



60W With PFC LED Power Supply

GSV60 series



(Wall-Mounted EU type)



(Interchangeable type)



■ Features

- AC 180~264V input
- Class II/2 power unit, no FG
- Built-in active PFC function with EN61347-1 regulation
- Constant voltage design
- Protections: Short circuit / Over load / Over voltage
- Cooling by free air convection
- No load power consumption<0.5W
- 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

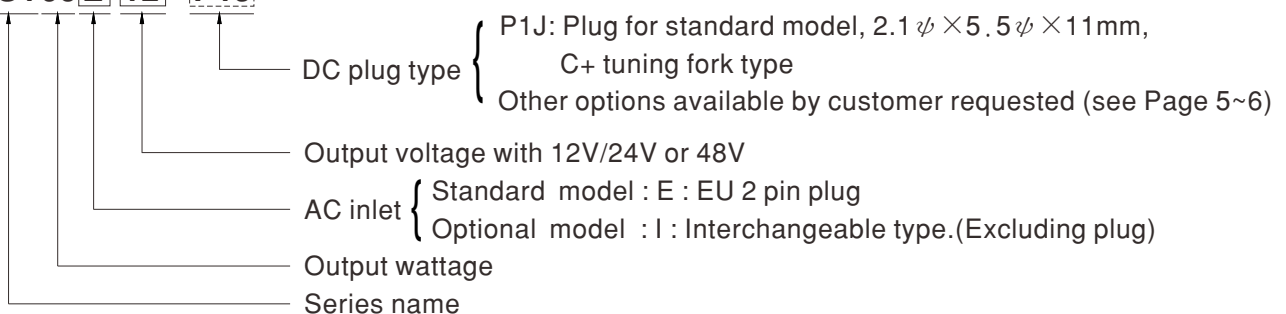
- LED strip lighting
- Indoor LED lighting
- LED decorative lighting
- Commercial lighting
- Mirror lighting
- Table light
- Portable lighting

■ Description

GSV60 series is a 60W external wall-mounted LED power supply with PFC function. The design of this product is based on the “plug and play” concept for adaptors. The AC input side exploits the 2-Pole (Class II, no FG) standard plug, and the output side is equipped with the highly accepted DC connector (2.1x5.5x11mm) in the market. This product accepts 180~264VAC input and offers constant voltage output with 12V/24V or 48V. The design complies with the lighting requirements of EMI BS EN/EN55015 and the harmonic current demand according to BS EN/EN61000-3-2 Class C. In addition, the no load power consumption is less than 0.5W, making GSV60 conform to the ErP regulation required by European Union for lighting systems as well.

■ Model Encoding

GSV60E12-P1J





SPECIFICATION

MODEL		GSV60[E] 12-P1J		GSV60[E] 24-P1J		GSV60[E] 48-P1J	
OUTPUT	DC VOLTAGE	12V		24V		48V	
	OPEN CIRCUIT VOLTAGE	<15V		<28V		<57V	
	RATED CURRENT	4.16A		2.5A		1.25A	
	RATED POWER	50W		60W		60W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	3Vp-p max.		4.5Vp-p max.		6.5Vp-p max.	
	VOLTAGE TOLERANCE <small>Note.3</small>	± 1.5V		± 2.25V		± 4.5V	
	LINE REGULATION	± 2.0%		± 2.0%		± 2.0%	
	NO LOAD CONSUMPTION	0.5W max.					
	SETUP UP TIME	500ms/230VAC at full load					
INPUT	VOLTAGE RANGE	180 ~ 264VAC 255 ~ 373VDC					
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF>0.92/230VAC at full load (Please refer to "Power Factor Characteristic" curve)					
	TOTAL HARMONIC DISTORTION	<20%/230VAC @ full load					
	EFFICIENCY (Typ.)	85% min. @ 230VAC		86% min. @ 230VAC		89% min. @ 230VAC	
	AC CURRENT (Typ.)	0.5A/230VAC				0.5A/230VAC	
	INRUSH CURRENT(max.)	COLD START 20A(twidth=200μs measured at 50% Ipeak) at 230VAC					
	LEAKAGE CURRENT	<0.25mA max. @ 230VAC					
PROTECTION	OVER LOAD	105 ~ 160% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	15.6V ~ 18V		28V ~ 32.4V		57.6V ~ 72V	
		Protection type : Clamp by zener diode, output short					
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed					
ENVIRONMENT	WORKING TEMP.	-20 ~ +40℃ (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 95% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-30 ~ +80℃, 10 ~ 95% RH					
	TEMP. COEFFICIENT	± 0.03%/℃ (-20 ~ 40℃)					
	VIBRATION	10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes					
SAFETY & EMC	SAFETY STANDARDS	LVD BS EN/EN61347-1, BS EN/EN61347-2-13, EAC TP TC 004 approved					
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC					
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25℃ / 70% RH					
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (100% load) ; BS EN/EN61000-3-3, EAC TP TC 020					
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, light industry level, criteria A, EAC TP TC 020					
OTHERS	MTBF	450K hrs min. MIL-HDBK-217F (25℃)					
	DIMENSION	E : 75.5*32*47.5 mm(L*W*H) ; I: 75.5*39.1*56.2 mm(L*W*H)					
	PACKING	E: 240g ; 60pcs / 15.5kg / CARTON ; I: 200g ; 60pcs / 13.5kg / CARTON					
CONNECTOR	PLUG	See page 5~6 ; Other type available by customer requested					
	CABLE	See page 5~6 ; Other type available by customer requested					
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 104PF/50V ceramic capacitor and 47μf/50V electric capacitor between output terminals. 3. Tolerance:includes set up tolerance,line regulation and load regulation with minimum load 1% to maximum load 100% at 230VAC input condition. 4. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft) ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx						

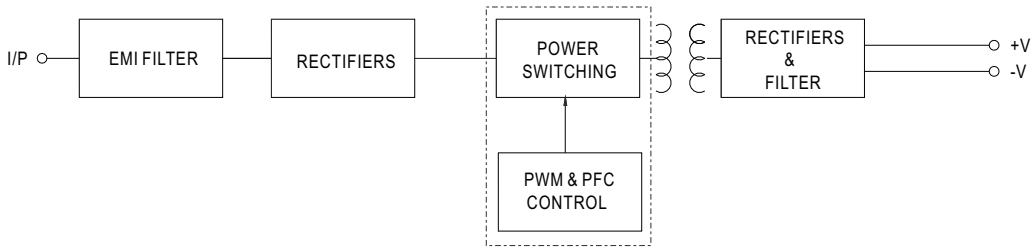


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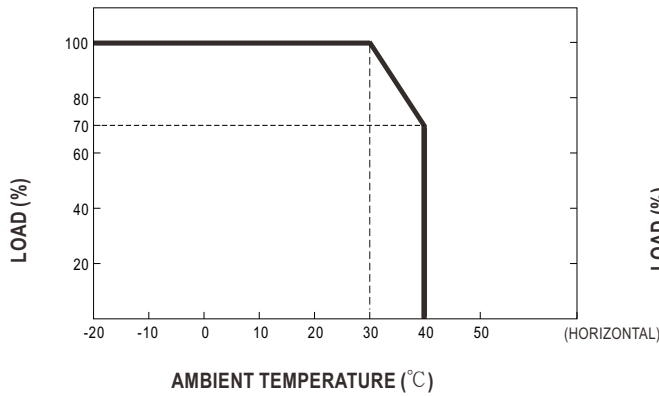
GSV60 series

■ Block Diagram

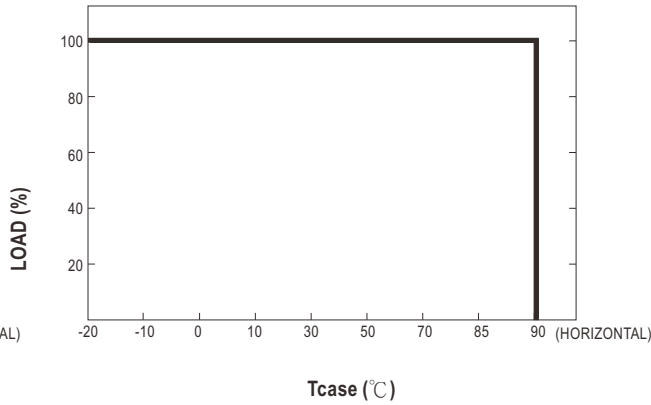
fosc : 100KHz



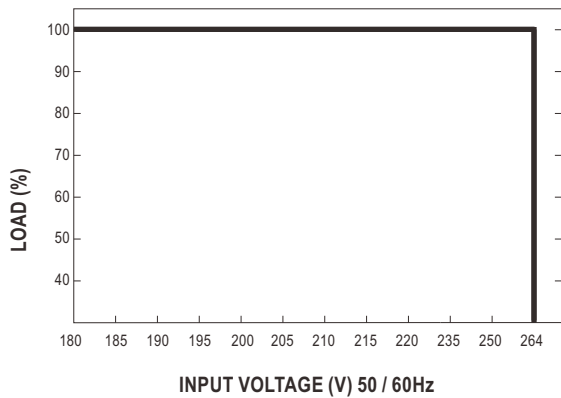
■ Derating Curve



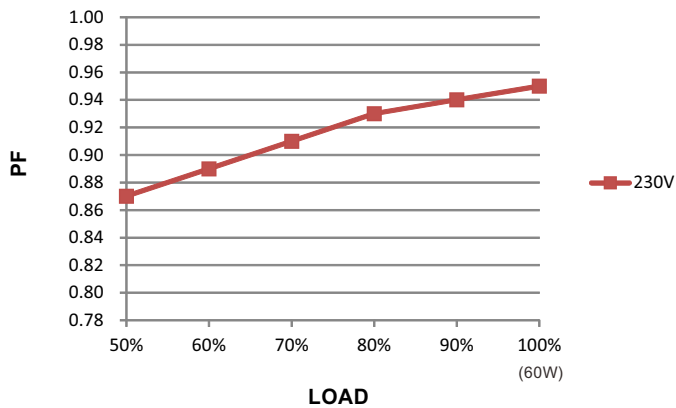
■ OUTPUT LOAD vs TEMPERATURE



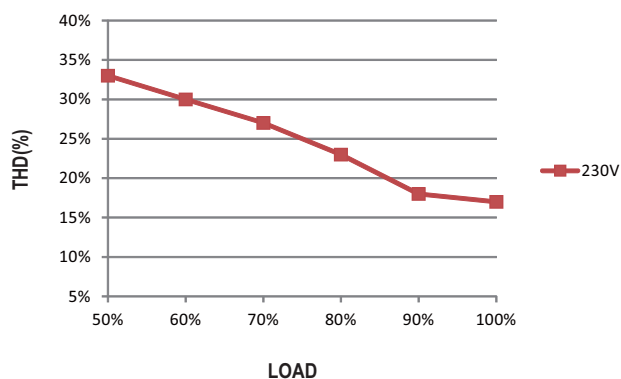
■ Static Characteristics



■ Power Factor Characteristic(24V)

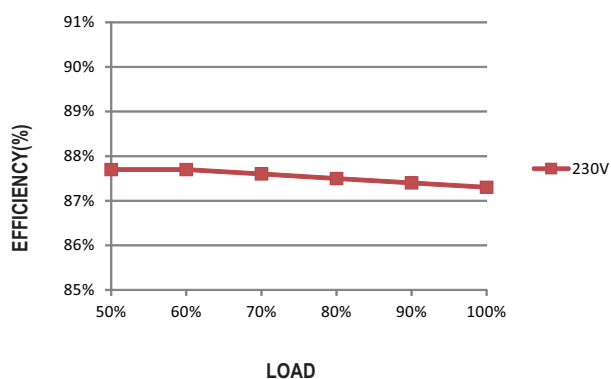


■ TOTAL HARMONIC DISTORTION (THD)

※ 24V Model, T_{case} at 70℃


■ EFFICIENCY vs LOAD

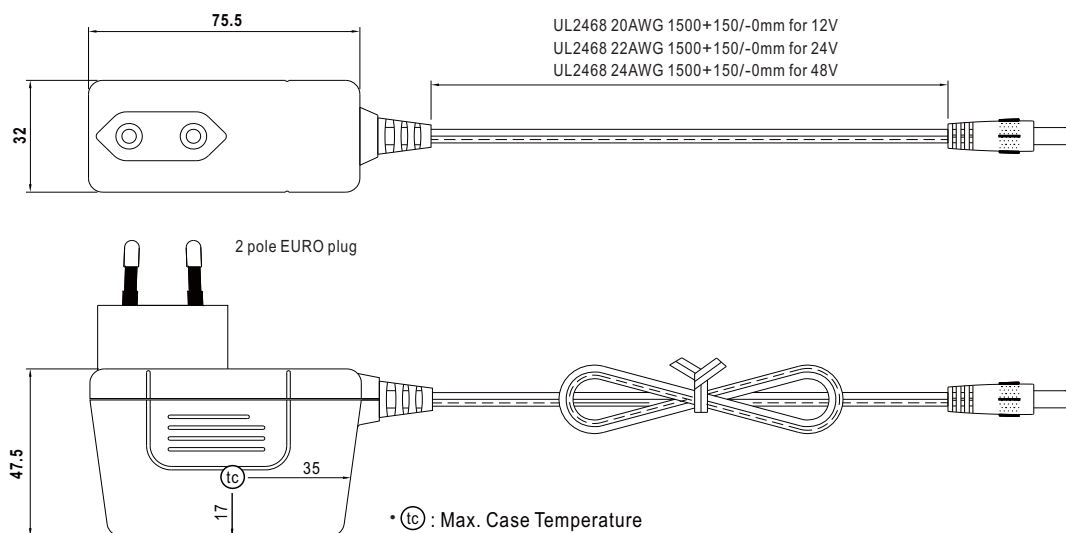
GSV60 series possess superior working efficiency that up to 90% can be reached in field applications.

※ 24V Model, T_{case} at 70℃


■ Mechanical Specification

※ Standard

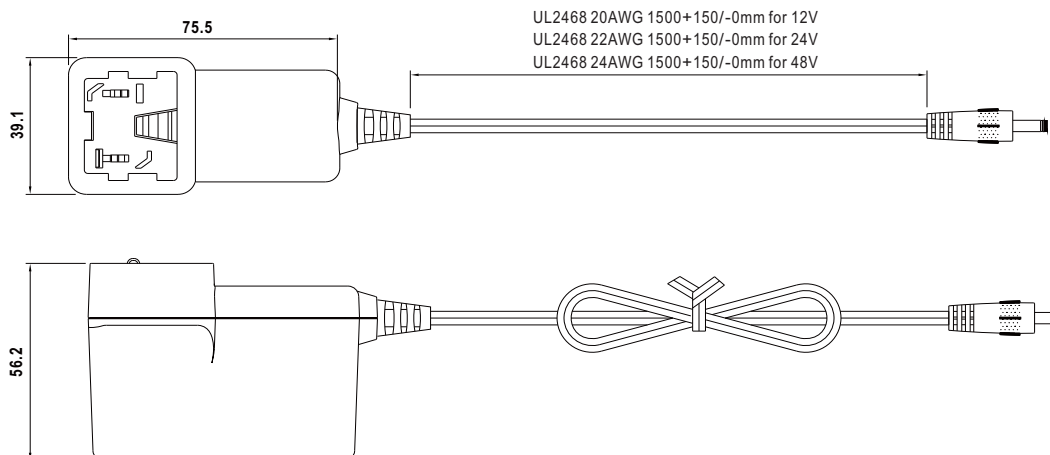
Unit:mm



※ Interchangeable AC plug Specifically for GSV30I/60I (order separately)

TYPE		
	U.K type	European type
ORDER NO.	AC plug-UK2	AC plug-EU2

By optional (For AC interchangeable plug same as GEM06~60I accessory)





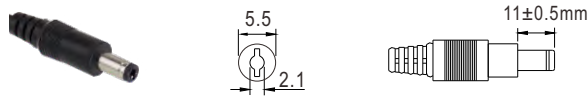


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■ DC output plug

◎ Standard plug: P1J

Unit:mm

P1J	Pin Assignment
	
	Outside  Inside

◎ DC plug changeable through:


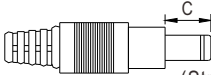
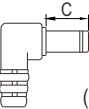


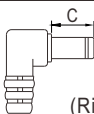

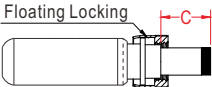
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)



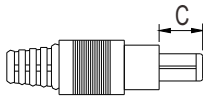


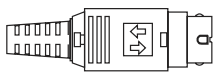





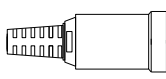

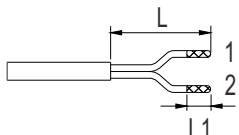
Please refer to below table and online selection guide : https://www.meanwell.com/upload/pdf/DC_plug.pdf

Example quick adapter accessory:



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

Tuning Fork Style		Type No.	A OD	B ID	C L	Quick Adapter Accessory	
	 (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 OD	B ID	C L	None	
	 (Straight)	P2I	5.5	2.1	9.5		
		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 OD	B ID	C L	None	
	 Floating Locking SWITCHCRAFT original or equivalent		P2S(S761K)	5.53	2.03		12.06
			P2K(761K)	5.53	2.54		12.06
			P2C(S760K)	5.53	2.03		9.52
			P2D(760K)	5.53	2.54		9.52

Center Pin Style	Type No.	A	B	C	D	Quick Adapter Accessory
		OD	ID	L	Center Pin	
   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				Available (Current rating: 7.5A max.)
		PIN No.	Output			
   KYCON KPPX-3P equivalent	R6B	1	+Vo			
		2	-Vo			
		3	+Vo			
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment				Available (Current rating: 7.5A max.)
		PIN No.	Output			
   KYCON KPPX-4P equivalent	R7B	1	+Vo			
		2	-Vo			
		3	-Vo			
		4	+Vo			
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment				None
		PIN No.	Output			
   KYCON KPJX-CM-4S equivalent	R7BF	1	+Vo			
		2	-Vo			
		3	-Vo			
		4	+Vo			
Stripped and tinned leads	Type No.	Pin Assignment				None
		PIN No.	Output			
  Length of Land L1 by request (MW's standard length, L: <u>25</u> _mm, L1: <u>10</u> _mm)	by customer	1 (Ribbed)	+Vo			
		2 (Letter)	-Vo			

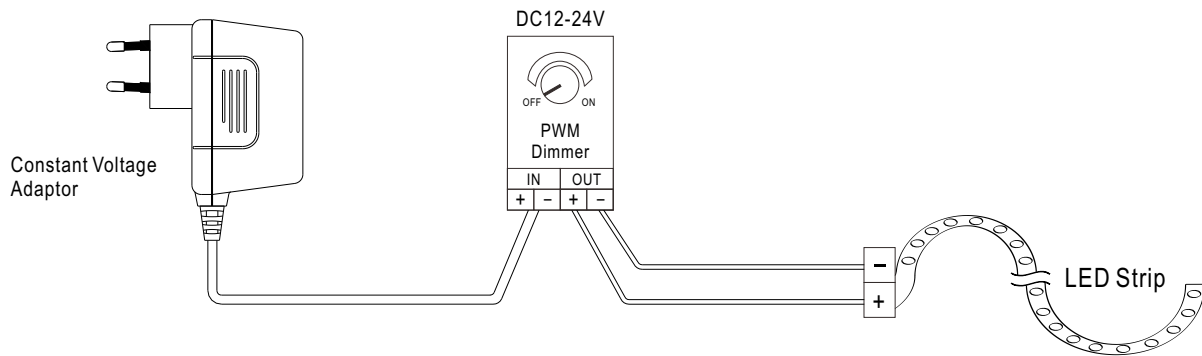


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■ Installation Manual

◎ Connection



◎ Cautions

- Before commencing any installation or maintenance work, please disconnect the power supply from the utility. Ensure that it cannot be re-connected inadvertently!
- Mounting orientations other than standard orientation or operate under high ambient temperature may increase the internal component temperature and will require a de-rating in output current.
- Current rating of an approved primary /secondary cable should be greater than or equal to that of the unit. Please refer to its specification.
- For dimmable LED power supplies, make sure that your dimming controller is capable of driving these units.
- Tc max. is identified on the product label. Please make sure that temperature of Tc point will not exceed limit.
- 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.
- For more information about installation, please refer to https://www.meanwell.com/Upload/PDF/LED_EN.pdf for details.
- Please refer to : <http://www.meanwell.com/manual.html>