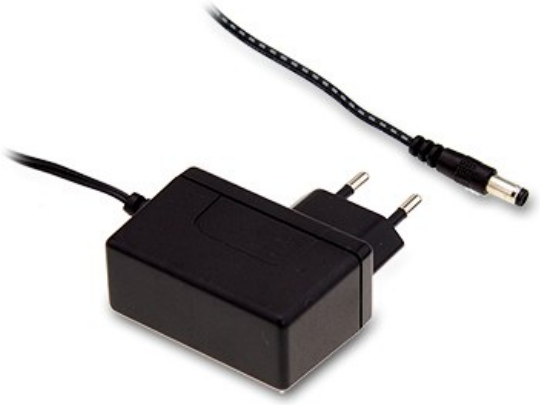
12W AC-DC High Reliability Slim Wall-mounted Adaptor SGA12E series



(Cable connection)

(USB connection)

EN62368-1 IEC62368-1 TPTC004

ECO Household Automate Industrial Security Network Telecom

Features

- Ultra slim
- Universal AC input / Full range
- 2 pole EURO plug, Class Ⅱ power unit
- No load power consumption <0.075W
- **Energy efficiency Level** Ⅵ
- Comply with EU ErP and meet CoC version 5
- Protections: Short circuit / Overload / Over voltage
- Fully enclosed plastic case
- Pass LPS
- 54V model available for PoE(optional)
- Various DC plug quick adapter accessory available
  (Plug kit sold sperately, please refer to : https://www.meanwell.com/upload/pdf/DC_plug.pdf)
- 3 years warranty

Applications

- Consumer electronic devices
- Telecommunication devices
- Office facilities
- Industrial equipments
- Power sourcing equipment of PoE

Description

SGA12E is a 12W ultra slim wall-mounted style single-output green adaptor series, which is compact and convenient for carry. SGA12E is a class Ⅱ power unit (no FG) equipped with the standard 2-Pin European plug, accepting the input range from 90VAC to 264VAC. The whole series provides different models with output voltages ranging between 5VDC and 48VDC that it can satisfy the demands for various types of consumer electronic devices.

With the efficiency up to 86% and the extremely low no-load power consumption below 0.075W, SGA12E is compliant with EU ErP and meet CoC version 5. The supreme feature allows the adaptor to save the energy when it is under either the operating mode or the standby mode. The entire series is approved for international safety regulations; moreover, it adopts the 94V-0 flame retardant plastic case that it can effectively prevent users from electric hazards.

Model Encoding

SGA 12 E 05 - P1J

- DC plug type:
  - P1J: Plug for standard model, 2.1ψ×5.5ψ×11mm, C+ tuning fork type
  - USB: USB (type A) for 5V standard model only
  - Other options available by customer requested (see Page 4~5)
- Output voltage
- European 2 pin AC plug
- Rated wattage
- Series name

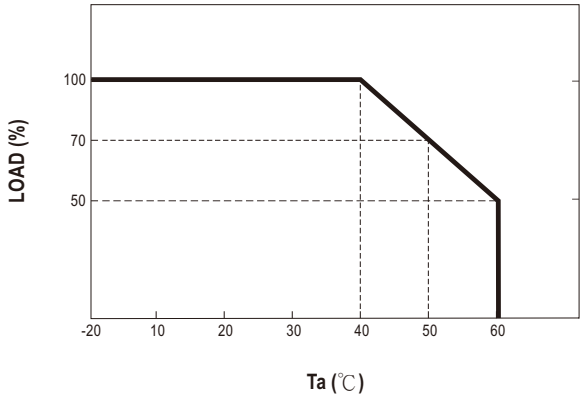
SPECIFICATION

ORDER NO.		SGA12E05-□ □=P1J, USB	SGA12E07-P1J	SGA12E09-P1J	SGA12E12-P1J	SGA12E15-P1J	SGA12E18-P1J	SGA12E24-P1J	SGA12E48-P1J
OUTPUT	SAFETY MODEL NO.	SGA12E05	SGA12E07	SGA12E09	SGA12E12	SGA12E15	SGA12E18	SGA12E24	SGA12E48
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V
	RATED CURRENT	2.4A	1.6A	1.33A	1A	0.8A	0.66A	0.5A	0.25A
	CURRENT RANGE	0 ~ 2.4A	0 ~ 1.6A	0 ~ 1.33A	0 ~ 1A	0 ~ 0.8A	0 ~ 0.66A	0 ~ 0.5A	0 ~ 0.25A
	RATED POWER (max.)	12W	12W	12W	12W	12W	12W	12W	12W
	RIPPLE & NOISE (max.) Note.3	50mVp-p	50mVp-p	80mVp-p	80mVp-p	80mVp-p	80mVp-p	100mVp-p	100mVp-p
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%
	LINE REGULATION Note.5	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION Note.6	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%
	SETUP, RISE, HOLD UP TIME	1300ms, 50ms, 12ms/230VAC 1300ms, 50ms, 12ms/115VAC at full load							
INPUT	VOLTAGE RANGE	90 ~ 264VAC							
	FREQUENCY RANGE	47 ~ 63Hz							
	EFFICIENCY (Typ.)	80%	83%	83%	83%	84.5%	85%	85%	86%
	AC CURRENT	0.5A / 115VAC 0.25A / 230VAC							
	INRUSH CURRENT (max.)	Cold start 30A / 115VAC 60A / 230VAC							
	LEAKAGE CURRENT(max.)	0.25mA / 240VAC							
PROTECTION	OVERLOAD	110 ~ 200% rated output power						120 ~ 250% rated output power	
		Protection type : Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE	110 ~ 140% rated output voltage							
		Protection type : Clamp by zener diode, output short							
ENVIRONMENT	WORKING TEMP.	-20 ~ +60℃ (Refer to "Derating Curve")							
	WORKING HUMIDITY	20% ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH non-condensing							
	TEMP. COEFFICIENT	±0.03% / ℃ (0 ~ 40℃)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
SAFETY & EMC (Note. 7)	SAFETY STANDARDS	TUV EN62368-1, EAC TP TC 004 approved							
	WITHSTAND VOLTAGE	I/P-O/P:4242VDC							
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH							
	EMC EMISSION	**Parameter**	**Standard**		**Test Level / Note**				
		Conducted emission	EN55032(CISPR32)		Class B				
		Radiated emission	EN55032(CISPR32)		Class B				
		Harmonic current	EN61000-3-2		Class A				
		Voltage flicker	EN61000-3-3		-------				
	EMC IMMUNITY	**Parameter**	**Standard**		**Test Level /Note**				
		ESD	EN61000-4-2		Level 3, 8KV air; Level 2, 4KV contact				
		RF field susceptibility	EN61000-4-3		Level 2, 3V/m				
		EFT bursts	EN61000-4-4		Level 2, 1KV				
		Surge susceptibility	EN61000-4-5		Level 3, 1KV/L-N				
		Conducted susceptibility	EN61000-4-6		Level 2, 3V				
		Magnetic field immunity	EN61000-4-8		Level 1, 1A/m				
		Voltage dips , interruption	EN61000-4-11		＞95% dip 0. 5 periods, 30% dip 25 periods, ＞95% interruptions 250 periods				
OTHERS	LIFE	3 years : 100% load 40℃, 8hours / day							
	MTBF	265Khrs min. MIL-HDBK-217F(25℃)							
	DIMENSION	62.2*27.4*39.7mm (L*W*H)							
	PACKING	100g ; 90pcs / 10kg / CARTON for cable connection ; 59.5g ; 90pcs / 8kg / CARTON for USB connection							
CONNECTOR	PLUG	See page 4~5 ; Other type available by customer requested							
	CABLE	See page 4~5 ; Other type available by customer requested							

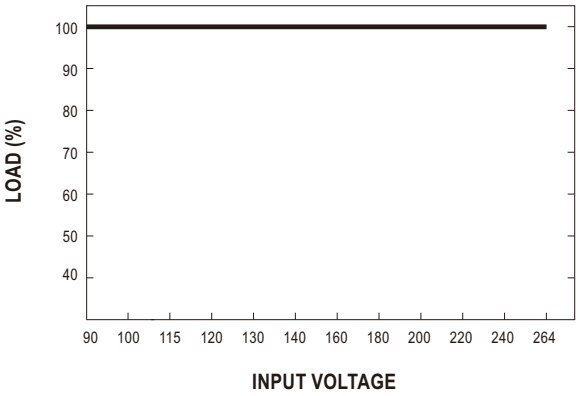
NOTE

1.All parameters are specified at 230VAC input, rated load, 25℃ 70% RH ambient.
2.DC voltage: The output voltage set at point measure by plug terminal & 50% load.
3.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μf & 47μf 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 10% to 100% rated load
7.The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies.” (as available on http://www.meanwell.com)

■ Derating Curve



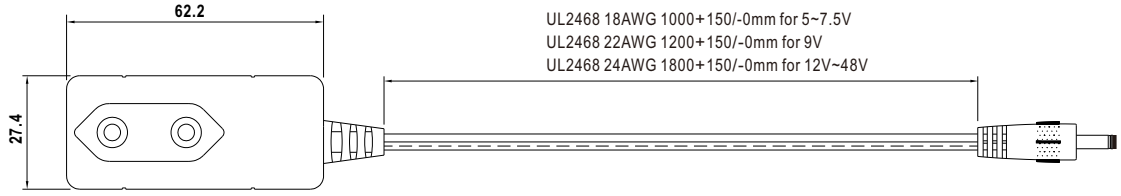
■ Static Characteristics

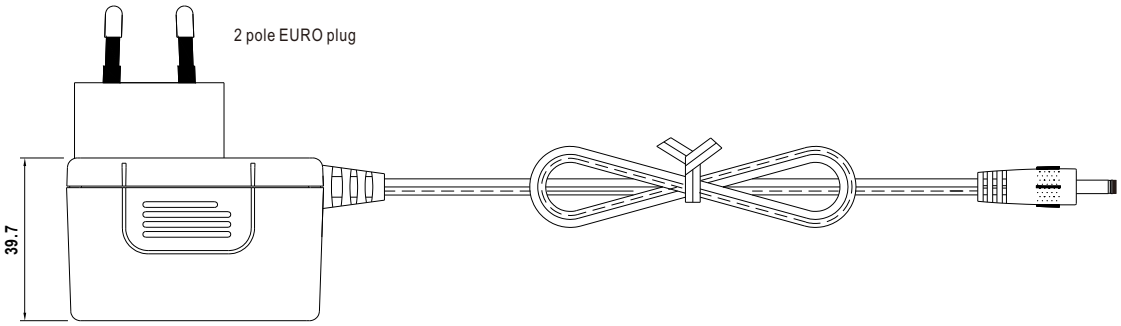


■ Mechanical Specification

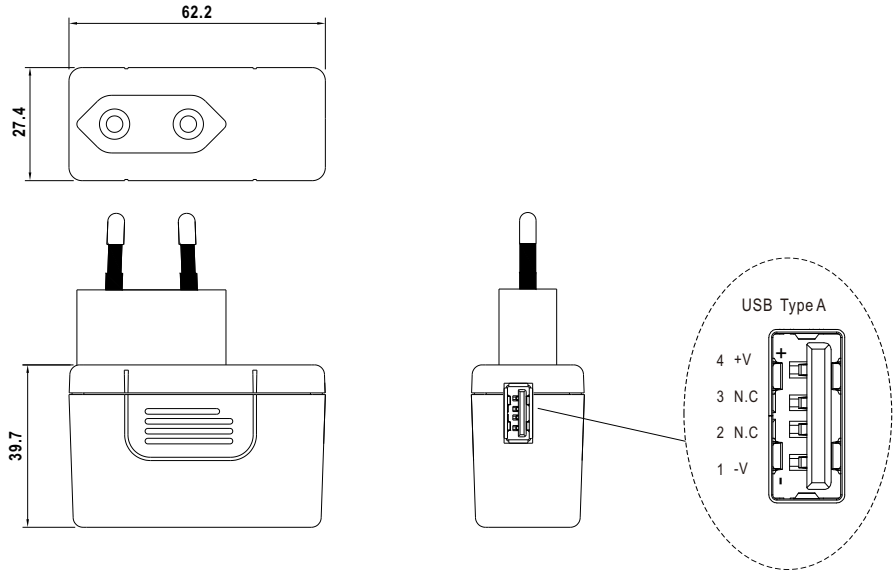
Unit:mm

※Cable Connection





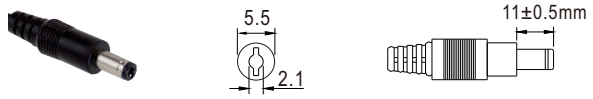
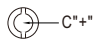
※USB Connection



■ DC output plug

◎ Standard plug: P1J

Unit:mm

P1J	Pin Assignment
	
	Outside Inside

◎ DC plug changeable through:

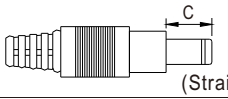
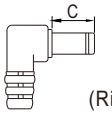
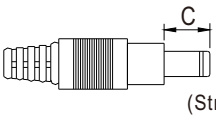
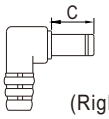
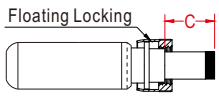
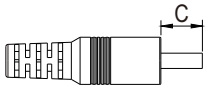
(1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)

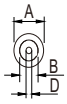
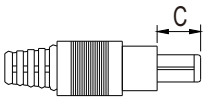
(2) Quick adapter accessory (sold separately without MOQ)

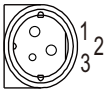
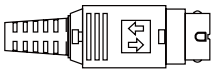
Please refer to below table and online selection guide : https://www.meanwell.com/upload/pdf/DC_plug.pdf

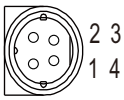
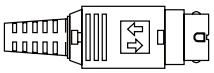
Example quick adapter accessory:

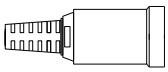
◎ Optional DC plug: (Available in customized cable or quick adapter)

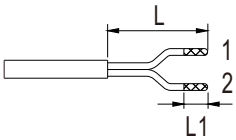
Tuning Fork Style		Type No.	A	B	C	Quick Adapter Accessory
			OD	ID	L	
	 (Straight)	P1I	5.5	2.1	9.5	Available (Current rating: 7.5A max.)
		P1L	5.5	2.5	9.5	
		P1M	5.5	2.5	11.0	
	 (Right-angled)	P1IR	5.5	2.1	9.5	
		P1JR	5.5	2.1	11.0	
		P1LR	5.5	2.5	9.5	
		P1MR	5.5	2.5	11.0	
Barrel Style		**Type No.**	**A**	**B**	**C**	
			OD	**ID**	**L**	
	 (Straight)	P2I	5.5	2.1	9.5	None
		P2J	5.5	2.1	11.0	
		P2L	5.5	2.5	9.5	
		P2M	5.5	2.5	11.0	
	 (Right-angled)	P2IR	5.5	2.1	9.5	
		P2JR	5.5	2.1	11.0	
		P2LR	5.5	2.5	9.5	
		P2MR	5.5	2.5	11.0	
Lock Style		**Type No.**	**A**	**B**	**C**	
			OD	**ID**	**L**	
	 SWITCHCRAFT original or equivalent	P2S(S761K)	5.53	2.03	12.06	None
		P2K(761K)	5.53	2.54	12.06	
		P2C(S760K)	5.53	2.03	9.52	
		P2D(760K)	5.53	2.54	9.52	
Min. Pin Style		**Type No.**	**A**	**B**	**C**	
			OD	**ID**	**L**	
	 EIAJ equivalent	P3A	2.35	0.7	11.0	Available (Current rating: 5A max.)
		P3B	4.0	1.7	11.0	
		P3C	4.75	1.7	11.0	

Center Pin Style	Type No.	A OD	B ID	C L	D Center Pin	Quick Adapter Accessory
  EIAJ equivalent	P4A	5.5	3.4	11.0	1.0	Available (Current rating: 7.5A max.)
	P4B	6.5	4.4	11.0	1.4	
	P4C	7.4	5.1	11.0	0.6	

Min. DIN 3 Pin with Lock (male)	Type No.	Pin Assignment PIN No.	Output	Quick Adapter Accessory
  KYCON KPPX-3P equivalent	R6B	1	+Vo	Available (Current rating: 7.5A max.)
		2	-Vo	
		3	+Vo	

Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment PIN No.	Output	Quick Adapter Accessory
  KYCON KPPX-4P equivalent	R7B	1	+Vo	Available (Current rating: 7.5A max.)
		2	-Vo	
		3	-Vo	
		4	+Vo	

Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment PIN No.	Output	Quick Adapter Accessory
 KYCON KPJX-CM-4S equivalent	R7BF	1	+Vo	None
		2	-Vo	
		3	-Vo	
		4	+Vo	

Stripped and tinned leads	Type No.	Pin Assignment PIN No.	Output	Quick Adapter Accessory
 Length of Land L1 by request (MW's standard length, L: 25 mm, L1: 10 mm)	by customer	1 (Ribbed)	+Vo	None
		2 (Letter)	-Vo	

■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html