

■ Features

- **Global certificates**
- Universal AC input / Full range
- 3 pole AC inlet IEC320-C14, Class I power unit
- Built-in active PFC function
- No load power consumption < 0.15W
- **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
- -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

■ Applications

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

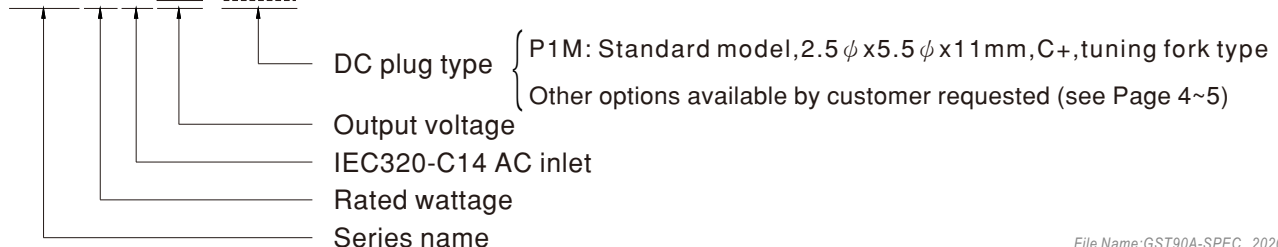
■ Description

GST90A is a highly reliable, 90W 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 12VDC and 48VDC that can satisfy the demands for various types of consumer electronic devices.

With the efficiency up to 91% and the extremely low no-load power consumption below 0.15W, GST90A 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. GST90A is certified for the international safety regulations.

■ Model Encoding

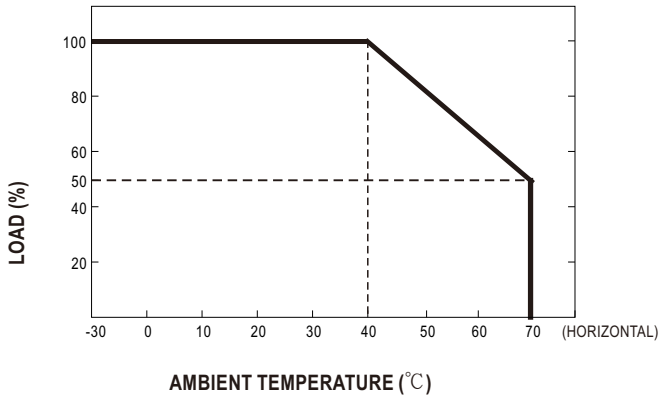
GST 90 A 12 -P1M



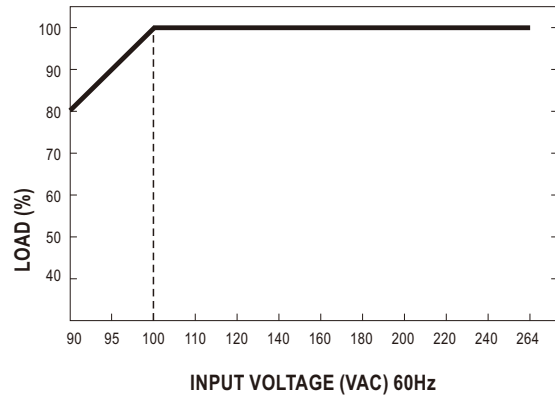
SPECIFICATION

ORDER NO.	GST90A12-P1M	GST90A15-P1M	GST90A19-P1M	GST90A24-P1M	GST90A48-P1M		
OUTPUT	SAFETY MODEL NO.	GST90A12	GST90A15	GST90A19	GST90A24	GST90A48	
	DC VOLTAGE <small>Note.2</small>	12V	15V	19V	24V	48V	
	RATED CURRENT	6.67A	6A	4.74A	3.75A	1.87A	
	CURRENT RANGE	0 ~ 6.67A	0 ~ 6A	0 ~ 4.74A	0 ~ 3.75A	0 ~ 1.87A	
	RATED POWER (max.)	80W	90W	90W	90W	90W	
	RIPPLE & NOISE (max.) <small>Note.3</small>	120mVp-p	150mVp-p	180mVp-p	200mVp-p	200mVp-p	
	VOLTAGE TOLERANCE <small>Note.4</small>	± 5.0%	± 5.0%	± 4.0%	± 3.0%	± 2.5%	
	LINE REGULATION <small>Note.5</small>	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	
	LOAD REGULATION	± 5.0%	± 5.0%	± 4.0%	± 3.0%	± 2.5%	
	SETUP, RISE TIME <small>Note.6</small>	1000ms, 50ms / 230VAC 1000ms, 50ms / 115VAC at full load					
HOLD UP TIME (Typ.)	20ms / 230VAC 20ms / 115VAC at full load						
INPUT	VOLTAGE RANGE <small>Note.7</small>	90 ~ 264VAC 127 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF>0.91 / 230VAC PF>0.95 / 115VAC at full load					
	EFFICIENCY (Typ.)	89%	89.5%	90%	90%	91%	
	AC CURRENT (Typ.)	1.3A / 115VAC 0.6A / 230VAC					
	INRUSH CURRENT (max.)	Cold start 35 / 115AC 70A / 230VAC					
	LEAKAGE CURRENT(max.)	1mA / 240VAC					
PROTECTION	OVERLOAD	110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	105 ~ 135% rated output voltage Protection type : Shut down o/p voltage, re-power on to recover					
	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 (0~40°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 CNS14336, 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	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	348.7K hrs min. MIL-HDBK-217F(25°C)					
	DIMENSION	145*60*32mm (L*W*H)					
	PACKING	0.45Kg; 30pcs/14.05Kg/0.9CUFT					
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 0.1µf & 47µf 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. GST90A □ -SIRIM by request. Please contact MEAN WELL for details.</p> <p>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." (as available on http://www.meanwell.com)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>						

Derating Curve

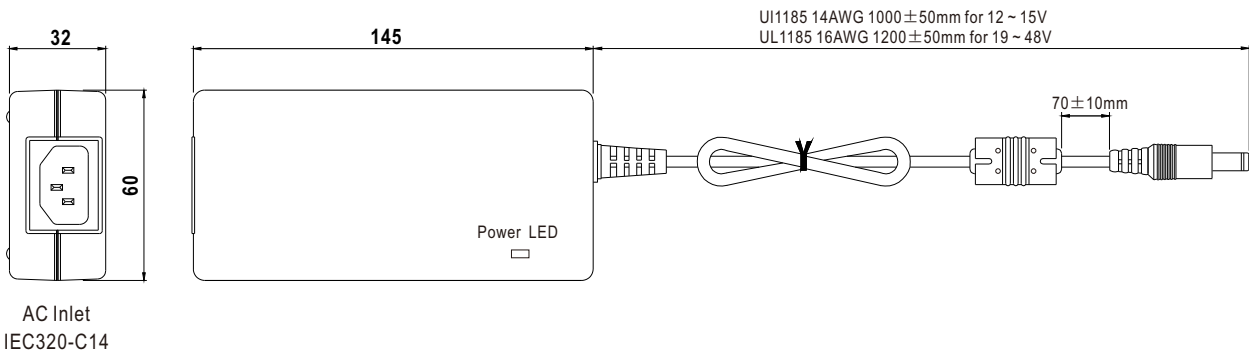


Static Characteristics



Mechanical Specification

Case No. GS90A Unit:mm



DC output plug

Standard plug: P1M

P1M	Pin Assignment
	<p>Outside Inside</p> <p>-V not connected to AC FG</p>

◎ DC plug changeable through:



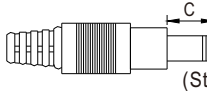
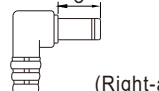


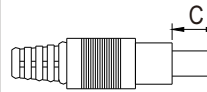
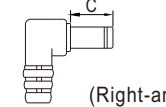


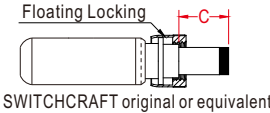


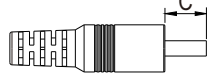

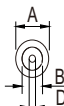
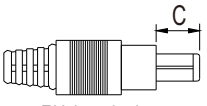
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)





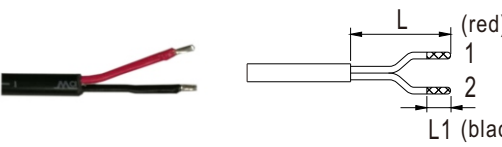
Please refer to below table and online selection guide : https://www.meanwell.com/upload/pdf/DC_plug.pdf

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			
	P1J	5.5	2.1	11.0			
	P1JR	5.5	2.1	11.0			
	P1IR	5.5	2.1	9.5			
	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	None		
	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	None	
	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	
 KYCON KPPX-3P equivalent	R6B	1	+Vo	None
		2	-Vo	
		3	+Vo	
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)
 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
 KYCON KPJX-CM-4S equivalent	R7BF	1	+Vo	
		2	-Vo	
		3	-Vo	
		4	+Vo	
DIN 5 Pin (male)	Type No.	Pin Assignment		None
	R1B	1	-Vo	
		2	-Vo	
		3	+Vo	
		4	-Vo	
		5	+Vo	
Stripped and tinned leads	Type No.	Pin Assignment		None
 Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>5</u> mm)	by customer	1	+Vo	
		2	-Vo	

Installation Manual

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