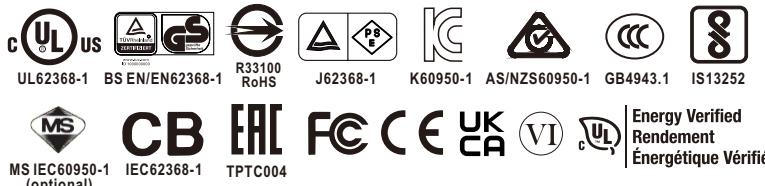




User's Manual



■ Features

- **Global certificates**
- Universal AC input / Full range
- 3 pole AC inlet IEC320-C14,Class I power unit
- No load power consumption< 0.075W
- **Energy efficiency Level VI**
- Comply with EISA 2007/DoE,NRCan,Korea K-MEPS, AU/NZ MEPS,EU ErP and CoC Version 5
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Fully enclosed plastic case
- Pass LPS
- -30~+70°C wide range working temperature
- LED indicator for power on
- **Various DC plug quick adapter accessory available**
(Plug kit sold separately, please refer to : https://www.meanwell.com/upload/pdf/DC_plug.pdf)
- 3 years warranty

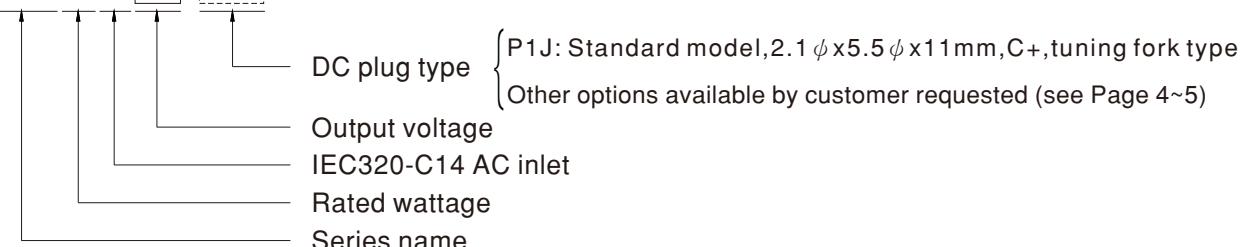
■ Description

GST60A is a highly reliable, 60W desktop style single-output green adaptor series. This product is a class I power unit (with FG), equipped with a standard IEC320-C14 AC inlet and adopting the input range from 90VAC to 264VAC. The entire series supplies different models with output voltages ranging between 5VDC and 48VDC that can satisfy the demands for various types of consumer electronic devices.

With the efficiency up to 92% and the extremely low no-load power consumption below 0.075W, GST60A is compliant with USA EISA 2007/DoE, Canada NRCan, Australia and New Zealand MEPS, Korea K-MEPS, EU ErP and Code of Conduct (CoC) Version 5. The supreme feature allows the adaptor to save the energy when it is either under the operating mode or the standby mode. The entire series utilizes the 94V-0 flame retardant plastic case. GST60A is certified for the international safety regulations.

■ Model Encoding

GST 60 A [05] -P1J



SPECIFICATION

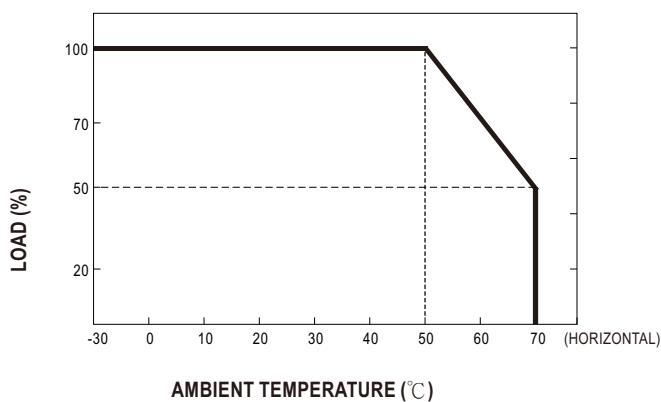
ORDER NO.	GST60A05-P1J	GST60A07-P1J	GST60A09-P1J	GST60A12-P1J	GST60A15-P1J	GST60A18-P1J	GST60A24-P1J	GST60A48-P1J
OUTPUT	SAFETY MODEL NO.	GST60A05	GST60A07	GST60A09	GST60A12	GST60A15	GST60A18	GST60A24
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V
	RATED CURRENT	6A	6A	6A	5A	4A	3.33A	2.5A
	CURRENT RANGE	0 ~ 6A	0 ~ 6A	0 ~ 6A	0 ~ 5A	0 ~ 4A	0 ~ 3.33A	0 ~ 2.5A
	RATED POWER (max.)	30W	45W	54W	60W	60W	60W	60W
	RIPLPE & NOISE (max.) Note.3	120mVp-p	120mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p	200mVp-p
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.5%
	LINE REGULATION Note.5	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.5%
INPUT	SETUP, RISE TIME Note.6	1000ms, 50ms / 230VAC	1000ms, 50ms / 115VAC	at full load				
	HOLD UP TIME (Typ.)	50ms / 230VAC	15ms / 115VAC	at full load				
PROTECTION	VOLTAGE RANGE Note.7	90 ~ 264VAC	135 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz						
	EFFICIENCY (Typ.)	85.5%	88.5%	89%	89.5%	89.5%	89.5%	90.5%
	AC CURRENT (Typ.)	1.4A / 115VAC	1A / 230VAC					
	INRUSH CURRENT (max.)	Cold start 35A / 115AC	65A / 230VAC					
	LEAKAGE CURRENT(max.)	0.75mA / 240VAC						
ENVIRONMENT	OVERLOAD	105 ~ 150% rated output power						
		Protection type : Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE	5.2 ~ 6.8V	7.8 ~ 10.2V	9.4 ~ 12.2V	12.6 ~ 16.2V	15.7 ~ 20.3V	18.9 ~ 24.3V	25.2 ~ 32.4V
		Protection type : Shut down o/p voltage, re-power on to recover						
SAFETY & EMC (Note. 9)	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover						
	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")						
	WORKING HUMIDITY	20% ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing						
	TEMP. COEFFICIENT	±0.03% / °C (0 ~ 50°C)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes						
	SAFETY STANDARDS Note. 8	UL62368-1, CSA C22.2 No.62368-1, TUV BS EN/EN62368-1, BSMI CNS 14336-1 , CCC GB4943.1, PSE J62368-1, AS/NZS 60950.1, BIS IS13252, KC K60950-1, EAC TP TC 004 approved; SIRIM MS IEC62368-1 (optional) approved						
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH						
	EMC EMISSION	Parameter	Standard		Test Level / Note			
		Conducted emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 CAN ICES-3(B)/NMB-3(B),CNS13438,GB17625.1 EAC TP TC 020,MSIP KN32		Class B			
		Radiated emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 CAN ICES-3(B)/NMB-3(B),CNS13438,GB17625.1 EAC TP TC 020,MSIP KN32		Class B			
		Harmonic current	BS EN/EN61000-3-2,GB9254		Class A			
	EMC IMMUNITY	Voltage flicker	BS EN/EN61000-3-3		-----			
		Parameter	Standard		Test Level / Note			
		ESD	BS EN/EN61000-4-2		Level 4, 15KV air; Level 4, 8KV contact			
		RF field susceptibility	BS EN/EN61000-4-3		Level 2, 3V/m			
		EFT bursts	BS EN/EN61000-4-4		Level 2, 1KV			
		Surge susceptibility	BS EN/EN61000-4-5		Level 3, 1KV/Line-Line , 2KV/Line-FG			
		Conducted susceptibility	BS EN/EN61000-4-6		Level 2, 3V			
OTHERS	Magnetic field immunity	BS EN/EN61000-4-8			Level 2, 3A/m			
	Voltage dips , interruption	BS EN/EN61000-4-11			>95% dip 0. 5 periods, 30% dip 25 periods, >95% interruptions 250 periods			
CONNECTOR	MTBF	709.7 hrs min. MIL-HDBK-217F(25°C)						
	DIMENSION	125*50*31.5mm (L*W*H)						
CONNECTOR	PACKING	0.305Kg; 40pcs/13.02Kg/1.04CUFT						
	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°C 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.	Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.						
	7.	Derating may be needed under low input voltages. Please check the derating curve for more details.						
	8.	The demand for Malaysia safety is processed with the order no. GST60A □ -SIRIM by request. Please contact MEAN WELL for details.						
	9.	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." (available on http://www.meanwell.com)						
	※	Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx						



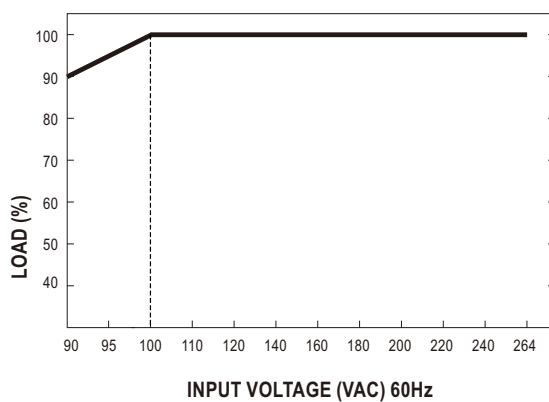
60WAC-DC Reliable Green Industrial Adaptor

GST60A series

■ Derating Curve

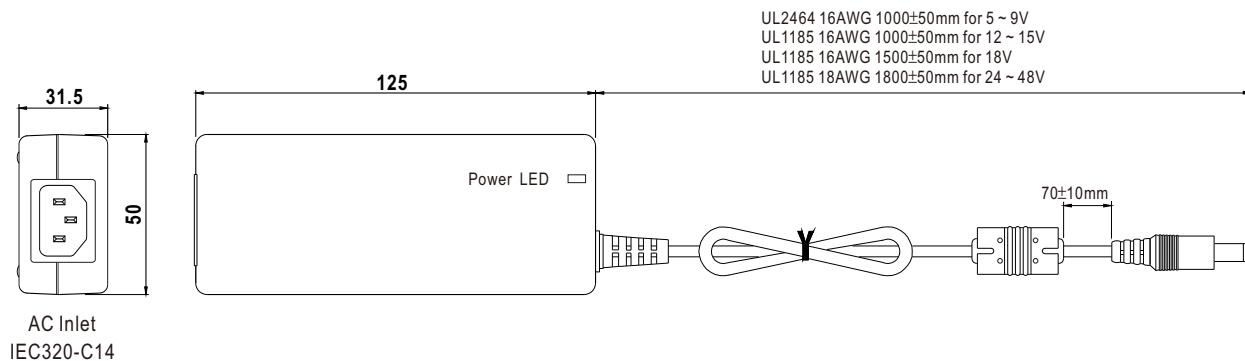


■ Static Characteristics



■ Mechanical Specification

Case No. GS60A Unit:mm



■ DC output plug

- ◎ Standard plug: P1J

P1J	Pin Assignment
 	 Outside Inside -V not connected to AC FG

◎ DC plug changeable through:

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

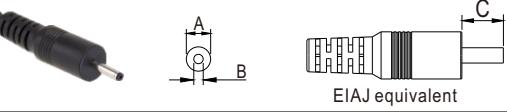
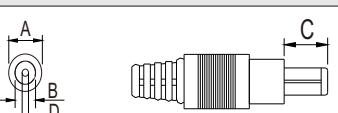
(2) Quick adapter accessory (sold separately without MOQ)

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

Example quick adapter accessory:



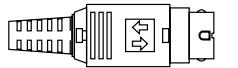
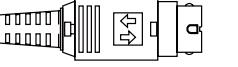
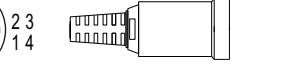
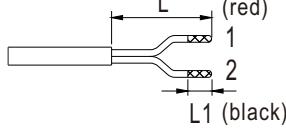
◎ Optional DC plug: (Available in customized cable or quick adapter)

Tuning Fork Style	Type No.	A	B	C	Quick Adapter Accessory
		OD	ID	L	
	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	
	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
	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	
	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
	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
	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	B	C
	P4A	5.5	3.4	11.0	Available (Current rating: 7.5A max.)
	P4B	6.5	4.4	11.0	
	P4C	7.4	5.1	11.0	



60WAC-DC Reliable Green Industrial Adaptor

GST60A series

Min. DIN 3 Pin with Lock (male)	Type No.	Pin Assignment		Quick Adapter Accessory
		PIN No.	Output	
	R6B	1	+Vo	Available (Current rating: 7.5A max.)
 1 2 3		2	-Vo	
 KYCON KPPX-3P equivalent		3	+Vo	
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)
		PIN No.	Output	
	R7B	1	+Vo	
 2 3 1 4		2	-Vo	
 KYCON KPPX-4P equivalent		3	-Vo	
		4	+Vo	
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment		None
		PIN No.	Output	
	R7BF	1	+Vo	
 KYCON KPJX-CM-4S equivalent		2	-Vo	
		3	-Vo	
		4	+Vo	
DIN 5 Pin (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)
		PIN No.	Output	
	R1B	1	-Vo	
 1 2 3 4 5		2	-Vo	
 1 2 3 4 5		3	+Vo	
 1 2 3 4 5		4	-Vo	
 1 2 3 4 5		5	+Vo	
Stripped and tinned leads	Type No.	Pin Assignment		None
		PIN No.	Output	
	by customer	1	+Vo	
 Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>5</u> mm)		2	-Vo	

■ Installation Manual

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