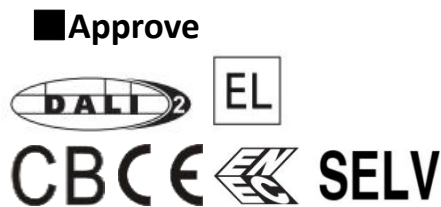


## 35W DALI + PUSH+NFC Dimming power supply



### Features

- Class I, Non-Isolated design, built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: >0.95
- Efficiency : 90%
- Adjustable Output Current with NFC
- Support DALI-2, Push Dimming
- DALI maintainace(Part 251,252,253)
- 5 years warranty

### Applications

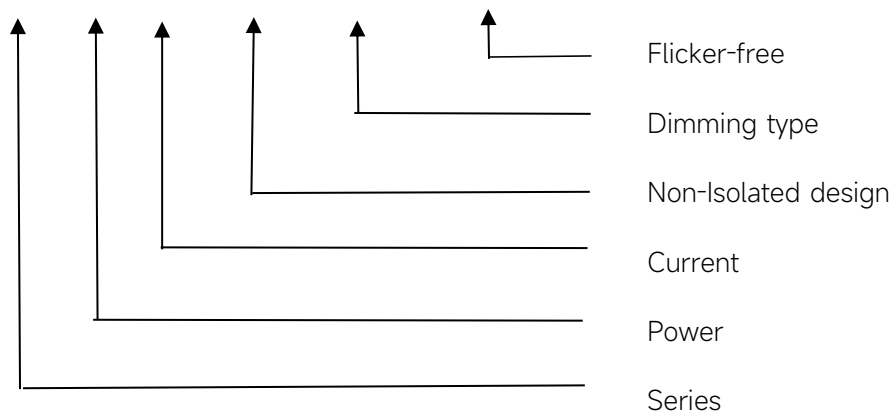
- Linear light

### ◆ Description

FMS-35-350 N-S DALI-2 LN1 is a 35W 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 16 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-35-350 N-S DALI-2 LN1



## ◆ Specification

Output	Constant Current	80-350mA
	Voltage Range	50-220VDC
	Unload voltage Max.	<250V RMS
	Current Accuracy	±5%
	Output HF current ripple(≥1KHz)	±15%
	Output LF current ripple(≤120Hz)	±3%
	SVM	≤0.4@Full Load
	Pst	≤1@Full Load
	Efficiency(Typ.)	90%
Input	Rated input voltage	220-240VAC
	Range of input voltage	198-264VAC
	Range input voltage(DC)	198-280VDC
	Frequency(Hz)	0/50/60 Hz
	Displacement factor	>0.95
	Power Factor(Typ.)	>0.95
	Input Current	0.23A max.
	Start-up time	< 0.7S
	No Load Power	≤0.5W
	Standby Power	≤0.5W
	Network standby power	≤0.5W
	THD (Typ.)	10%
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 YES/Latch off
	Short circuit Protection	YES/Latch off
	Over Temperature Protection	YES/Auto Resume
Environment	Operating Temperature	-25°C~+60°C
	Humidity	20%-90%RH
	Tc	80°C
	Storage Temperature	-25°C~+60°C
	Lifetime	>50000h,@Tc=75°C

Surface	Dimension	280 x 30 x 16(LXWXH)mm
standards	EN 61347-1; EN61347-2-13; EN62384; EN55015; EN61000-3-2 ; EN61000-3-3; EN 61547;	
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 by using a 300mm twisted pair-wire terminated with a 0.1uF &amp; 47 uF parallel capacitor.</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>	

## ◆ Parameter

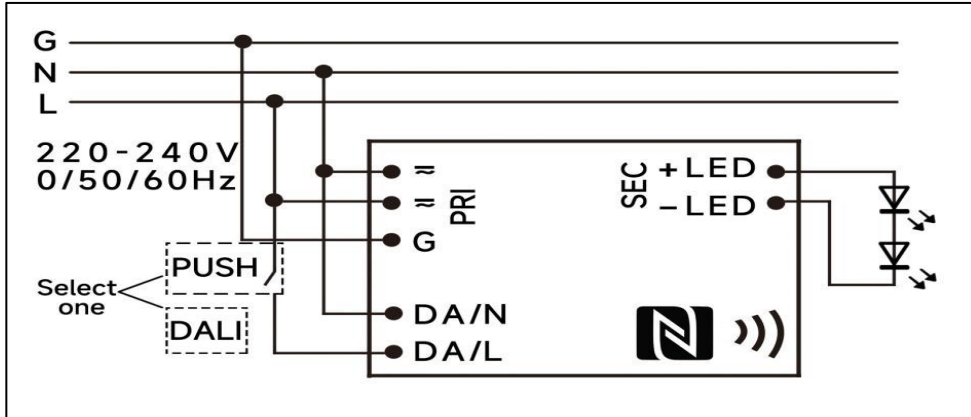
Number	Output			
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
*1	80mA	50-220VDC	250	17.6
2	...	...	...	...
3	159mA	50-220VDC	250	34.98
4	...	...	...	...
5	350mA	50-100VDC	250	35

\* Factory default

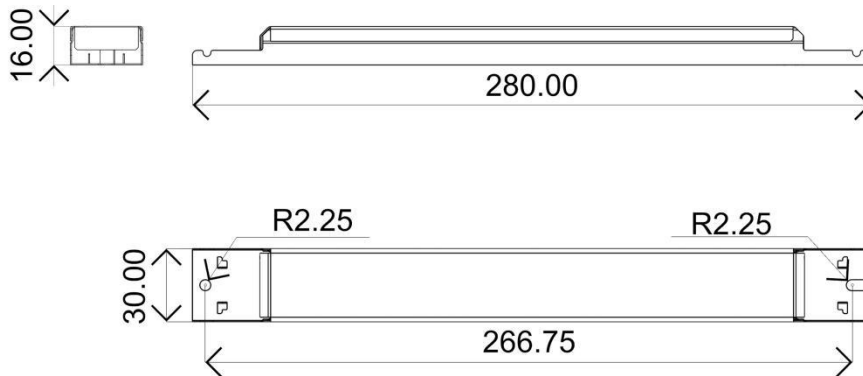
## ◆ Circuit Breaker

I <sub>peak</sub>	T <sub>width</sub>	B10	B16	B20	C10	C16	C20
27.6A	168μs	17pcs	28pcs	35pcs	29pcs	47pcs	59pcs

◆ **Wiring diagram**



◆ **2D diagram**

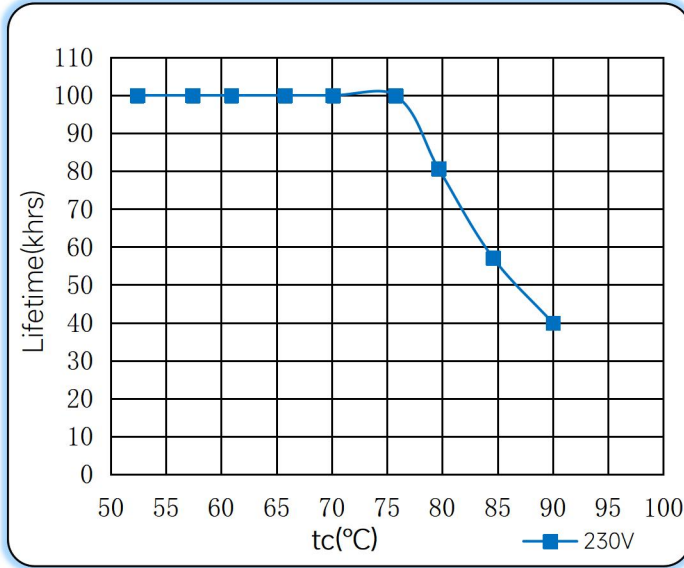


◆ **Wiring & Connections**

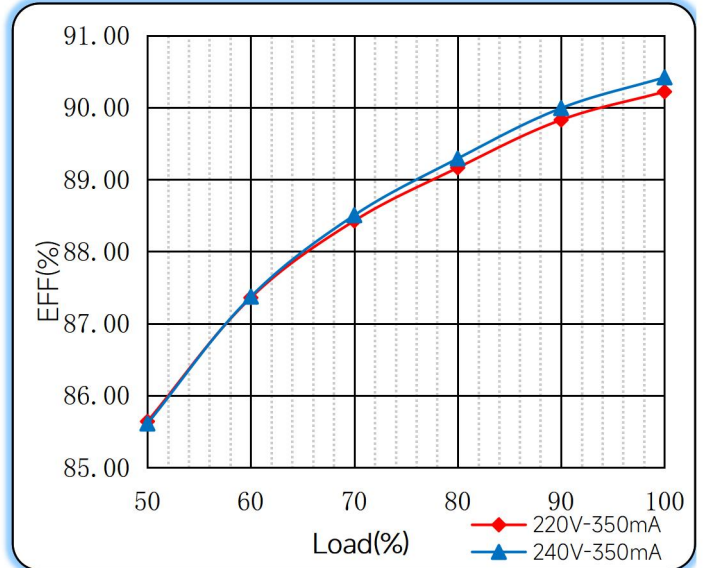
Specification item		Value (Unit )
Input	Input wire cross-section	0.5...1.5 mm <sup>2</sup>
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm <sup>2</sup>
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

## ◆ Curve for FMS-35-350 N-S DALI-2 LN1, $I_o=350mA$

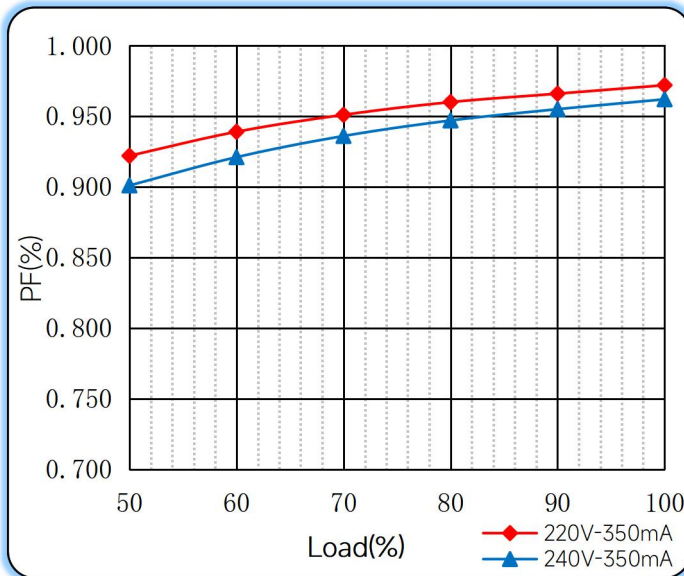
### Lifetime vs. Temperature Curve



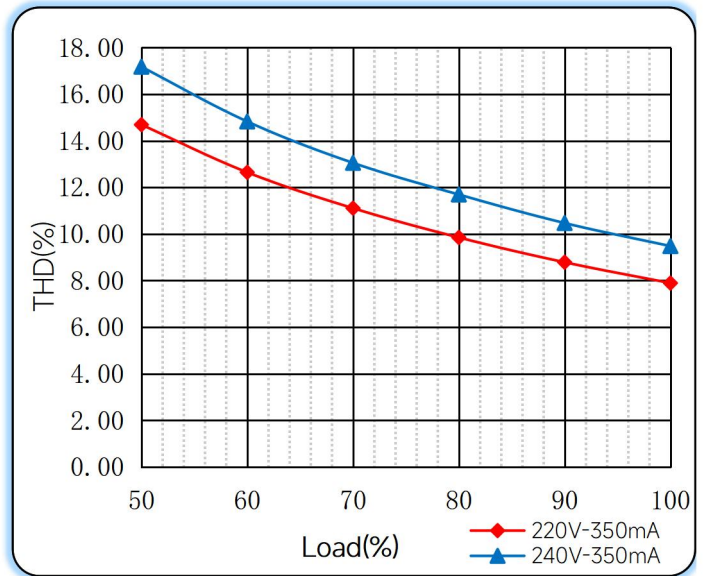
### Efficiency vs. Load



### Power Factor Characteristics



### THD vs. Load



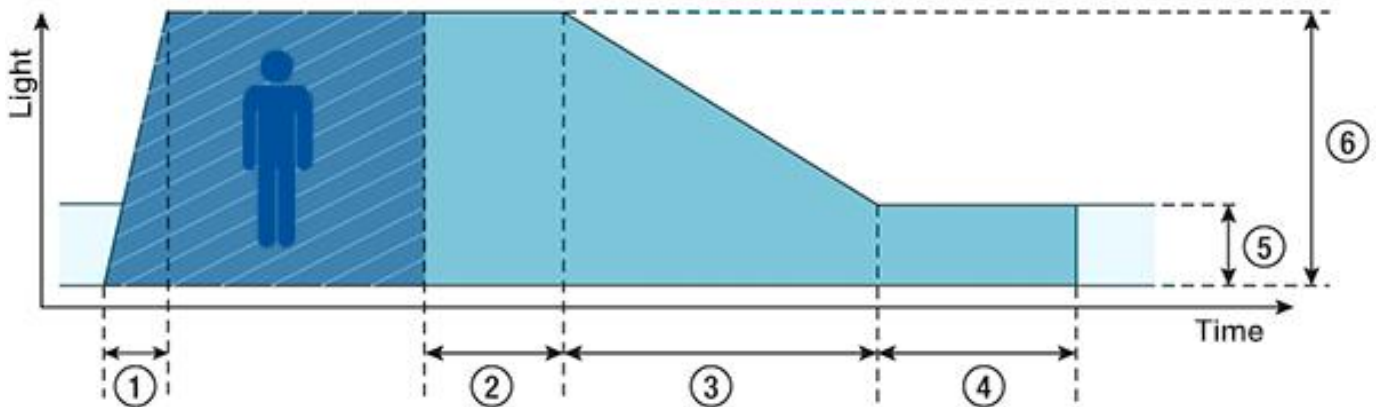
## ◆ Push dimming operation

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:

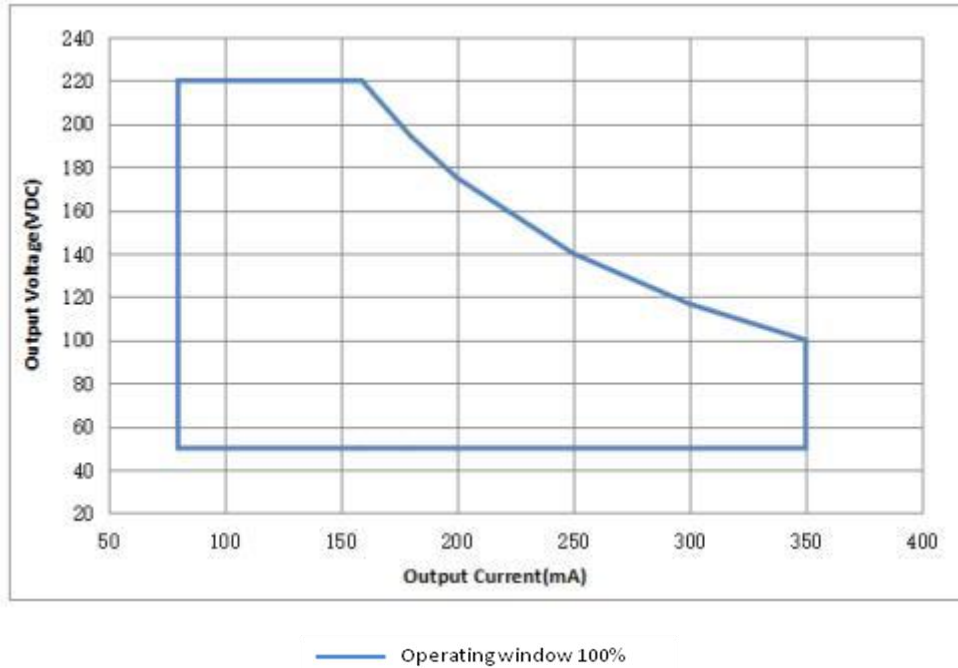
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

## ◆ Corridor mode



- ◆ 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	2022/09/09
Tc	85°C	80°C	B	2022/11/09
Circuit Breaker and Curve		Added		
SVM	≤0.15@Full Load	≤0.4@full load		
Pst	≤0.15@Full Load	≤1@Full Load		
update software			C	2024/01/22

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Manual