

PRODUCT SPECIFICATION

Product Name	Wireless DALI Bridge Box
Model Name	BSZ-DALI01E
Version	B
Revised Date	2023/07/15

1 Description

A wireless DALI controller is a device that has a built-in wireless signal transmitter and receiver unit, as well as a digital addressable lighting interface (DALI). It is capable of receiving commands from a gateway or other wireless controllers, and can control lighting devices with DALI interface to achieve functions such as turning on, turning off, and dimming lights. It can also receive wireless ZIGBEE scenes and output LEVEL to control DALI devices.

This device can communicate with a gateway, dimming panels, gateway apps, and other smart terminal devices, enabling local and remote control.

2 Features

- DALI Bus interface
- Built-in DALI power supply (250mA max)
- Two inputs for a momentary push button or Rocker Switch /motion sensor
- color temperature (tunable white) adjustment with Support for DT8(Device Type 8)
- Wireless connectivity
- ZIGBEE protocol compliance (ZHA / ZIGBEE 3.0)
- Support for TOUCH LINK connection control
- Over-the-air (OTA) upgrade support

3 Application

- Lighting dimming control with DALI interface
- Lighting control for various settings
- Office and creating a comfortable working environment
- Classroom
- Hotel
- Home

4 Product Data

All specifications are typical and at 25 °C Ambient unless otherwise specified.

Electrical data

Specification item	Value	Unit	Conditions
Operation voltage range	100...240	Vac	Performance range
Rated input voltage	220	Vac	
Rated input frequency range	50...60	Hz	
Rated input power	<1.5	W	@ rated input voltage
Power factor	>0.98		@ rated output power @ rated input voltage
ESD	4KV@ conductive		
Mains surge capability (L – N)	1000	V	

RF data

Specification item	Value	Unit	Conditions
RF Frequency	2.4 ... 2.4835	GHz	
Modulation	QPSK		
Transmit Power	0...10 Typical value : 8.5	dBm	Conditions: 2.0-3.6V, +25°C
Receiving Sensitivity	-92 ... -96 Typical value : -94	dBm	Nominal for 1% PER
Protocol	ZIGBEE 3.0		
RF distance	30	m	

Interface

Specification item	Value	Unit	Conditions
DALI Bus Power Supply votage	14...20 Typical value : 16	Vdc	
DALI Bus Max Output current	250	mA	
DALI version	1.0/ 2.0		Note: Only support broadcast instruction eg Level\ temperature \on/off

EMC & SAFETY

Specification item	Value
Safety	EN61347-2-13、EN61347-1
EMC	EN/IEC55011、EN/IEC55014
ESD	IEC61000-4-2

Operational temperatures and humidity

Specification item	Value	Unit	Conditions
Ambient temperature	-20...+50	°C	
Relative humidity	10...90	%	
Tcase-life	65	°C	Measured at T case -point
Tc-max	65	°C	

Storage temperature and humidity

Specification item	Value	Unit	Conditions
Ambient temperature	-25...+85	°C	
Relative humidity	5...95	%	

Lifetime

Specification item	Value	Unit	Conditions
lifetime	30000	Hours	Measured temperature at T case -point is T case -life. Maximum failures = 10%

Certificates and standards

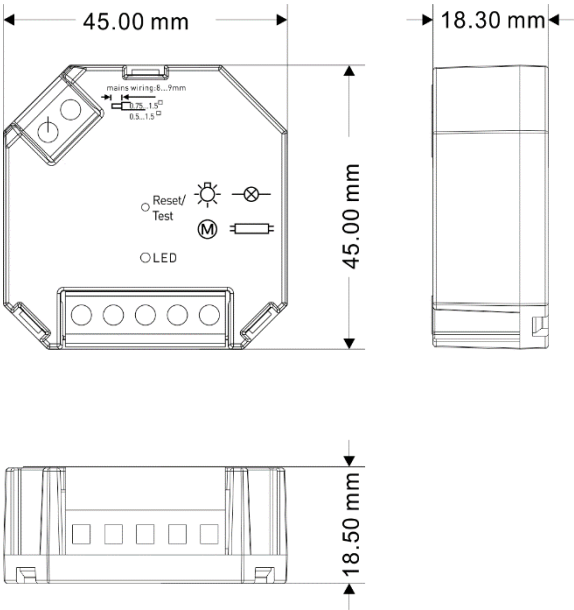
Specification item	Value
Approval marks	CCC /CE
RoHS	Compliant
REACH	Compliant
ZIGBEE	ZIGBEE 3.0
Audible noise	<20dB
Ingress Protection classification	20
class of safety protection	II

Wiring & Connections

Specification item	Value	Unit	Conditions
Wire Type	0.5...2.5	mm2	Tolerance: +/- 0.1mm2
Wire Strip Length	6...7	mm	

Dimensions and weight

Specification item	Value	Unit	Conditions
Dimensions L x W x H	86*86*41.8	mm	Tolerance: +/- 0.1mm
Color/ Material	Dark Grey/White/PC		
Weight	131	gram	



5 Wiring & Connections

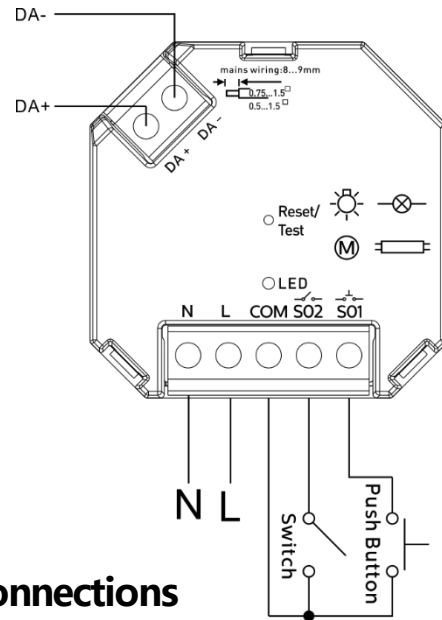
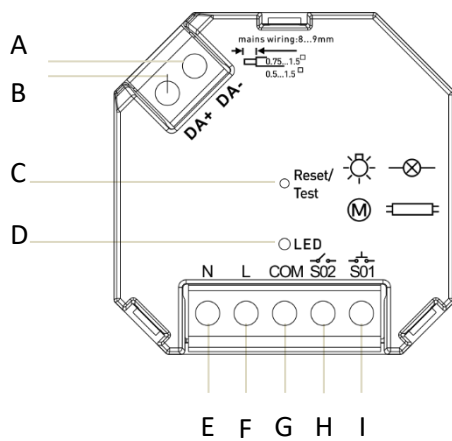
Here is a detailed explanation of the power and connection steps for the device:

1. Start by disconnecting the power supply line to ensure safe operation.
2. Connect the device's neutral wire (N) and live wire (L) to the power supply line, following the installation requirements and electrical regulations.
3. Connect the device's input terminals, L and N, to the corresponding L and N wires of the power supply to ensure proper power supply to the device.
4. Connect the device's DA+ and DA- to the dimming interface DA+ and DA- of the LED dimming driver power supply to enable DALI interface control.
5. Optionally, incorporate manual switch control devices, such as toggle switches or momentary push-button switches, into the input power line, allowing users to manually control the lighting.

Please note that before performing any electrical connections, make sure you have the relevant electrical knowledge and follow the electrical installation regulations in your local area. If you are unsure about the steps or encounter difficulties, it is recommended to consult a professional electrician or seek technical support to ensure safe and correct installation.

Pin Definition

Specification item	Definition	Remark
A: DA-	DALI negative polarity output	Connect the device's DA- to the dimming interface DA- of the LED driver
B: DA+	DALI positive polarity output	Connect the device's DA+ to the dimming interface DA+ of the LED driver
C: Reset keypad	Reset button	
D: LED indicator	LED	
E: N	Neutral input terminal	
F: L	Live input terminal	
G: COM	Keypad input common terminal	
H: S02	Input for Rocker switch key	
I: S01	Input for momentary push button	



Example connections

6 Program

Restore the device to its factory settings

After the device is restored to its factory default state, groupings, brightness settings, modes, and other information will be cleared, and the device will not be controlled.

6.1.1 Button Reset

Press and hold the side reset button for 5-10 seconds. The LED indicator will flash, and the connected lighting fixtures will flash several times, indicating that the device has been restored to its factory default state.

6.1.2 Power Switch on/off to reset

Power Switch off First, ensure that the device is properly connected to the LED lighting fixture driver.

Follow these steps:

1. Connect the device to the power supply (you can do this by setting the device's AC power switch to the on position) and keep it powered on for at least 5 seconds.
2. Turn off the device power.
3. Wait for at least 3 seconds.
4. Turn on the device power.
5. Wait for no more than 4 seconds. Repeat steps "1, 2, 3, 4" a total of 7 times. At this point, the lighting fixture will flash several times, indicating that the device has been restored to its factory default state.

Paring

To restore the device to its factory settings first, open the network of the gateway or app and allow it to accept new devices. The device will automatically join the network and the lighting fixture will flash several times to indicate that it has successfully joined the network. The app interface will then display the new device. For detailed instructions, please refer to the APP operation manual.

7 Others

- Do not install in fully enclosed metal bodies.
- Keep a distance of 60mm or more from metal bodies.

8 Revision History

Version	Date	Comments
A	2023/07/15	First release