

2305N-50CC650-1300 6 Dimmable Driver

## SUNRICHER

50W Constant Current Linear LED Driver with DALI-2 NFC

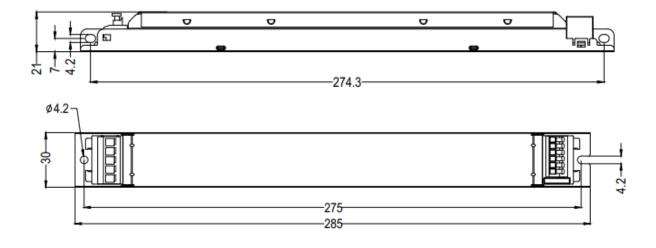


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# Specification

		SRPL-2305N-50CC650-1300
	DC Voltage Range	10 ~ 54V
	Rated current	650-1300mA via NFC setting; Min.current gear lower to 0.1mA. Default 1300mA
Output	Current Accuracy	±3%( ±1%@Certain full load) @ full load
	Rated power	50W
	Voltage Range	220-240VAC
	Frequency range	50/60Hz
	Power Factor (Typ.)	> 0.97@230VAC (Full load)
	Total Harmonic Distortion	THD ≤ 6% (@ full load / 230VAC)
Input	Efficiency (Typ.)	>88% @ 230VAC full load
1.1	AC Current (Max)	0.3A @ 230VAC
	Inrush Current (Typ.)	Max.26.6A at 230VAC; 144µs duration
	Leakage current	< 5mA/230VAC
	Standby Power Consumption	<0.5W
	Anti Surge	L-N: 2KV
	Dimming Interface	DALI Device Type 6 (DALI consumption < 2mA)/ AC Push
	Dimming Range	0.01%-100%@ Max current
Control	Dimming Method	Amplitude/CCR dimming
	Dimming Curve	Linear/ Logarithmic optional
	Short Circuit	Yes, recovers automatically after fault condition is removed
Protection	Over Current	Yes, recovers automatically after fault condition is removed
	Over Temperature	Yes, recovers automatically after temperature drop
	Working TEMP.	-25°C~+60°C
Environment	Max. Case Temp	TC=90°C
LIMIOIIIIent	Working humidity	10%-95% RH (non-condensing)
	Storage TEMP humidity	40°C ~ +80°C, 10% ~ 95% RH
	Safety standards	EN61347-1, EN61347-2-13
	Withstand voltage	I/P-O/P: 3.75KVAC
Safety & EMC	Isolation resistance	I/P-O/P: 100MΩ/500VDC/25°C/70% RH
	EMC emissions	EN55015, EN61000-3-2, EN61000-3-3
	EMC Immunity	EN61547, EN61000-4-2,3,4,5,6,8,11
	Size	285*30*21 mm (L*W*H)
Others	Weight	0.25kgs
	Warranty	5 Years
Notes	<ol> <li>DO NOT select dimming input with</li> <li>DO NOT install with power applied</li> <li>DO NOT expose the device to mois</li> </ol>	to device.

# Mechanical Specification

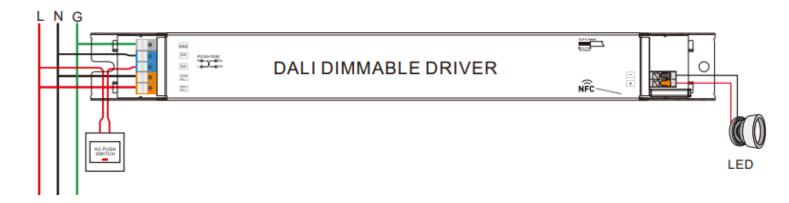


### Wiring Diagrams & Dimming





# Push Dimming



# Operation

### With DALI Master:

1. DALI Address

- 1 DALI address for 1 channel output are assigned by DALI Master controller automatically, please refer to user manuals of compatible DALI Masters for specific operations

### With NFC Programming Devices:

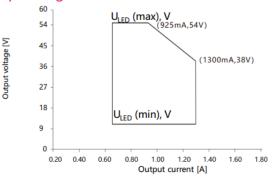
Note:

- 1. Do wiring according to the wiring diagram and power on the DALI system
- 2. Recommend setting parameters without power-on the DALI devices
- 3. Please make sure your mobile phone has NFC function and enable it

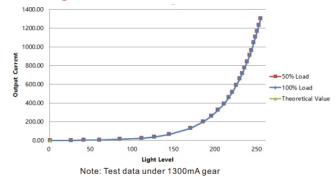
LED

### Wiring Diagrams & Dimming

### **Operating Window**



#### **Dimming Curve**

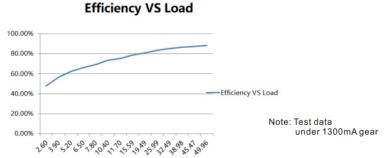


PF VS Load

26 39 52 65 18 10 1, 10 15 10 15 28 32 B 30 51 49

5% / 8% / 10% /13% /16%/ 21% /23% /31%/ 39%/ 52%/ 65%/ 78% /91%/ 100%

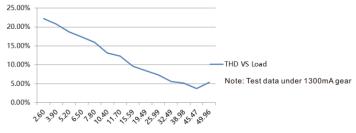
#### **Driver Performance**



5% / 8% / 10% /13% /16%/ 21% /23% /31%/ 39%/ 52%/ 65%/ 78% /91%/ 100%

#### **Driver Performance**

THD VS Load



5% / 8% / 10% /13% /16%/ 21% /23% /31%/ 39%/ 52%/ 65%/ 78% /91%/ 100%

#### Expected Lifetime

Module Number	Output current	Та	30 °C	40 °C	45 °C	•••	60 °C
SRPL-2305N-50CC650-1300	650 – 1300 mA	Тс	48 °C	58 °C	64 °C	•••	90 °C(max)
SRPL-2309N-50CCT650-1300	650 – 1300 mA	Lifetime	> 100,000 h	> 100,000 h	> 80,000 h	n	> 25,000 h

Note: Test data under 1300mA gear

PF VS LOAD

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 Quality

**Driver Performance** 

1.2

0.8

0.4

0.2

	Module Number	Ipeak	Twidth				Max	.qua	ntity	of L	ED D	rive	per	мсв					I (A)
L				B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25	Ipeak
s	RPL-2305N-50CC650-1300	26.6A	144µs	17	22	27	34	42	23	30	37	47	58	27	35	43	53	67	1/2 Ipeak
s	RPL-2309N-50CCT650-1300	26.6A	144µs	17	22	27	34	42	23	30	37	47	58	27	35	43	53	67	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.

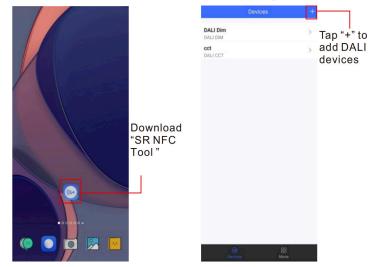
4. When the installation environment temperature of MCBs exceeds 30°C or when multiple MCBs are installed side by side, the number of mounted drives

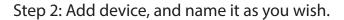
will be reduced, which requires recalculation.

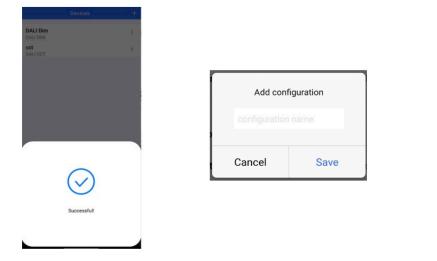
5. Type C MCB's are strongly recommended to use with LED lighting

# **Operation - Working with 'SR NFC Tool' App**

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







Step 3: Unlock device, enter parameters configuring page.

<	DALI Dim 2	۵		<	DALI Dim 2	6		<	Options
Device Type		DALI DIM	Locked	Device Type		DALI DIM	Unlock it	•	Max level Min level
Product Id	0	x01000001	Loonou	Product Id		0x01000001	UNIOCKIL		Minievel
Target current		300.0mA		Options		>		0	Power on level System failure level
				Target current		300.0mA >		0	Short address Groups
								•	Fade time Fade rate
								0	Dimming curve
								•	Scenes
								0	Target current
								•	Low side current error compensation
Se	t All Attributes			Se	t All Attribute	s			Unselect All Select All

ADM Systems Pty Ltd E sales@admtech.com.au 1300 236 467

Note:

Ready to Read

uch the device with the back of the mobil

Cancel

DALI Dim

DALI Dim 2

- Please make sure that you have enabled NFC function with your mobile phone/ tablet.
- Please make sure that the "NFC position" is matched.
- Please do not power on the device before setting.
- Please If you can't download "SR NFC Tool".
   Please contact with us
- 5. Please refer to QR code below





Notes:

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

# Operation

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

<	DALI Dim 2	< DALI Dim 2	2 6	Cancel	Power on level	Save	Cancel Syst	em failure level	Save	Cancel Fade	ate Save	Cance	6	Gro	oups	Sa	ave
Device Type	DALI DIM	Options	>	Level			Level			-	_		-				
Product Id	0x01000001	Max level	100.0% >	255 (MA	SK)	- +	255 (MASK)	-	+	7 (44.7steps/s)	- +	0	1	2	3 .	4 5	
Options	>	Min level	0.100% >				200 (mnon)					6	7	8	9 1	0 11	
Max level	100.0% >	Power on level	MASK >						-0	1	15	12	13	14	15		
Min level	0.100% >	System failure level	MASK >	0		255	0		255								
Power on level	mask >	Short address	0 >														
System failure le	wel MASK >	Groups	>	Dimming curv	ve.		Dimming curve										
Short address	0 >	Fade time	Extended fade >	<ul> <li>Logarithm</li> </ul>	ic C Linear		<ul> <li>Logarithmic</li> </ul>	O Linear									
Groups	>	Fade rate	358steps/s >														
Fade time	Extended fade >	Dimming curve	Logarithmic >														
Fade rate	358steps/s >	Scenes	>														
Dimming curve	Logarithmic >	Target current	300.0mA >														
Scenes	>	Low side current error compensation	0.100 >														
Set	All Attributes	Set All Attribu	utes	Read		Write	Read	Writ	ite	Read	Write		Read			Write	

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

	Scenes	Cancel	Target current	Save	< DALI	Dim 2 🗗	<
e 0	level MASK >				Options	×	Options
e 1	level MASK >	3000		300.0mA 1=0.1mA	Max level	100.0% >	Max level
e 2	level MASK >	Value range	1000-50000		Min level	0.100% >	Min level
e 3	level MASK >						
	level MASK >				Power on level	MASK >	Power on level
5	level MASK >				System failure level	MASK >	System failure
6	level MASK >				Short address	0 >	Short address
7	level MASK >				Groups	>	Groups
	level MASK >				Fade time	5.7s >	Fade time
	level MASK >						
	level MASK >				Ready t	to Write	
	level MASK >				6		
2	level MASK >				(		
3	level MASK >						
14	level MASK >				Touch the device with dev		
15	level MASK >				dev	ive.	
					Car	ncel	
Read	Write	Rea	ad	Write			

### Notes:

- 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/ gateway

# CLO and Corridor DIM(CD) Function Instruction

Step 1: Open APP, and Find the CLO/CD functions

System f Short ad Groups

Fade tim

larget c

		ස්	< 12CC	8	
		100.0% >	System failure level	100.0%	ailure level
		0 >	Short address	0	dress
CLO	Cancel	>	Groups		
CLO	Cancer	2.0s >	Fade time	2.0s	e
		5.6steps/s >	Fade rate	5.6steps/s	
nen enable	Constant lume	Logarithmic >	Dimming curve	Logarithmic	curve
		>	Scenes		
irs 0 ho	Working hour	100.0mA >	Target current	100.0mA	arrent
or Disable CLO function	Enable o	MASK >	Minimum current compensation	MASK	n current sation
		Disabled >	Constant lumen operating	Disabled	lumen operating
		PD mode >	Corridor	PD mode	
		utor	Sat All Attribut		Cot All Attributor

Read From the NFC Driver

Unlock it, and Click here to enter CLO settings

### Step 2: Enter CLO Setting homepage

review			
aput Level (%)			
0			
0			
0			
0	Invi	slid	
0			
0			
	Operating	Time (kh)	
imes and I	Levels		
1 Invalid	2 Invalid	3 Invalid	4 Invalid
1 Invalid	2 Invalid	Invalid	Invalid
1	2		
1 Invalid	2 Invaild 6 Invaild	Invaild	Invalid



Enable CLO function

Click "1", and set its time and level

System failure level

Short address Groups

Fade time

Fade rate

Scenes

Dimming curve

Target current

Minimum current

Constant lumen operating

compensation

Corridor

Cancel	C	-0	S
Preview			
Output Level (%)			
100			
80			
60			
40			
20			
0 10	20 50	40	
Times and	Levels		
Times and 1 10kh 75%	2 20kh 80%	<b>3</b> 30kh 85%	4 40kt 90%
1 10kh	2 20kh	30kh	40kt
1 10kh 75%	2 20kh 80% 6 Invalid	30kh 85% 7	40ki 90%

#### Note:

ave

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

Set your desired time and levels. Graphic display

100.0% >

2.0s >

5.6steps/s >

Logarithmic >

100.0mA >

MASK >

Disabled >

PD mode >

### Step 3: Corridor dim(CD) function

System failure level	100.0%
ayotan nanara ratar	100.070
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



Unlock it, and Click here to enter Corridor mode

Cancel

Mode

O CD

PD: PUSH DIM

CD: Corridor DIM

Corridor

O PD

Save

# Operation

### Step 4: Enter CD Setting homepage

Mode Occupied time Prolonged time     120  s      120  s <th>Cancel Corridor Save</th> <th>Cancel Corridor Sa</th> <th>Cancel Co</th>	Cancel Corridor Save	Cancel Corridor Sa	Cancel Co
120 s   ew Value range 0-60,000   Value range 0-60,000   Occupied level   100 %   Prolonged level   100 %   Value range 0-100   5 s   Value range 0-100   5   Value range 0-100		Occupied time	Prolonged time
with Occupied level   0 %   100 % <t< td=""><td>CD OPD</td><td></td><td>60</td></t<>	CD OPD		60
Occupied level Infinite   100 %   Prolonged level 100   Value range 0-100 20   Fade out time 20   Infinite 20   Value range 0-100 5   s Value range 0-100   upied time 5		Value range 0-60,000	Value range 0-60,000
100 %   Fade in Occupied   Fade out Prolonged level   Value range 0-100 20   Fade out time 5   s Value range 0-100   trange 0-100 5   value range 0-100 5   trange 0-100 5   value range 0-100 5   value range 0-100 5   value range 0-100 5   value range 0-100 5		Occupied level	O Infinite
Fade in Occupied Fade out Protonged Dimits off     Ge in time     5     5     Value range 0-100     5   Value range 0-100     Dim to off time     5   value range 0-100     60     20     Value range 0-100     5   0     60     100 </td <td></td> <td></td> <td>Prolonged level</td>			Prolonged level
adde in time 5 s Value range 0-100   5 s Value range 0-100 5   value range 0-100 Prolonged time 5   ccupied time 60 5		Value range 0-100	20
S     Value range 0-100     Dim to off time       Iue range 0-100     5       Prolonged time     Value range 0-100	de in time		Value range 0-100
Prolonged time Value range 0-100	s		Dim to off time
Value range 0-100	e range 0-100		5
	cupied time	Prolonged time	Value range 0-100

#### Notes:

- You should select either CD mode or PD mode, but not both. 1.
- 2. Under CD mode, you can realize it with normal (3rd party) AC
- sensor.

# **Additional Information**



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 / CD functions

