

100W DALI + PUSH Dimming power supply



■ Approve



Features

- For luminaires of protection Class I/II, Non-Isolated design, Built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor 0.95
- Efficiency : 94%
- Adjustable Output Current with dip-switch
- Support DALI-2, Push Dimming
- 5 years warranty

Applications

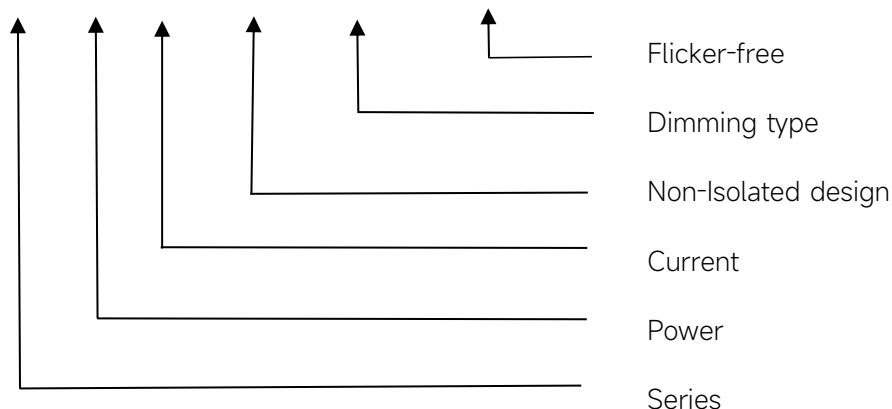
- Linear light

◆ Description

FMS-100-1050 N-S DALI-2 LD is a 100W constant current LED driver that operates from 198-264Vac input with 300 to 1050mA output current and a forward voltage range from 50 to 220Vdc. The output current is adjustable by dip-switch. With it's compact dimensions from 280 x 30 x 21 mm. It is easy to integrate in linear light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

FMS-100-1050 N-S DALI-2 LD



◆ Specification

Output	Constant Current	300mA	350mA	400mA	...	1000mA	1050mA
	Voltage Range	50-220			...	50-100	50-95.24
	Unload voltage Max.	<250V RMS					
	Current Accuracy	±5%					
	Output LF current ripple(≤120Hz)	±3%					
	SVM	≤0.4					
	P _{st}	≤1					
	Efficiency(Typ.)	94%@300~900mA					
	EOFI	15%					
Input	Rated input voltage	220-240V					
	Range of input voltage	198-264VAC					
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition					
	Rated input voltage(DC)	176-280VDC					
	Frequency(Hz)	0/50/60 Hz					
	Displacement factor	≥0.9					
	Power Factor	>0.95@Full Load,230V					
	Input Current	0.65A max.					
	Start-up time	< 0.8S					
	Switch over time(AC/DC mode)	< 0.4S					
	No Load Power	≤0.3W					
	Standby Power	≤0.3W					
	Network standby power	≤0.3W					
	THD (Typ.)	10%@Full Load,230V					
Dimming	Dimming	YES					
	Dimming mode	DALI-2 (IEC 62386-101,102,207,251,252,253) & Push Dimming (Corridor Function)					
	Dimming depth	1%					
	Dimming current range	1 ~100%					
Protection	Over Load Protection	103-120%					
		YES/Latch off					
	Over Voltage Protection	<250V RMS					
		YES/Latch off					
capability	Short circuit Protection	YES/Latch off					
	Over Temperature Protection	YES/Auto Resume					
capability	Surge capability (L-N)	1KV					
	Surge capability (L/N-Ground)	2KV					
Environment	Operating Temperature	-25°C~+60°C					
	Humidity	20%-90%RH					

	Tc	90°C
	Storage Temperature	-25°C~+60°C
	Lifetime	>50000h,@Tc=80°C
	Noise	≤25dB(A)@20cm
Surface	Dimension	280 x 30 x 21(LXWXH)mm
	material	metal case
Standards	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;AS/NZS 61347- 1, AS/NZS 61347-2- 13;AS 61347.2.13;EN62384;
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN55015, EN61000-3-2, EN61000-3-3, EN61547,EN 62493;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, EN61547
	Energy Efficiency	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
DALI	EN 62386-101 (DALI-2) EN 62386-102 (DALI-2) EN 62386-207 (DALI-2,including part251,252,253)	
Note	1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature. Ripple & Noise are measured at 20MHz of bandwidth. 2.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements , EMC is not considered. 3.EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications. 4.Switch and dimmer are not recommended to connect between this product output and luminaries. 5.Unload voltage Max is measured 5 seconds after power-on. 6.All Eaglerise power supply are complied with EMI regulations. Since they are belong to component and will be installed inside system enclosure. When they are integrated into a system, the EMI characteristics of the system must be re-verified again.	

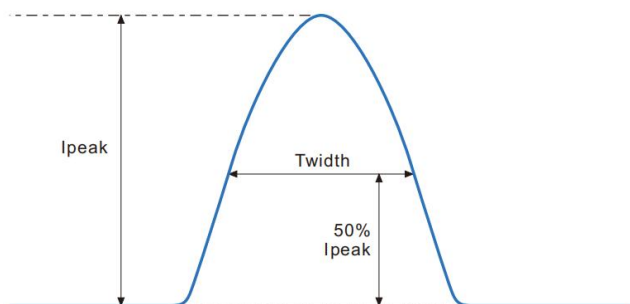
◆ Parameter

Number	Output				Switch position			
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3	4
*1	300mA	50-220	250	66	--	--	--	--
2	350mA			77	ON	--	--	--
3	400mA			88	--	ON	--	--
4	450mA			99	ON	ON	--	--
5	500mA	50-200		100	--	--	ON	--
6	550mA	50-181.8		100	ON	--	ON	--
7	600mA	50-166.7		100	--	ON	ON	--
8	650mA	50-153.9		100	ON	ON	ON	--
9	700mA	50-142.9		100	--	--	--	ON
10	750mA	50-133.3		100	ON	--	--	ON
11	800mA	50-125		100	--	ON	--	ON
12	850mA	50-117.7		100	ON	ON	--	ON
13	900mA	50-111		100	--	--	ON	ON
14	950mA	50-105.3		100	ON	--	ON	ON
15	1000mA	50-100		100	--	ON	ON	ON
16	1050mA	50-95.2		100	ON	ON	ON	ON

* Factory default

◆ Inrush Current

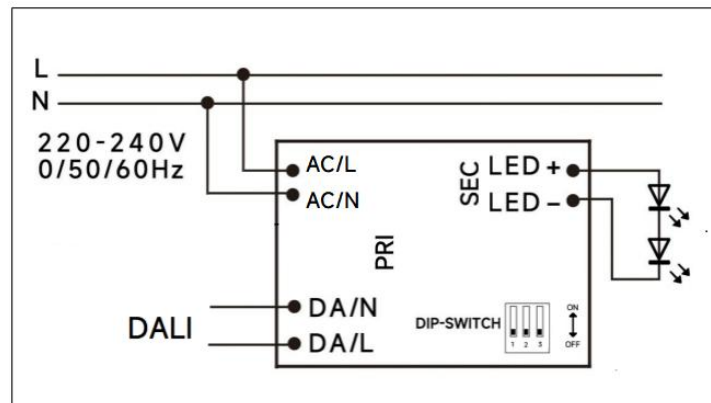
I_{peak}	T_{width}	B10	B16	B20	C10	C16	C20
40.8A	240μs	8pcs	13pcs	16pcs	12pcs	19pcs	24pcs



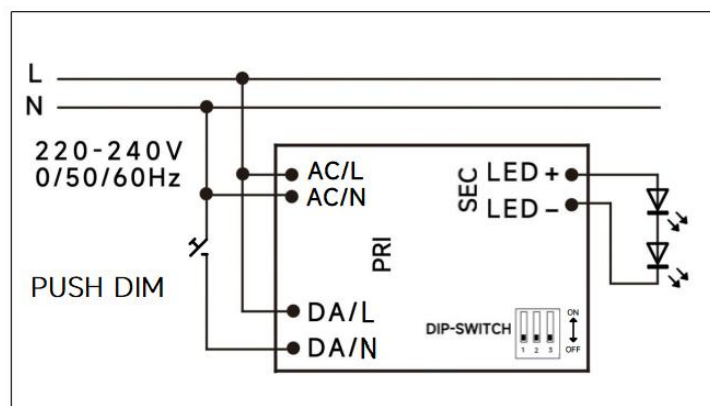
Remarks:

- 1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- 2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

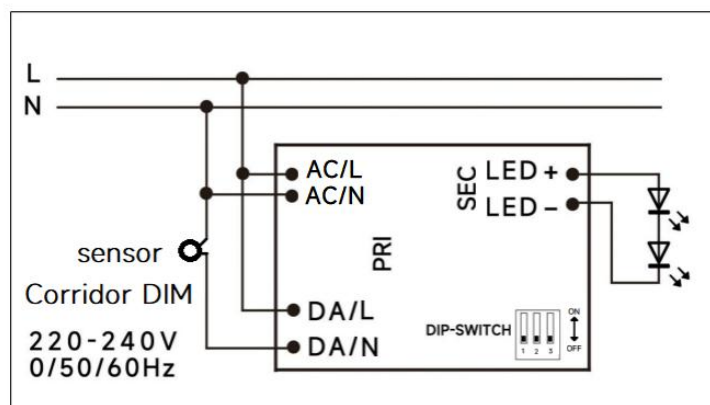
◆ Wiring diagram



DALI dimming application

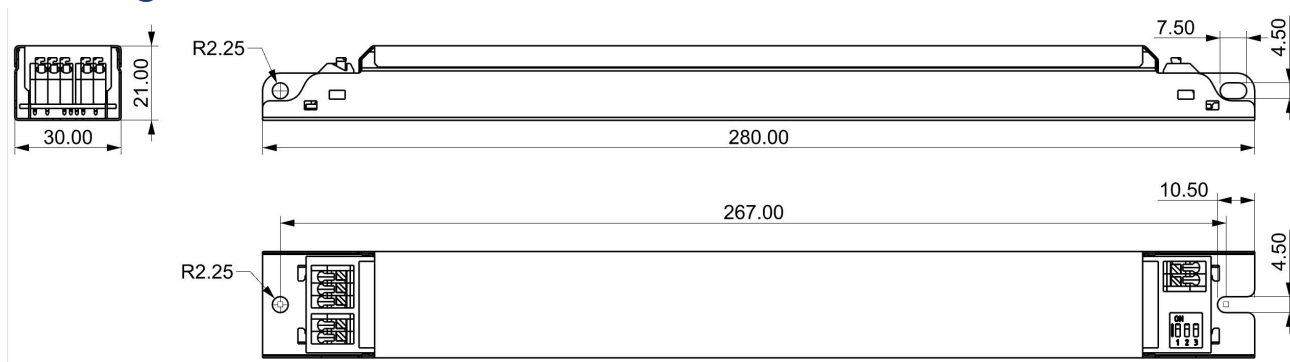


PushDIM dimming application



Corridor DIM dimming application

◆ 2D diagram



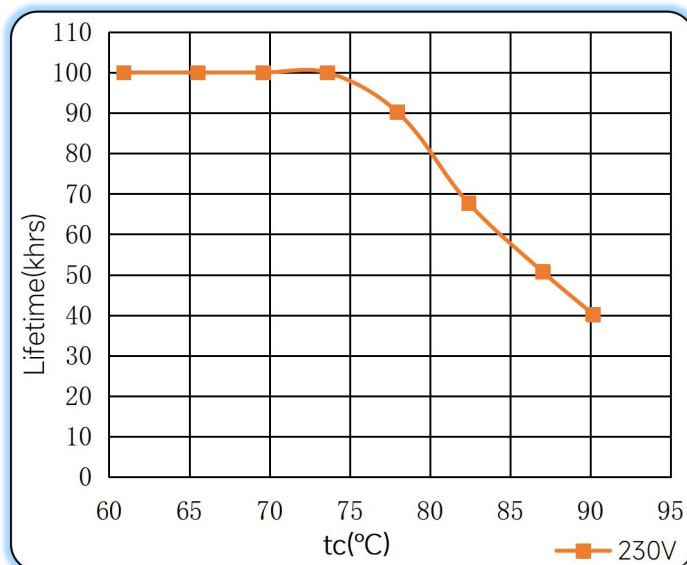
◆ Wiring & Connections

Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ² (With A side caps: 0.75...1.5 mm ²)
	Input wire gauge.	16...20 AWG (With A side caps: 16...22 AWG)
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ² (With A side caps: 0.75...1.5 mm ²)
	Output wire gauge.	16...20 AWG (With A side caps: 16...22 AWG)
	Output wire strip length	0.5...1.5 mm ² (With A side caps: 0.75...1.5 mm ²)

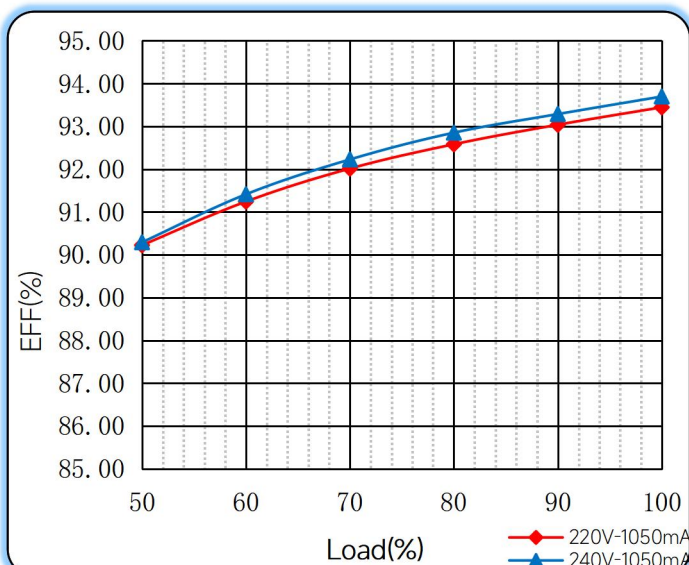
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for FMS-100-1050 N-S DALI-2 LD, $I_o=1050\text{mA}$

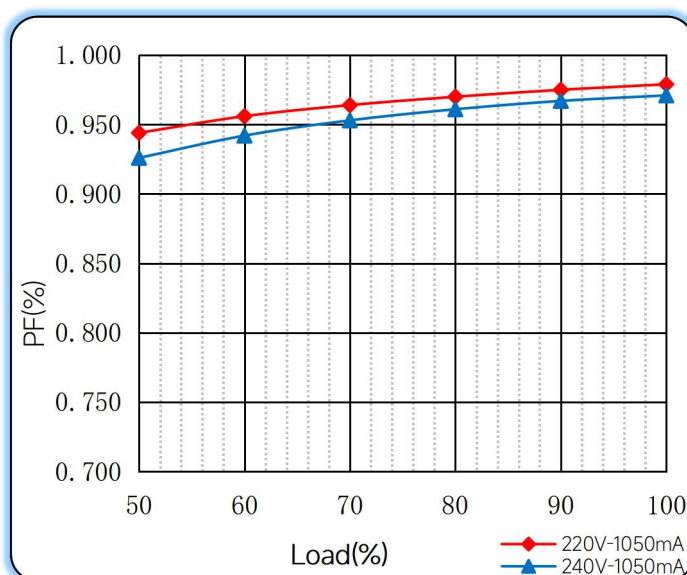
Lifetime vs. Temperature Curve



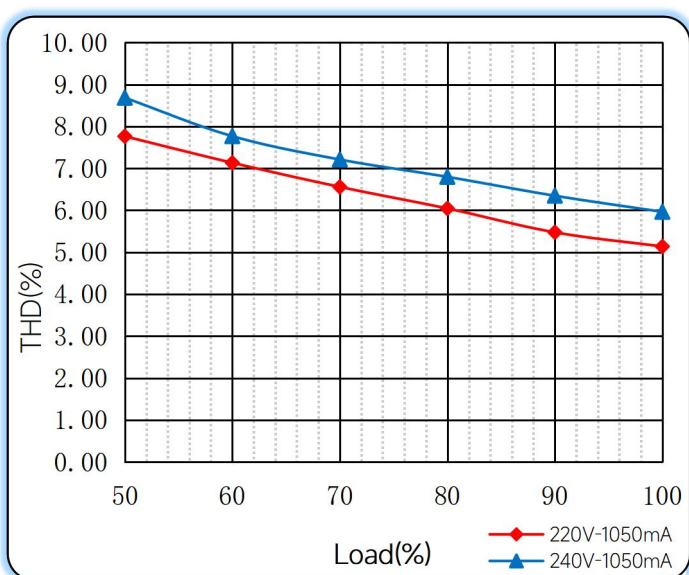
Efficiency vs. Load



Power Factor Characteristics



THD vs. Load



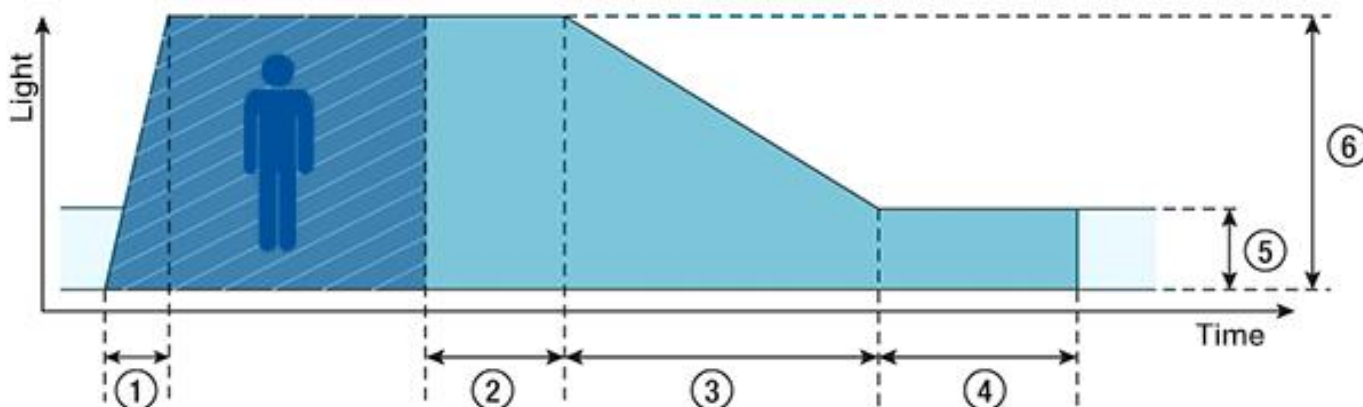
◆ Push dimming operation

Action	Action duration	Function
Short push	<0.5s	Turn on/off
Short push twice	<0.5s	LED on: Save current brightness level LED off: Delete saved level and turn on at 100% brightness
Short push five times	<3s	Quit Corridor mode
Long push	0.5-14s	Dimming up or down
Long push	15s-2mins	Sync all LEDs to be 100% brightness
Long push	>2mins	Enter Corridor mode - LED keep 100% brightness for 2mins. Then brightness will turn to be 10% within 32s if no action during 2mins 100% brightness.

Note:

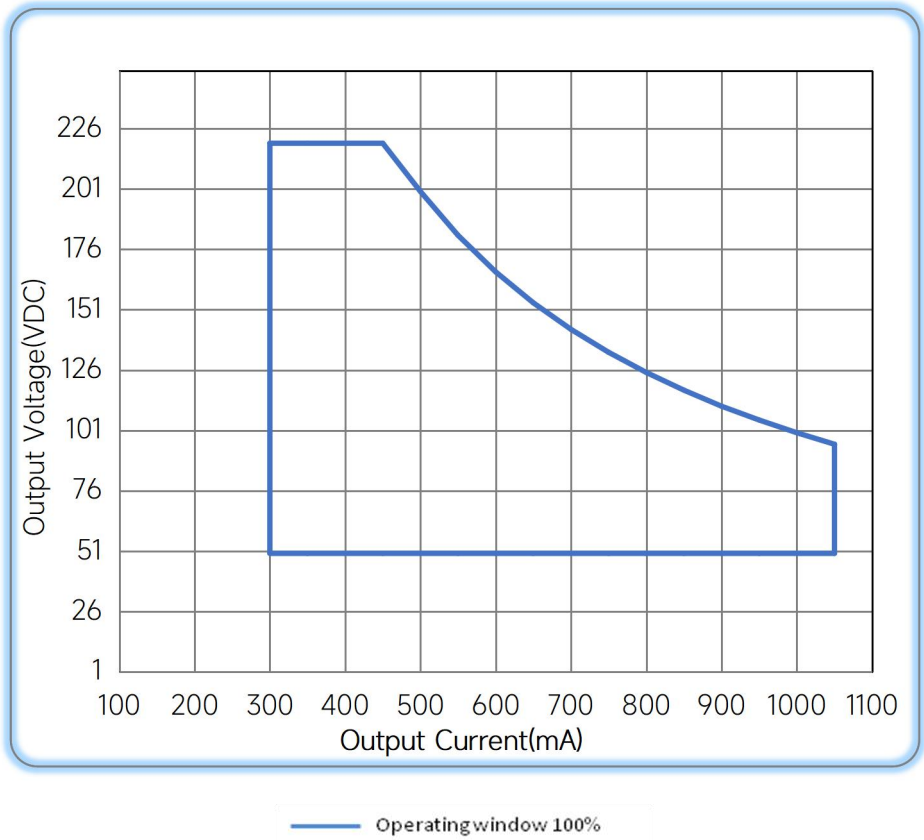
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ Corridor mode



- ◆ ① **Fade-in time(0.5s)**: the time that starts as soon as the presence of a person is detected. During the fade-in time the luminous intensity is faded up to the presence value.
- ◆ ② **Run-on time(120s)**: the time that starts as soon as the presence of a person is no longer detected. If the presence of a person is detected again during the run-on time the run-on time is restarted from zero. If no presence is detected during the run-on time the fade time is started as soon as the run-on time expires.
- ◆ ③ **Fade time(32s)**: the time during which the luminous intensity is faded from the presence value to the absence value.
- ◆ ④ **Switch-off delay (Never Off)**: the time during which the absence value is held before the lighting is switched off. Depending on the profile selected the switch-off delay may have different values or may not be defined.
- ◆ ⑤ **Absence value(default: 10 %)**: the luminous intensity when there is no person present.
- ◆ ⑥ **Presence value (default: 100 %)**: the luminous intensity when persons are present.

◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/10/20

Remark:The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

Tel: +86-0757-86256822, +86-0757-86256831
E-mail: sales@eaglerise.com
Website : <https://lighting.eaglerise.com>



EAGLERISE



Manual