

2305N-30CC250-850

## SUNRICHER

30W Constant Current Linear LED Driver with DALI-2 NFC



NEC NEC

# Specification

		SRPL-2305N-30CC250-850
	DC Voltage Range	10 ~ 54V
	Rated current	250 ~ 850mA via NFC setting: Min. current gear lower to 0.1mA, Default 700mA
Output	Current Accuracy	±3% (±1%@Certain full load) @ full load
	Rated power	30W
	Voltage Range	220-240VAC
	Frequency range	50/60Hz
	Power Factor (Typ.)	> 0.97@230VAC (Full load)
	Total Harmonic Distortion	THD ≤ 3% (@ full load / 230VAC)
Input	Efficiency (Typ.)	>87% @ 230VAC full load
• • • •	AC Current (Max)	0.2A @ 230VAC
	Inrush Current (Typ.)	Max. 6.04A at 230VAC; 72µs 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
Environment	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	245*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



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## 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**



## **Driver Performance**

PF VS Load



5% / 7% / 9% /12% /14% /18%/ 21% /28% /35%/ 46%/ 58%/ 70%/ 82% /93/ 100%

#### **Driver Performance**



5% / 7% / 9% /12% /14% /18%/ 21% /28% /35%/ 46%/ 58%/ 70%/ 82% /93/ 100%

#### **Driver Performance**



#### **Expected Lifetime**

Module Number	Output current	Та	30 °C	40 °C	45 °C	•••	60 °C
SRPL-2305N-30CC250-850	250 – 850 mA	Тс	46 °C	55 °C	61 °C	•••	90 °C(max)
SRPL-2309N-30CCT250-850	250 – 850 mA	Lifetime	> 100,000 h	> 100,000 h	> 80,000 ł	ı	> 30,000 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 Quality

Module Number	Ipeak	Twidth				Max	.qua	ntity	ofL	ED D	rive	r per	мсв					I (A) Ipeak
			B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25	1
SRPL-2305N-30CC250-850	6.04A	72µs	30	39	48	60	75	35	45	56	70	87	40	52	64	80	100	¹∕₂lpea
SRPL-2309N-30CCT250-850	6.04A	72µs	30	39	48	60	75	35	45	56	70	87	40	52	64	80	100	



#### 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	<b>_</b>	<	DALI Dim 2	6		<	Options
Device Type	DALI DIM	Locked	Device Type		DALI DIM	 Unlock it	0	Max level Min level
Product Id	0x01000001	2001.00	Product Id		0x01000001	OTHOCK IL		Will level
Target current	300.0mA		Options		>		0	Power on level System failure level
			Target current		300.0mA >		0	Short address Groups
							0	Fade time Fade rate
							0	Dimming curve
							•	Scenes
							0	Target current
							•	Low side current error compensation
			_					
Set	t All Attributes		Se	et All Attributes				Unselect All Select All

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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:

- 1. 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 🗗	Cancel	Power on level	Save	Cancel	System failure level	Save	Cancel Fa	de rate	Save	Cance		G	roups		Save
Device Type	DALI DIM	Options	>	Level			Level				_	_		_				
Product Id	0x01000001	Max level	100.0% >	255 (MA	sk)	- 1 - +	255 (M		+	7 (44.7steps/s)	-	+	0	1	2	3	4	5
Options	>	Min level	0.100% >	200 (			233 (14	(ASK)		<u> </u>			6	7	8	9	10	11
Max level	100.0% >	Power on level	MASK >	_		-0			-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 I	level MASK >	Groups	>	Dimming curv	re		Dimming cu	irve										
Short address	0 >	Fade time	Extended fade >	<ul> <li>Logarithm</li> </ul>	ic 🔿 Linear		O Logarith	mic 🔿 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 >															
Se	et All Attributes	Set All Attri	butes	Read	w	rite	Rea	d Wr	rite	Read	Writ	e		Read			Writ	te

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

	Scenes	Cancel	Target current	Save	< DALI	Dim 2 ල්	<
0	level MASK >				Options	×	Options
1	level MASK >	3000		300.0mA 1=0.1mA	Max level	100.0% >	Max level
2	level MASK >	Value range	1000-50000		Min level	0.100% >	Min level
3	level MASK >						
4	level MASK >				Power on level	MASK >	Power on level
	level MASK >				System failure level	MASK >	System failure I
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	o Write	
	level MASK >				G		
12	level MASK >				(		
13	level MASK >						
4	level MASK >				Touch the device with t		
15	level MASK >				devi	ue.	
					Can	cel	
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

	6	· < 1	2CC E	<b>5</b>
ilure level	100.0%	System failure level	100.0%	>
tress	o	Short address	0 3	>
		Groups		Cancel CLO
	2.0s	Fade time	2.0s 2	CLO
	5.6steps/s	Fade rate	5.6steps/s	
curve	Logarithmic	Dimming curve	Logarithmic	Constant lumen enable
		Scenes		>
rrent	100.0mA	Target current	100.0mA 3	Working hours 0 ho
current ation	MASK	Minimum current compensation	MASK 3	Enable or Disable CLO functior
lumen operating	Disabled	Constant lumen oper	ating Disabled	
	PD mode	Corridor	PD mode 3	>
Cot All Attailuitos		Set All	Attributor	

Read From the NFC Driver

Unlock it, and Click here to enter CLO settings

## Step 2: Enter CLO Setting homepage

eview put Level (%)			
	Invi	ild	
	Operating	Time (kh)	
mes and	Levels		
nes and 1 Invalid	Levels 2 Invalid	3 Invalid	4 Invalid
1	2		
1 Invalid	2 Invaild 6 Invaild	Invalid	Invalid

Time 10 kh	
Value range 1-100	
Level	
75 %	
Value range 1-100	

Enable CLO function

Click "1", and set its time and level



#### Note:

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

Set your desired time and levels. Graphic display



< 12CC	۵
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 Attrib	utes





Unlock it, and Click here to enter Corridor mode

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# Operation

## Step 4: Enter CD Setting homepage

Cancel Corridor Save	Cancel Corridor Save	Cancel Corridor
cD O PD	Occupied time	Prolonged time
	120 s	60 s
iew N	Value range 0-60,000	Value range 0-60,000
	Occupied level	) Infinite
	100 % Value range 0-100	Prolonged level
Fade in Occupied Fade out Prolonged Dim to off	Fade out time	20 9
le in time	5 S	Value range 0-100
s	Value range 0-100	Dim to off time
ue range 0-100	Prolonged time	5 s
ccupied time	40	Value range 0-100
		Read

#### 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

