12W DALI DT6 NFC Enabled LED Driver(Constant Current)

The selv (SR-Data 251/252/253)

Important: Read All Instructions Prior to Installation

Function introduction





Product Data

	LED Channel	1					
	DC Voltage	6-42V, Max. 50V					
	Current	100-700mA via NFC tool; Min.current gear lower to 0.1mA, default 300mA					
Output	Current Accuracy	±3%(±1%@Certain full load) @ full load					
	Rated Power	Max. 12W					
	Voltage Range	220-240VAC/220-240VDC					
	Absolute Voltage Range	196-264VAC/196-264VDC					
	Frequency Range	0/50/60Hz					
	Power Factor (Typ.)	> 0.95 @ 230VAC Full load*					
	Total Harmonic Distortion	THD ≤ 12% (@ full load / 230VAC)*					
Input	Efficiency (Typ.)	> 77% @ 230VAC full load*					
	AC Current (Typ.)	0.1A Max.					
	Inrush Current (Typ.)	Max. 3.96A at 230VAC; 90µs 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					
Control	Dimming Range	0.01%-100%@ Max current					
Control	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.				
	Working Temp.	-25℃ ~ +45℃				
	Max. Case Temp.	Tc=85℃				
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 17743-2				
	EMC Immunity	EN61547, EN61000-4-2,3,4,5,6,8,11				
	MTBF	191350H, MIL-HDBK-217F @ 230VAC full load and 25°C ambient temperature				
Others	Dimension	135x35x20mm (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,

• Built-in DALI-2 interface, DALI DT6 device

- Dimmable LED driver. Max. output power 12W
- 100-700mA 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
- To switch and dim LED lighting luminaries
- 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 1 channel output are assigned by DALI Master controller automatically, please refer to user manuals of compatible DALI Masters for specific operations.

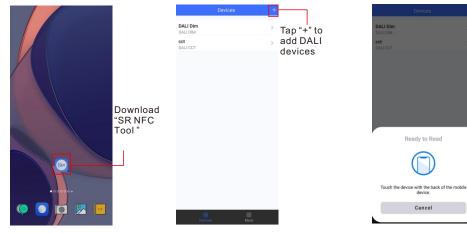
With NFC Programming devices

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 .
- 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 .



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.



Add confi	iguration
Cancel	Save

Devices	+
DALI Dim DALI DIM	>
CCT DALI CCT	>
DALI Dim 2 DALI DIM	>

Step 3: Unlock device, enter parameters configuring page.

LI Dim 2 🔒]	< 0	DALI Dim 2 ක්		<	
DALI DIM	Locked	Device Type	DALI DIM	Unlock it	0	Max level Min level
0x01000001	2001104	Product Id	0x01000001	Onioekn		
300.0mA		Options	>		0	Power on level System failure
		Target current	300.0mA >		•	Short address Groups
					•	Fade time Fade rate
					0	Dimming curve
					0	Scenes
					0	Target current
						Low side curre
	0x01000001	0x01000001	0x01000001 Product Id 300.0mA Options	Locked Product Id 0x0100001 300.0mA Options >	Locked Product Id Gx01000001 Unlock it 300.0mA Options >	0x01000001 Unlock it 300.0mA Options

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 🗗
се Туре	DALI DIM
Id	0×01000001
	>
x level	100.0% >
in level	0.100% >
wer on level	MASK >
ystem failure level	MASK >
ort address oups	0 >
de time de rate	Extended fade > 358steps/s >
imming curve	Logarithmic >
enes	>
Set All A Cancel System fi	ilure level Save
_evel	
255 (MASK)	- +
	255
0 mming curve	

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

	Scenes	Cancel	Target current	Save	< DALI Dim	2 f	< DALI Dim	2
cene 0	level MASK >				Options	>	Options	
cene 1	level MASK >	3000		300.0mA 1=0.1mA	Max level	100.0% >	Max level	
cene 2	level MASK >	Value range 1	1000-50000		Min level	0.100% >	Min level	
cene 3	level MASK >							
cene 4	level MASK >				Power on level	MASK >	Power on level	
cene 5	level MASK >				System failure level	MASK >	System failure level	
cene 6	level MASK >				Short address	0 >	Short address	
ene 7	level MASK >				Groups	>	Groups	
cene 8	level MASK >				Fade time	5.7s >	Fade time	
cene 9	level MASK >				rade unie	5.767	Pade unie	J.
cene 10	level MASK >				Ready to V	Vrite		
cene 11	level MASK >				\sim		\sim	
cene 12	level MASK >)	(\checkmark)	
ene 13	level MASK >						\mathbf{C}	
cene 14	level MASK >				Touch the device with the I	back of the mobile	Successful	
cene 15	level MASK >				device.		Succession	
					Cancel			
Read	Write	Rea	d	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.

2.Enter CLO Setting homepage

Cancel CL) Save
Preview Output Level (%)	
100 80 60 inva 40 20	id
0 Operating 1	ime (kh)
Times and Levels	
1 2 Invalid Invalid	3 4 Invalid Invalid
5 6 Invalid Invalid	7 8 Invalid Invalid
Working hours	0 hour(s)
Read	Write

Graphic display

Tips:

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

CLO AND CORRIDOR DIM(CD) FUNCTION INSTRUCTION

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

e 🔒
100.0%
0
2.0s
5.6steps/s
Logarithmic
100.0mA
MASK
g Disabled
PD mode
ibutes

3.Corridor dim(CD) function

K 12CC	۵	< 12CC	ස්
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 Attribu	utes
Read From the	NFC Driver	Unlock it, and C	lick here

1

Read From the NFC Driver

Unlock it, and Click here to enter CLO settings

4.Enter CD Setting homepage

Cancel	Corridor	Save
Mode		
O CD	O PD	
Preview		
80		
60 40		
20 0 Fade in 0	Dccupied Fade out Prolonge	d Dim to off
Fade in time		
5	S	
Value range 0-1		
Occupied tin	ne	
Read	v	Vrite



Graphic display

Enter CD mode

Tips:

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

Additional Remarks

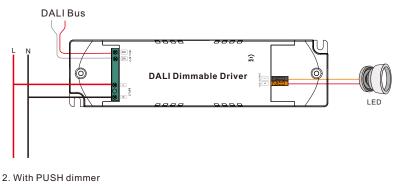


 Please make sure your APP version is 1.0.10 or higher.
Please make sure NFC driver's firmware is available with CLO / CD functions.

Wiring Diagram

1. With DALI bus

1) With single color LED luminarie

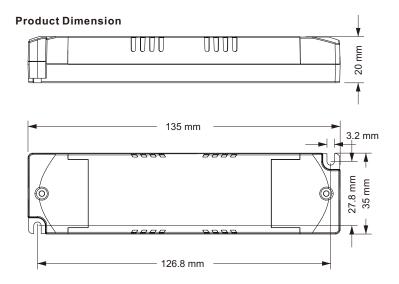




AC Push Function

1) Click the button to switch ON/OFF

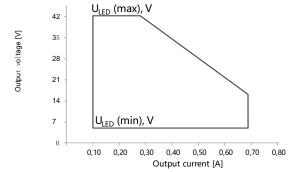
2) Press and hold down the button to increase or decrease light intensity to desired level and release it, then repeat the operation to adjust light intensity to opposite direction. The dimming range is from 1% to 100%.

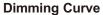


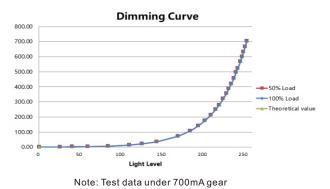
Operating window

Driver Performance

82.00%



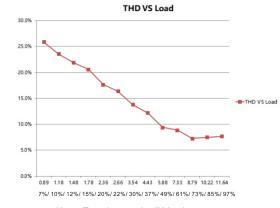




80.00% 78.00% 76.00% 74.00% 72.00% 70.00% 68.00% 5.49 6.17 8.22 10.27 11.63 11.73 45%/ 52%/ 70%/ 85%/ 97%/ 98% Note: Test data under 700mA gear

Typical Efficiency Vs Load

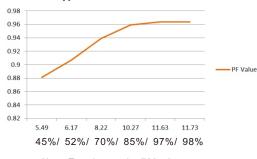
Driver Performance



Note: Test data under 700mA gear

Driver Performance

Typical Power Factor Vs Load





Expected Lifetime

Module Number	Output current	Та	30 °C	40 °C	45 °C	•••	
SRP-2305N-12CC100-700	100 – 700 mA	Tc	50 °C	60 °C	65 °C	•••	85 °C
SRP-2309N-12CCT100-700	100 – 700 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	lpeak	Twidth	Max.quantity of LED Driver per MCB B10 B13 B16 B20 B25 C10 C13 C16 C20 C25 D10 D16 D20 D25								D25						
SRP-2305N-12CC100-700	3.96A	90µs	37	49	60	75	94	63	81	100	125	156	80	104	128	160	200
SRP-2309N-12CCT100-700	3.96A	90µs	37	49	60	75	94	63	81	100	125	156	80	104	128	160	200

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		
2023-6-17	V1.7	Update CLO/CD function	Romeo		

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

