

45W Constant Voltage DALI2-LS Series

LS-45-24 DALI2 LI



■ Approve



■ Features

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

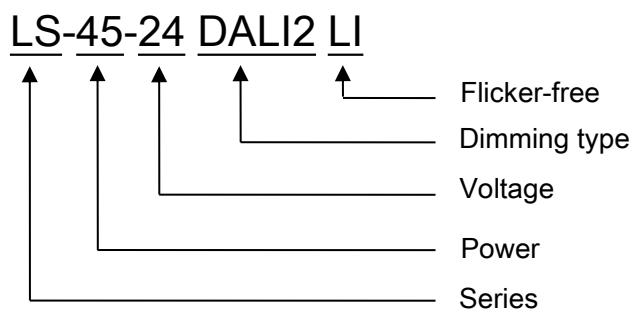
■ Applications

- LED strips
- Linear light
- Troffer light

■ Description

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

■ Model code



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■ Specification

Input	Rated input voltage	220-240VAC
	Range of input voltage	176-264VAC
	DC voltage range	176-280V
	Frequency(Hz)	0/50/60 Hz
	Power Factor	> 0.95@Full Load,230VAC
	Input Current max	0.35A MAX. @Full Load,176VAC
	Start-up time	< 1S
	Unload Power Consumption	≤0.5W
	Inrush Current	40A Max./250μs@230V, Full Load , 50%Ipk-50%Ipk
	THD	≤20% @Full Load,240VAC
	Leakage Current	< 0.5mA(240VAC)
Output	Constant Voltage	24VDC
	Current Range	0-1.88.A
	Rated power	45W Max.
	Voltage Accuracy	±5%@220-240VAC
	Voltage Regulation	±1% @Full Load
	Load Regulation	≤2%
	Hold-up Time	1s max.@Full Load
	Ripple& Noise *Note.2	≤0.24Vp-p@Full Load,240VAC
	Output LF current ripple(<120Hz)	≤±1% @Full Load,240VAC
	Efficiency(Typ.)	≥86%
	Dimming	Dimmable
Dimming mode		DALI II, Push
Dimming current range		1%~100%
Protection	Over Load Protection	105-150% Protection type: Auto Resume
	Over Voltage Protection	> 25.2VDC Protection type: Auto Resume
	Short circuit Protection	Protection type : Latch off , Auto recovery after power off and restart
	Over Temperature protection	Protection type: Auto Resume
Environment	Operating Temperature	-20°C...+50°C
	tc	85°C
	Storage Temperature	-30°C...+65°C
	Temperature coefficient	±0.03%/°C(0-50°C)
	Life time	> 44,000h@ta=50°C
	Humidity	20%-90%RH
Others	Dimension	187X45X30.5(LXWXH)mm
Safety & EMC	Safety standards	EN 61347-1; EN61347-2-13; EN62384;
	Withstand voltage	Input-Output : 3750V/5mA/1min
	Isolation resistance	Input-Output : ≥4MΩ@500VDC
	EMI	EN55015; EN61000-3-2 Class C; EN61000-3-3
	EMS	EN 61547; EN 61000-4-2; EN 61000-4-5 —1000V;
Note	1.All parameters NOT specially mentioned are measured at 240VAC 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.	

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■ Model list

No.	Model number	Input			Output		
		Voltage (VAC)	Current (A)	Frequency (Hz)	Constant voltage (VDC)	Normal working current (A)	P _{rated} (W)
1	LS-45-24 DALI2 LI	220-240	0.35	50/60	24	0-1.88	45

■ 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 (when has been in Corridor mode)
Long push	0.5-14s	Dimming up or down
Long push	>=15s	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.

■ Maximum loading of automatic circuit breakers in relation to inrush current

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20
Installation Ø	1.5mm ²	1.5mm ²	1.5mm ²	1.5mm ²	1.5mm ²	1.5mm ²	1.5mm ²	1.5mm ²
LS-45-24 DALI2 LI	16	20	24	28	13	16	19	22

These are max values calculated out of inrush current! Please consider not to exceed the maximum rated continuous current of the circuit breaker.

Actual values may differ due to used circuit breaker types and installation environment.

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■wiring

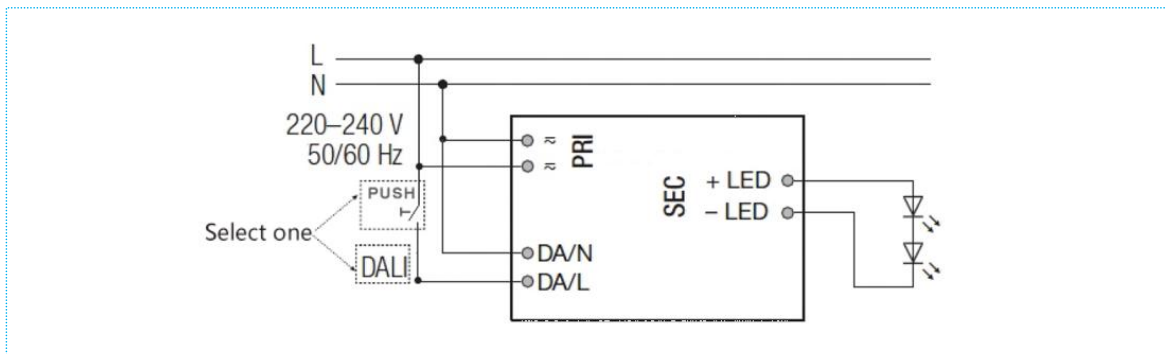
LED wire length

EAGLERISE internally verified the wire length from LED driver to LED module at full load is up to 18 meter
 Chose a proper wire thickness to reduce the voltage drop effect

Wire cross section	mm ²	1.0mm ²	1.5mm ²
	AWG	17	15
Maximum cable length		10m	18m

The values are indicative. Each connection may increase the total voltage drop

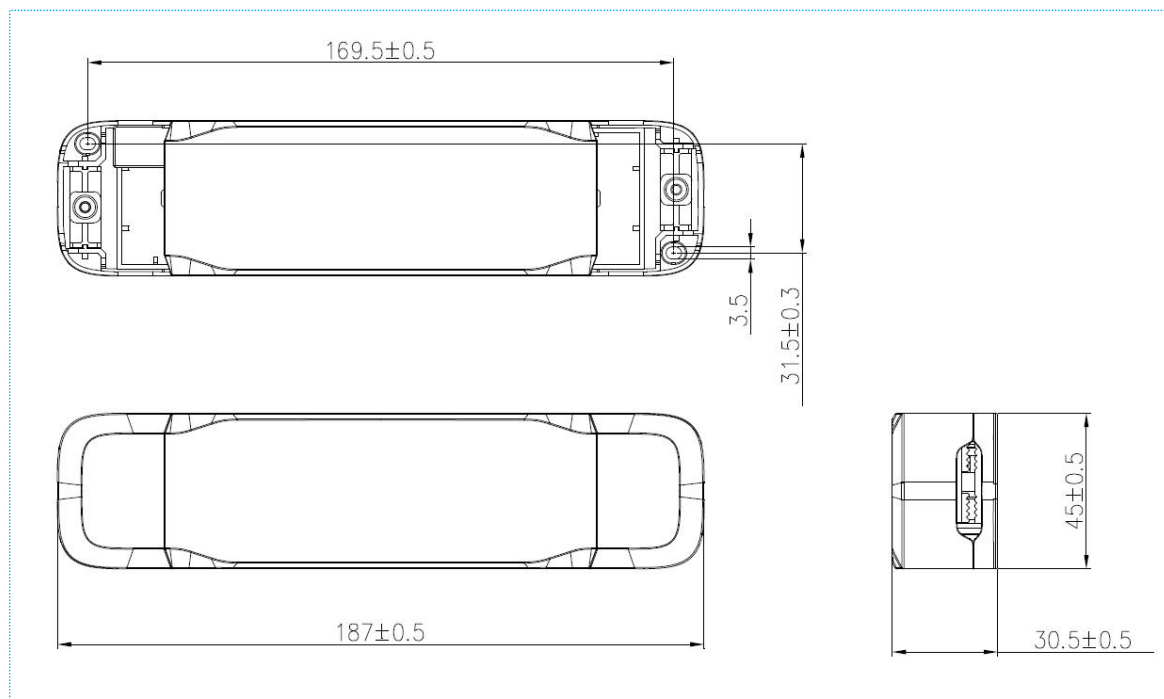
■Wiring diagram



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■2D diagram

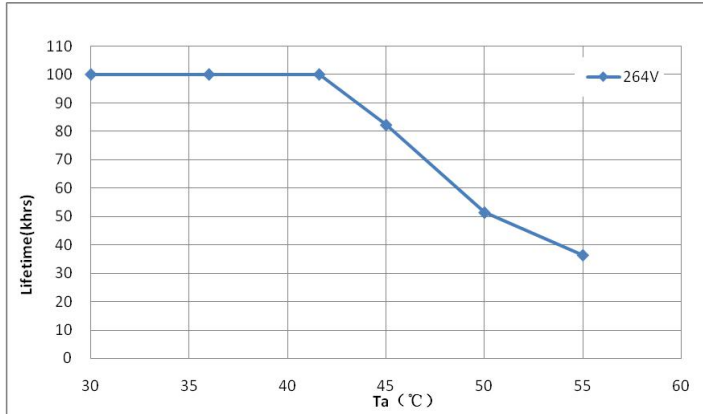


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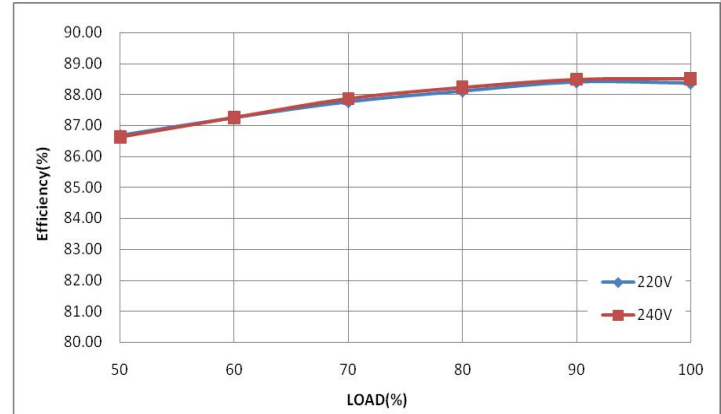
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■Curve

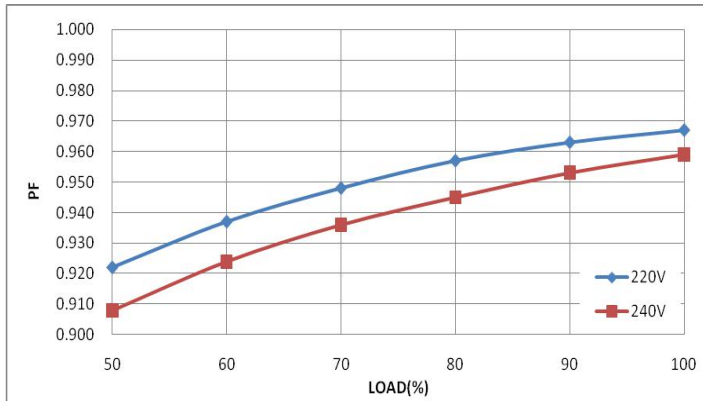
Lifetime vs. Ambient Temperature Curve



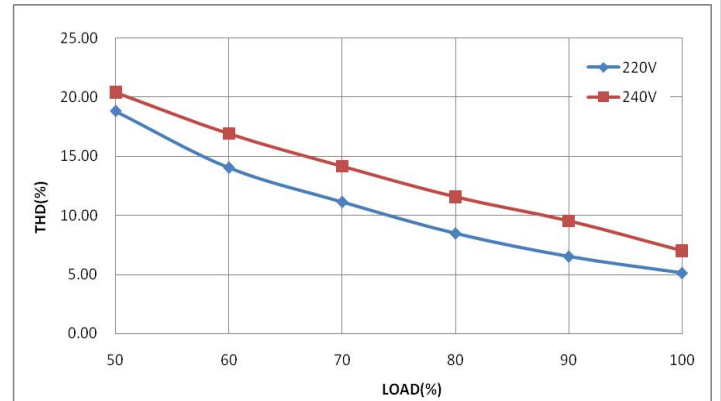
Efficiency vs. Load



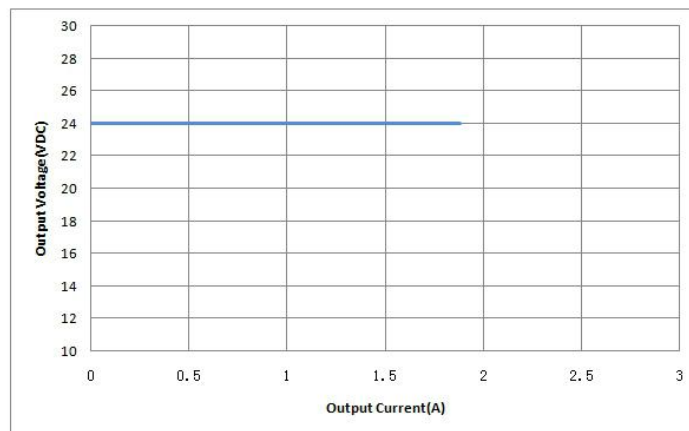
Power Factor Characteristics



THD vs. Load



■Operating window



— Operating window 100%