

Constant Voltage LED Power Supply

SPG350-12V

SPG350-24V



Product description

SPG350-12/24V series is a constant voltage outdoor waterproof power supply. Its input voltage range is 180-305Vac, with the high efficiency up to 95%, fanless design, working in the temperature range of - 40 ° C to +70° C under free air convection. It has ultra-high power factor, ultra-low total harmonic distortion, low standby power consumption, with all-round protection functions such as lightning protection and waterproof function, which not only greatly improves the reliability of the product, but also ensures the life cycle of product. This series are designed for LED lighting such as road lighting, floodlights, stage lighting and advertising lights etc, suitable in almost all kinds of applications where LED lamps can be installed. The product designed completely in accordance with world's lighting equipment safety regulations to ensure the safety of both user and luminaire system during installation.

Standards

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

Characteristics

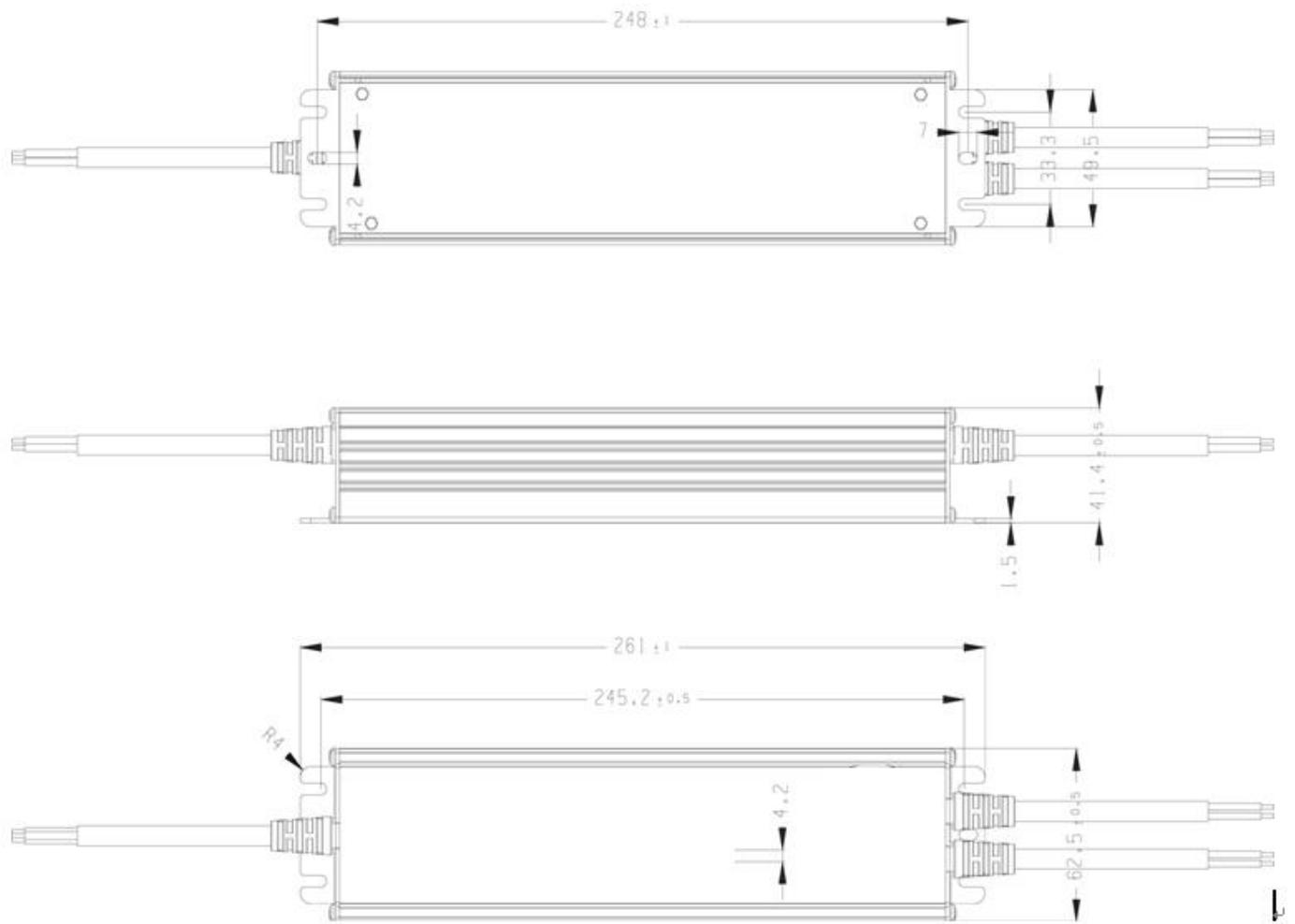
- European AC input (200-277VAC)
- Built-in active PFC function
- IP67, Metal Case
- Suitable for indoor and outdoor environment
- Protections: Short circuit / Over voltage/Over temperature
- Adopt metal shell and internal glue potting, can be used in dangerous situations
- Built in lightning protection device can meet the requirements of DM 4KV / CM 6kV
- Compliance to worldwide safety regulations for lighting
- 5 years warranty

Specifications

Model		SPG350-12V	SPG350-24V
Output	output power(W)	300	350
	output voltage range(V)	12	24
	output voltage tolerance	≤±5%	≤±5%
	ripple voltage(mV)	240	480
	Line Regulation	2%	2%
	Load Regulation	5%	5%
	working current range(A)	0-25	0-14.58
	SVM	0.1	0.1
	Pst	0.1	0.1
Input	turn on time(S)	<0.5	<0.5
	rated DC supply voltage(Vdc)	255-431	255-431
	rated supply voltage(Vac)	200-277	200-277
	voltage range(Vac)	180-305	180-305
	line frequency(Hz)	50/60	50/60
	input current(A)	1.8A@230V	1.8A@230V
	efficiency (TYPE)	93%@full load	94.6%@full load
	average efficiency(TYPE) 3	93.4%	94.7%
	no load power consumption(W)	≤0.5W	≤0.5W
	power factor	0.98@full load	0.98@full load
	Displacement factor	0.98	0.98
	THD(typ.)	<10%@full load 230V	<10%@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	hiccup mode, restart automatically after fault correction.	hiccup mode, restart automatically after fault correction.
	over load protection	exceed maximum rated load times 1.1-1.6	exceed maximum rated load times 1.1-1.6
	Over voltage protection	hiccup mode, restart automatically after fault correction	hiccup mode, restart automatically after fault correction
	Over temperature protection	latch off	latch off
	surge capacity	L-N: 4KV L N-GND:6KV	L-N: 4KV L N-GND:6KV
	Withstand voltage	Input-Output: 3000V/5mA/1min Input-gnd:1500V/5mA/1min	Input-Output: 3000V/5mA/1min Input-gnd:1500V/5mA/1min
Ta(C)	-40...70(See decreaed curve)	-40...70(See decreaed curve)	
Tc max.(C)	max.80	max.80	

Ambient and Life	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
Other	dimensions (L×W×H)(mm)	261× 62.5 × 41.4	261× 62.5 × 41.4
	weight(g)	1400	1400
	casing material	metal	metal
	housing colour	Alumina color	Alumina color
	type of protection	IP67	IP67
	protection class	class I	class I
	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

L: brown

N: blue

PE yellow
green

LED POWER SUPPLY

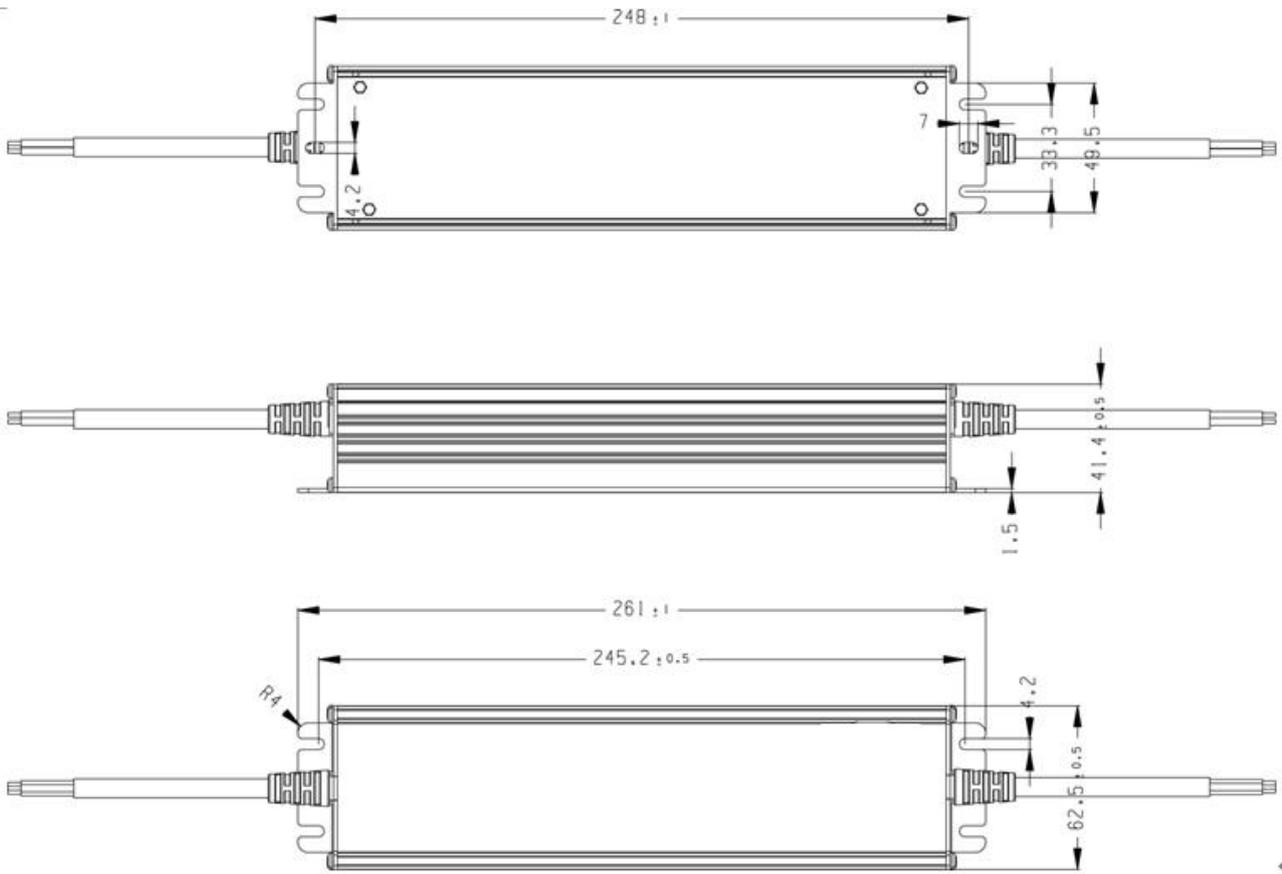
Wire preparation

7-8mm

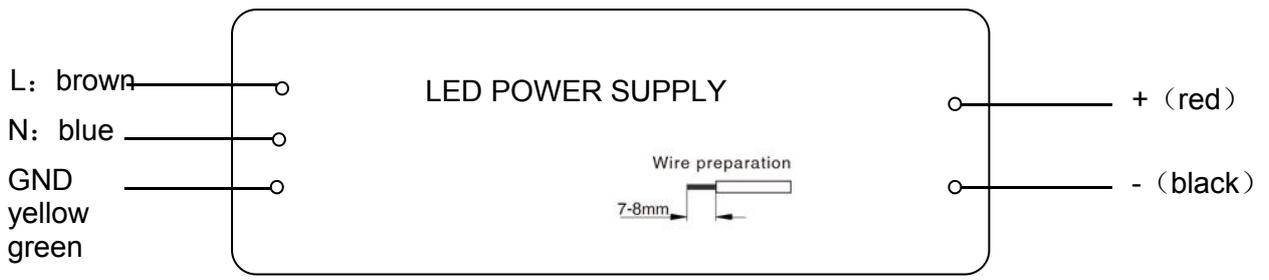
+ (red)

- (black)

AC input cable	VDE, H05RN-F 105°C 3G*1.0mm ² , L=300mm+SR yellow green: PE, brown:L, blue: N
DC output cable	12V: SJTW, 2*14AWG *2 4*2.08mm ² 105°C, L=300mm+SR white: V+, black: V-



Wiring Diagram



AC input cable	VDE, H05RN-F 105°C 3G*1.0mm ² , L=300mm+SR yellow green: PE, brown:L, blue: N
DC output cable	24V: SJTW, 14AWG *2 2*2.08mm ² 105°C, L=300mm+SR white: V+, black: V-

Electrical curves

Fig. 1 Output load-Temperature curve

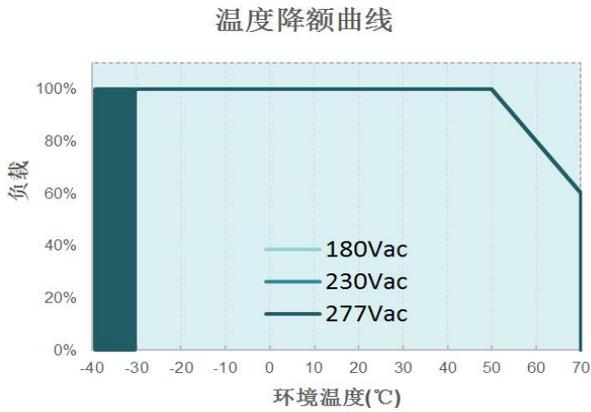


Fig. 2 Static characteristic curve

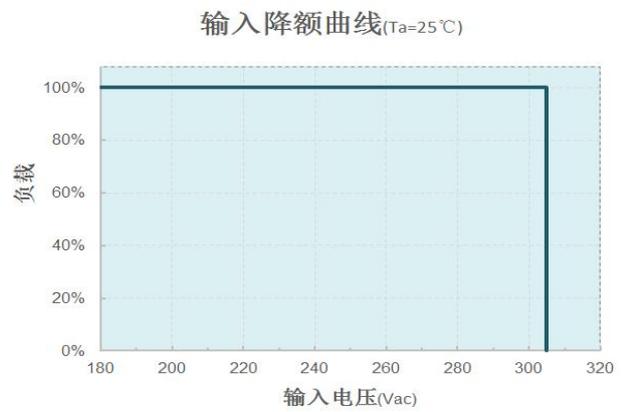


Fig. 3 I-V curve

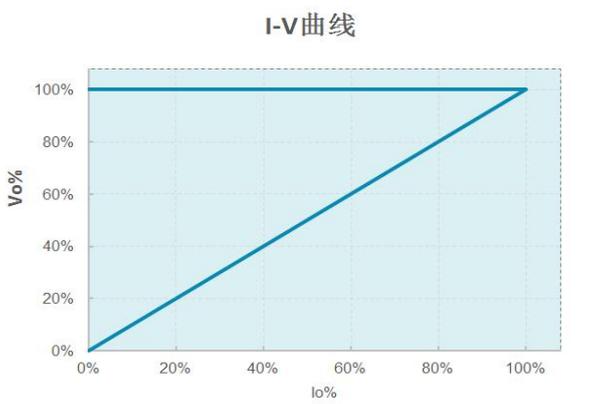


Fig. 4 Power factor characteristic curve

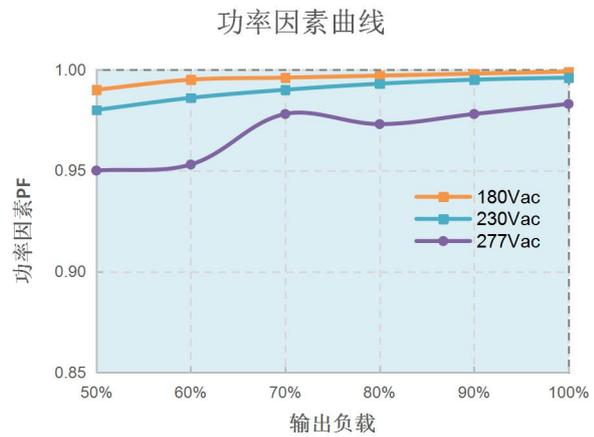


Fig.5 Total harmonic distortion curve (THD)

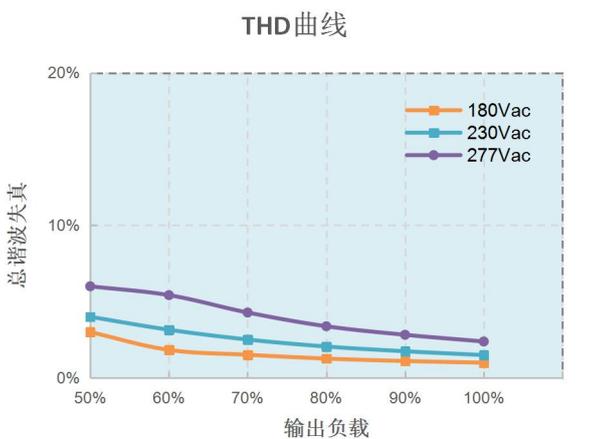
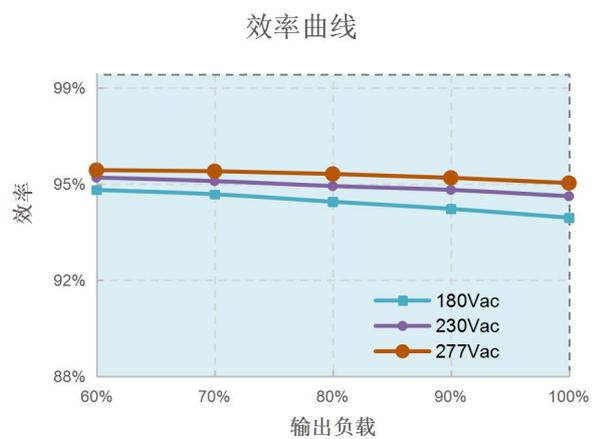


Fig.6 Efficiency-Load curve



MCBS

Model \ MCBS	B10	B13	B16	B20	C10	C13	C16	C20
SPG350-12V	2	2	3	4	2	3	4	5
SPG350-24V	2	2	3	4	2	3	4	5

Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
SPG350-12V			
SPG350-24V			

Revision history

Date	Rev.	Remark
2023.10.23	A0	Initial release.