# 80W DALI D4i DT8 NFC LED Driver(Constant Current)

Important: Read All Instructions Prior to Installation

# **Function introduction**



# **Product Data**

	LED Channel	2
	DC Voltage	10-54V, Max.60V
	Current	1000-2000mA via NFC setting; Min.current gear lower to 0.1mA,Default 1800mA
Output	Current Accuracy	±3%( ±1%@Certain full load) @ full load
	Rated Power	Max. 80W
	Voltage Range	220-240VAC/ 176-280VDC
	Frequency Range	0/50/60Hz
	Power Factor (Typ.)	> 0.96 @ 230VAC Full load*
	Total Harmonic Distortion	THD ≤ 10% (@ full load / 230VAC)*
	Efficiency (Typ.)	>82% @ 230VAC full load*
Input	AC Current (Typ.)	0.44A Max.
	Inrush Current (Typ.)	Max. 34.4A at 230VAC; 160µs duration
	Leakage Current	< 5mA /230VAC
	Standby Power Consumption	< 0.5W
	Anti Surge	L-N:2KV
	Dimming Interface	DALI Device Type 8 (DALI consumption < 2mA)/ AC Push
Control	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
	Working Humidity	10% ~ 95% RH non-condensing
	Storage Temp. & Humidity	-40℃ ~ +80℃, 10% ~ 95% RH
	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
Safety & EMC	Isolation Resistance	I/P-O/P: 100M Ohms / 500VDC / 25°C / 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
Otherse	MTBF	191350H, MIL-HDBK-217F @ 230VAC full load and 25°C ambient temperature
Others	Dimension	355x30x21mm (L*W*H)
	Warranty	5 Years

### DALI Infos

Parameter	Min.	Тур.	Max.
DALI Interface Standard	IEC62	386-101, 102, 209, 250, 251, 25	2, 253
Dimming Range	0.1%	Logarithmic (default)	100%
DA1, DA2 High Level	9.5V	16V	22.5V
DA1, DA2 Low Level	-6.5V	0	6.5V
DA1, DA2 Current	0		2mA
Bus Power Supply Voltage	12Vdc	16Vdc	22Vdc
Bus Power Supply Current	/	55mA	60mA

\*: 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

• Built-in DALI-2 interface, DALI DT8 device

 $\bullet$  Dimmable LED driver with linear metal housing. Max. output power 80W

 $\bullet \ 1000\ -2000 \text{mA current selectable via NFC program tool.} \ \text{Min.current gear lower to } 0.1 \text{mA}$ 

DALI Address/Group/Scene setting via NFC program tool.

 $\bullet$  Class  ${\rm I\hspace{-0.1em}I}$  power supply, isolated design

• High power factor and efficiency

• To switch and dim LED lighting luminaries, color temperature

 $\bullet$  Amplitude/CCR dimming, smooth and deep dimming

Compatible with universal DALI masters that support Dt8 commands

• DALI-250/251/252/253 Enabled, DALI data inside.

• Integrated Max.56mA DALI BUS supply, enabled to powered DALI-2 sensors.

• IP20 rating, suitable for indoor LED lighting applications

5 years warranty

# Operation

#### With DALI master

#### 1. DALI Address

1 DALI address for 2 channels output is 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 .

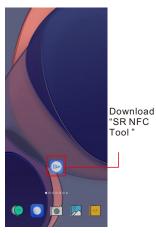
DALI Dim

cct

- 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 .

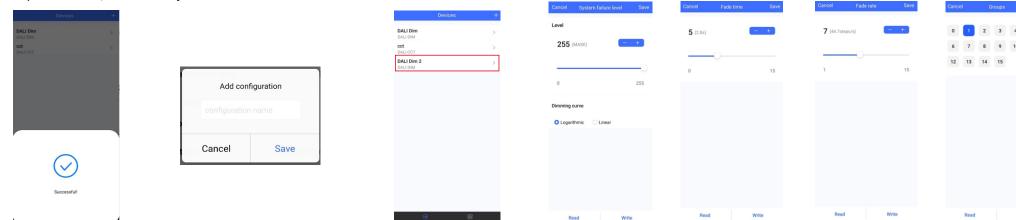


Devices +		Devices
>	Tap "+" to add DALI	DALI Dim DALI DIM cct DALI CCT
	devices	
		Ready to Read
		Touch the device with the back of the m device.
88 More		Cancel
	-	

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.



#### Step 3: Unlock device, enter parameters configuring page.

< D	DALI Dim 2	<u> </u>	<	DALI Dim 2	ස්		<	Options
Device Type	DALI DIM	Locked	Device Type	1	DALI DIM	Unlock it	0	Max level Min level
Product Id	0x01000001		Product Id	0x0	1000001			
arget current	300.0mA		Options		>		0	Power on level System failure level
			Target current	30	0.0mA >		•	Short address Groups
							0	Fade time Fade rate
							0	Dimming curve
							0	Scenes
							0	Target current
							•	Low side current error compensation
Set A	All Attributes		Se	t All Attributes				Unselect All Select All

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.

UALI	Dim 2 🖬		< DALI Di	m 2 பி		Cancel Pow	ver on level
Туре	DALI DIM		Options	>		Level	
Id	0x01000001		Max level	100.0% >		055	_
	>		Min level	0.100% >		255 (MASK)	
	100.0% >		Power on level	MASK >			
	0.100% >		System failure level	MASK >		0	
level	MASK >		Short address	0 >			
ilure level	MASK >		Groups	>		Dimming curve	
ress	0 >		Fade time	Extended fade >		<ul> <li>Logarithmic</li> </ul>	C Linear
	>		Fade rate	358steps/s >			
	Extended fade >		Dimming curve	Logarithmic >			
	358steps/s >		Scenes	>			
curve	Logarithmic >		Target current	300.0mA >			
	>		Low side current error compensation	0.100 >			
Set All A	ttributes		Set All Att	lbutes		Read	Writ
	ttributes silure level Save	Cancel F	Set All Att		e rate Save	Read	Writ
		Cance! F 5 (2.8a)			erate Save	Cancel	
System fa			iade time Save	Cancel Fade		Cancel	Groups
System fa	siture level Save		iade time Save	Cancel Fade		Cancel 0 1 6 7	Groups 2 3 4
System fa	Ilure level Save		iade time Save	Cancel Fade		Cancel 0 1 6 7	Groups 2 3 4 8 9 10
System fa	siture level Save	5 (2.86)	ade time Save	Cancel Fade 7 (44.7steps/s)		Cancel 0 1 6 7	Groups 2 3 4 8 9 10
System fa (MASK)	Ilure level Save	5 (2.86)	ade time Save	Cancel Fade 7 (44.7steps/s)		Cancel 0 1 6 7	Groups 2 3 4 8 9 10
System fr (MASK) curve	- + 255	5 (2.86)	ade time Save	Cancel Fade 7 (44.7steps/s)		Cancel 0 1 6 7	Groups 2 3 4 8 9 10
System fr (MASK) surve	Ilure level Save	5 (2.86)	ade time Save	Cancel Fade 7 (44.7steps/s)		Cancel 0 1 6 7	Groups 2 3 4 8 9 10
System fr (MASK) surve	- + 255	5 (2.86)	ade time Save	Cancel Fade 7 (44.7steps/s)		Cancel 0 1 6 7	Groups 2 3 4 8 9 10
System fr (MASK) curve	- + 255	5 (2.86)	ade time Save	Cancel Fade 7 (44.7steps/s)		Cancel 0 1 6 7	Groups 2 3 4 8 9 10
System fr (MASK) curve	- + 255	5 (2.86)	ade time Save	Cancel Fade 7 (44.7steps/s)		Cancel 0 1 6 7	Groups 2 3 4 8 9 10
System fa 5 (MASK) ng curve	- + 255	5 (2.86)	ade time Save	Cancel Fade 7 (44.7steps/s)		Cancel 0 1 6 7	Groups 2 3 4 8 9 10

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

	Scenes	Cancel Targe	et current Save	< DALI Dir	n 2 🖆	< DALI Din	12
cene 0	level MASK >			Options	>	Options	
ene 1	level MASK >	3000	300.0mA 1=0.1mA	Max level	100.0% >	Max level	
me 2	level MASK >	Value range 1000-50000	)	Min level	0.100% >	Min level	
3	level MASK >						
	level MASK >			Power on level	MASK >	Power on level	MASK
	level MASK >			System failure level	MASK >	System failure level	MASK
6	level MASK >			Short address	0 >	Short address	
e 7	level MASK >			Groups	>	Groups	
e 8	level MASK >			Fade time	5.7s >	Fade time	
9	level MASK >			1 due unie	0.000	r due anne	0.70
10	level MASK >			Ready to V	Write		
11	level MASK >			$\sim$		$\sim$	
12	level MASK >			(	)	$(\checkmark$	)
13	level MASK >					Ċ	
e 14	level MASK >			Touch the device with the	back of the mobile	Successfu	di .
ne 15	level MASK >			device.		Guccesar	
				Cance	I.		
Read	Write	Read	Write				

# 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/ gateway.



Cancel CL	O Save								
Preview Output Level (%)		Time				Preview Output Level (%)			
100 80 60 40 20	ld	10 Value range 1-100	kh			100 80 40 20			
Operating	fime (kh)	Level 75				0 10	20 30 Operating	40 Time (kh)	
Times and Levels		Value range 1-100	%			Times and	Levels		
1 2 Invalid Invalid	3 4 Invalid Invalid	value lenge i roo				1 10kh 75%	2 20kh 80%	3 30kh 85%	4 40kh 90%
5 6 Invalid Invalid	7 8 Invalid Invalid					5 Invalid	6 Invalid	7 Invalid	8 Invalid
Working hours	0 hour(s)					Working ho	ours		0 hour(s)
Read	Write					Rea	d	v	/rite

Graphic display

Tips:

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

# **CLO FUNCTION INSTRUCTION**

#### 1.Open APP, and Find the CLO function

< 12CC	۵	K 12CC	đ
System failure level	100.0%	System failure level	100.0% >
Short address	0	Short address	0 >
Groups		Groups	>
Fade time	2.0s	Fade time	2.0s >
Fade rate	5.6steps/s	Fade rate	5.6steps/s >
Dimming curve	Logarithmic	Dimming curve	Logarithmic >
Scenes		Scenes	>
Target current	100.0mA	Target current	100.0mA >
Minimum current compensation	MASK	Minimum current compensation	MASK >
Constant lumen operating	Disabled	Constant lumen operating	Disabled >
Corridor	PD mode	Corridor	PD mode >
Set All Attribu	tes	Set All Attrib	utes
Read From the	NFC Driver	Unlock it, and C	lick here to

# Additional Remarks



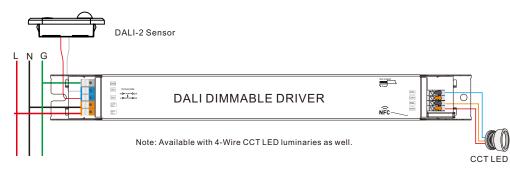
- 1. Please make sure your APP version is 1.0.10 or higher.
- 2. Please make sure NFC driver's firmware is available with **CLO** function.

Read From the NFC Driver

Unlock it, and Click here to enter CLO settings

# Wiring Diagram

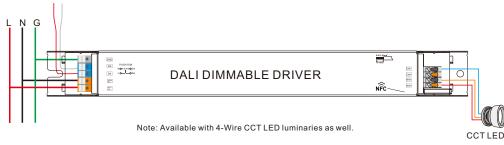
1. As a D4i Driver



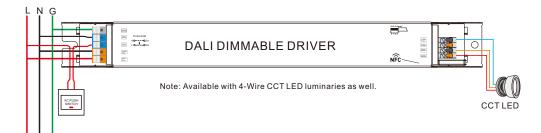
#### 2.As a Normal DALI driver.

2.1 With DALI bus





#### 2.2 With PUSH dimmer



#### **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%.

3) Double click the button to switch between brightness mode and color temperature mode.

4) Press and hold down the button to change color temperature under color temperature mode.

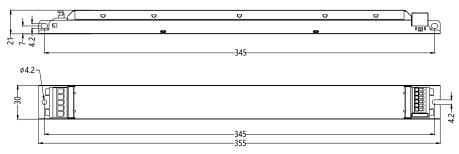
# Safety & Warnings

• DO NOT install with power applied to the device.

• DO NOT expose the device to moisture.

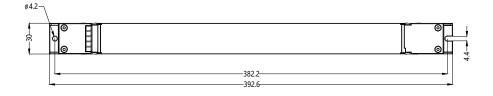
# **Product Dimension**

#### Without End Cap

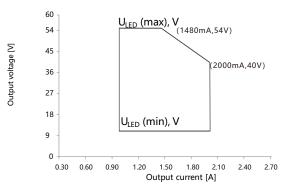


With End Cap

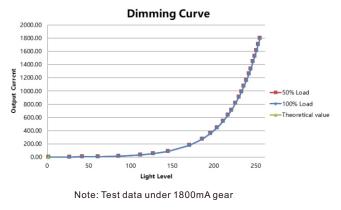




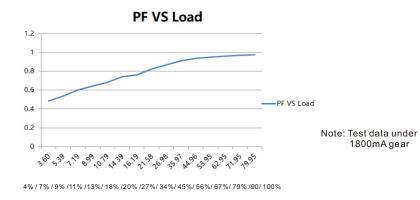
# **Operating window**



# **Dimming Curve**



# **Driver Performance**



# 

4% / 7% / 9% /11% /13%/ 18% /20% /27%/ 34%/ 45%/ 56%/ 67%/ 79% /90/ 100%

# Expected Lifetime

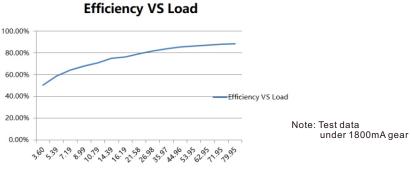
Module Number	Output current	Та	30 °C	40 °C	45 °C	•••	60 °C
SRPL-2305iN-80CC1000	-2000 1000 – 2000 mA	Tc	60 °C	70 °C	76 °C	•••	90 °C(max)
SRPL-2309iN-80CCT1000	-2000 1000 – 2000 mA I	ifetime	> 100,000 h	> 80,000 h	> 50,000 h	ı	> 20,000 h

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	lpeak	Twidth				Max	.qua	ntity	ofL	ED D	river	. per	мсв				
			B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
SRPL-2305iN-80CC1000-2000	34.4A	160µs	12	15	19	24	30	16	20	25	31	39	18	23	28	36	44
SRPL-2309iN-80CCT1000-2000	34.4A	160µs	12	15	19	24	30	16	20	25	31	39	18	23	28	36	44

# **Driver Performance**



4% / 7% / 9% /11% /13%/ 18% /20% /27%/ 34%/ 45%/ 56%/ 67%/ 79% /90/ 100%

# Driver Performance

THD VS Load

I (A)

Ipeak

1/2 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.

 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  $30^\circ C$  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	
2023-9-1	V1.5	Parameter Update	Romeo	