45W constant Voltage-LS Series



Features

- Class II，SELV，Independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OTP/OVP
- Power Factor：≥0.95（Typ.）
- Efficiency：≥87%（Typ.）
- 5 years warranty

Applications

- LED strips

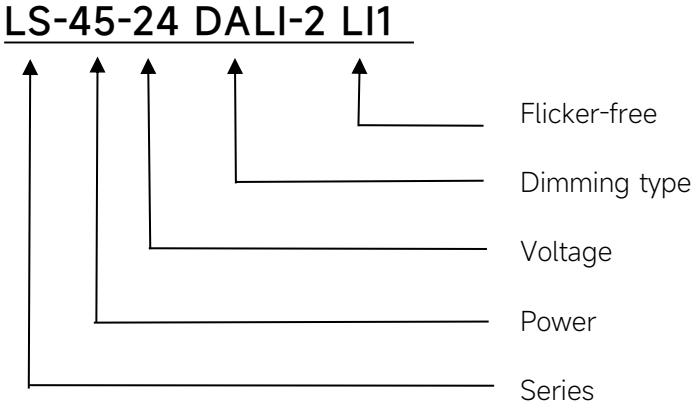
■Approve

Note:Non IC

◆ Description

LS-45-24 DALI-2 LI1 is a 45W constant voltage LED driver that operates from 198-264Vac input with 24V output voltage. With it's compact dimensions from 168 x 38 x 30 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



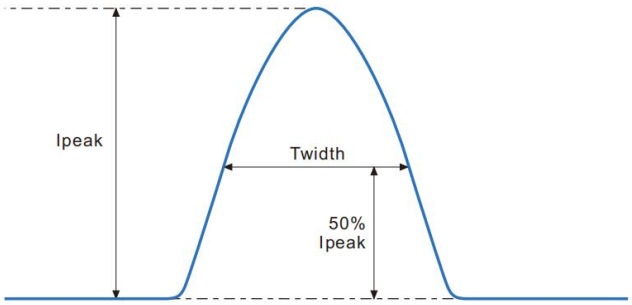
◆ Specification

Output	Constant Voltage	24VDC
	Current Range	0-1.88A
	Voltage Accuracy	±5%
	Output HF current ripple(≥1KHz)	±3%
	Output LF current ripple(≤120Hz)	±1%
	SVM	≤0.4
	Pst	≤1
	Efficiency(Typ.)	≥87%@Full load,230V
	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
	Range input voltage(VDC)	176-280VDC
	Frequency(Hz)	0/50/60 Hz
	Displacement factor	≥0.9
	Power Factor	0.95@full load, 230Vac
	Input Current max	0.3A @full load, 198Vac
	Start-up time	＜0.8S
	Switch over time(AC/DC mode)	＜0.4S
	Standby Power	≤0.5W, @DIM TO OFF，230VAC
	Network Standby Power	≤0.5W, @DIM TO OFF，230VAC
	THD (Typ.)	＜10% @240Vac, Full load
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	105-150%
		YES/Auto Resume
	Short circuit Protection	YES/Auto Resume
	Over Temperature Protection	YES/Auto Resume
capability	Surge capability (L-N)	1KV
	Surge capability (L/N-Ground)	2KV
Environment	Operating Temperature	-20℃~+45℃
	Humidity	20%-90%RH
	Tc	85℃
	Storage Temperature	-30℃~+85℃
	Life time	＞50000h@Tc=75℃,230VAC,full load

	Ripple & Noise	≤25dB(A)@20cm
Surface	Dimension	168X38X30(LXWXH)mm
	material	PC
Standards	Safety	IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN61347- 1, EN61347-2- 13, EN62384;GB19510. 1, GB19510. 14;S/NZS 61347- 1, AS/NZS 61347-2- 13
	EMC	EN55015, EN61000-3-2, EN61000-3-3, EN61547;GB/T17743;GB17625. 1;EN 62493
	Energy Efficiency	Erp2.0 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 240VAC input , full load and 25℃ 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.Switch and dimmer are not recommended to connect between this product output and luminaries. 4.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.	

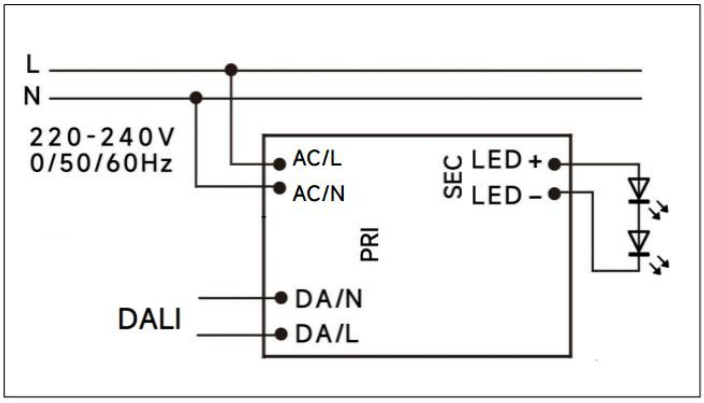
◆ Inrush Current

I^{peak}	Twidth	B10	B16	B20	C10	C16	C20
24.4A	**198μs**	16pcs	27pcs	33pcs	26pcs	42pcs	53pcs

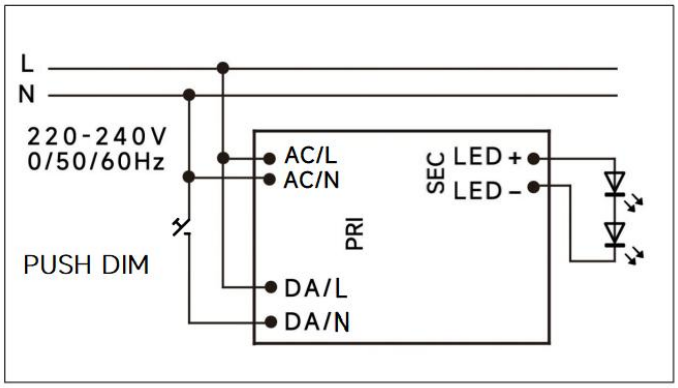


Remarks:
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

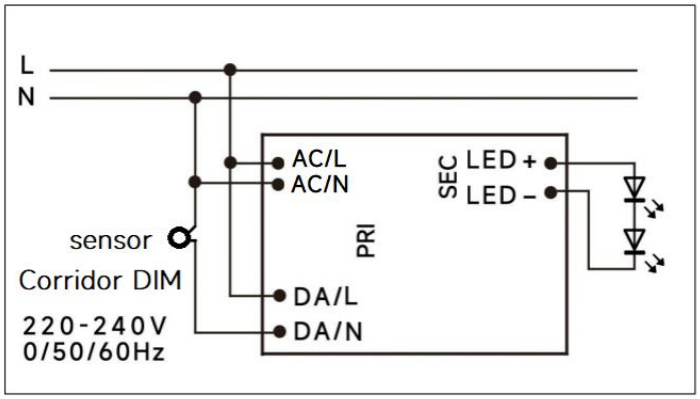
◆ Wiring diagram



DALI dimming application

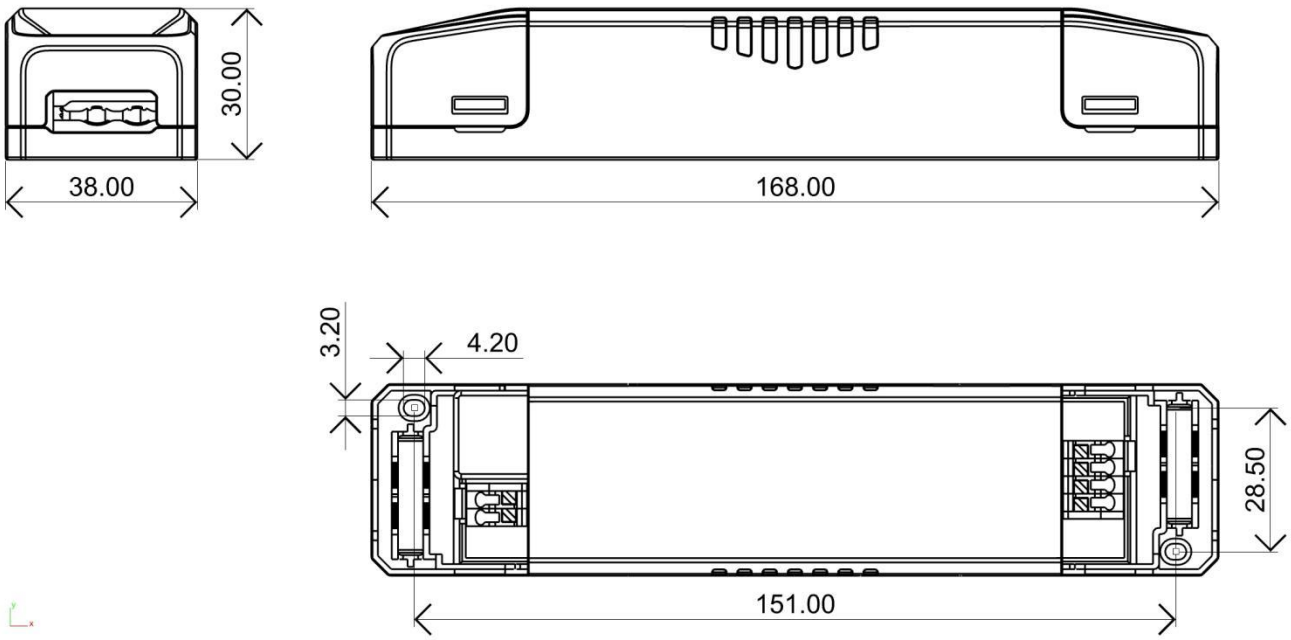


PushDIM dimming application

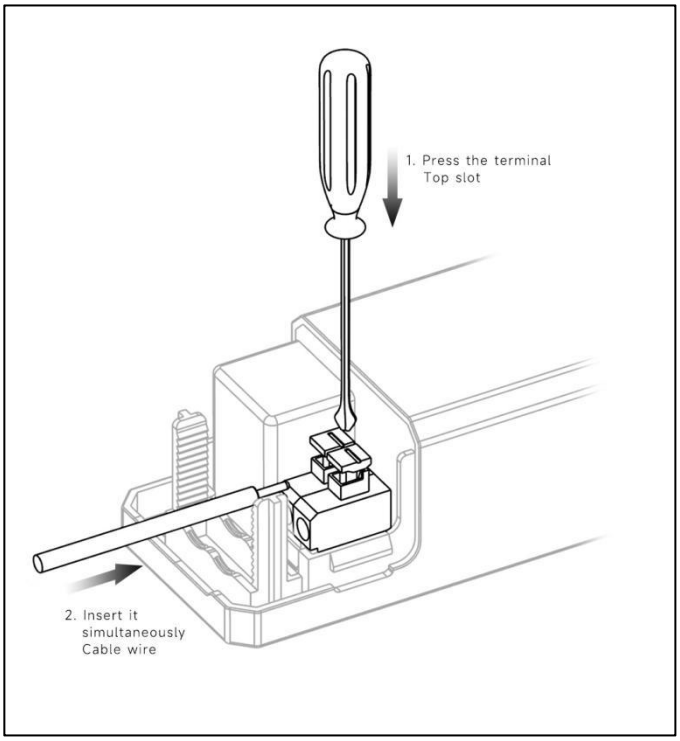


Corridor DIM dimming application

◆ 2D diagram



Terminal

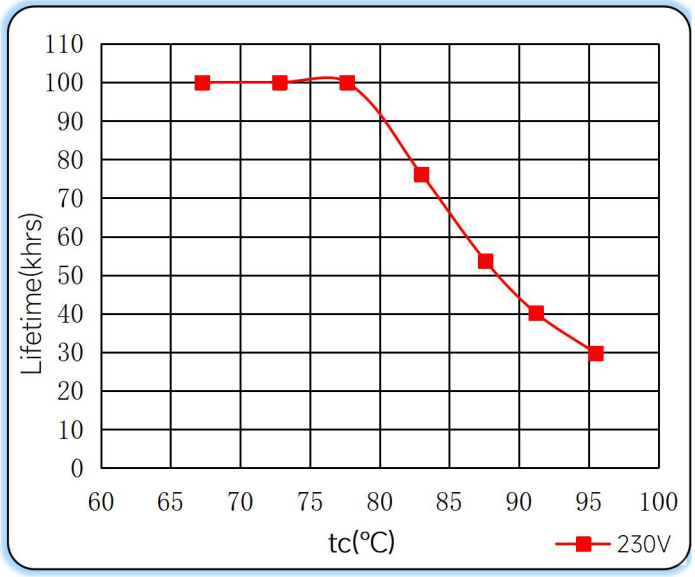


◆ Wiring & Connections

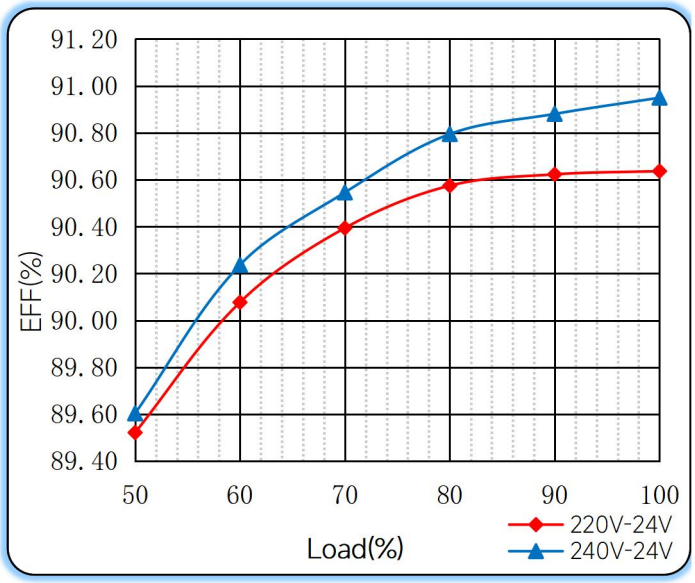
Specification item		Value （Unit ）
Input	Input wire cross-section	1.0...1.5 mm^2
	Input wire gauge.	16...18 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	1.0...1.5 mm^2
	Output wire gauge.	16...18 AWG
	Output wire strip length	7...9mm

◆ Curve for LS-45-24 DALI-2 LI1

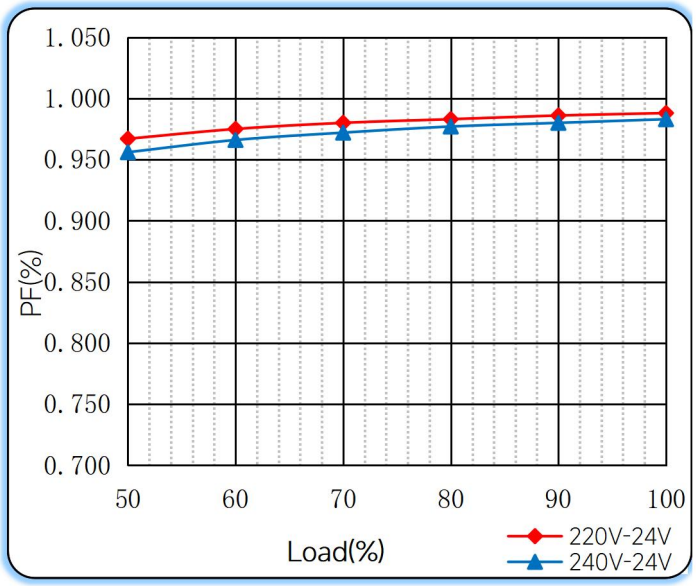
Lifetime vs. Temperature Curve



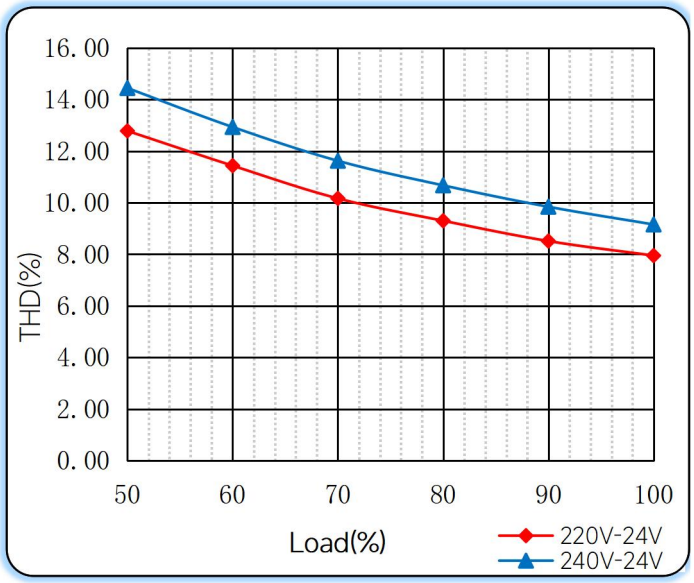
Efficiency vs. Load



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.

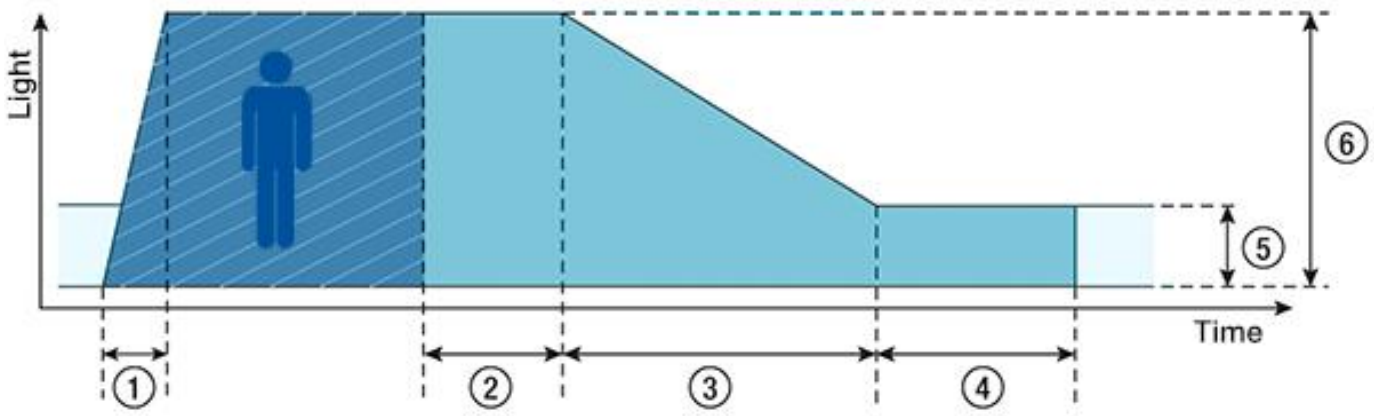
Note:

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

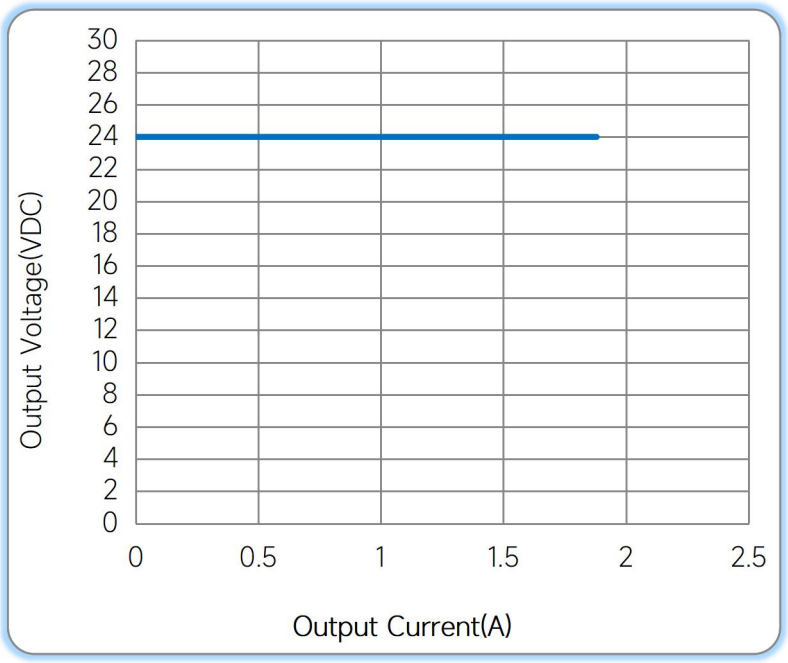
3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ 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	2023/07/12
Tc	75°C	85°C	B	2024/07/08

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