



60W AC-DC Reliable Green Industrial Adaptor

GST60A series



User's Manual



Video



■ 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

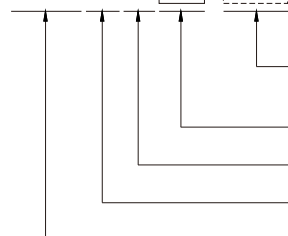
■ Description

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



- DC plug type { P1J: Standard model, 2.1 ϕ x 5.5 ϕ x 11 mm, C+, tuning fork type
Other options available by customer requested (see Page 4~5)
- Output voltage
IEC320-C14 AC inlet
Rated wattage
Series name

■ Applications

- Consumer electronic devices
- Telecommunication devices
- Office facilities
- Industrial equipments

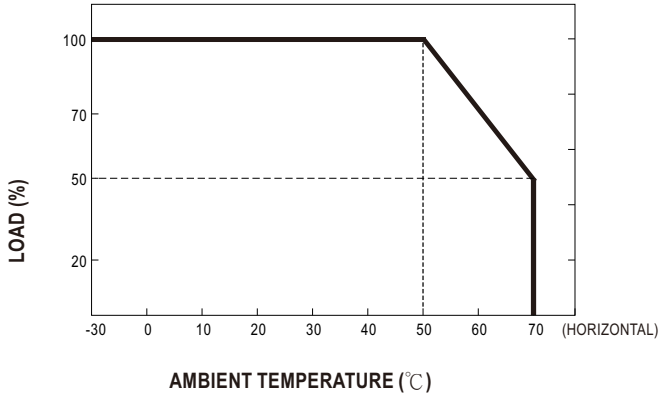
■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

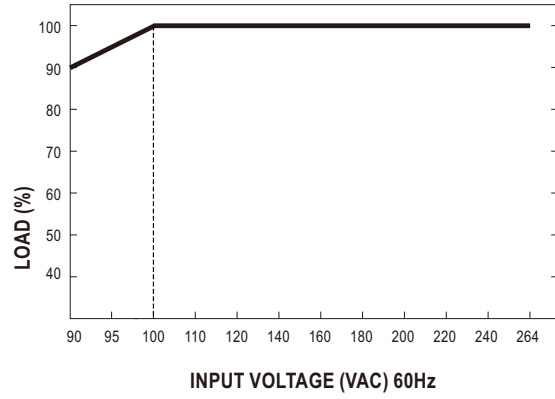
SPECIFICATION

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	GST60A48	
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V	
	RATED CURRENT	6A	6A	6A	5A	4A	3.33A	2.5A	1.25A	
	CURRENT RANGE	0 ~ 6A	0 ~ 6A	0 ~ 6A	0 ~ 5A	0 ~ 4A	0 ~ 3.33A	0 ~ 2.5A	0 ~ 1.25A	
	RATED POWER (max.)	30W	45W	54W	60W	60W	60W	60W	60W	
	RIPPLE & NOISE (max.) Note.3	120mVp-p	120mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p	150mVp-p	200mVp-p	
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±5.0%	±3.0%	±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%	±1.0%	
	LOAD REGULATION	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±3.0%	±2.5%	
	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							
INPUT	VOLTAGE RANGE Note.7	90 ~ 264VAC								
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY (Typ.)	85.5%	88.5%	89%	89.5%	89.5%	89.5%	90.5%	91%	
	AC CURRENT (Typ.)	1.4A / 115VAC		1A / 230VAC						
	INRUSH CURRENT (max.)	Cold start	35A / 115AC	65A / 230VAC						
	LEAKAGE CURRENT(max.)	0.75mA / 240VAC								
PROTECTION	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	50.4 ~ 64.8V	
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover								
ENVIRONMENT	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 & EMC (Note. 10)	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 IEC60950-1 (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		
	Voltage flicker		BS EN/EN61000-3-3				-----			
	EMC IMMUNITY	BS EN/EN55035								
		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				
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				
OTHERS	MTBF	3620.0K hrs min. Telcordia SR-332 (Bellcore) ; 709.7K hrs min. MIL-HDBK-217F (25°C)								
	DIMENSION	125*50*31.5mm (L*W*H)								
	PACKING	0.305Kg; 40pcs/13.02Kg/1.04CUFT								
CONNECTOR	PLUG	See page 4~5 ; Other type available by customer requested								
	CABLE	See page 4~5 ; Other type available by customer requested								
NOTE	<p>1. All parameters are specified at 230VAC input, rated load, 25°C 70% RH ambient.</p> <p>2. DC voltage: The output voltage set at point measure by plug terminal & 50% load.</p> <p>3. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1 μF & 47 μF capacitor.</p> <p>4. Tolerance: includes set up tolerance, line regulation, load regulation.</p> <p>5. Line regulation is measured from low line to high line at rated load.</p> <p>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.</p> <p>7. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>8. The demand for Malaysia safety is processed with the order no. GST60A □ -SIRIM by request. Please contact MEAN WELL for details.</p> <p>9. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>10. 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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>									

■ Derating Curve

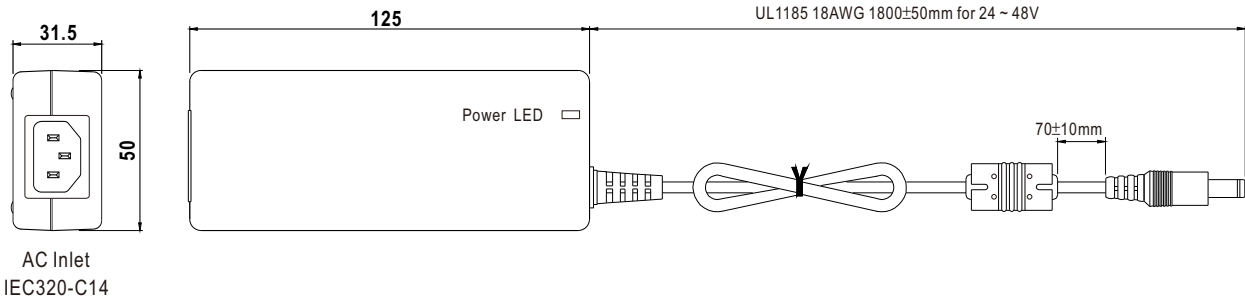


■ Static Characteristics



■ 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:



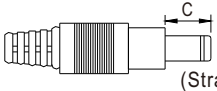
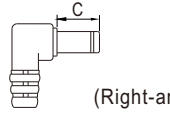


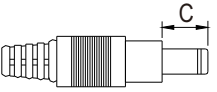
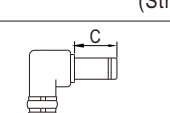


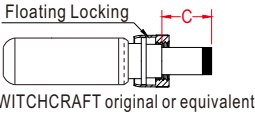


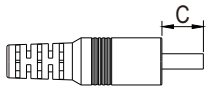

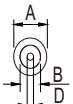
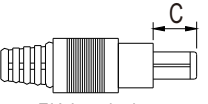
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

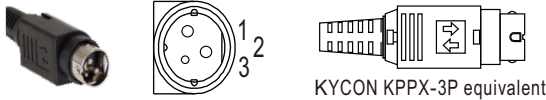

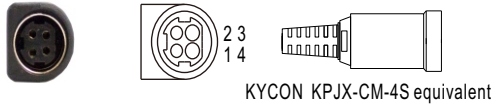

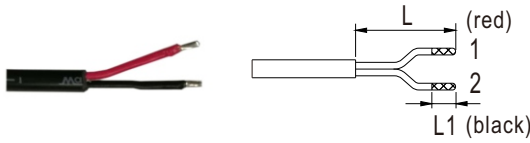
Please refer to below table and online selection guide : https://www.meanwell.com/upload/pdf/DC_plug.pdf

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		
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>A B</p> </div> <div style="text-align: center;">  <p>C (Straight)</p> </div> <div style="text-align: center;">  <p>C (Right-angled)</p> </div> </div>	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	Quick Adapter Accessory	
			OD	ID	L		
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>A B</p> </div> <div style="text-align: center;">  <p>C (Straight)</p> </div> <div style="text-align: center;">  <p>C (Right-angled)</p> </div> </div>	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	Quick Adapter Accessory	
			OD	ID	L		
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>A B</p> </div> <div style="text-align: center;">  <p>Floating Locking SWITCHCRAFT original or equivalent C</p> </div> </div>	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	Quick Adapter Accessory	
			OD	ID	L		
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>A B</p> </div> <div style="text-align: center;">  <p>EIAJ equivalent C</p> </div> </div>	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	D	Quick Adapter Accessory
			OD	ID	L	Center Pin	
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>A B D</p> </div> <div style="text-align: center;">  <p>EIAJ equivalent C</p> </div> </div>	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		Quick Adapter Accessory
		PIN No.	Output	
	R6B	1	+Vo	Available (Current rating: 7.5A max.)
		2	-Vo	
		3	+Vo	
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)
	R7B	1	+Vo	
		2	-Vo	
		3	-Vo	
		4	+Vo	
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment		None
	R7BF	1	+Vo	
		2	-Vo	
		3	-Vo	
		4	+Vo	
DIN 5 Pin (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)
	R1B	1	-Vo	
		2	-Vo	
		3	+Vo	
		4	-Vo	
		5	+Vo	
Stripped and tinned leads	Type No.	Pin Assignment		None
 <p>Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>5</u> mm) (NOTE: The wire color is for reference only, please refer to the actual product)</p>	by customer	1	+Vo	
		2	-Vo	

■ **Installation Manual**

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