65W DALI DT8 NFC Enabled LED Driver(Constant Current)

DALI2 · TÜV · 25 · CE · UK CA · ⚠ · CCC · Ⓢ · EL · SELV · (warranty 5 years) · RoHS COMPLIANT · SR-Data 251/252/253

Important: Read All Instructions Prior to Installation

SVM <0.01   PstLM <0.02

Function introduction

LED Output

+ WW/ + OUT LED
+ CW-

NFC

DALI Dimmable Driver

DALI signal input
AC Push input

DA DA DALI INPUT

AC/DC power input

L N INPUT
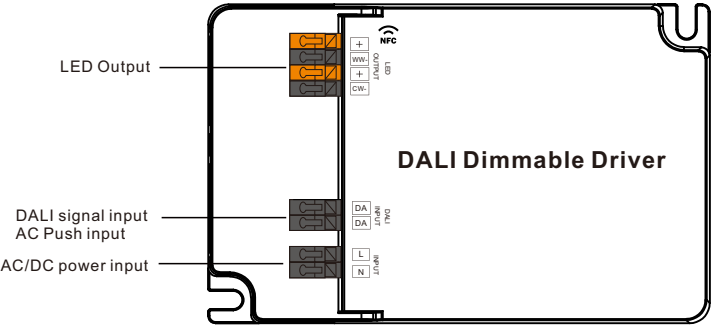
Product Data

Output	LED Channel	2
	DC Voltage	6-54V, Max. 60V
	Current	500-1500mA via NFC tool; Min.current gear lower to 0.1mA, default 1050mA
	Current Accuracy	±3%(±1%@Certain full load) @ full load
	Rated Power	Max. 65W
Input	Voltage Range	220-240VAC/220-240VDC
	Absolute Voltage Range	196-264VAC/196-264VDC
	Frequency Range	0/50/60Hz
	Power Factor (Typ.)	> 0.97 @ 230VAC Full load*
	Total Harmonic Distortion	THD ≤ 10% (@ full load / 230VAC)*
	Efficiency (Typ.)	> 88% @ 230VAC full load*
	AC Current (Typ.)	0.4A Max.
	Inrush Current (Typ.)	Max. 9.68A at 230VAC; 70µs duration
	Leakage Current	< 5mA /230VAC
	Standby Power Consumption	< 0.5W
	Anti Surge	L-N:2KV
Control	Dimming Interface	DALI Device Type 8 (DALI consumption < 2mA)/ AC Push
	Dimming Range	0.01%-100%@ Max current
	Dimming Method	Amplitude/CCR dimming
	Dimming Curve	Linear/ Logarithmic optional

Protection	Short Circuit	Yes, remove the fault conditions and re-power the device.
	Over Current	Yes, remove the fault conditions and re-power the device.
	Over Temperature	Yes, remove the fault conditions and re-power the device.
Environment	Working Temp.	-25℃ ~ +45℃
	Max. Case Temp.	Tc=85℃
	Working Humidity	10% ~ 95% RH non-condensing
	Storage Temp. & Humidity	-40℃ ~ +80℃, 10% ~ 95% RH
Safety & EMC	Safety Standards	EN61347-1, EN61347-2-13, GB/T 19510.1-2023, GB/T 19510.213-2023
	Withstand Voltage	I/P-O/P: 3.75KVAC
	Isolation Resistance	I/P-O/P: 100M Ohms / 500VDC / 25℃ / 70% RH
	EMC Emission	EN55015, EN61000-3-2, EN61000-3-3, GB 17625.1-2022, GB/T 17743-2021
	EMC Immunity	EN61547, EN61000-4-2,3,4,5,6,8,11
Others	MTBF	191350H, MIL-HDBK-217F @ 230VAC full load and 25℃ ambient temperature
	Dimension	123.9x78.8x30mm (L*W*H)
	Warranty	5 Years

*: PF/THD/Eff shall be different per different testing setup and equipment.

- In compliance with IEC 62386-101:2014, IEC 62386-102:2014, IEC 62386-207 Ed2, IEC 62386-209:2011
- Built-in DALI-2 interface, DALI DT8 device
- Dimmable LED driver. Max. output power 65W
- 500-1500mA current selectable via NFC program tool. Min.current gear lower to 0.1mA
- DALI Address/Group/Scene setting via NFC program tool.
- Class Ⅱ power supply, full isolated plastic case
- High power factor and efficiency
- ON/OFF, Dimming and Tunable White control
- Amplitude/CCR dimming, smooth and deep dimming
- Compatible with universal DALI masters that support DT6 commands
- Error report function
- DALI-251/252/253 Enabled,DALI data inside
- IP20 rating, suitable for indoor LED lighting applications
- 5 years warranty

Safety & Warnings

- DO NOT install with power applied to the device.
- DO NOT expose the device to moisture.

Operation

With DALI master

1. DALI Address
1 DALI address for 2 channels output are assigned by DALI Master controller automatically, please refer to user manuals of compatible DALI Masters for specific operations.
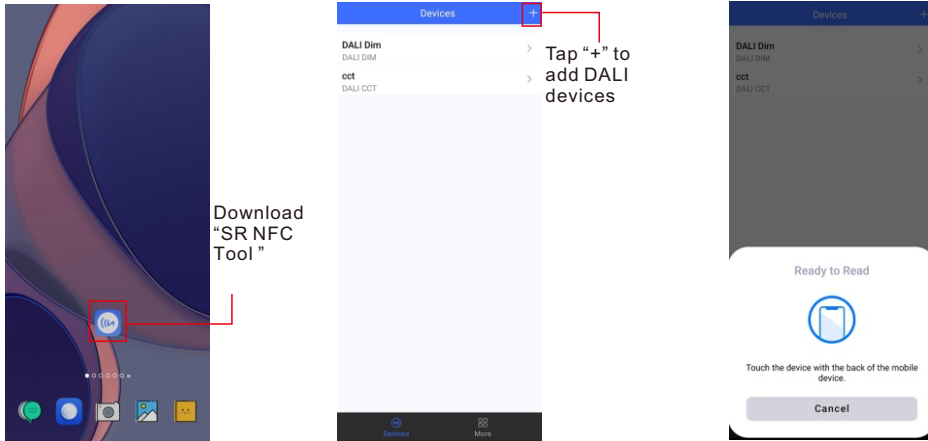
With NFC Programming devices

Note

1) Do wiring according to the wiring diagram and power on the DALI system .

2) Recommend setting parameters without power-on the DALI devices .

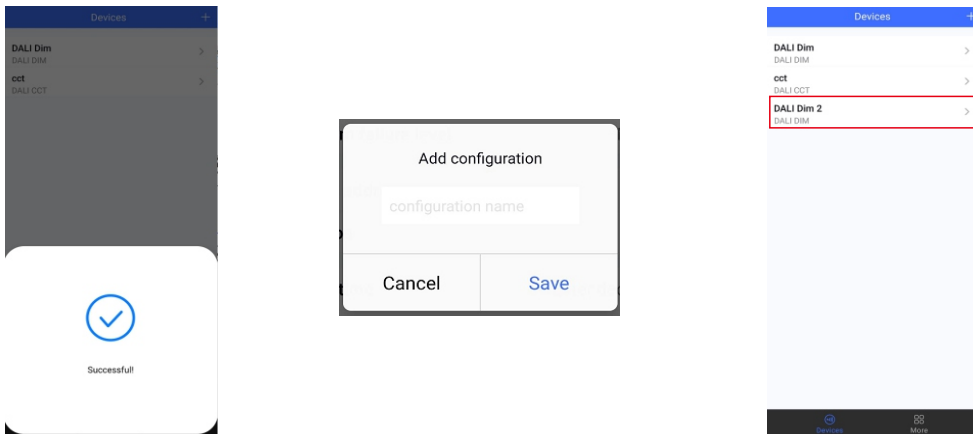**2) Please make sure your mobile phone has NFC function and enable it .**

Working with "SR NFC Tool" APP

Step 1: Download the APP (searching "SR NFC Tool" from App Store and Google Play) .
       Then open the APP .

Download "SR NFC Tool "

Tap "+" to add DALI devices

Ready to Read

Touch the device with the back of the mobile device.

Cancel

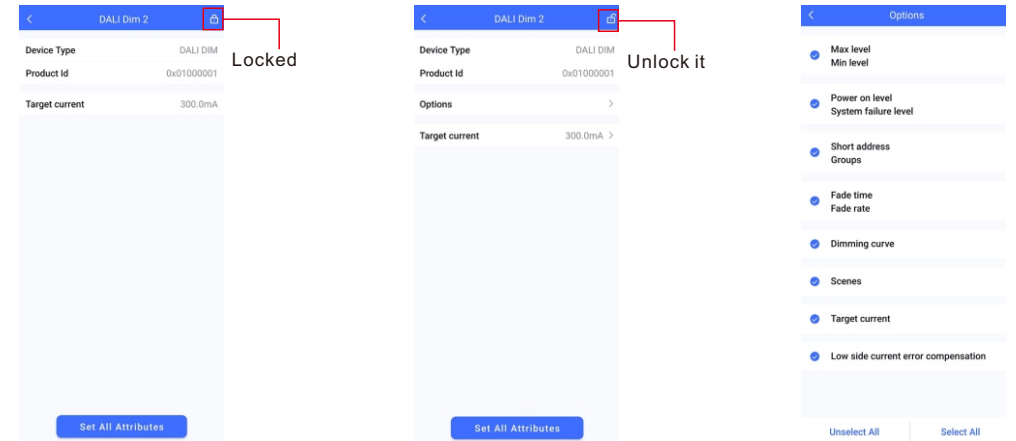**Note**: 1. Please Make sure that you have enabled NFC function with your mobile phone/ tablet .
    2. Please Make sure that the "NFC position" is matched.
    3. Please do not power on the device before setting.
    4. If you can't download "SR NFC Tool". Please contact with us.
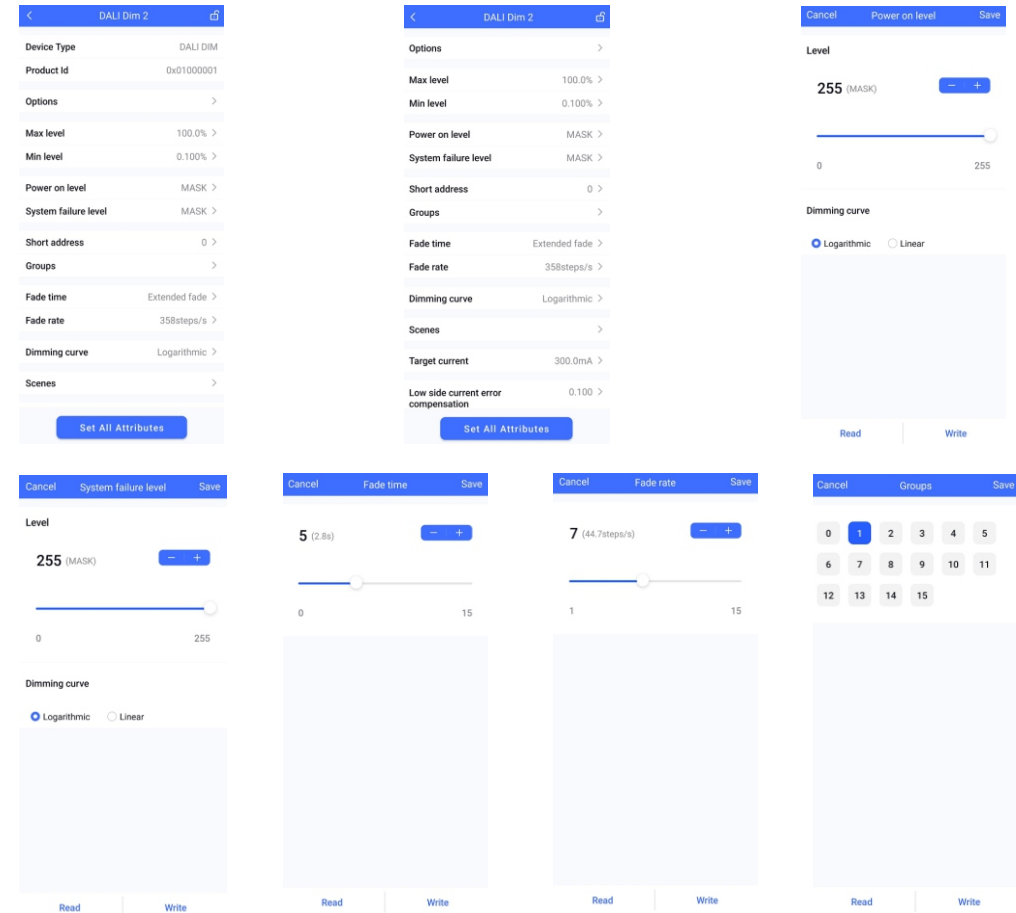
Step 2: Add device, and name it as you wish.

Successful!

Add configuration

configuration name

Cancel   Save

Step 3: Unlock device, enter parameters configuring page.

Locked   Unlock it

DALI Dim 2	
Device Type	DALI DIM
Product Id	0x01000001
Target current	300.0mA

DALI Dim 2	
Device Type	DALI DIM
Product Id	0x01000001
Options	>
Target current	300.0mA >

Options
- Max level / Min level
- Power on level / System failure level
- Short address / Groups
- Fade time / Fade rate
- Dimming curve
- Scenes
- Target current
- Low side current error compensation

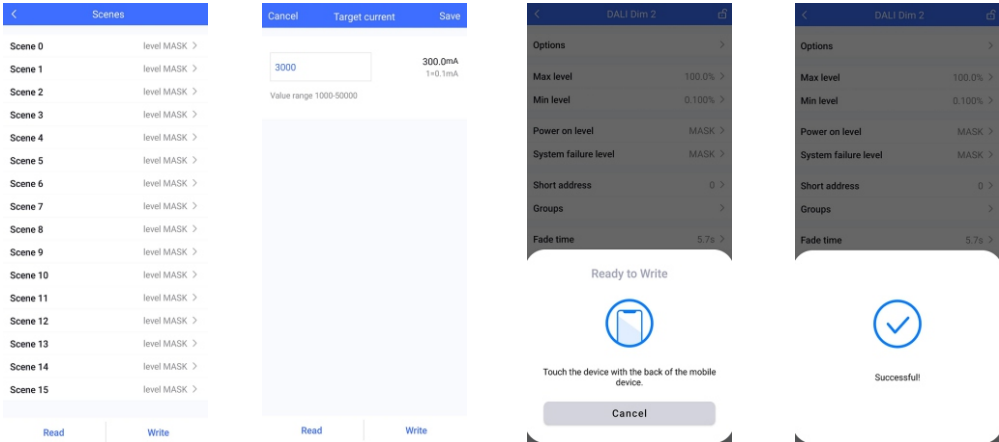Unselect All   Select All

Set All Attributes

Note: 1. You have to unlock the device then do some settings
         2. Only when the corresponding function is selected, the function interface will be displayed.

Step 4: Few parameter interface, you can choose the setting based on your requirements.

DALI Dim 2	
Device Type	DALI DIM
Product Id	0x01000001
Options	>
Max level	100.0% >
Min level	0.100% >
Power on level	MASK >
System failure level	MASK >
Short address	0 >
Groups	>
Fade time	Extended fade >
Fade rate	358steps/s >
Dimming curve	Logarithmic >
Scenes	>

Set All Attributes

DALI Dim 2	
Options	>
Max level	100.0% >
Min level	0.100% >
Power on level	MASK >
System failure level	MASK >
Short address	0 >
Groups	>
Fade time	Extended fade >
Fade rate	358steps/s >
Dimming curve	Logarithmic >
Scenes	>
Target current	300.0mA >
Low side current error compensation	0.100 >

Set All Attributes

Cancel   Power on level   Save

Level

255 (MASK)   — +

0   255

Dimming curve

○ Logarithmic   ○ Linear

Read   Write

Cancel   System failure level   Save

Level

255 (MASK)   — +

0   255

Dimming curve

○ Logarithmic   ○ Linear

Read   Write

Cancel   Fade time   Save

5 (2.8s)   — +

0   15

Read   Write

Cancel   Fade rate   Save

7 (44.7steps/s)   — +

1   15

Read   Write

Cancel   Groups   Save

0	1	2	3	4	5
6	7	8	9	10	11
12	13	14	15		

Read   Write

Step 5: After setting, please save the selected configuration via NFC and power on the device.

Scenes	
Scene 0	level MASK >
Scene 1	level MASK >
Scene 2	level MASK >
Scene 3	level MASK >
Scene 4	level MASK >
Scene 5	level MASK >
Scene 6	level MASK >
Scene 7	level MASK >
Scene 8	level MASK >
Scene 9	level MASK >
Scene 10	level MASK >
Scene 11	level MASK >
Scene 12	level MASK >
Scene 13	level MASK >
Scene 14	level MASK >
Scene 15	level MASK >

Read   Write

Cancel   Target current   Save

3000   300.0mA
                 1=0.1mA
Value range 1000-50000

Read   Write

DALI Dim 2
Options >
Max level   100.0% >
Min level   0.100% >
Power on level   MASK >
System failure level   MASK >
Short address   0 >
Groups >
Fade time   5.7s >

Ready to Write

Touch the device with the back of the mobile device.

Cancel

DALI Dim 2
Options >
Max level   100.0% >
Min level   0.100% >
Power on level   MASK >
System failure level   MASK >
Short address   0 >
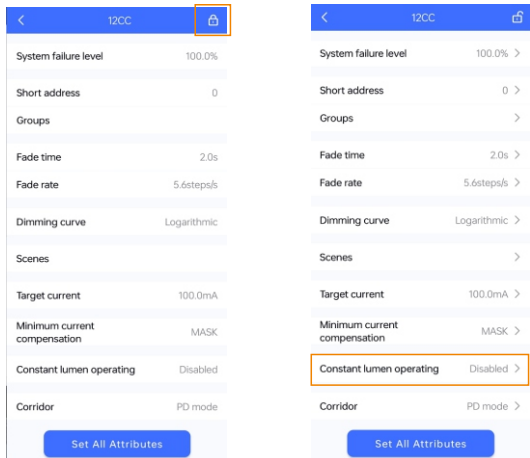Groups >
Fade time   5.7s >

Successful!

Tips

1. NFC function doesn't require any power driver.

2. Many functions can be configured by NFC. Kindly check your desired functions.

3. All of our DALI drivers are in the best performance within our DALI master/ DALI IoT gateway.

4.This is a 2-channel output product, so we recommend ensuring that both loads are connected and have the same loads for each channel at the same time during testing.

4.1If you have to connect 1 channel to test, please follow the following moves (**before powering on**).

4.1.1If you are connected to "+/WW" (signal channel), please make sure to set **"power on CCT"** of NFC Driver to 2700k (DALI default value),and write to the device.

4.1.2If you are connected to "+/CW" (signal channel), please make sure to set **"power on CCT"** of NFC Driver to 6500k (DALI default value),and write to the device.

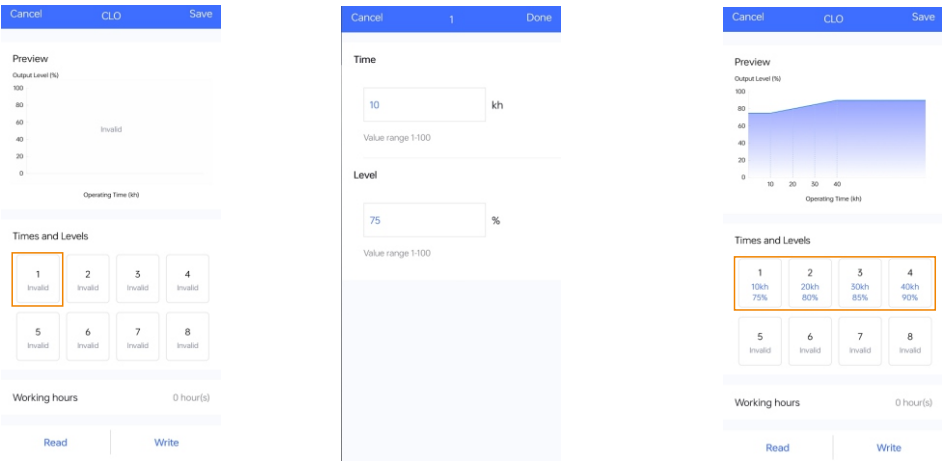## CLO AND CORRIDOR DIM(CD) FUNCTION INSTRUCTION

1.Open APP, and Find the CLO/CD functions

12CC	
System failure level	100.0%
Short address	0
Groups	
Fade time	2.0s
Fade rate	5.6steps/s
Dimming curve	Logarithmic
Scenes	
Target current	100.0mA
Minimum current compensation	MASK
Constant lumen operating	Disabled
Corridor	PD mode

Set All Attributes

Read From the NFC Driver

12CC	
System failure level	100.0% >
Short address	0 >
Groups	>
Fade time	2.0s >
Fade rate	5.6steps/s >
Dimming curve	Logarithmic >
Scenes	>
Target current	100.0mA >
Minimum current compensation	MASK >
Constant lumen operating	Disabled >
Corridor	PD mode >

Set All Attributes

Unlock it,and Click here to enter CLO settings

Cancel   CLO   Save

Constant lumen enable ⬜

Working hours   0 hour(s)

Enable or Disable CLO function

2.Enter CLO Setting homepage

Cancel   CLO   Save

Preview
Output Level (%)
100
80
60
40
20
0
        Invalid

Operating Time (kh)

Times and Levels
| 1 Invalid | 2 Invalid | 3 Invalid | 4 Invalid |
| 5 Invalid | 6 Invalid | 7 Invalid | 8 Invalid |

Working hours   0 hour(s)

Read   Write

Enable CLO function

Cancel   1   Done

Time
10   kh
Value range 1-100

Level
75   %
Value range 1-100

Click "1",and set its time and level

Cancel   CLO   Save

Preview
Output Level (%)
100
80
60
40
20
0
   10 20 30 40
        Operating Time (kh)

Times and Levels
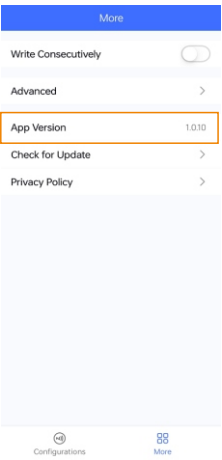| 1 10kh 75% | 2 20kh 80% | 3 30kh 85% | 4 40kh 90% |
| 5 Invalid | 6 Invalid | 7 Invalid | 8 Invalid |

Working hours   0 hour(s)

Read   Write

Set your desired time and levels.
Graphic display

Tips:

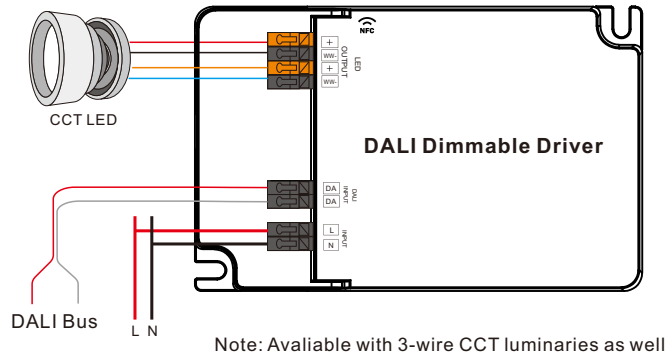**Working hours : Ability to calculate the working hours of a single driver.**

Additional Remarks

More
Write Consecutively ⬜
Advanced >
App Version   1.0.10
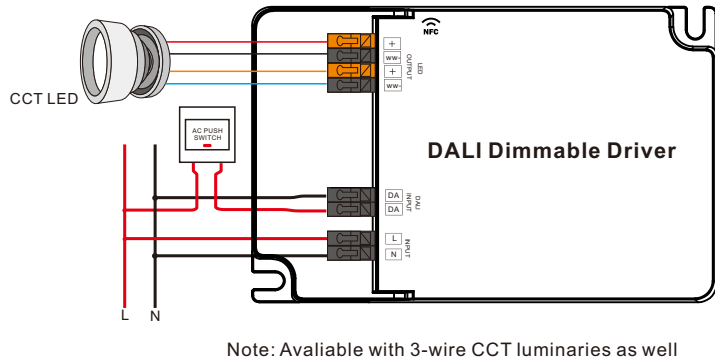Check for Update >
Privacy Policy >

Configurations   More

1. Please make sure your APP version is 1.0.10 or higher.

2. Please make sure NFC driver's firmware is available with CLO functions.
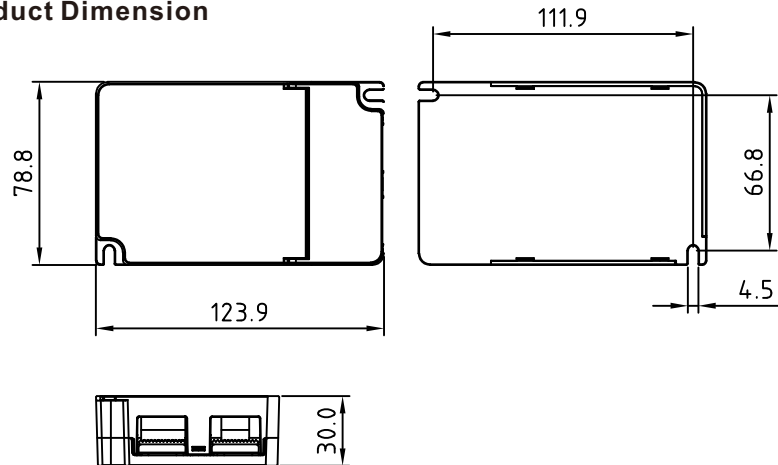
Wiring Diagram

1. With DALI bus

CCT LED

DALI Bus

L N

Note: Avaliable with 3-wire CCT luminaries as well

2. With PUSH dimmer

CCT LED

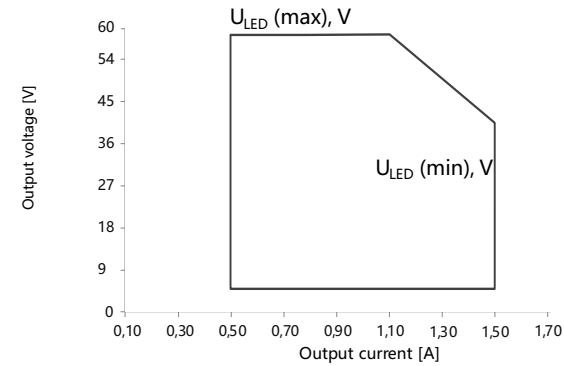L N

Note: Avaliable with 3-wire CCT luminaries as well

AC Push Function

1) Click the button to switch ON/OFF

2) Press and hold down the button to increase or decrease light intensity to desired level and release it, then repeat the operation to adjust light intensity to opposite direction. The dimming range is from 1% to 100%.
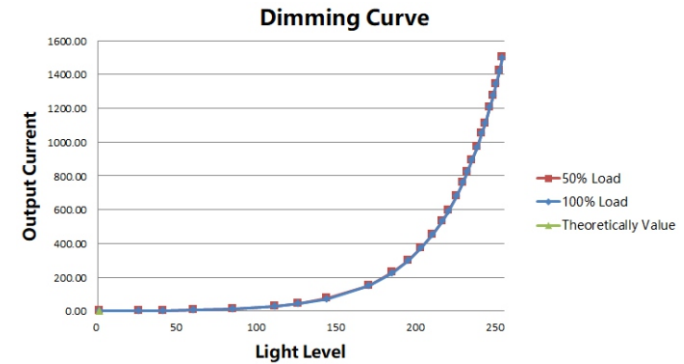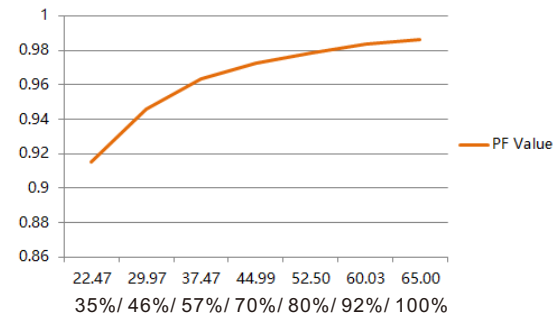
Product Dimension

78.8

123.9

111.9

66.8

4.5

30.0

Operating window

U_{LED} (max), V

U_{LED} (min), V

Output voltage [V]

Output current [A]

Dimming Curve

Dimming Curve

Output Current

Light Level

- 50% Load
- 100% Load
- Theoretically Value

Note: Test data under 1500mA gear

Driver Performance

Typical Power Factor

PF Value

22.47   29.97   37.47   44.99   52.50   60.03   65.00

35%/ 46%/ 57%/ 70%/ 80%/ 92%/ 100%

Note: Test data under 1500mA gear

Driver Performance

Typical Efficiency

	22.47	29.97	37.47	44.99	52.50	60.03	65.00
	35%/	46%/	57%/	70%/	80%/	92%/	100%

Efficiency axis: 80.00% – 92.00%

— Efficiency

Note: Test data under 1500mA gear

Driver Performance

THD VS Load

4.16/ 5.55/ 6.93/ 8.32/ 11.08/ 12.47/ 16.62/ 20.76/ 27.66/ 34.58/ 41.46/ 48.34/ 55.24/ 63.48

6%/ 9%/ 11%/ 13%/ 17%/ 19%/ 26%/ 32%/ 43%/ 53%/ 64%/ 74%/ 85%/ 98%

— THD VS Load

Note: Test data under 1500mA gear
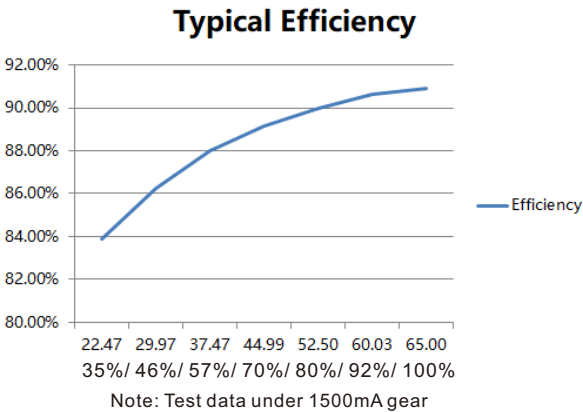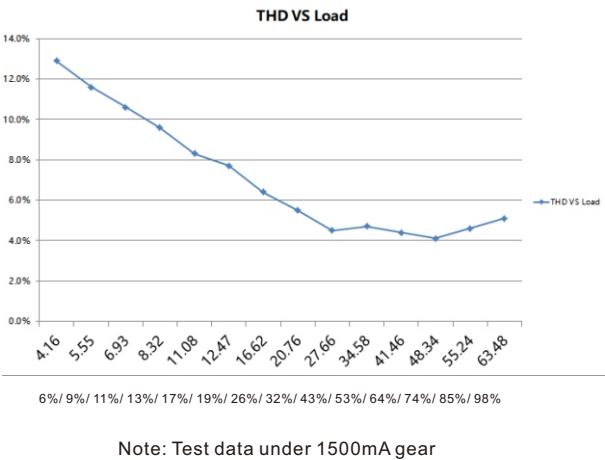
Expected Lifetime

Module Number	Output current	Ta	30 °C	40 °C	45 °C	•••	
SRP-2305N-65CC500-1500	500 – 1500 mA	Tc	50 °C	60 °C	68 °C	•••	85 °C
SRP-2309N-65CCT500-1500	500 – 1500 mA	Lifetime	> 100,000 h	> 100,000 h	> 100,000 h		> 40,000 h

The LED driver is designed for a lifetime stated above under reference conditions .

The relation of tc to ta temperature depends also on the luminaire design.

MCB Load Quantity

Module Number	Ipeak	Twidth	Max.quantity of LED Driver per MCB														
			B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
SRP-2305N-65CC500-1500	9.68A	70μs	15	20	24	30	38	20	26	32	40	50	22	29	36	45	57
SRP-2309N-65CCT500-1500	9.68A	70μs	15	20	24	30	38	20	26	32	40	50	22	29	36	45	57

$I\ (A)$

I_{peak}

½ Ipeak

Δt — T (ms)
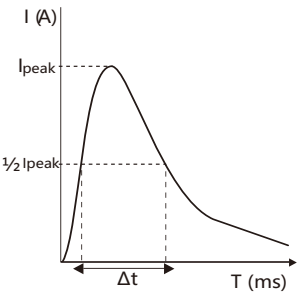
Note:

1. Those MCB parameters are based on ABB S200 series circuit breakers.

2. For different brands and models of miniature circuit breakers, the quantity of drivers will have difference.

3. Please do not exceed the above-mentioned quantity during on-site installation, and the specific load quantity shall be subject to on-site installation.

4. When the installation environment temperature of MCBs exceeds 30°C or when multiple MCBs are installed side by side, the number of mounted drives will be reduced, which requires recalculation.

5. Type C MCB's are strongly recommended to use with LED lighting

Update log

Date	Version	Update content	Update by
2023-6-19	V1.4	Update CLO function	Romeo

Note： Subject to change without notice. Please contact us if you have any questions.