



User's Manual



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, AU/NZ MEPS, EU ErP and CoC Version 5
- Protections: Short circuit / Overload / Over voltage / Over temperature
- -30~+70°C wide range working temperature
- Fully enclosed plastic case
- LED indicator for power on
- 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

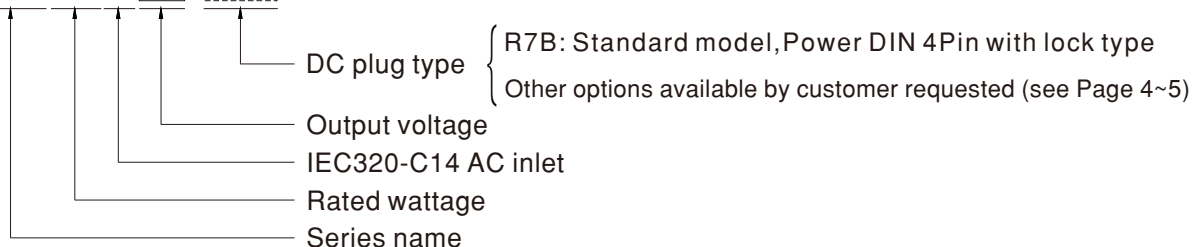
- Consumer electronic devices
- Telecommunication devices
- Office facilities
- Industrial equipments

Description

GST160A is a highly reliable, 160W 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 85VAC 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 94% and the extremely low no-load power consumption below 0.15W, GST160A 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. GST160A is certified for the international safety regulations.

Model Encoding

GST 160A 12 -R7B



SPECIFICATION

ORDER NO.		GST160A12-R7B	GST160A15-R7B	GST160A20-R7B	GST160A24-R7B	GST160A36-R7B	GST160A48-R7B
OUTPUT	SAFETY MODEL NO.	GST160A12	GST160A15	GST160A20	GST160A24	GST160A36	GST160A48
	DC VOLTAGE Note.2	12V	15V	20V	24V	36V	48V
	RATED CURRENT	11.5A	9.6A	8A	6.67A	4.44A	3.34A
	CURRENT RANGE	0 ~ 11.5A	0 ~ 9.6A	0 ~ 8A	0 ~ 6.67A	0 ~ 4.44A	0 ~ 3.34A
	RATED POWER (max.)	138W	144W	160W	160W	160W	160W
	RIPPLE & NOISE (max.) Note.3	80mVp-p	100mVp-p	120mVp-p	150mVp-p	150mVp-p	200mVp-p
	VOLTAGE TOLERANCE Note.4	± 5.0%	± 5.0%	± 4.0%	± 3.0%	± 3.0%	± 3.0%
	LINE REGULATION Note.5	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%
	LOAD REGULATION	± 5.0%	± 5.0%	± 4.0%	± 3.0%	± 3.0%	± 3.0%
	SETUP, RISE TIME Note.6	2000ms, 50ms / 230VAC 2500ms, 50ms / 115VAC at full load					
HOLD UP TIME (Typ.)	20ms / 230VAC 20ms / 115VAC at full load						
INPUT	VOLTAGE RANGE Note.7	85 ~ 264VAC 120 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	12V/15V:PF>0.93 / 230VAC 20V,24V,48V:PF>0.94 / 230VAC PF>0.98 / 115VAC at full load					
	EFFICIENCY (Typ.)	90%	91%	93%	93%	92%	94%
	AC CURRENT	1.85A / 115VAC 1A / 230VAC					
	INRUSH CURRENT (max.)	Cold start 95A / 115VAC 120A / 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	105 ~ 135% rated output voltage Protection type : Hiccup mode @ 10%load					
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover					
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")					
	WORKING HUMIDITY	20% ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃ , 10 ~ 95% RH non-condensing					
	TEMP. COEFFICIENT	± 0.03% / °C (0~50℃)					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes					
SAFETY & EMC (Note. 9)	SAFETY STANDARDS Note. 8	UL62368-1, CSA C22.2 No.62368-1, TUV BS EN/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:SHORT					
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25℃ / 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	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	236.4K hrs min. MIL-HDBK-217F(25℃)					
	DIMENSION	175*72*35mm (L*W*H)					
	PACKING	0.66Kg; 20pcs/ 14.2Kg/ 0.95CUFT					
CONNECTOR	PLUG	See page 4~5 ; Other type available by customer requested					
	CABLE	See page 4~5 ; Other type available by customer requested					

NOTE

- All parameters are specified at 230VAC input, rated load, 25°C 70% RH ambient.
- DC voltage: The output voltage set at point measure by plug terminal & 50% load.
- Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μf & 47μf capacitor.
- Tolerance: includes set up tolerance, line regulation, load regulation.
- Line regulation is measured from low line to high line at rated load.
- 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.
- Derating may be needed under low input voltage. Please check the derating curve for more details.
- The demand for Malaysia safety is processed with the order no. GST160A □ -SIRIM by request. Please contact MEAN WELL for details.
- 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>)

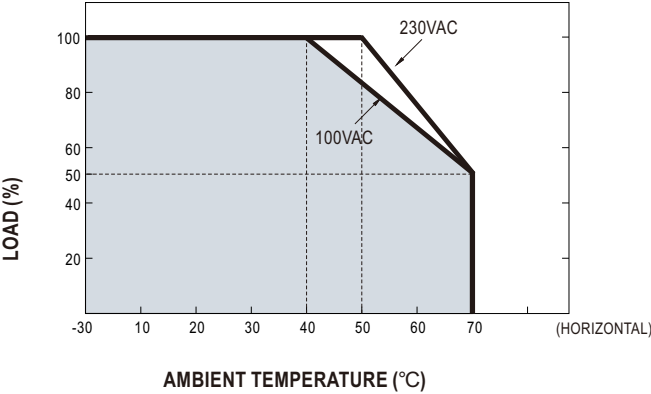
※ Product Liability Disclaimer : For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>



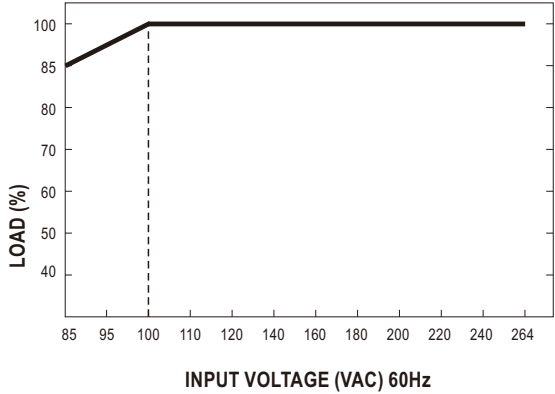
160W AC-DC Reliable Green Industrial Adaptor

GST160A series

Derating Curve

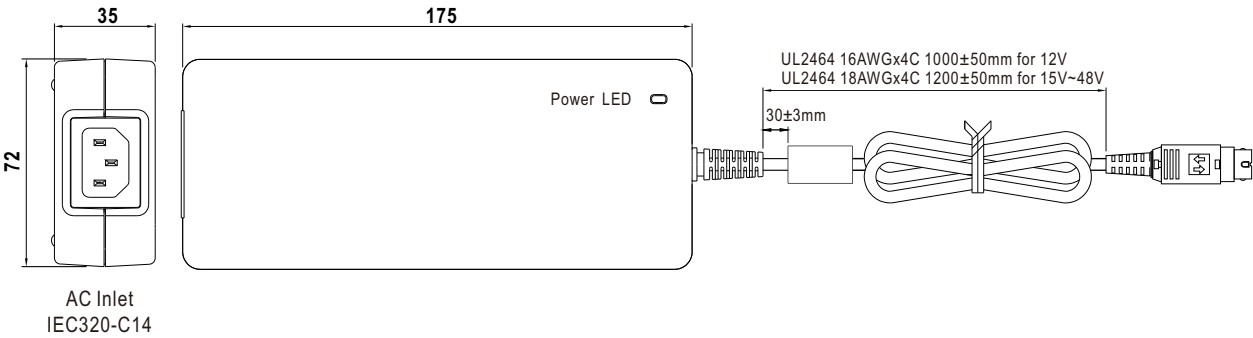


Static Characteristics




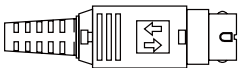
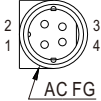
Mechanical Specification

Case No. GS160A
Unit:mm



DC output plug

Standard plug: R7B

R7B		Pin Assignment			
	 KYCON KPPX-4P equivalent	 AC FG -V connected to AC FG	PIN NO.	OUTPUT	
			1	+Vo	
			2	-Vo	
			3	-Vo	
		AC FG -V connected to AC FG	4	+Vo	

◎ DC plug changeable through:



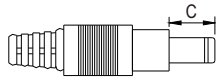


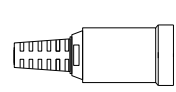




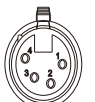
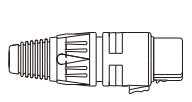


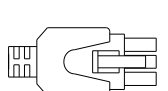
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

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

Example quick adapter accessory:



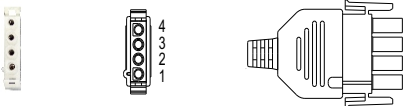
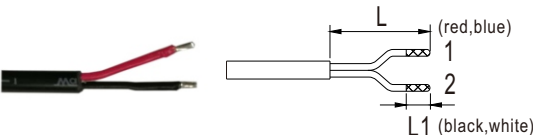
◎ Optional DC plug: (Available in customized cable or quick adapter)

Tuning Fork Style	Type No.	A	B	C	Quick Adapter Accessory
		OD	ID	L	
   (Straight)	P1J	5.5	2.1	11.0	Available for 24 ~ 48V (Current rating: 7.5A max.)
	P1M	5.5	2.5	11.0	
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment		None	
   KYCON KPJX-CM-4S equivalent	R7BF	PIN No.	Output		
		1	+Vo		
		2	-Vo		
		3	-Vo		
		4	+Vo		
DIN 5 Pin (male)	Type No.	Pin Assignment		None	
  	R1B	PIN No.	Output		
		1	-Vo		
		2	-Vo		
		3	+Vo		
		4	-Vo		
		5	+Vo		
NEUTRIK XLR NC4FX equivalent	Type No.	Pin Assignment		None	
  	MIC4	PIN No.	Output		
		1	+Vo		
		2	+Vo		
		3	-Vo		
		4	-Vo		
MOLEX 39-01-2060 (4.2mm) equivalent	Type No.	Pin Assignment		None	
   FG not connected to output connector	C6P	PIN No.	Output		
		1	+Vo		
		2	+Vo		
		3	+Vo		
		4	-Vo		
		5	-Vo		
		6	-Vo		



160W AC-DC Reliable Green Industrial Adaptor

GST160A series

AMP 1-480702-0 (6.35mm) equivalent	Type No.	Pin Assignment		Quick Adapter Accessory
		PIN No.	Output	
 FG not connected to output connector	C4P	1	+Vo	None
		2	+Vo	
		3	-Vo	
		4	-Vo	
Stripped and tinned leads	Type No.	Pin Assignment		
		PIN No.	Output	
 Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>5</u> mm)	by customer	1	+Vo	None
		2	-Vo	

■ Installation Manual

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