Constant Voltage LED Driver

SDL100-12/24/48VF6

SDL100-24VF8

Product description

The SDL100 series is a constant voltage LED DALI driver for indoor use. Its input voltage range is 198-264Vac, with a conversion efficiency of up to 93%. It adopts a fanless design and works at -20°C ~ +45°C. Naturally cooled chassis temperature range, ultra-high power factor, ultra-low total harmonic distortion, low standby power consumption, and all-round protection functions not only greatly improve the reliability of the product, but also ensure the product life cycle. This series of products is designed for LED lighting design and is used in indoor and outdoor lighting. Suitable for various application environments in almost all indoor and outdoor places where LED lamps can be installed. Comply with DALI2.0 standard (IEC 62386-101, 102, 207), innovative thermal management technology, intelligent protection of power supply life.

Standards

EN61347-1
EN61347-2-13
EN61547
EN55015
EN61000-3-2
EN61000-3-3
EN62384
EN62493
IEC 62386-101,102,207

Characteristics

- AC input range (220-240VAC)
- With active PFC function
- IP20
- DALI-2.0 DT6/DT8 dimming driver
- Built-in press dimming function
- Dimming range 1-100%
- Suitable for dry indoor environments
- Protection type: short circuit/over temperature/over voltage protection
- Plastic shell, filled with glue inside
- Comply with world lighting equipment safety regulations
- 5 years warranty

Specifications

Model		SDL100-12VF6	SDL100-24VF6/8	SDL100-48VF6
Output	turn on time(S)		＜0.5	
	output power(W)		100	
	output voltage(V)	12	24	48
	output voltage tolerance		≤±5%	
	ripple voltage(mV)	150	200	480
	Line Regulation		1%	
	Load Regulation		3%	
	working current range(A)	0.833-8.33	0.416-4.16	0.208-2.08
	SVM		0.1	
	Pst		0.1	
	dimming type		YES	
	dimming range		1-100%	
Input	rated DC supply voltage(Vdc)		NA	
	rated supply voltage(Vac)		220-240	
	voltage range(Vac)		198-264	
	line frequency(Hz)		50/60	
	input current(A)		0.7	
	efficiency (TYPE)	92%@full load	93%@full load	93%@full load
	average efficiency(TYPE) 3 (TYPE)3	91.5%	92%	92.5%
	no load power consumption(W)		≤0.5W	
	power factor		0.95@full load	
	Displacement factor		0.95	
	THD(typ.) THD（）		5.5%	
	inrush current(Ipk) （Ipk）		80A/260uS	
	Leakage current (mA)		0.7@240Vac 60Hz	
Protection	short circuit protection		hiccup mode, restart automatically after fault correction.	
	over load protection		exceed maximum rated load times 1.6	
	Over voltage protection		Latch off,power on again after fault correction	
	Over temperature protection		Latch off,power on again after fault correction	
	surge capacity		L-N: 1KV	
	Withstand voltage		Input-Output:3000V/5mA/1min	

Ambient and Life	Ta(C)	-20…45(See derating curve)
	Tc max.(C)	max.85
	Storage Temperature(C)	-30...80
	ambient humidity range	5%...85%RH, Not condensing
	nominal life-time(hrs)	50'000@Ta
Other	dimensions (L×W×H)(mm)	336.6mm*30mm*18.2mm
	weight(g)	190
	casing material	Plastics
	housing colour	
	type of protection	IP20
	protection class	class Ⅱ
	certificate	

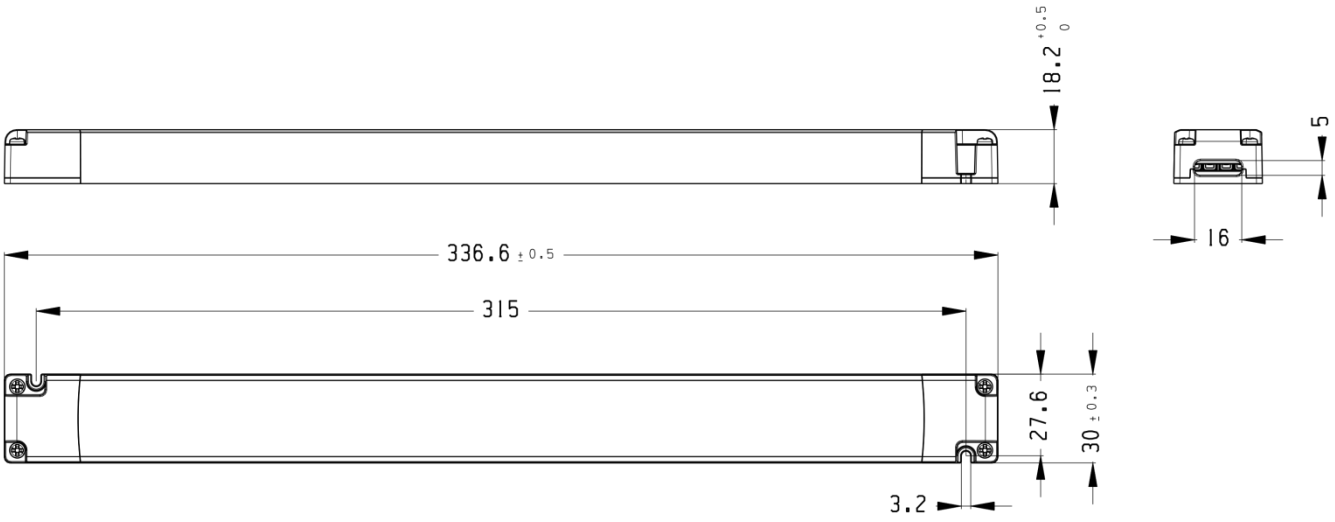
Note

1.Tolerance:includes set up tolerance, line regulation and load regulation.
2.Tested at full load,230Vac.Refer to"Power Factor" and "EFFICIENT"curve graphs.
3.Calculate the model's average efficiency for each test voltage by testing at 100%, 75%, 50%, and 25% of rated current and then computing the simple arithmetic average of these four values.
4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature.
5.The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

Function	Press time
Status no change	<0.05 sec.
Push ON/OFF	0.1-1 sec.
Long press to dim down or up	1.5-10 sec.
Long press in the off state, dimming from the minimum value	>1 sec.

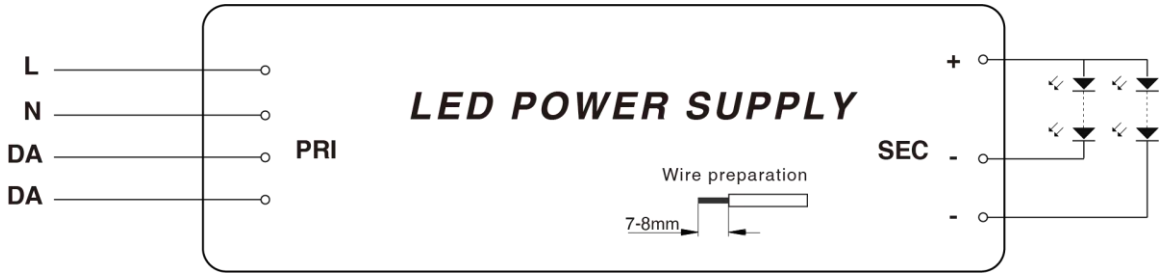
PUSH button dimming/color temperature adjustment.
Dimming: long press .
Switch: short press.
Dimming memory: When the light is turned off and turned on again, the light will return to the previously adjusted brightness level.
Each long press will adjust the brightness in the opposite direction.
Long press for more than 15S is a synchronization function. All devices will be adjusted to 50%. Press and hold again to adjust the dimming brightness down. (DT8 color temperature will be unified to 4500K. Long press again will adjust the color temperature down.)

Dimensions(mm)

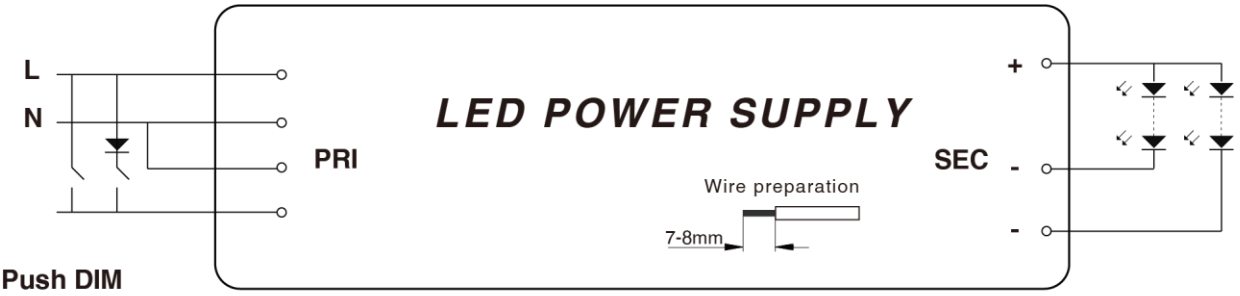


Wiring Diagram

DALI



PUSH



Push DIM
Push CCT(Diode 1N4004~1N4007)

AC	H03VVH2-F 2*0.75mm^2
DALI	H03VVH2-F 2*0.75mm^2
DC	H05VVH2-F 2*1.0mm^2

Electrical curves

Fig. 1 Output load-Temperature curve

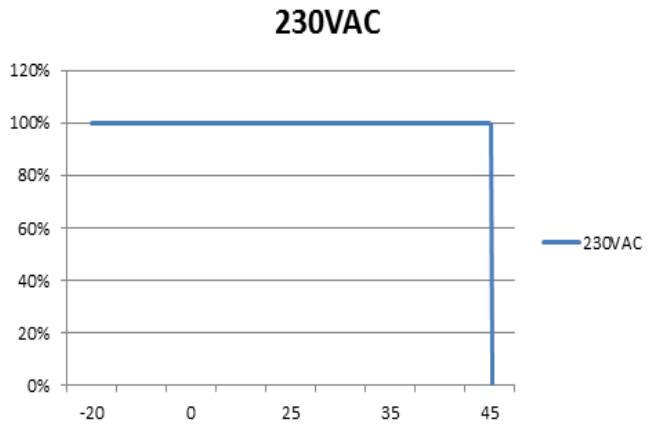


Fig. 2 Static characteristic curve

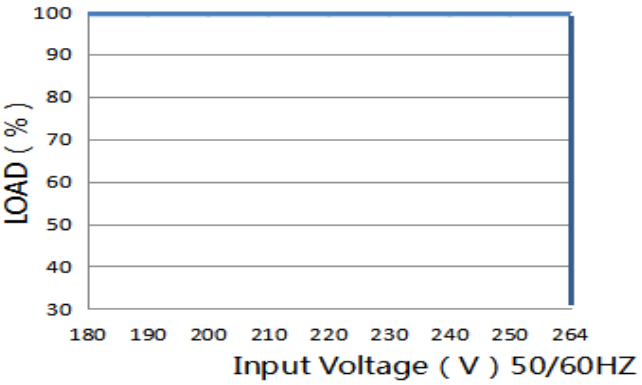


Fig. 3 I-V curve

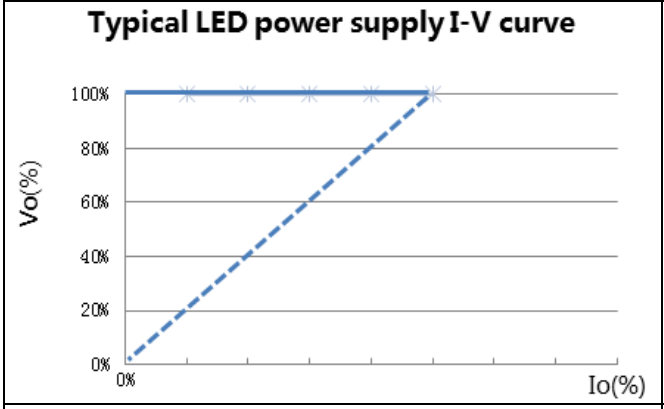


Fig. 4 Power factor characteristic curve

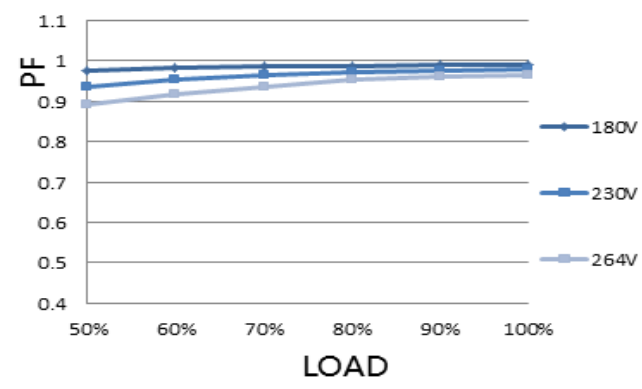


Fig.5 Total harmonic distortion curve（THD）

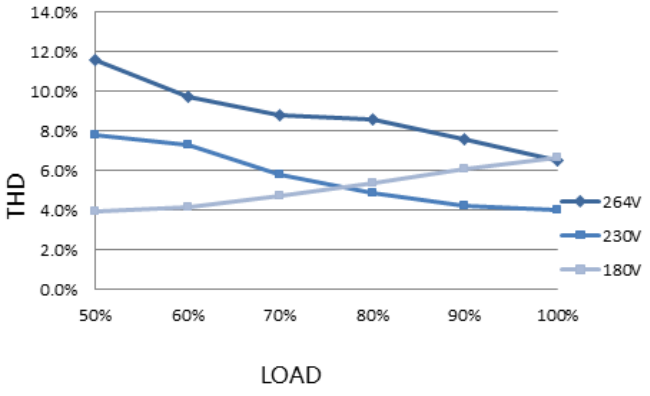
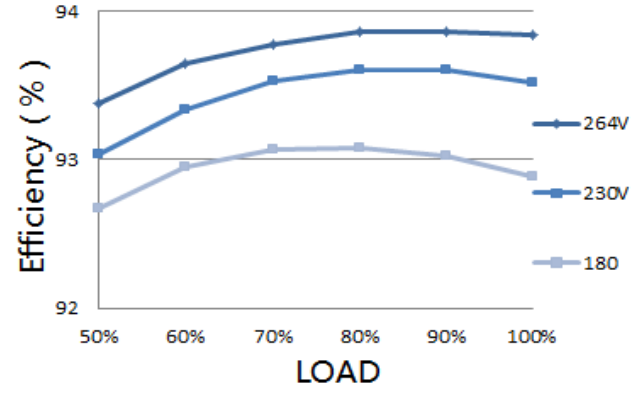


Fig.6 Efficiency-Load curve



MCBS

MCBS / Model	B10	B13	B16	B20	C10	C13	C16	C20
SDL100-12VF6	6	7	9	11	7	9	11	14
SDL100-24VF6/8	6	7	9	11	7	9	11	14
SDL100-48VF6	6	7	9	11	7	9	11	14

Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
SDL100-12VF6			
SDL100-24VF6/8			
SDL100-48VF6			

Revision history

Date	Rev.	Remark
2023.11.14	A3	Version update
2023.12.18	A4	Push diagram added