

## 80W DALI + PUSH+NFC Dimming power supply



■ Approve



### Features

- Class I, Non-Isolated design, Built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor : > 0.95
- Efficiency : 92%
- Adjustable Output Current with NFC
- Support DALI-2, Push Dimming
- Constant Lumen Output (CLO)
- 5 years warranty

### Applications

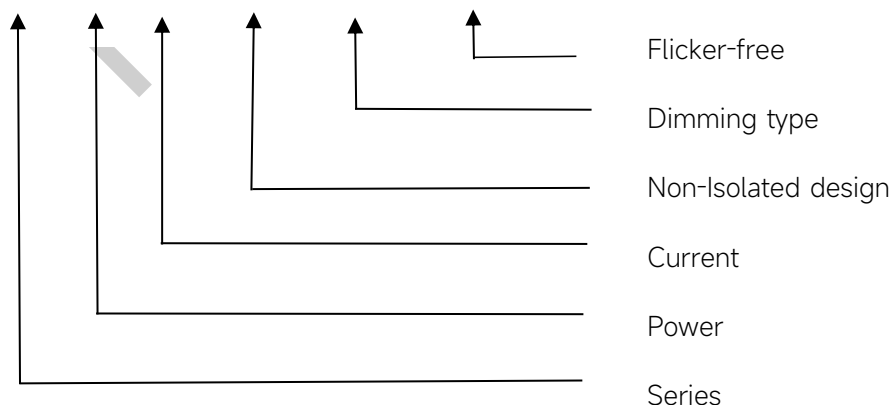
- Linear light

### ◆ Description

FMS-80-700 N-S DALI-2 LN-F is a 80W constant current LED driver that operates from 198-264Vac input with 150 to 700mA output current and a forward voltage range from 70 to 300Vdc. The output current is adjustable by NFC. 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-80-700 N-S DALI-2 LN-F



## ◆ Specification

Output	Constant Current	150mA	...	350mA	...	700mA
	Voltage Range	70-300VDC	...	70-228VDC	...	70-114V
	Unload voltage Max.	<400VDC				
	Current Accuracy	±5%				
	Output LF current ripple(≤120Hz)	±3%				
	SVM	≤0.4				
	P <sub>st</sub>	≤1				
	Efficiency(Typ.)	92%@Full Load,230V				
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	0.5A max.				
	Start-up time	< 0.8S				
	Switch over time(AC/DC mode)	< 0.4S				
	No Load Power	≤0.5W				
	Standby Power	≤0.5W				
	Network standby power	≤0.5W				
	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	<400VDC				
		YES/Latch off				
Environment	Short circuit Protection	YES/Latch off				
	Over Temperature Protection	YES/Auto Resume				
	Operating Temperature	-25°C~+60°C				
	Humidity	20%-90%RH				
	T <sub>c</sub>	85°C				
	Storage Temperature	-25°C~+60°C				
	Lifetime	>50000h,@T <sub>c</sub> =80°C				
	Ripple	≤25dB(A)@20cm				

Surface	Dimension	280 x 30 x 21(LXWXH)mm
	material	metal case
Standards	Safety	IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13; EN62384;
	EMC	EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-2,3,4,5,6,8,11, EN61547;EN61000-4-5
	Energy Efficiency	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Others	ErP	EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
DALI performance	EN 62386-101 (DALI-2) EN 62386-102 (DALI-2) EN 62386-207 (DALI-2,including part251,252,253)	
Note	<p>1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple &amp; Noise are measured at 20MHz of bandwidth.</p> <p>3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.</p> <p>4.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.</p> <p>5.All Astralux 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.</p>	

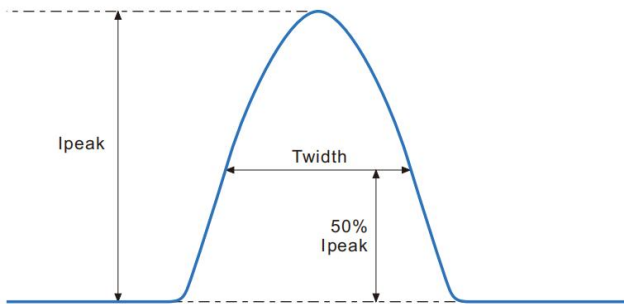
## ◆ Parameter

Number	Output			
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
*1	150mA	70-300VDC	400	45
2	...	...	...	...
3	266mA	70-300VDC	400	79.8
4	...	...	...	...
5	350mA	70-228VDC	400	79.8
6	...	...	...	...
7	700mA	70-114VDC	400	79.8

\* Factory default

## ◆ Inrush Current

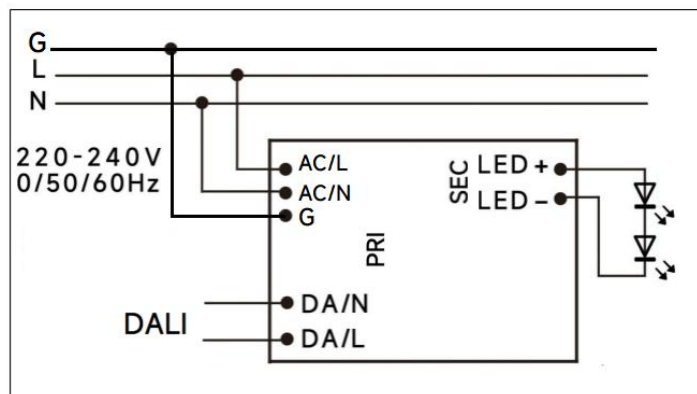
$I_{peak}$	Twidth	B10	B16	B20	C10	C16	C20
31.2A	240μs	10pcs	17pcs	21pcs	16pcs	25pcs	32pcs



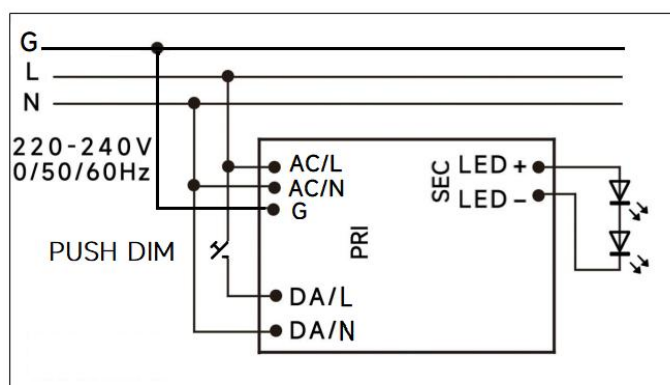
### Remarks:

- 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.

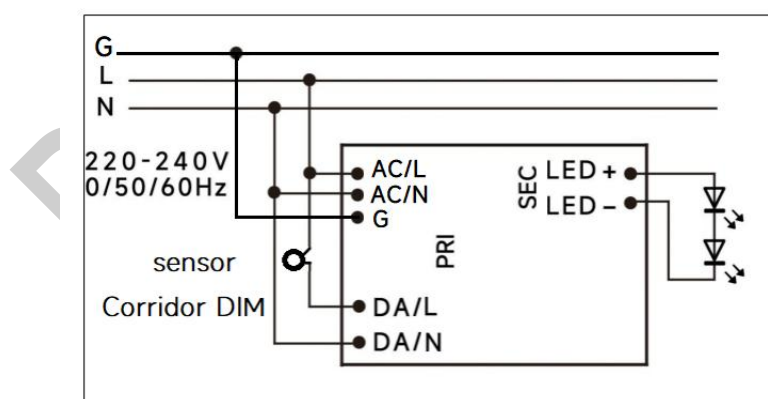
## ◆ Wiring diagram



DALI dimming application

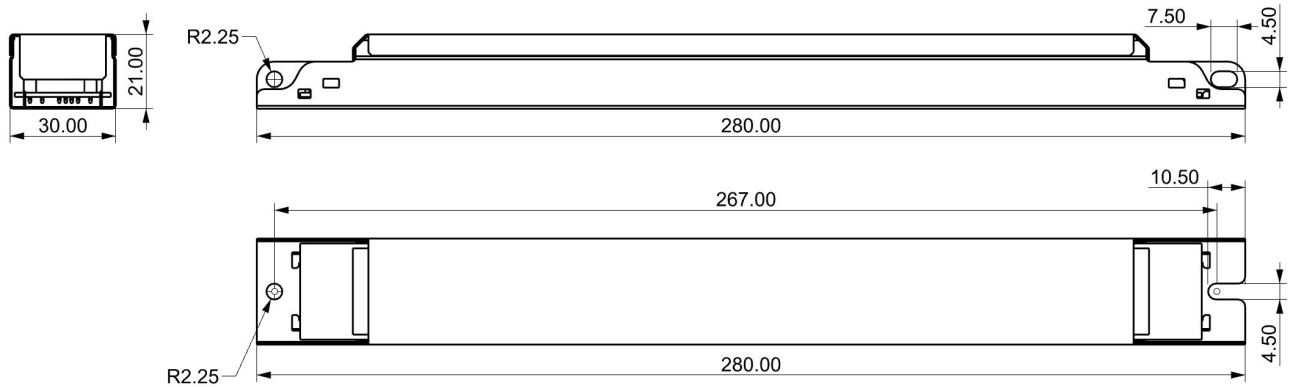


PushDIM dimming application



Corridor DIM dimming application

## ◆ 2D diagram



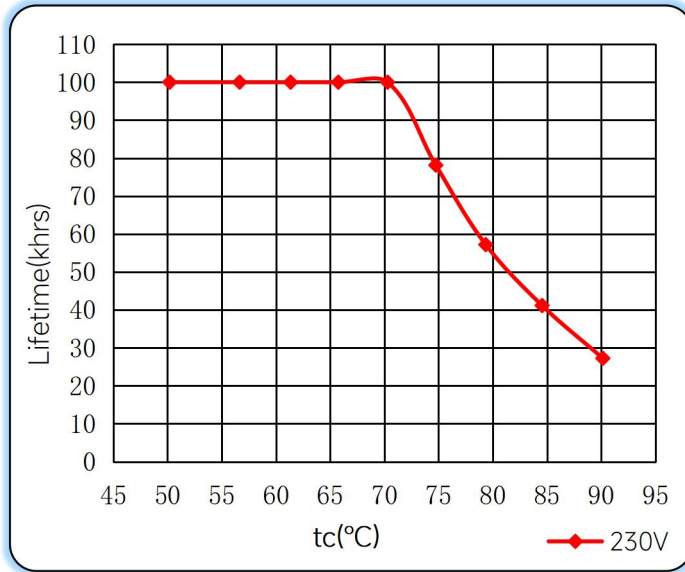
## ◆ Wiring & Connections

Specification item		Value (Unit )
Input	Input wire cross-section	0.5...1.5 mm <sup>2</sup>
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm <sup>2</sup>
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

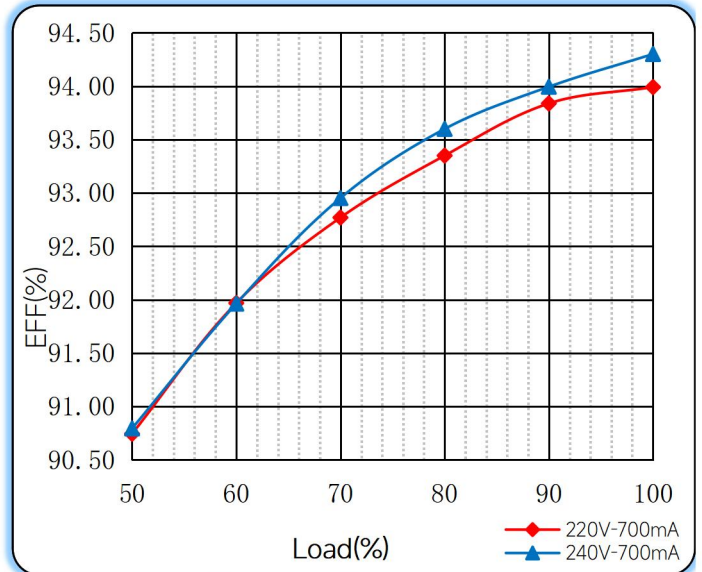
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

# ◆ Curve for FMS-80-700 N-S DALI-2 LN-F, $I_o=700\text{mA}$

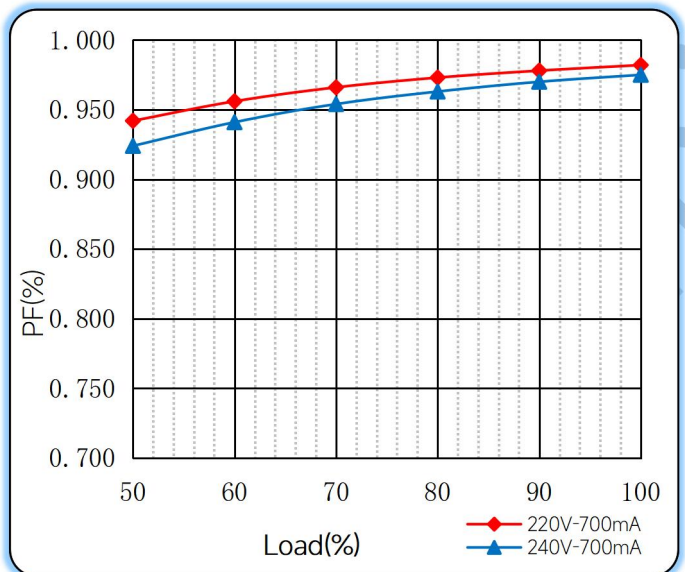
Lifetime vs. Temperature Curve



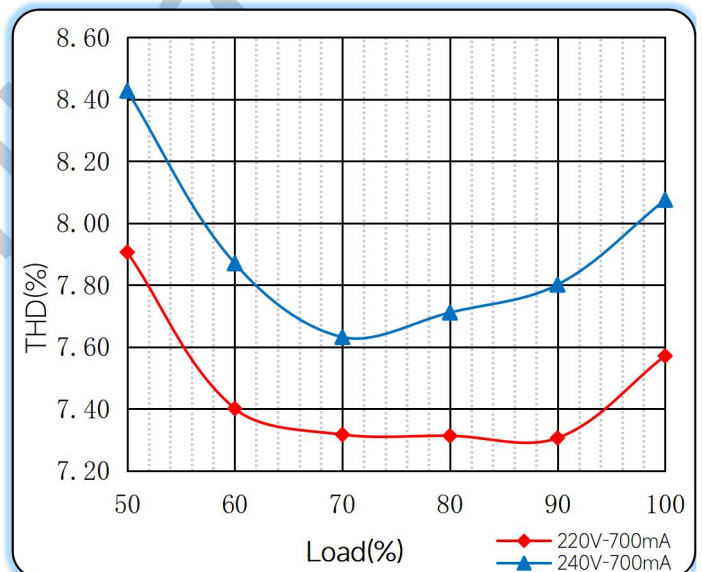
Efficiency vs. Load



Power Factor Characteristics



THD vs. Load



## ◆ Push dimming operation

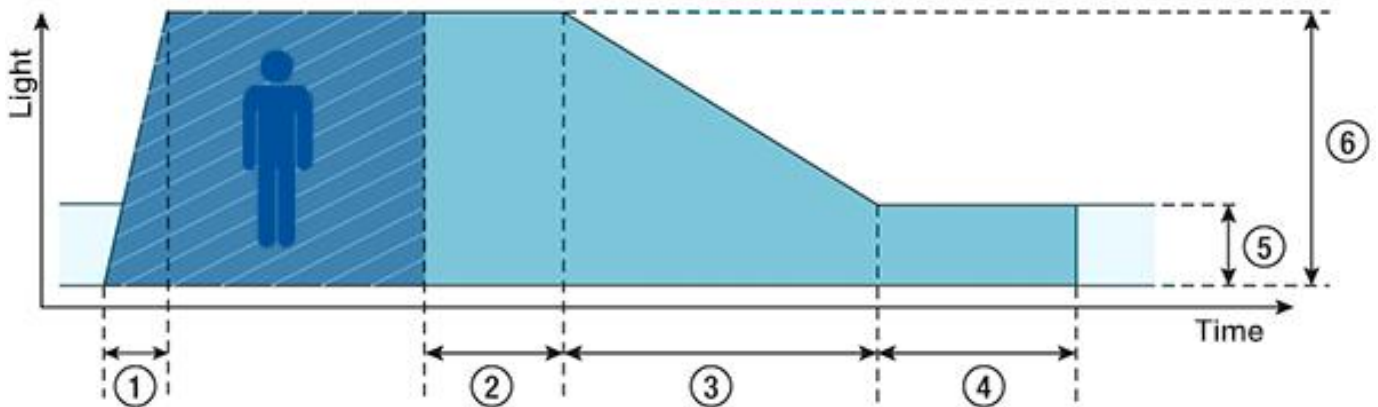
Action	Action duration	Function
Short push	<0.5s	Turn on/off
Short push twice	<0.5s	LED on: Save current brightness level LED off: Delete saved level and turn on at 100% brightness
Short push five times	<3s	Quit Corridor mode
Long push	0.5-14s	Dimming up or down
Long push	15s-2mins	Sync all LEDs to be 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.

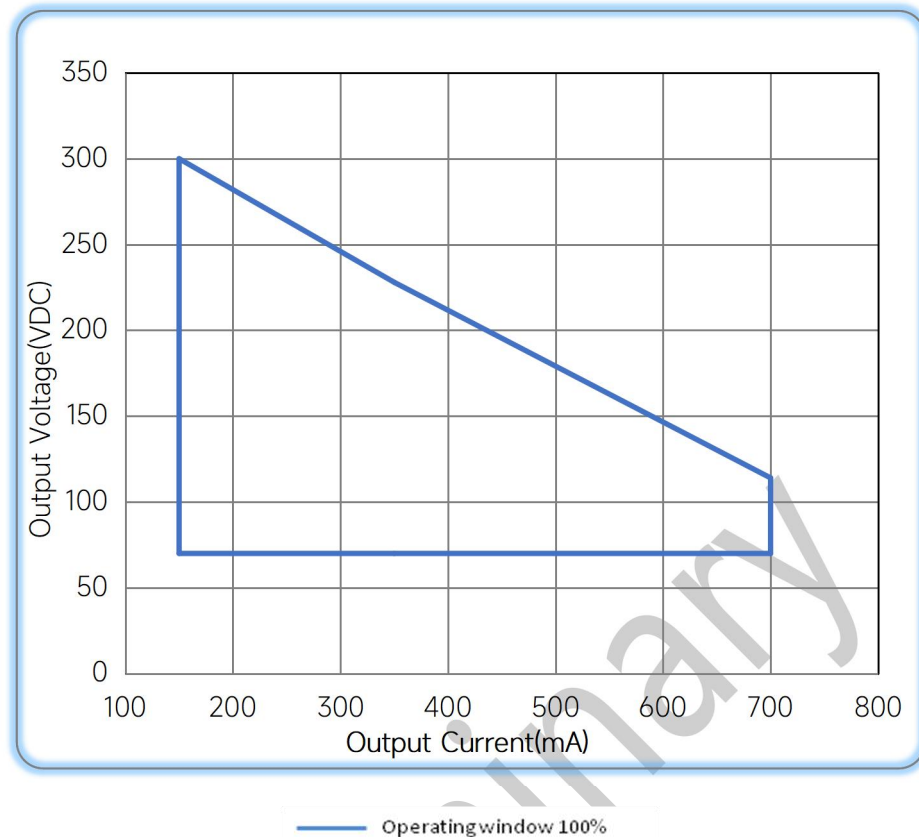


## ◆ Corridor mode



- ◆ **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	2024/01/12
Voltage Range	50-350V	70-350V	B	2024/06/07
Voltage Range	70-350V	70-300V	C	2024/07/20

Remark: The final interpretation of the contents of the specification belongs to Astralux.

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