

Constant Voltage LED Power Supply

SL100-12VFM

SL100-24VFM



Product description

SL100-12/24VMT is an indoor 4 in 1 (Triac+ (0-10V , PWM , Potentiometer)) dimming constant voltage LED driver. Its input voltage range is 220-240VAC, and its working range is -20C~+45C with natural cooling. This product is not only cost-effective , it also integrates 4 dimming methods; in order to improve the safety of the product, open circuit, short circuit and overload protection functions are added to the circuit. This series of products is designed for LED lighting and is suitable for indoor IP20 locations with LED lamps. Complies with European lighting equipment safety regulations while ensuring the safety of users and lighting systems during installation.

Standards

EN61347-1
EN61347-2-13
EN61547
EN55015
EN61000-3-2
EN61000-3-3
EN62384
EN62493

Characteristics

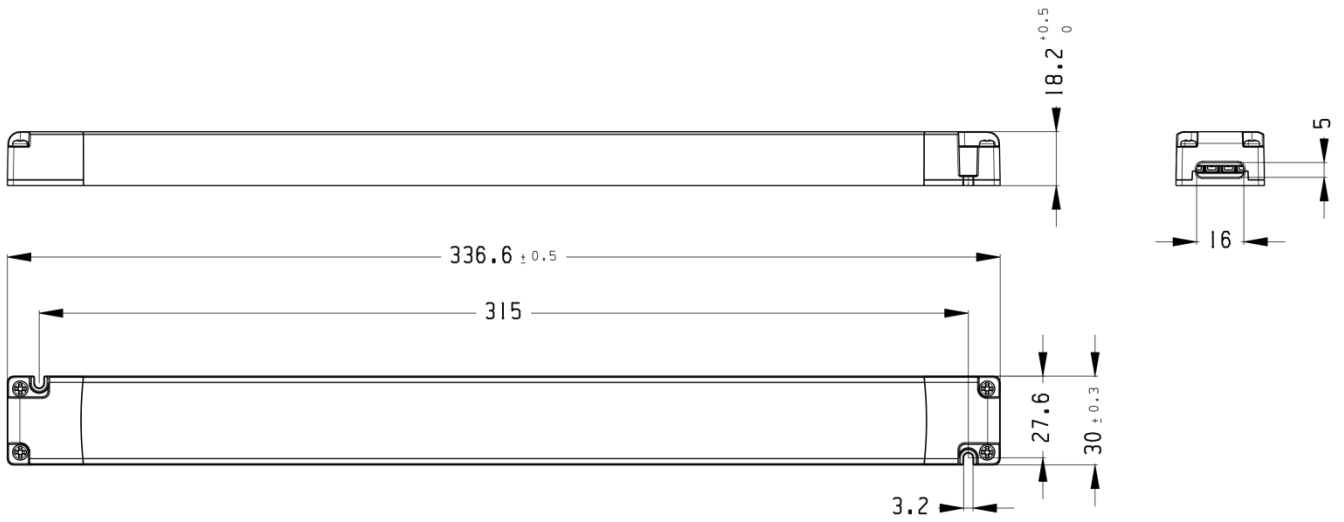
- Suitable for Triac leading and trailing dimmers
- Suitable for **(0-10V, PWM, Potentiometer)** dimmers, isolated type; meets the latest standards
- AC (220-240VAC)
- IP20
- Active PFC
- Suitable for indoor environments
- Protection type: short circuit/over temperature/over voltage protection
- Using plastic shell, filled with glue inside
- Built-in lightning protection device, capable of meeting differential mode and common mode 1kV
- Complies with European lighting equipment safety regulations
- 5 years warranty
- Dimming range: 1-100%(Triac)
- Dimming range: 0-100%(3 in 1)

Specifications

Model		SL100-12VFM	SL100-24VFM
Output	Output power(W)	20-100	20-100
	Output voltage range(V)	12	24
	Output current(A)	1.66 - 8.33A	0.83 – 4.16A
	Output voltage tolerance	≤±5%	≤±5%
	Line Regulation	2%	2%
	Load Regulation	5%	5%
	Dimming mode	Triac leading edge or trailing edge. (0-10V, PWM, Potentiometer)	Triac leading edge or trailing edge. (0-10V, PWM, Potentiometer)
	SVM	0.1	0.1
	Pst	0.1	0.1
	Turn on time(S)	<0.5	<0.5
Input	Rated DC supply voltage(Vdc)	NA	NA
	Rated supply voltage(Vac)	220-240	220-240
	Voltage range(Vac)	198-264	198-264
	Line frequency(Hz)	50/60	50/60
	Input current(A)	0.6@230V	0.6@230V
	Efficiency (TYPE)	89.5%@full load	91.0%@full load
	Average efficiency(TYPE) 3	88.1%	88.8%
	Power factor	0.98@full load	0.98@full load
	Displacement factor	0.98	0.98
	THD(typ.) THD(TYPE)	18%@full load 230V	18%@full load 230V
	Inrush current(Ipk)	85A@twidth=500us	85A@twidth=500us
	Leakage current(mA)	0.75@240Vac 60Hz	0.75@240Vac 60Hz
	Protection	Short circuit protection	Yes(latch off)
Over load protection		exceed maximum rated load times 1.1-1.6 latch off	exceed maximum rated load times 1.1-1.6 latch off
Over voltage protection		Yes(latch off)	Yes(latch off)
Over temperature protection		Yes(latch off)	Yes(latch off)
Surge capacity		L-N: 1KV	L-N: 1KV
Withstand voltage		Input-Output: 3750V/5mA/1min	Input-Output: 3750V/5mA/1min
Ambient and Life	Ta(C)	-20...45	-20...45
	Tc max.(C)	max.85	max.85
	Storage Temperature(C)	-40...80	-40...80
	Ambient humidity range	5%...85%RH, Not condensing	5%...85%RH, Not condensing
	Nominal life-time(hrs)	50'000@Tc 80	50'000@Tc 80
	dimensions (L×W×H)(mm)	336.6*30*18.2mm	336.6*30*18.2mm

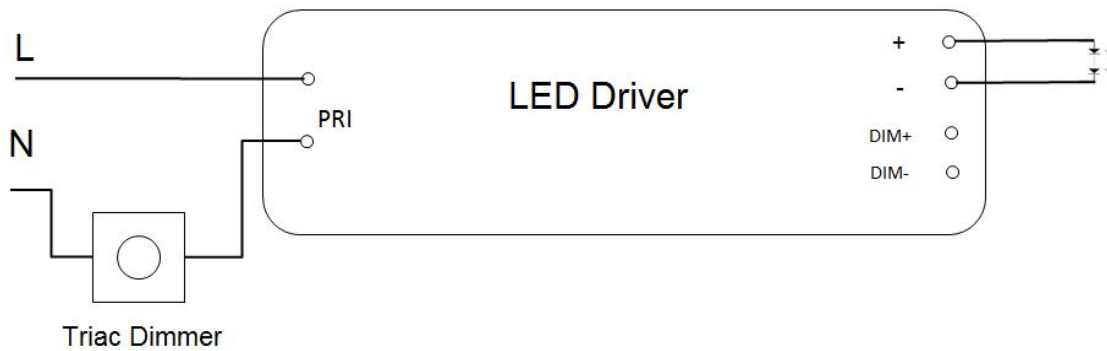
Other	Weight(g)	300g	300g
	Casing material	PC	PC
	Housing colour	White	White
	Type of protection	IP20	IP20
	Protection class	Class II	Class II
	Certificate		
Note	<p>1.Tolerance:includes set up tolerance, line regulation and load regulation.</p> <p>2.Tested at full load,230Vac.Refer to"Power Factor" and "EFFICIENT"curve graphs.</p> <p>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.</p> <p>4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature.</p> <p>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.</p>		

Dimensions(mm)

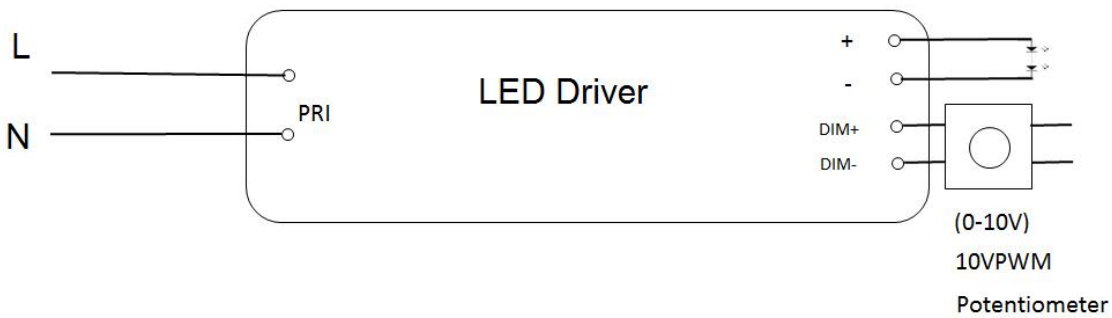


Wiring Diagram

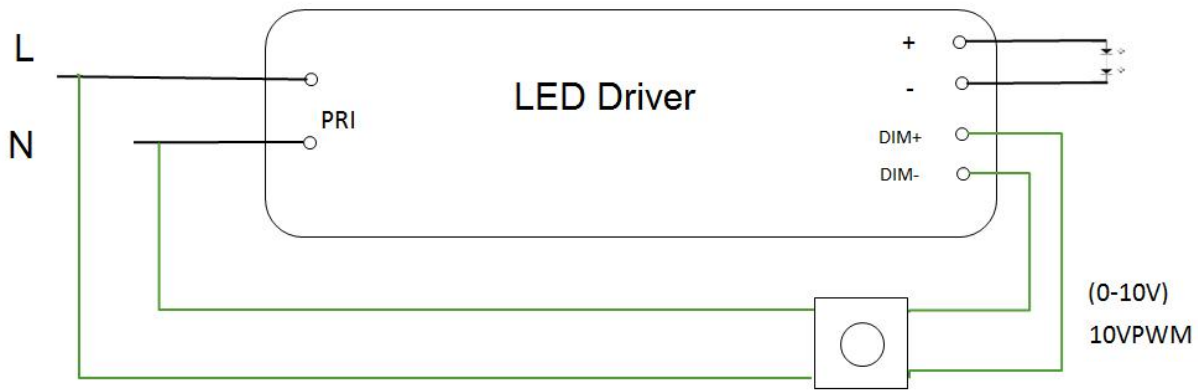
Method 1



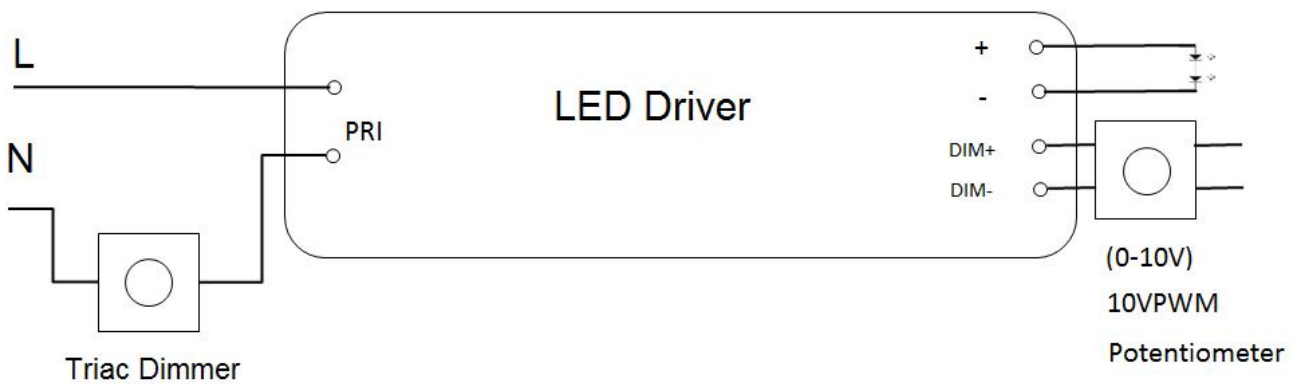
Method 2



Method 3



Method 4



AC input cable	Terminal + H03VVH2-F 2*0.75mm ²
DC output cable	12V: Terminal + H05VVH2-F 2*1.0mm ² 24V: Terminal + H03VVH2-F 2*0.75mm ²

Electrical curves

Fig. 1 Output load-Temperature curve

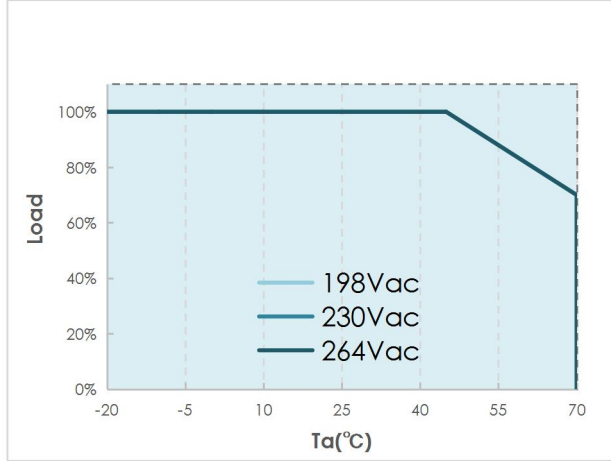


Fig. 2 Static characteristic curve

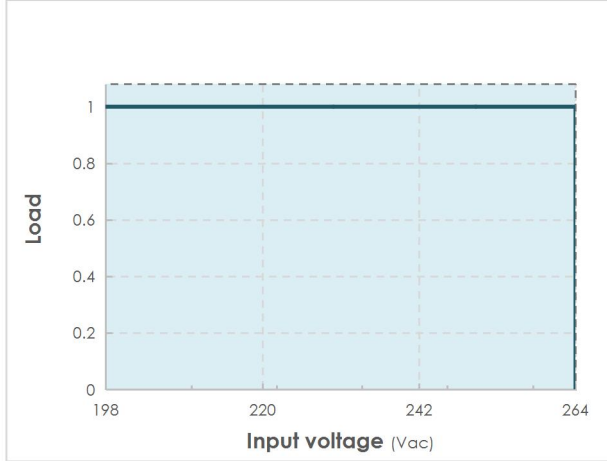


Fig. 3 I-V curve

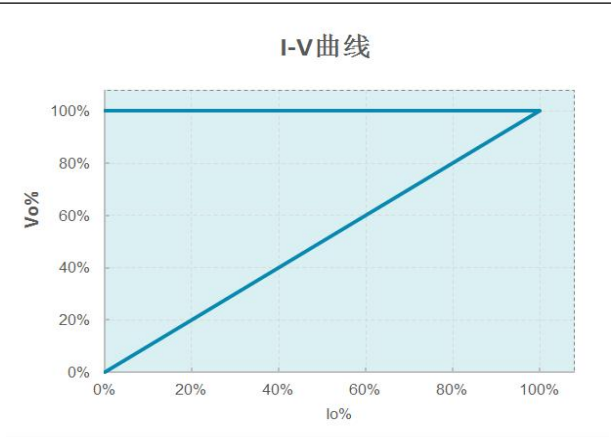


Fig. 4 Power factor characteristic curve

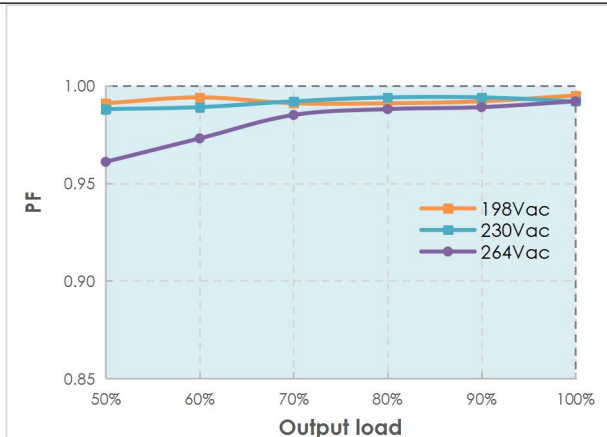


Fig.5 Total harmonic distortion curve (THD)

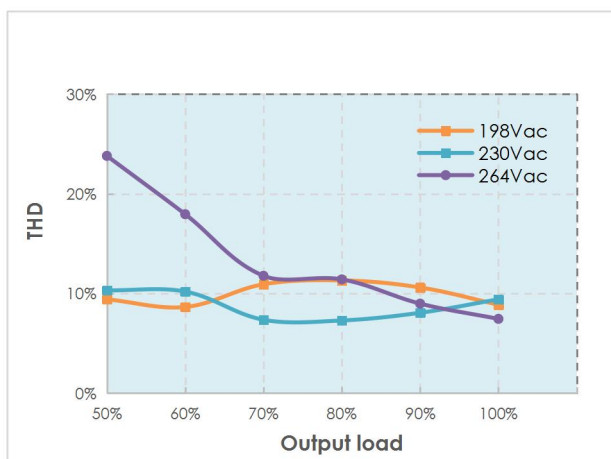
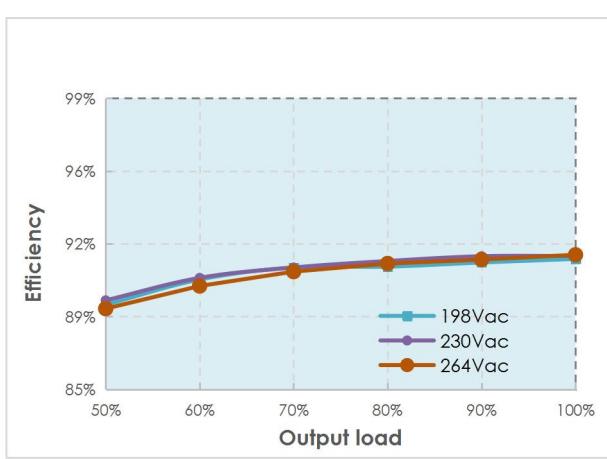


Fig.6 Efficiency-Load curve



MCBS

Model \ MCBS	B10	B13	B16	B20	C10	C13	C16	C20
SL100-12VFM	6	8	10	13	8	10	13	16
SL100-24VFM	6	8	10	13	8	10	13	16

Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
SL100-12VFM			
SL100-24VFM			

Revision history

Date	Rev.	Remark
2023.10.20	A0	Initial release.