

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: $\geq 87\%$ (Typ.)
- 5 years warranty

Applications

- LED strips

■ Approve

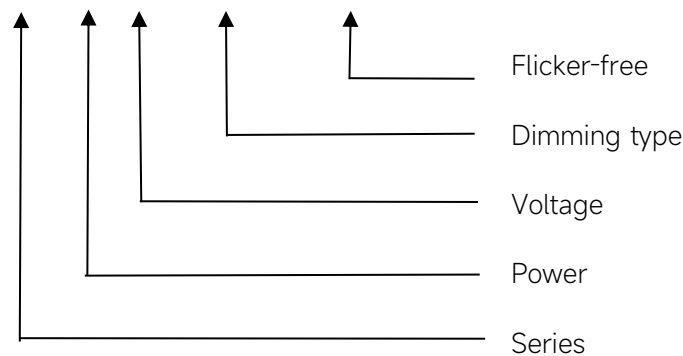


◆ Description

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

LS-45-24 DALI-2 LI1



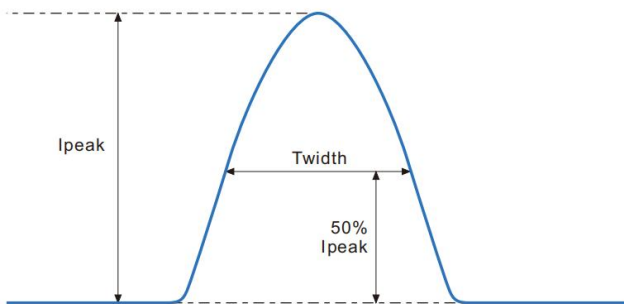
◆ Specification

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
	EOF1	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°C~+45°C
	Humidity	20%-90%RH
	Tc	75°C
	Storage Temperature	-30°C~+85°C
	Life time	> 50000h@Tc=75°C,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,
	EMC	EN55015, EN61000-3-2, EN61000-3-3, EN61547;GB/T17743;GB17625. 1
	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	<p>1.All parameters NOT specially mentioned are measured at 240VAC input , full load and 25°C of ambient temperature.</p> <p>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.</p> <p>3.Switch and dimmer are not recommended to connect between this product output and luminaries.</p> <p>4.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.</p>	

◆ Inrush Current

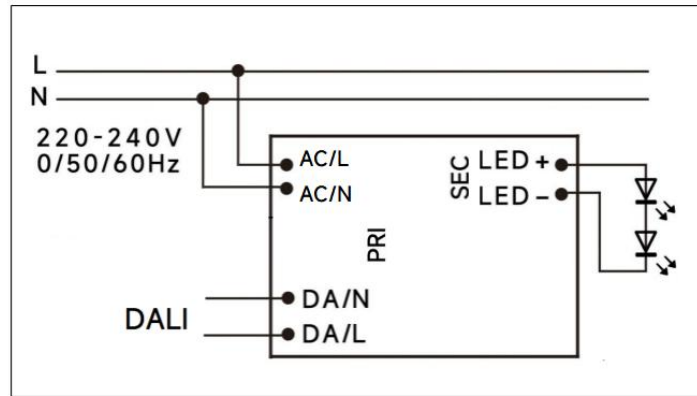
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
A	μs	pcs	pcs	pcs	pcs	pcs	pcs



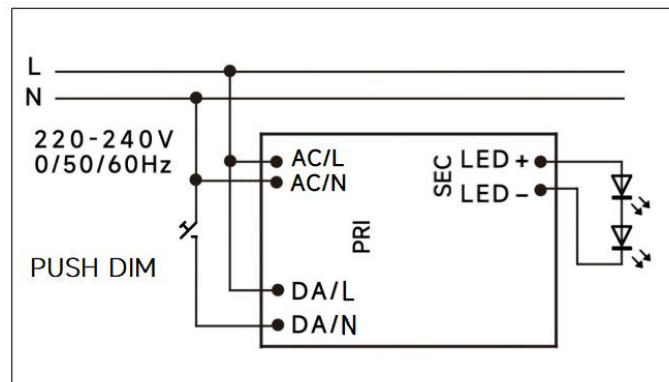
Remarks:

- 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.

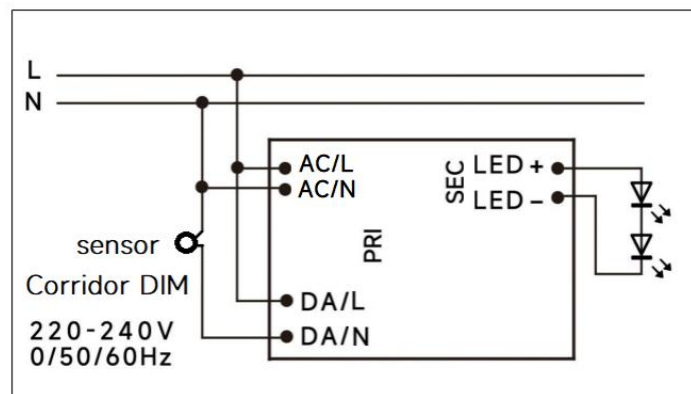
◆ Wiring diagram



DALI dimming application

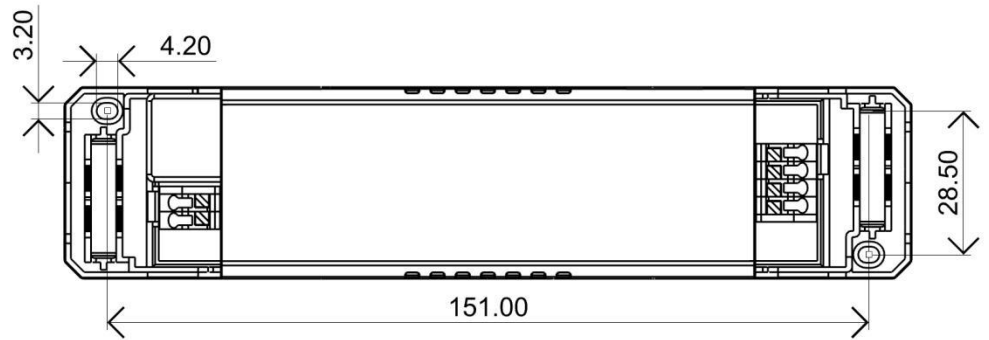
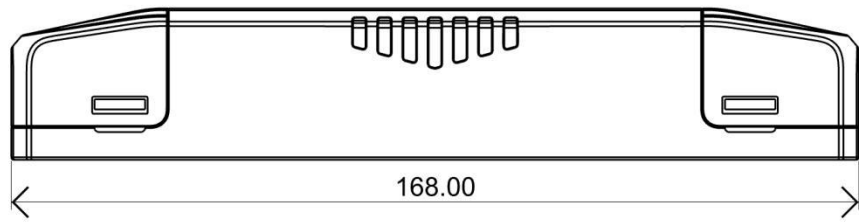
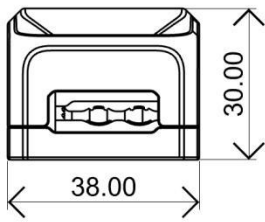


PushDIM dimming application

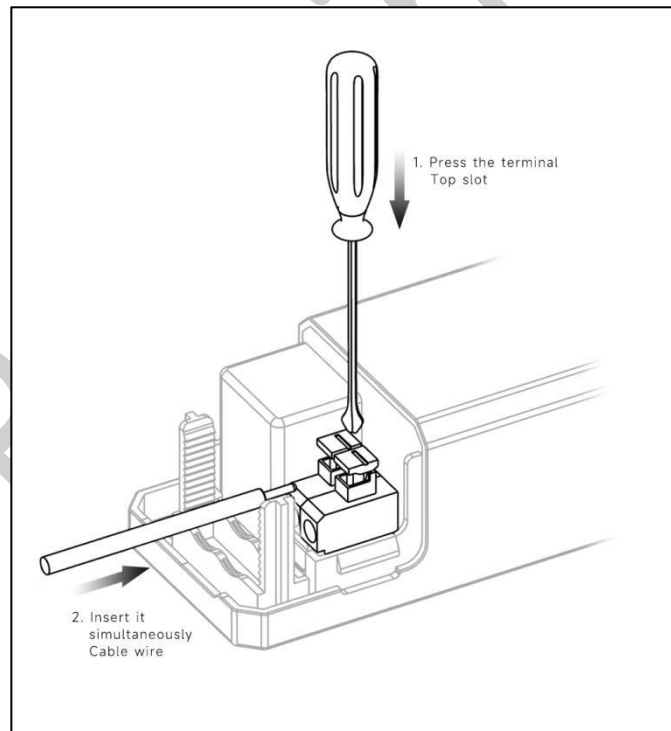


Corridor DIM dimming application

◆ **2D diagram**



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◆ 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

Preliminary

◆ **Curve for LS-45-24 DALI-2 LI1**

Lifetime vs. Temperature Curve

Efficiency vs. Load

Power Factor Characteristics

THD vs. Load

Preliminary

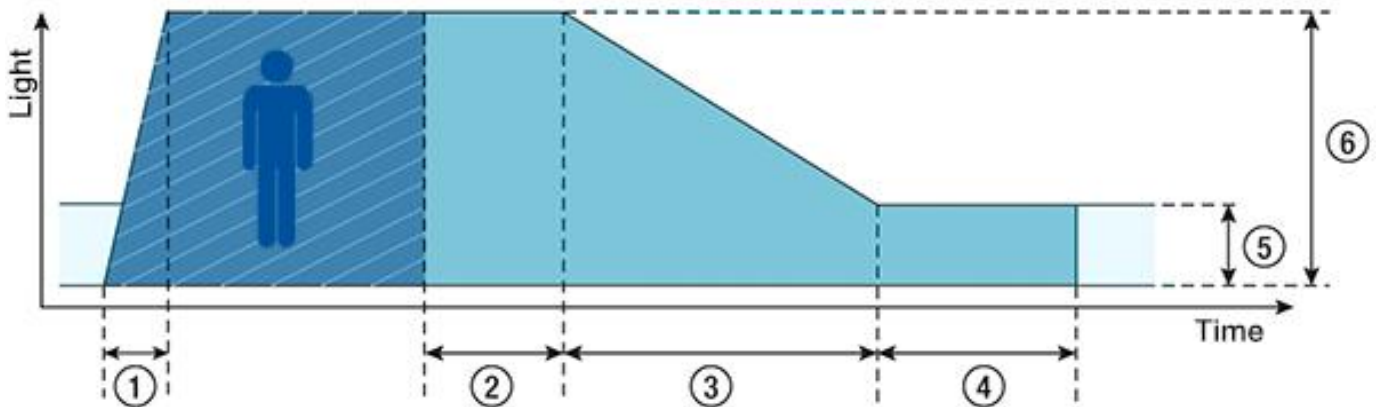
◆ Push dimming operation

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:

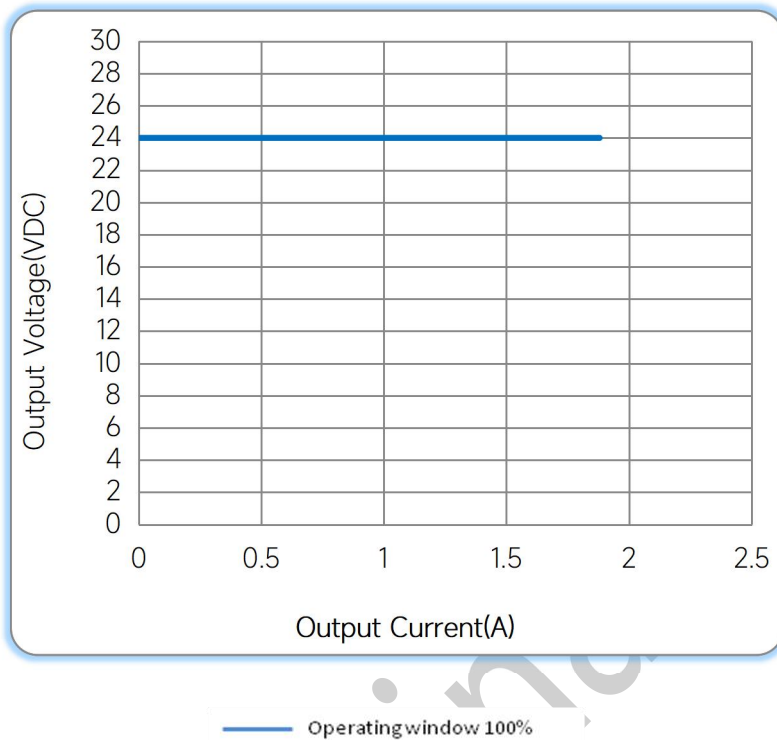
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ 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	2023/07/12

Remark: The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

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EAGLERISE



Manual