42W 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

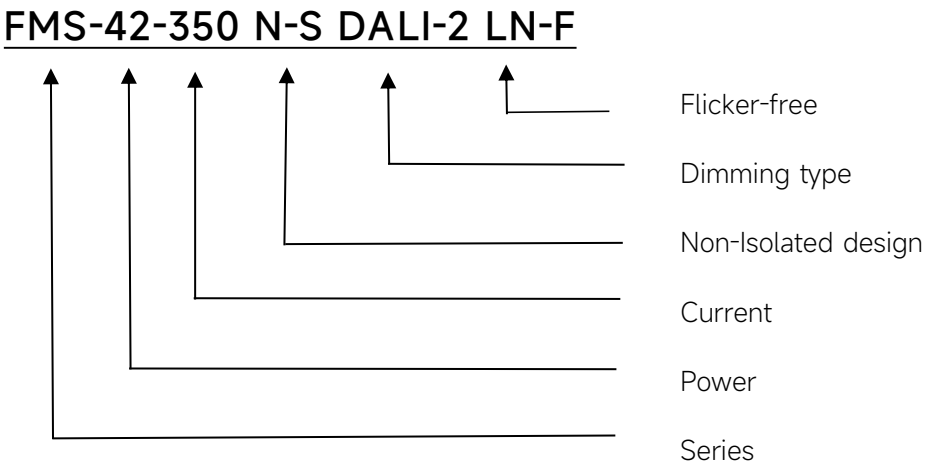
Applications

- Linear light

◆ Description

FMS-42-350 N-S DALI-2 LN-F is a 42W constant current LED driver that operates from 198-264Vac input with 80 to 350mA output current and a forward voltage range from 50 to 220Vdc. 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



◆ Specification

Output	Constant Current	80mA	...	200mA	...	350
	Voltage Range	50-220VDC	...	50-210VDC	...	50-120V
	Unload voltage Max.	<250VDC				
	Current Accuracy	±5%				
	Output LF current ripple(≤120Hz)	±3%				
	SVM	≤0.4				
	P_{st}	≤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	0.3A 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	<250VDC				
		YES/Latch off				
	Short circuit Protection	YES/Latch off				
	Over Temperature Protection	YES/Auto Resume				
Environment	Operating Temperature	-25℃~+60℃				
	Humidity	20%-90%RH				
	Tc	75℃				
	Storage Temperature	-25℃~+60℃				
	Lifetime	>50000h,@Tc=75℃				
	Ripple	≤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;EN61347- 1, EN61347-2-13; EN62384;
	EMC	GB/T17743, GB17625. 1;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	1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25℃ of ambient temperature. 2.Ripple & Noise are measured at 20MHz of bandwidth. 3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered. 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. 5.Unload voltage Max. is measured 5 seconds after power-on.	

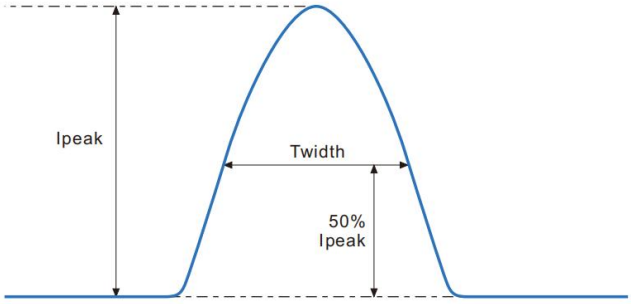
◆ Parameter

Number	Output			
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
*1	80mA	50-220VDC	250	17.6
2	...	...	...	...
3	190mA	50-220VDC	250	42
4	...	...	...	...
5	200mA	50-210VDC	250	42
6	...	...	...	...
7	350mA	50-120VDC	250	42

* Factory default

◆ Inrush Current

I^{peak}	Twidth	B10	B16	B20	C10	C16	C20
20.3A	**268μs**	14pcs	23pcs	29pcs	24pcs	39pcs	49pcs

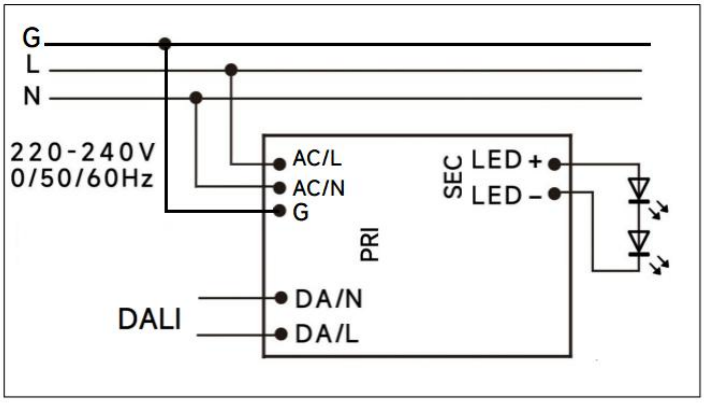


Remarks:

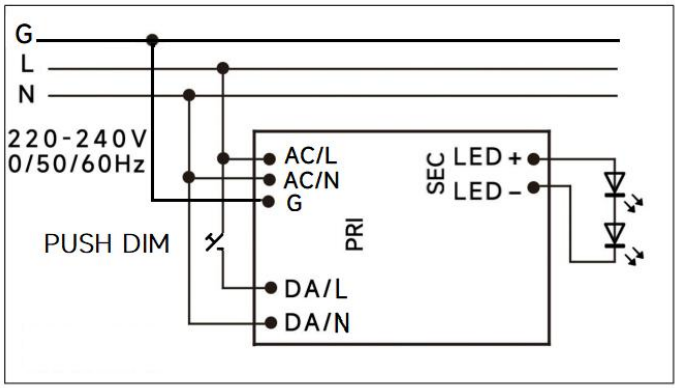
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.

2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

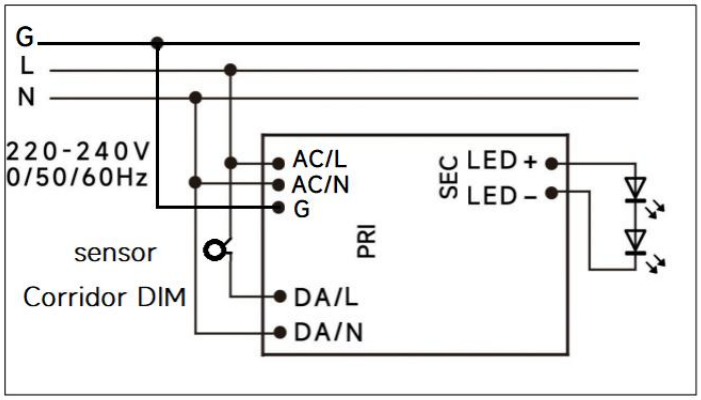
◆ Wiring diagram



DALI dimming application

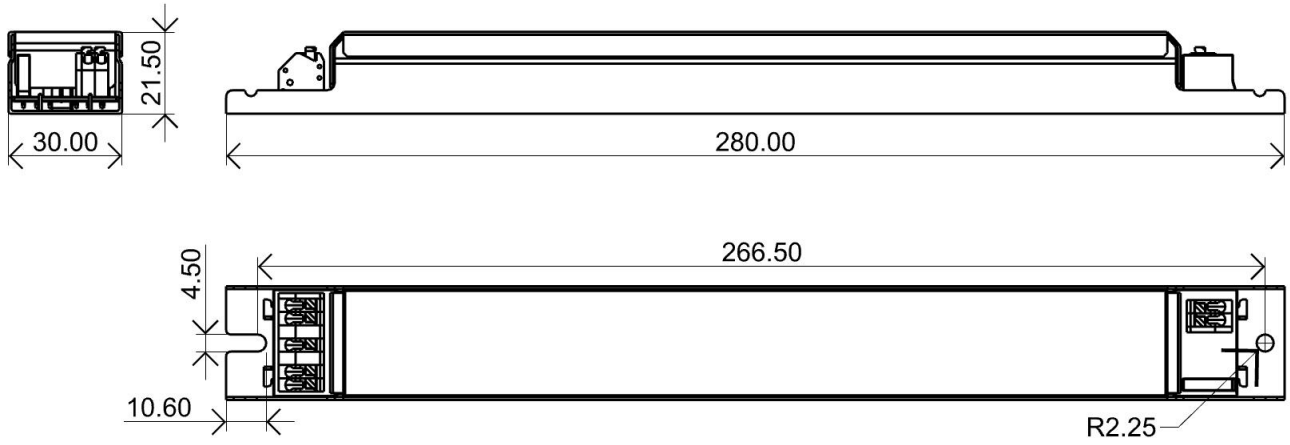


PushDIM dimming application



Corridor DIM dimming application

◆ 2D diagram



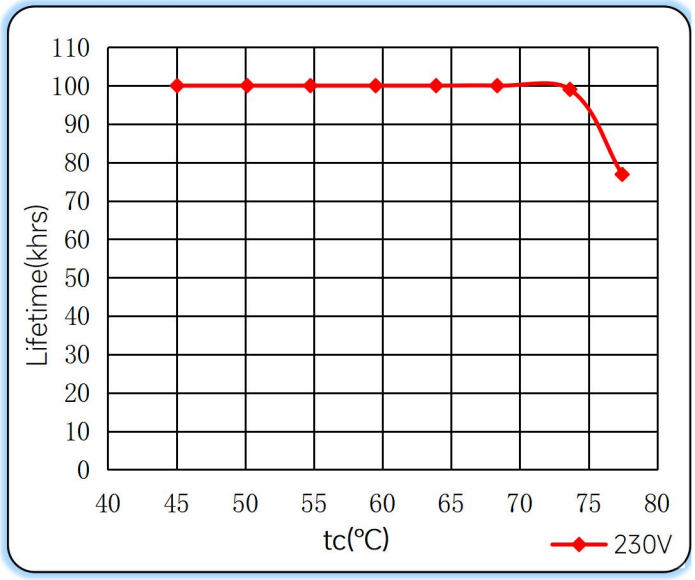
◆ Wiring & Connections

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

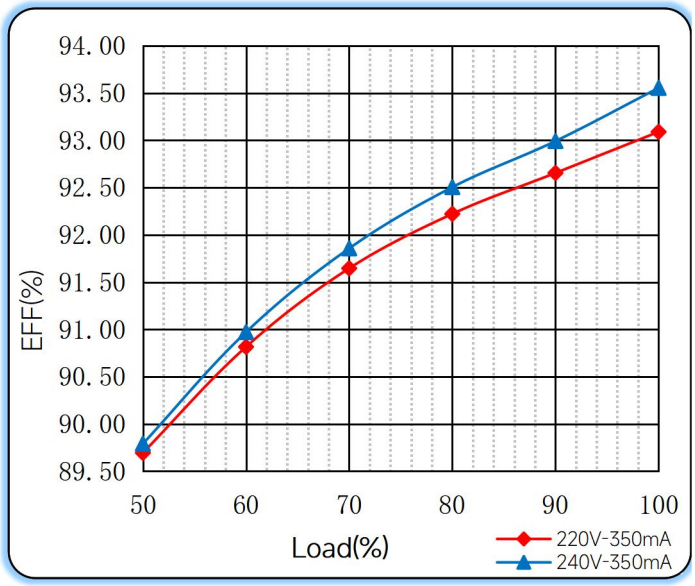
Note:Solid wire is risky to use on an angled terminal.Stranded wire is recommended for this kind of use.

◆ Curve for FMS-42-350 N-S DALI-2 LN-F, Io=350mA

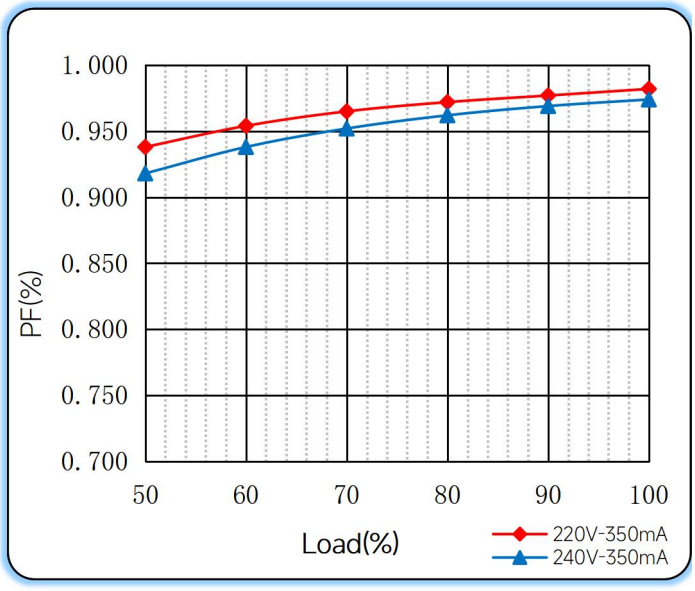
Lifetime vs. Temperature Curve



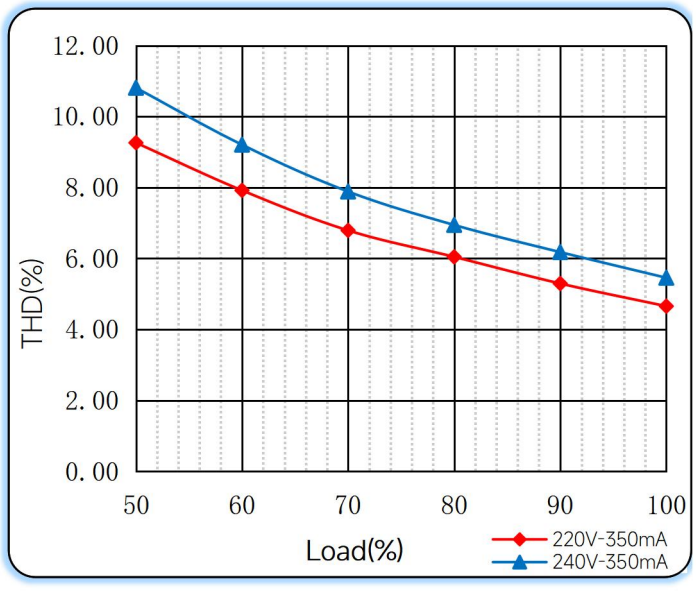
Efficiency vs. Load



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.

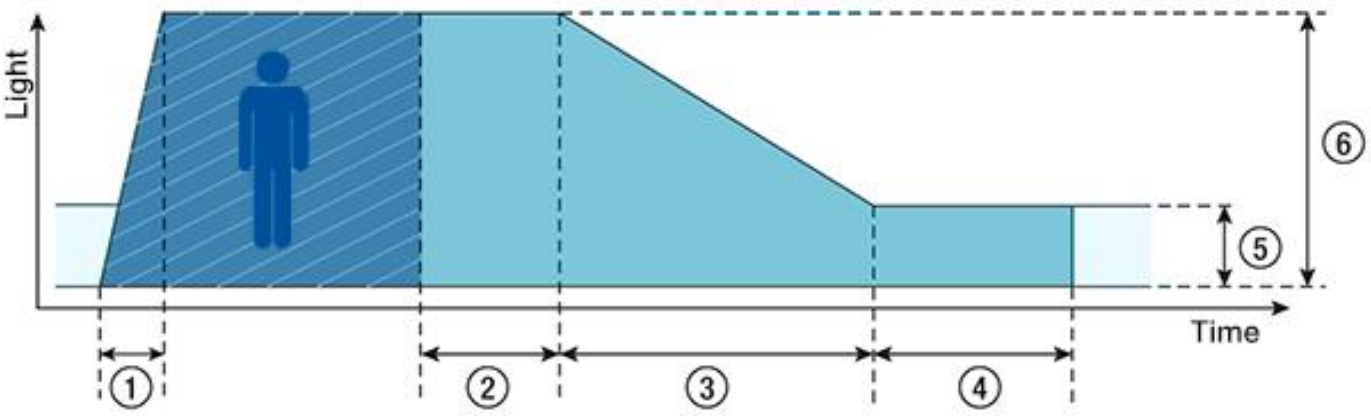
Note:

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

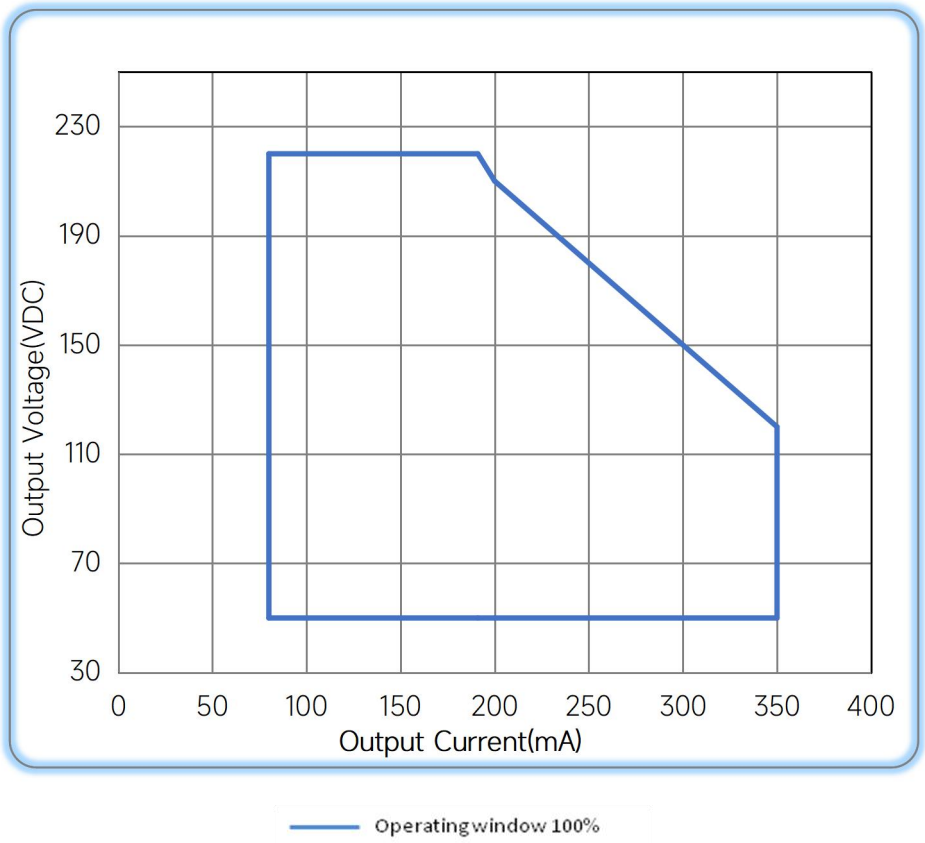
3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ Corridor mode



- ①Fade-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.
- ②Run-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.
- ③Fade time(32s): the time during which the luminous intensity is faded from the presence value to the absence value.
- ④Switch-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.
- ⑤Absence value(default: 10 %): the luminous intensity when there is no person present.
- ⑥Presence value (default: 100 %): the luminous intensity when persons are present.

◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/01/12

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

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