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							
Output	Current Accuracy	±3%@ full load							
	Rated Power	Max. 80W							
	Voltage Range	120-277VAC							
	Frequency Range	50/60Hz							
	Power Factor (Typ.)	> 0.96 @ 230VAC Full load*							
	Total Harmonic Distortion	THD \leq 10% (@ full load / 230VAC)*							
	Efficiency (Typ.)	> 82% @ 230VAC full load*							
Input	AC Current (Typ.)	0.5A 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℃ ~ +60℃						
- · ·	Max. Case Temp.	TC=90°C						
Environment	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						
Others	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, 252	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	1	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

• Dimmable LED driver with linear metal housing. Max. output power 80W

• 1000-2000mA current selectable via NFC program tool. Min.current gear lower to 0.1mA

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

 \bullet Class Π power supply, isolated design

• High power factor and efficiency

 \bullet To switch and dim LED lighting luminaries, enable tunable white control

 \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.

- 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 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 .

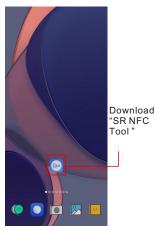
DALI Dim

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 .



Tap "+" to DALIDM	
, add DALI cet	
devices	
Ready to Read	
Touch the device with the back of device.	the mo
Eancel 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.

Devices +		Devices +	Cancel System failure level Save	Cancel Fade time Save	Cancel Fade rate Save	Cancel Groups
DALI Dim > 1 DALI DIM ect > 1		DALI Dim > DALI DIM cct >	Level 255 (MASK) - +	5 (2.8s) - +	7 (44.7steps/s) - +	0 1 2 3 4 5 6 7 8 9 10 1 ⁻
DALLOCT		DALICIT DALI Dim 2 DALI DIM	o	0 15	1 15	12 13 14 15
	Add configuration		0 255 Dimming curve			
			CLogarithmic CLinear			
\bigcirc	Cancel Save					
Successfull						
		a 88	Read Write	Read Write	Read Write	Read Write

Step 3: Unlock device, enter parameters configuring page.

<	DALI Dim 2		<	DALI Dim 2	ස්			<	Options
Device Type	DALI DIM	Locked	Device Type		DALI DIM	Unlock	k it	0	Max level Min level
Product Id	0x01000001	2001104	Product Id		0x01000001	emeer			
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
								0	Low side current error compensation
Set	All Attributes		Se	et 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.

	Dim 2 🖬		< DALI D	m 2 🖬		Cancel	Power	on level	
ype	DALI DIM		Options	>		Level			
d	0x01000001		Max level	100.0% >		055			
	>		Min level	0.100% >		255 (MASI	()		
	100.0% >		Power on level	MASK >					
	0.100% >		System failure level	mask >		0			
level	MASK >		Short address	0 >					
ailure level	MASK >		Groups	>		Dimming curve			
Iress	0 >		Fade time	Extended fade >		O Logarithmic	OL	inear	
	>		Fade rate	358steps/s >					
2	Extended fade >		Dimming curve	Logarithmic >					
	358steps/s >		Scenes	>					
curve	Logarithmic >		Target current	300.0mA >					
	>		Low side current error compensation	0.100 >					
C All A.	tributes		Set All Att	lbutes					
		Cancel Fa			te Save	Read		Groups	Write
System fa		Cancel Fa 5 (2.8s)	de time Save		te Save	Cancel	2	Groups 3	Write 4
System fa			ide time Save	Cancel Fade ra		Cancel	_		
System fa	ilure level Save		ide time Save	Cancel Fade ra		Cancel	2	3	4
System fa	tture level Save		ide time Save	Cancel Fade ra		Cancel 0 1 6 7	2 8	3	4
System fa	ilure level Save	5 (2.8s)	ide time Save	Cancel Fade ra 7 (44.7steps/s)	- +	Cancel 0 1 6 7	2 8	3	4
System fa	tture level Save	5 (2.8s)	ide time Save	Cancel Fade ra 7 (44.7steps/s)	- +	Cancel 0 1 6 7	2 8	3	4
System fa (MASIC)	iture level Save	5 (2.8s)	ide time Save	Cancel Fade ra 7 (44.7steps/s)	- +	Cancel 0 1 6 7	2 8	3	4
System fa (MASK) curve	iture level Save	5 (2.8s)	ide time Save	Cancel Fade ra 7 (44.7steps/s)	- +	Cancel 0 1 6 7	2 8	3	4
System fa (MASIC)	iture level Save	5 (2.8s)	ide time Save	Cancel Fade ra 7 (44.7steps/s)	- +	Cancel 0 1 6 7	2 8	3	4
System fa (MASK) J curve	iture level Save	5 (2.8s)	ide time Save	Cancel Fade ra 7 (44.7steps/s)	- +	Cancel 0 1 6 7	2 8	3	4
System fa (MASK) g curve	iture level Save	5 (2.8s)	ide time Save	Cancel Fade ra 7 (44.7steps/s)	- +	Cancel 0 1 6 7	2 8	3	4
System fa (MASK) g curve	iture level Save	5 (2.8s)	ide time Save	Cancel Fade ra 7 (44.7steps/s)	- +	Cancel 0 1 6 7	2 8	3	4

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				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



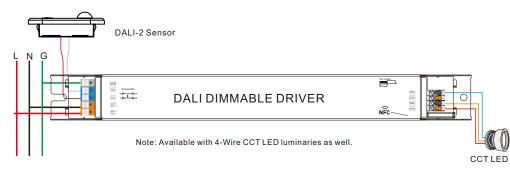
- 1. Please make sure your APP version is 1.0.10 or higher.
- 2. Please make sure NFC driver's firmware is available with **CLO** function.

Read From the NFC Driver

Unlock it, and Click here to enter CLO settings

Wiring Diagram

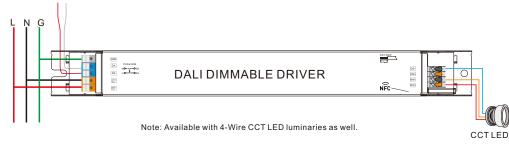
1. As a D4i Driver



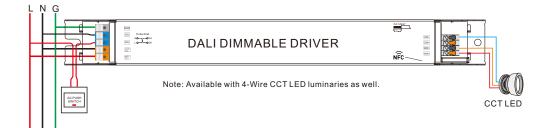
2.As a Normal DALI driver.

2.1 With DALI bus

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.

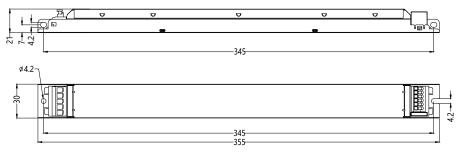
Safety & Warnings

• DO NOT install with power applied to the device.

• DO NOT expose the device to moisture.

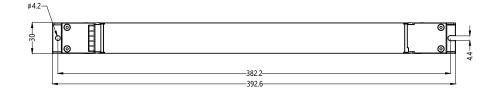
Product Dimension

Without End Cap

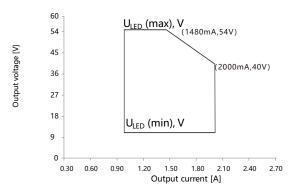


With End Cap

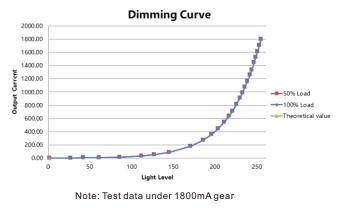




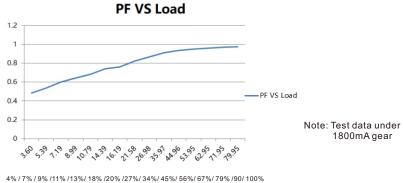
Operating window



Dimming Curve



Driver Performance



40.00% 35.00% 30.00% 25.00% 20.00% —THD VS Load 15.00% 10.00% Note: Test data under 1800mA gear 5.00% 0.00% 3° 5³ 1¹³ 8° 5¹³ 11³ 15³ 15³ 15³ 15³ 15³ 11⁶ 15³ 15³ 11⁵ 15³ 11⁵ 11⁵ 11⁵ 11⁵

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

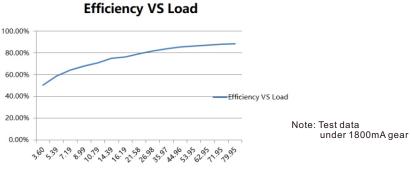
Expected Lifetime

Driver Performance

Module Number	Output current	Та	30 °C	40 °C	45 °C	•••	60 °C
SRPL-2305iN-80CC1000-2000	J 1000 – 2000 mA	Тс	60 °C	70 °C	76 °C	•••	90 °C(max)
SRPL-2309iN-80CCT1000-2000	J 1000 – 2000 mA L	ifetime	> 100,000 h >	> 80,000 h	> 50,000 H	n	> 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.

Driver Performance



MCB Load Quantity

Module Number	lpeak	Twidth				Мах	.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-80CC1000-2000L	34.4A	160µs	12	15	19	24	30	16	20	25	31	39	18	23	28	36	44
SRPL-2309iN-80CCT1000-2000U	34.4A	160µs	12	15	19	24	30	16	20	25	31	39	18	23	28	36	44

THD VS Load

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

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	