



◆ Feature

- Universal Input Switch Mode Power Supplies
- No load power consumption <0.3 Watt
- Meet energy star CEC, EUPS, MEPS level (IV) & (V)
- Protection: over voltage , over current ,short circuit
- High Efficiency and Reliability
- Range output 3VDC~36VDC
- Water proof IP44 up to IP67
- Comply to UL,CSA, GS/TUV, CE, PSE
- Class (I) & Class (II)

Specification

Input	Voltage range	90~264Vac
	Frequency range	47~63Hz
	AC current	0.8A Max. @ 230Vac
	Inrush current (max.)	30Amax. @ 230Vac, cold start
	Leakage current(max.)	0.25mA @120Vac,60Hz / 0.45mA @ 230Vac,50Hz
Protection	Over load	>105% rate output voltage power Hiccup mode, Recovery automatically
	Short circuit	Power shutdown Auto recovery after fault condition is removed
Environment	Operating Temp.	0~40°C
	Relative Humidity	20%~90% , non-condensing
	Storage Temp. / Humidity	-20°C~85°C, 10%~95% RH
	Vibration	19.6m/s ² 10-55Hz, 3minutes period,60minutes each along X,Y and Z axis (Non operating)
	IMPACT	196.1m/s ² 11ms, once each X,Y and Z axis (Non operating)
Safety & EMC	Safety Standard	UL60950-1, EN60950-1 / EN61558
	Withstand voltage	I/P-O/P:3KVac, 1 minute
	Isolation resistance	I/P-O/P: 100M ohms/500Vdc/25°C/70%RH
	Conducted / Radiated	EN55022 , FCC part 15 Class B
	Harmonic	EN61000-3-2
Others	MTBF	100,000 hours min. @25°C, 80% of full load. (MIL-HDBK-217F)
	Dimension	107mm *42mm *32mm
Note	1.All parameters are specified at 230Vac input, rated load,25°C 70% RH ambient;	
	2.DC voltage: the output voltage set at point measure by plug terminal & 100% load;	
	3.Ripple & Niose are measured at 20Mhz with a 0.1uf & 47uf capacitor	
	4.Tolerance: includes set up tolerance, line regulation, load regulation,	
	5.Line regulation is measured from low line to high line at rated load,	
	6.Load regulation is measured from 0%~100% at rated load	
	7.Efficiency is measured at 110Vac or 230Vac.	

Safty mark



Output

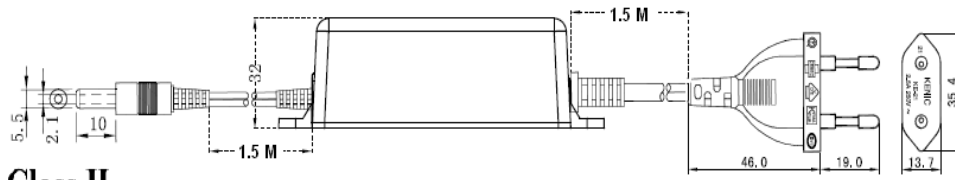
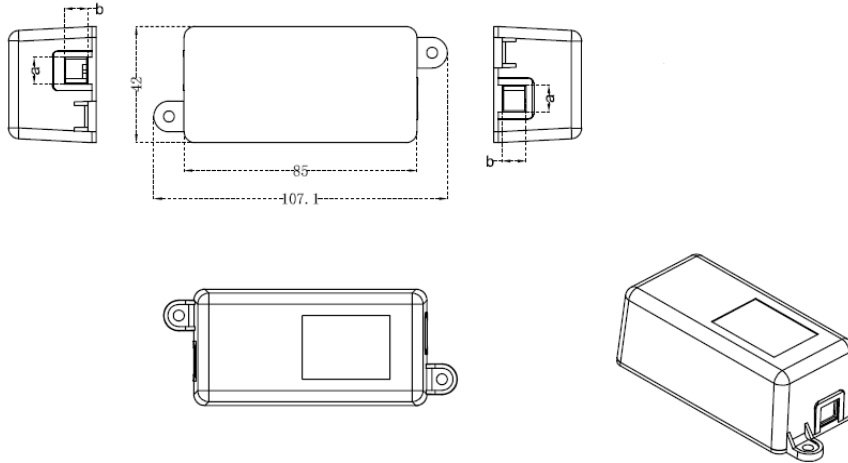
Model No.	Output Voltage (V)	Output Current (mA)	Ripple & Noise	Line regulation	Load regulation	Voltage tolerance
SPA-030yyyy-HP-Z	3V	100 to 2500	1%	±1%	±5%	±5%
SPA-035yyyy-HP-Z	3.5V	100 to 2500	1%	±1%	±5%	±5%
SPA-040yyyy-HP-Z	4V	100 to 2500	1%	±1%	±5%	±5%
SPA-045yyyy-HP-Z	4.5V	100 to 2500	1%	±1%	±5%	±5%
SPA-050yyyy-HP-Z	5V	100 to 2500	1%	±1%	±5%	±5%
SPA-055yyyy-HP-Z	5.5V	100 to 2200	1%	±1%	±5%	±5%
SPA-060yyyy-HP-Z	6V	100 to 2200	1%	±1%	±5%	±5%
SPA-065yyyy-HP-Z	6.5V	100 to 2200	1%	±1%	±5%	±5%
SPA-070yyyy-HP-Z	7V	100 to 2000	1%	±1%	±5%	±5%
SPA-075yyyy-HP-Z	7.5V	100 to 1900	1%	±1%	±5%	±5%
SPA-080yyyy-HP-Z	8V	100 to 1800	1%	±1%	±5%	±5%
SPA-085yyyy-HP-Z	8.5V	100 to 1700	1%	±1%	±5%	±5%
SPA-090yyyy-HP-Z	9V	100 to 1600	1%	±1%	±5%	±5%
SPA-095yyyy-HP-Z	9.5V	100 to 1500	1%	±1%	±5%	±5%
SPA-100yyyy-HP-Z	10V	100 to 1400	1%	±1%	±5%	±5%
SPA-105yyyy-HP-Z	10.5V	100 to 1400	1%	±1%	±5%	±5%
SPA-110yyyy-HP-Z	11V	100 to 1300	1%	±1%	±5%	±5%
SPA-115yyyy-HP-Z	11.5V	100 to 1250	1%	±1%	±5%	±5%
SPA-120yyyy-HP-Z	12V	100 to 1250	1%	±1%	±5%	±5%
SPA-125yyyy-HP-Z	12.5V	100 to 1150	1%	±1%	±5%	±5%
SPA-130yyyy-HP-Z	13V	100 to 1150	1%	±1%	±5%	±5%
SPA-135yyyy-HP-Z	13.5V	100 to 1100	1%	±1%	±5%	±5%
SPA-140yyyy-HP-Z	14V	100 to 1050	1%	±1%	±5%	±5%
SPA-145yyyy-HP-Z	14.5V	100 to 1000	1%	±1%	±5%	±5%
SPA-150yyyy-HP-Z	15V	100 to 1000	1%	±1%	±5%	±5%
SPA-155yyyy-HP-Z	15.5V	100 to 950	1%	±1%	±5%	±5%
SPA-160yyyy-HP-Z	16V	100 to 900	1%	±1%	±5%	±5%
SPA-165yyyy-HP-Z	16.5V	100 to 900	1%	±1%	±5%	±5%
SPA-170yyyy-HP-Z	17V	100 to 850	1%	±1%	±5%	±5%
SPA-175yyyy-HP-Z	17.5V	100 to 850	1%	±1%	±5%	±5%
SPA-180yyyy-HP-Z	18V	100 to 800	1%	±1%	±5%	±5%
SPA-185yyyy-HP-Z	18.5V	100 to 800	1%	±1%	±5%	±5%
SPA-190yyyy-HP-Z	19V	100 to 750	1%	±1%	±5%	±5%
SPA-195yyyy-HP-Z	19.5V	100 to 750	1%	±1%	±5%	±5%
SPA-200yyyy-HP-Z	20V	100 to 750	1%	±1%	±5%	±5%
SPA-205yyyy-HP-Z	20.5V	100 to 700	1%	±1%	±5%	±5%
SPA-210yyyy-HP-Z	21V	100 to 700	1%	±1%	±5%	±5%
SPA-215yyyy-HP-Z	21.5V	100 to 650	1%	±1%	±5%	±5%
SPA-220yyyy-HP-Z	22V	100 to 650	1%	±1%	±5%	±5%

15W series AC to DC power supply**Waterproof IP44 & IP67**

SPA-225yyyy-HP-Z	22.5V	100 to 650	1%	±1%	±5%	±5%
SPA-230yyyy-HP-Z	23V	100 to 650	1%	±1%	±5%	±5%
SPA-235yyyy-HP-Z	23.5V	100 to 600	1%	±1%	±5%	±5%
SPA-240yyyy-HP-Z	24V	100 to 600	1%	±1%	±5%	±5%
SPA-250yyyy-HP-Z	25V	100 to 600	1%	±1%	±5%	±5%
SPA-260yyyy-HP-Z	26V	100 to 550	1%	±1%	±5%	±5%
SPA-270yyyy-HP-Z	27V	100 to 550	1%	±1%	±5%	±5%
SPA-280yyyy-HP-Z	28V	100 to 500	1%	±1%	±5%	±5%
SPA-290yyyy-HP-Z	29V	100 to 500	1%	±1%	±5%	±5%
SPA-300yyyy-HP-Z	30V	100 to 500	1%	±1%	±5%	±5%
SPA-310yyyy-HP-Z	31V	100 to 450	1%	±1%	±5%	±5%
SPA-320yyyy-HP-Z	32V	100 to 450	1%	±1%	±5%	±5%
SPA-330yyyy-HP-Z	33V	100 to 450	1%	±1%	±5%	±5%
SPA-340yyyy-HP-Z	34V	100 to 400	1%	±1%	±5%	±5%
SPA-350yyyy-HP-Z	35V	100 to 400	1%	±1%	±5%	±5%
SPA-360yyyy-HP-Z	36V	100 to 400	1%	±1%	±5%	±5%

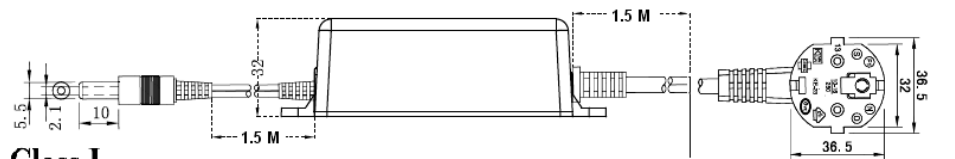
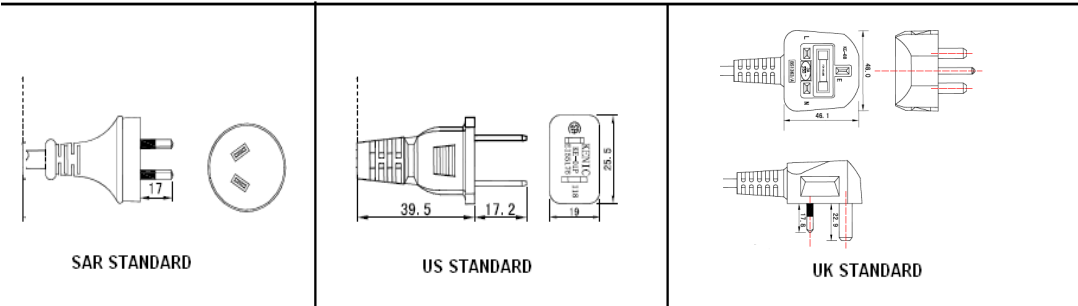
Definition of variables :

Variable :	Range of variable :	Content
xxx	030-360	3 digits, indicates 10 times of output voltage in Voltage. eg : 030=3.0V, 360=36V
yyyy	0100-4000	4 digits, indicates 1000 times of output voltage in Voltage. eg : 0100=0.1A, 4000=4.0A
H	W, S	"W" indicates IP protection class (IP67), "S" indicates IP protection class (IP44)
Z	EU, BS	"EU" indicates power supply cord with EU plug, "BS" indicates power supply cord with BS plug.



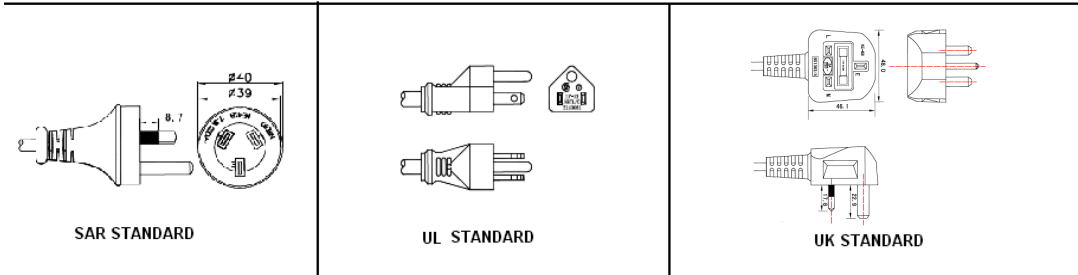
Class II

EURO STANDARD



Class I

EURO STANDARD



Note: 1.All dimensions in mm.
2.Detail mechanical drawing upon request.

Safety mark

