its intended purpose. Follow proper disposal guidelines and do not dispose of electronic equipment in fire or near open heat sources.

MAINTENANCE AND DISPOSAL

The product may be cleaned with a dry soft lint free cloth. Do not use water or any abrasive, solvent based or aerosol cleaners as this may damage, discolor or affect the finish and safety of the product. At the end of their useful life the packaging, product should be disposed of via a suitable recycling center. Do not dispose of with your normal household waste. Do not burn.

The symbol indicates that the product should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.

WARRANTY

The company undertakes to replace or repair, at its discretion, this product should it become defective within a period of 2 years after delivery, solely because of faulty materials and /or workmanship. Understandably, if the product has not been installed or maintained in accordance with the company's instructions, it has not been used appropriately, or if any attempt has been made to rectify, dismantle or alter the product in any way, the warranty will be invalidated.

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