

45W DALI+PUSH Dimming power supply



■ Approve



Features

- Class II, SELV, Independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor: > 0.95
- Efficiency: ≥86%
- 5 years warranty
- Support DALI-2, Push Dimming

Applications

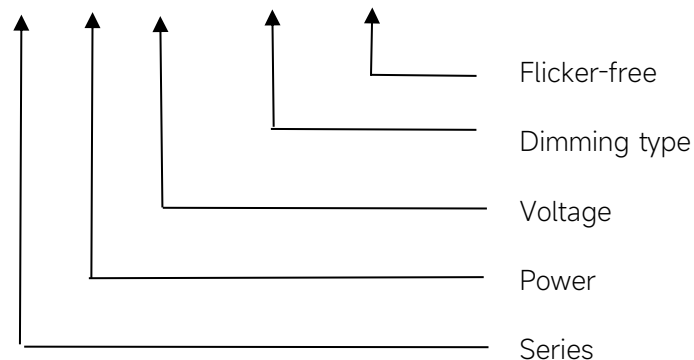
- LED strips

◆ Description

LS-45-24 DALI2 LI is a 45W constant Voltage LED driver that operates from 176-264Vac input with 24V output voltage. With it's compact dimensions from 187 x 45 x 30.5 mm. It is easy to integrate in LED strips products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

LS-45-24 DALI2 LI



◆ Specification

Output	Constant Voltage	24VDC
	Current Range	0-1.88A
	Voltage Accuracy	±5%
	Output HF current ripple(≥1KHz)	±1%
	Output LF current ripple(≤120Hz)	±1%
	SVM	≤0.4
	Pst	≤1
	Efficiency(Typ.)	86%
Input	Rated input voltage	220-240VAC
	Range of input voltage	176-264VAC
	Rated input voltage(DC)	176-280V
	Frequency(Hz)	0/50/60 Hz
	Displacement factor	≥0.9
	Power Factor	0.95
	Input Current max	0.35A MAX
	Start-up time	< 0.5 S
	No Load Power	≤0.5W
	Standby Power	≤0.5W
	Network standby power	≤0.5W
	THD (Typ.)	< 25%
Dimming	Dimming	YES
	Dimming mode	DALI-2 IEC 62386-101,102,207 & Push Dimming (Corridor Function)
	Dimming depth	1%
	Dimming current range	1-100%
Protection	Over Load Protection	105-150% rated output power YES/Auto Resume
	Over Voltage Protection	> 25.2VDC Protection type: Auto Resume
	Short circuit Protection	YES/Auto Resume
	Over Temperature Protection	YES/Auto Resume
Environment	Operating Temperature	-20°C...+50°C
	Humidity	20%-90%RH
	Tc	85°C
	Storage Temperature	-30°C...+65°C
	Life time	≥50,000h@Tc=75°C, full load
Surface	Dimension	187x45x30.5mm(LXWXH)mm
Standards	IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN61347- 1;EN61347-2- 13, EN62384;EN55015	
Others	ErP	EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863

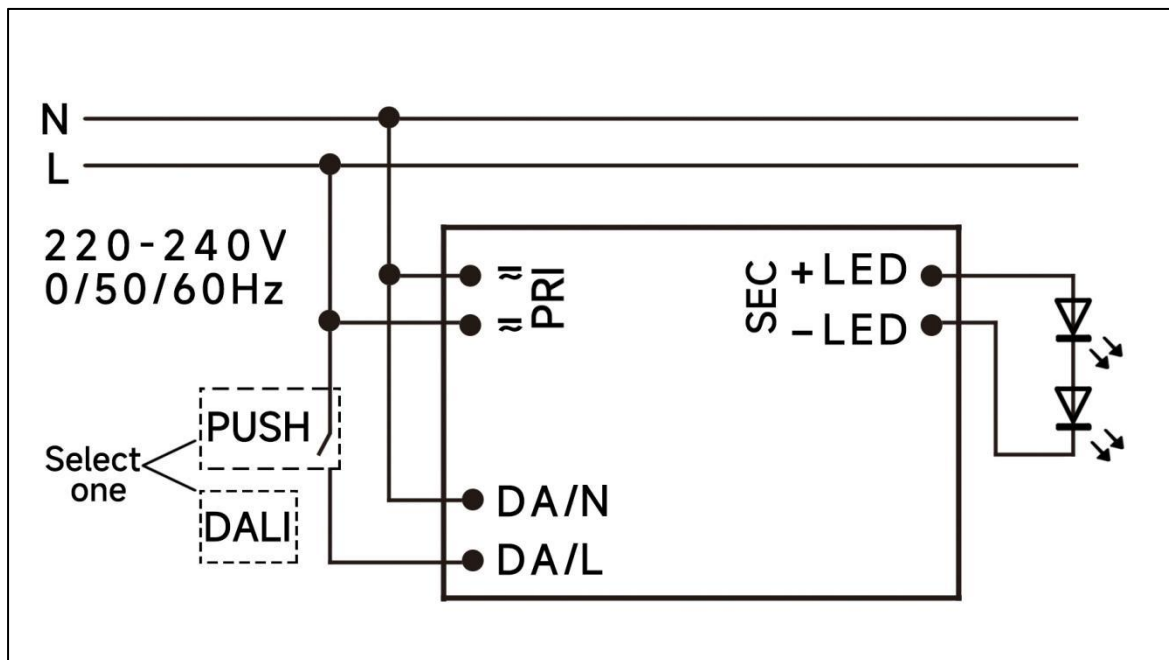
Note

- 1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.
- 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.
- 3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.

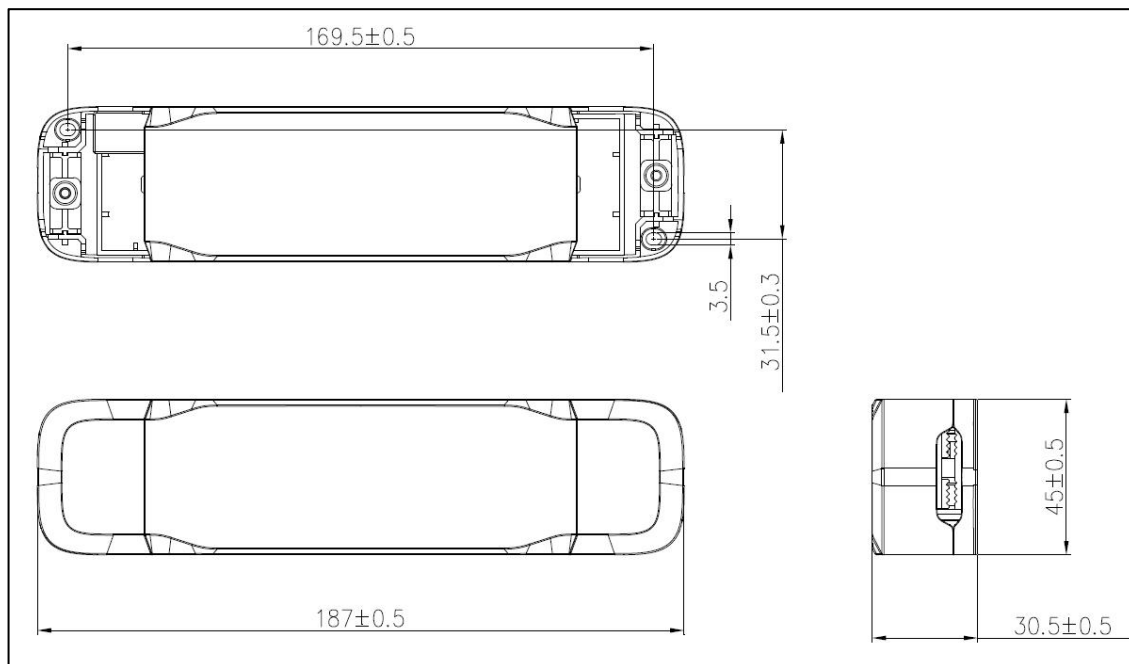
◆ Circuit Breaker

Ipeak	Twidth	B10	B16	B20	C10	C16	C20
29.1A	215.4μs	13pcs	20pcs	26pcs	21pcs	34pcs	43pcs

◆ Wiring diagram



◆ 2D diagram

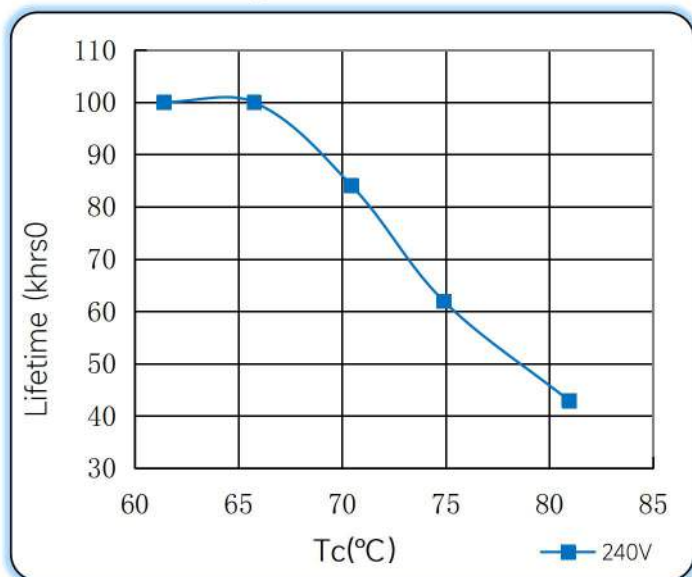


Wiring & Connections

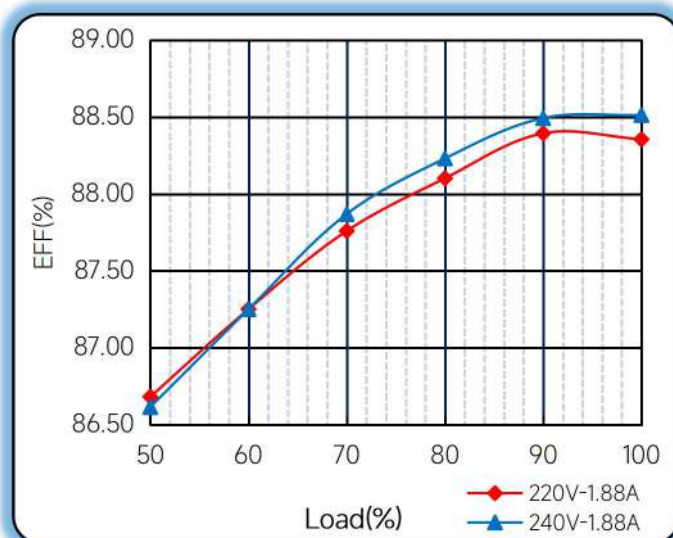
Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

◆ Curve for LS-45-24 DALI2 LI

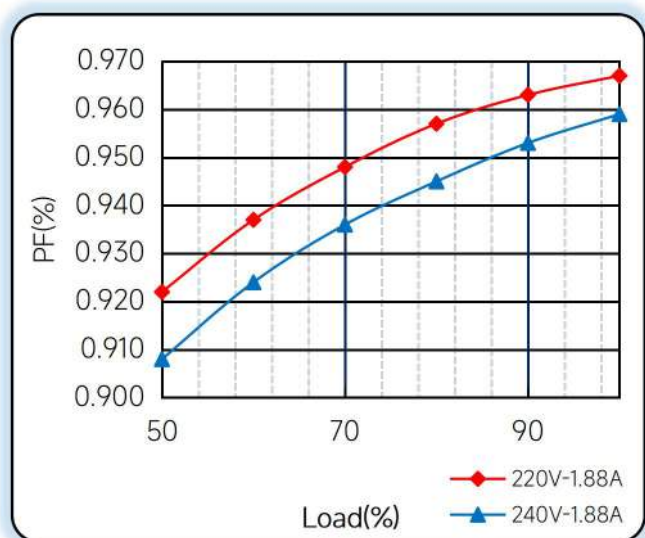
Lifetime vs. Temperature Curve



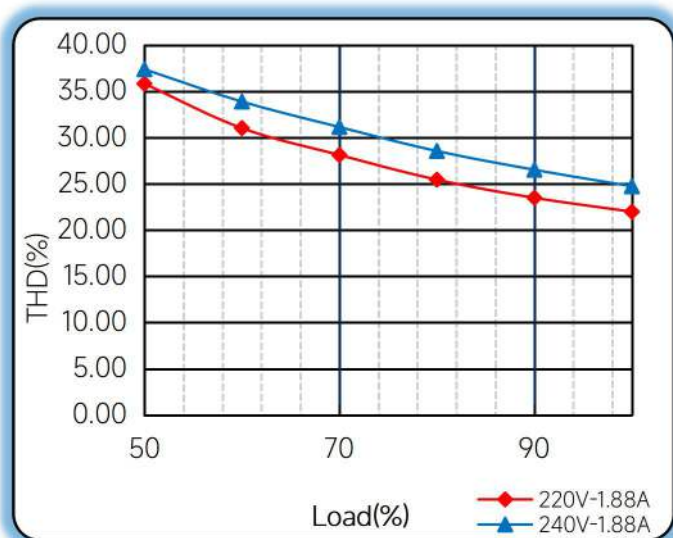
Efficiency vs. Load



Power Factor Characteristics



THD vs. Load



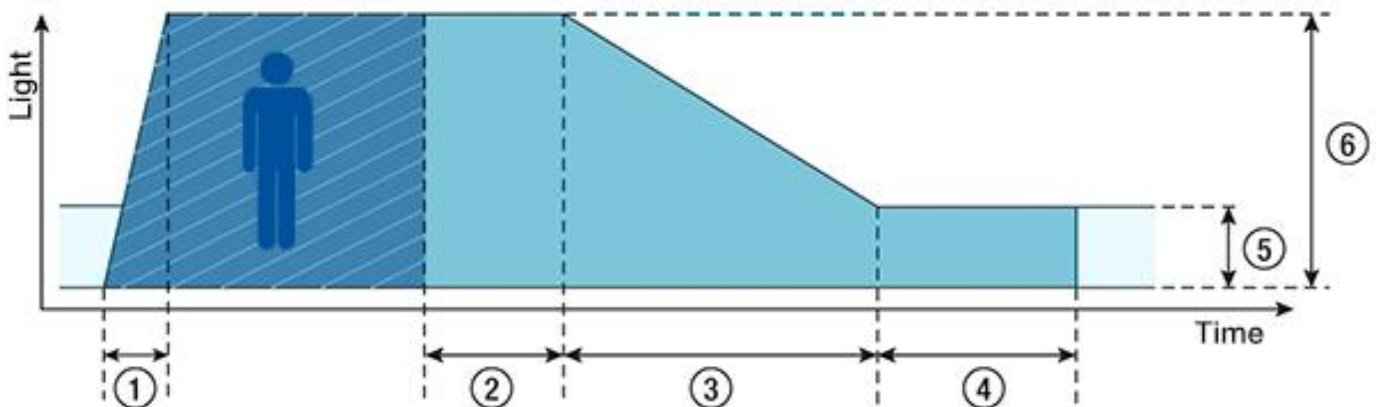
◆ Push dimming operation

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	<0.5s	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:

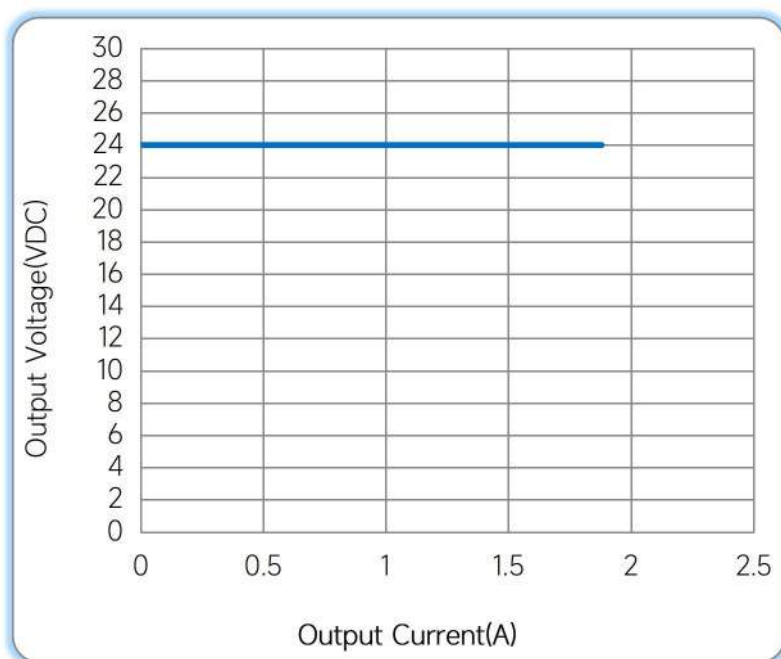
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ Corridor mode



- ◆ **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.
- ◆ **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.
- ◆ **Fade time(32s):** the time during which the luminous intensity is faded from the presence value to the absence value.
- ◆ **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.
- ◆ **Absence value(default: 10 %):** the luminous intensity when there is no person present.
- ◆ **Presence value (default: 100 %):** the luminous intensity when persons are present.

◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/02/15

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Manual