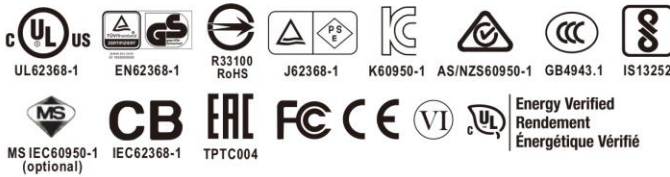




**60W Desktop power supply < GST60A**



**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**
- 3 years warranty

**Applications**

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

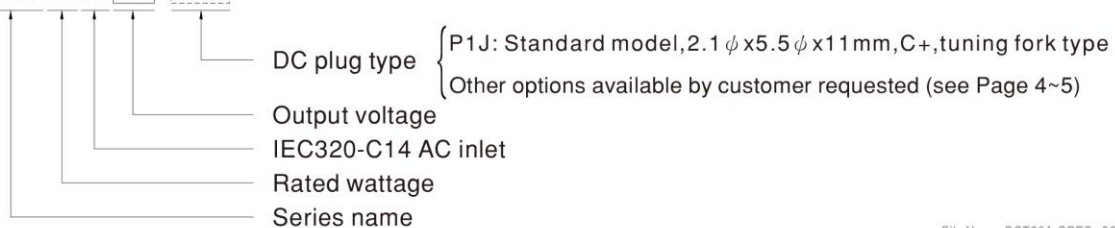
**Description**

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**





**60W Desktop power supply < GST60A**

**SPECIFICATION**

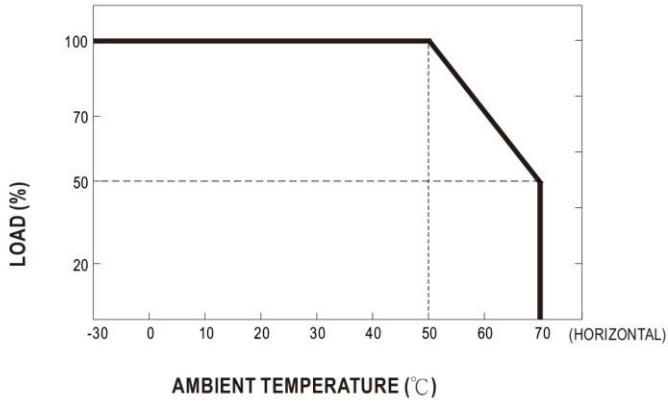
ORDER NO.	GST60A05-P1J	GST60A07-P1J	GST60A09-P1J	GST60A12-P1J	GST60A15-P1J	GST60A18-P1J	GST60A24-P1J	GST60A48-P1J		
OUTPUT	SAFETY MODEL NO.	GST60A05	GST60A07	GST60A09	GST60A12	GST60A15	GST60A18	GST60A24	GST60A48	
	DC VOLTAGE <small>Note.2</small>	5V	7.5V	9V	12V	15V	18V	24V	48V	
	RATED CURRENT	6A	6A	6A	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.) <small>Note.3</small>	120mVp-p	120mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p	150mVp-p	200mVp-p	
	VOLTAGE TOLERANCE <small>Note.4</small>	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±3.0%	±2.5%	
	LINE REGULATION <small>Note.5</small>	±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 <small>Note.6</small>	1000ms, 50ms / 230VAC 1000ms, 50ms / 115VAC at full load								
HOLD UP TIME (Typ.)	50ms / 230VAC 15ms / 115VAC at full load									
INPUT	VOLTAGE RANGE <small>Note.7</small>	90 ~ 264VAC 135 ~ 370VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY (Typ.)	85.5%	88.5%	89%	89.5%	89.5%	89.5%	90.5%	92%	
	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. 9)	SAFETY STANDARDS <small>Note. 8</small>	UL62368-1, CSA C22.2 No.62368-1, TUV 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	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	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	EN61000-3-2, GB9254					Class A		
	Voltage flicker	EN61000-3-3					-----			
	EMC IMMUNITY	Parameter	Standard					Test Level / Note		
		ESD	EN61000-4-2					Level 4, 15KV air; Level 4, 8KV 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/Line-Line, 2KV/Line-FG			
Conducted susceptibility		EN61000-4-6					Level 2, 3V			
Magnetic field immunity		EN61000-4-8					Level 2, 3A/m			
Voltage dips, interruption		EN61000-4-11					>95% dip 0. 5 periods, 30% dip 25 periods, >95% interruptions 250 periods			
OTHERS	MTBF	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	<ol style="list-style-type: none"> <li>All parameters are specified at 230VAC input, rated load, 25°C 70% RH ambient.</li> <li>DC voltage: The output voltage set at point measure by plug terminal &amp; 50% load.</li> <li>Ripple &amp; noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μf &amp; 47μf capacitor.</li> <li>Tolerance: includes set up tolerance, line regulation, load regulation.</li> <li>Line regulation is measured from low line to high line at rated load.</li> <li>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.</li> <li>Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>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."</li> </ol>									



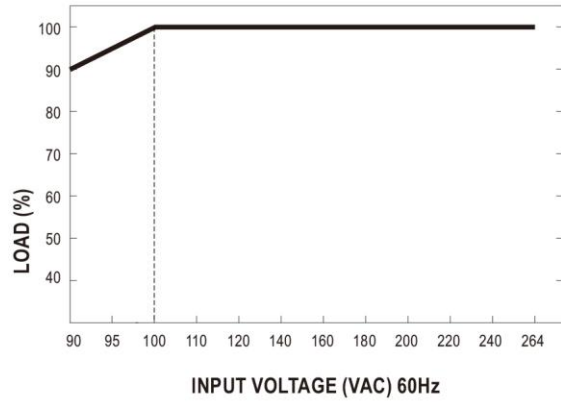
E-Star Power Development Co., Ltd. (E-STAR)  
 1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City  
 22069, Taiwan (R.O.C.)  
 Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

**60W Desktop power supply < GST60A**

**Derating Curve**

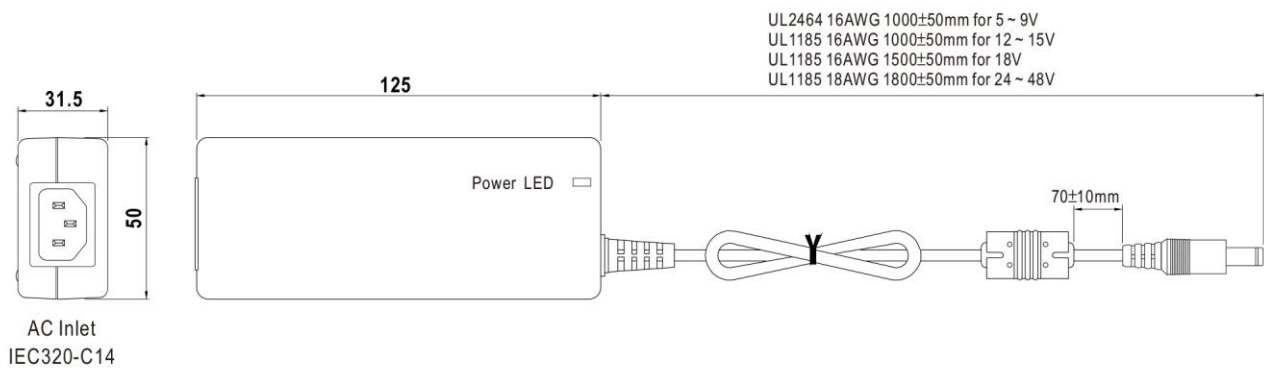


**Static Characteristics**



**Mechanical Specification**

Case No. GS60A Unit:mm



**DC output plug**

Standard plug: P1J

P1J	Pin Assignment
	<p>C<sup>+</sup></p>
	<p>Outside ⊖ ⊕ Inside</p> <p>-V not connected to AC FG</p>



**60W Desktop power supply < GST60A**



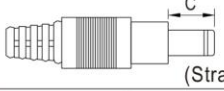
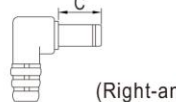


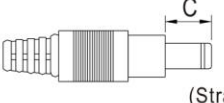
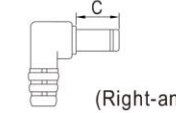


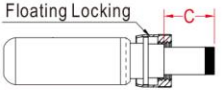


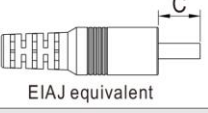

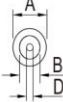
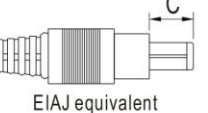
◎ DC plug changeable through:

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

Example quick adapter accessory:


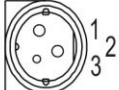
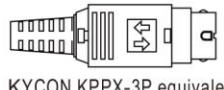

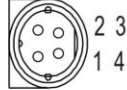
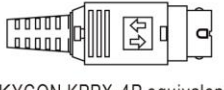


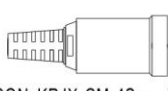




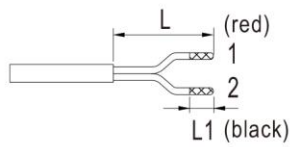


◎ Optional DC plug: (Available in customized cable or quick adapter)

Tuning Fork Style		Type No.	A OD	B ID	C L	Quick Adapter Accessory	
   		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 OD	B ID	C L	None	
   		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		
		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	
   <p>SWITCHCRAFT original or equivalent</p>		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		
Min. Pin Style		Type No.	A OD	B ID	C L	Available (Current rating: 5A max.)	
   <p>EIAJ equivalent</p>		P3A	2.35	0.7	11.0		
		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	Available (Current rating: 7.5A max.)
   <p>EIAJ equivalent</p>		P4A	5.5	3.4	11.0	1.0	
		P4B	6.5	4.4	11.0	1.4	
		P4C	7.4	5.1	11.0	0.6	



**60W Desktop power supply < GST60A**

Min. DIN 3 Pin with Lock (male)	Type No.	Pin Assignment		Quick Adapter Accessory
		PIN No.	Output	
   <p>KYCON KPPX-3P equivalent</p>	R6B	1	+Vo	Available (Current rating: 7.5A max.)
		2	-Vo	
		3	+Vo	
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment		
   <p>KYCON KPPX-4P equivalent</p>	R7B	1	+Vo	
		2	-Vo	
		3	-Vo	
		4	+Vo	
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment		
   <p>KYCON KPJX-CM-4S equivalent</p>	R7BF	1	+Vo	
		2	-Vo	
		3	-Vo	
		4	+Vo	
DIN 5 Pin (male)	Type No.	Pin Assignment		
  	R1B	1	-Vo	
		2	-Vo	
		3	+Vo	
		4	-Vo	
		5	+Vo	
Stripped and tinned leads	Type No.	Pin Assignment		
  <p>Length of Land L1 by request (MW's standard length, L: <u>25</u>_mm, L1: <u>5</u>_mm)</p>	by customer	1	+Vo	
		2	-Vo	