



160W AC-DC Reliable Green Industrial Adaptor

GST160A series

User's Manual



Video



■ Features

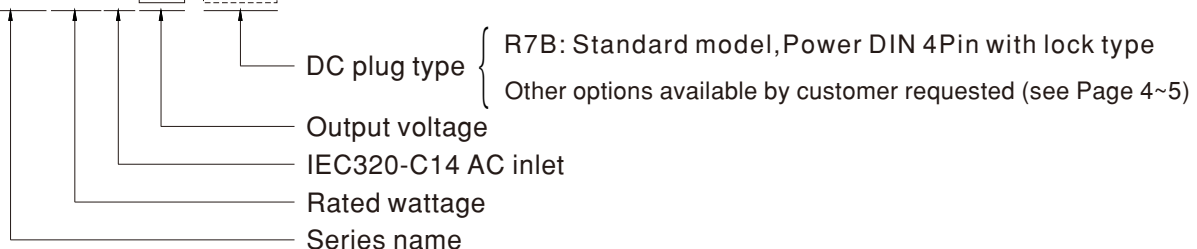
- **Global certificates**
- Universal AC input / Full range
- 3 pole AC inlet IEC320-C14, Class I power unit
- Built-in active PFC function
- No load power consumption < 0.15W
- **Energy efficiency Level VI**
- Comply with EISA 2007/DoE, NRCAN, AU/NZ MEPS, EU ErP and CoC Version 5
- Protections: Short 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](https://www.meanwell.com/upload/pdf/DC_plug.pdf)
(Plug kit sold separately, please refer to : https://www.meanwell.com/upload/pdf/DC_plug.pdf)
- 3 years warranty

■ 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



■ Applications

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

■ GTIN CODE

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

SPECIFICATION

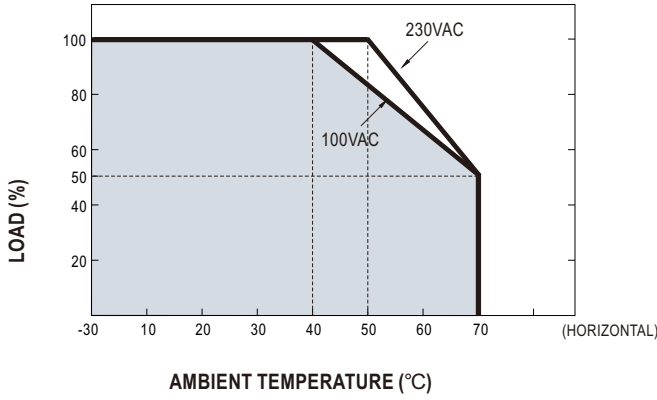
ORDER NO.	GST160A12-R7B	GST160A15-R7B	GST160A20-R7B	GST160A24-R7B	GST160A36-R7B	GST160A48-R7B		
OUTPUT	SAFETY MODEL NO.	GST160A12	GST160A15	GST160A20	GST160A24	GST160A36	GST160A48	
	DC VOLTAGE <small>Note.2</small>	12V	15V	20V	24V	36V	48V	
	RATED CURRENT	11.5A	9.6A	8A	6.67A	4.44A	3.34A	
	CURRENT RANGE	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.) <small>Note.3</small>	80mVp-p	100mVp-p	120mVp-p	150mVp-p	150mVp-p	200mVp-p	
	VOLTAGE TOLERANCE <small>Note.4</small>	±5.0%	±5.0%	±4.0%	±3.0%	±3.0%	±3.0%	
	LINE REGULATION <small>Note.5</small>	±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 <small>Note.6</small>	2000ms, 50ms / 230VAC 2500ms, 50ms / 115VAC at full load						
HOLD UP TIME (Typ.)	20ms / 230VAC 20ms / 115VAC at full load							
INPUT	VOLTAGE RANGE <small>Note.7</small>	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°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 <small>Note. 8</small>	UL62368-1, CSA C22.2 No.62368-1, TUV BS EN/EN62368-1, BSMI CIS15598-1, CCC GB4943.1, PSE J62368-1, AS/NZS 60950.1, BIS IS13252, KC K60950-1, EAC TP TC 004 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°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),CNS15936,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),CNS15936,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 3, 2KV		
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	2205.4K hrs min. Telcordia SR-332 (Bellcore) ; 236.4K hrs min. MIL-HDBK-217F (25°C)						
	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	<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 voltage. Please check the derating curve for more details.</p> <p>8. 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>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 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>							



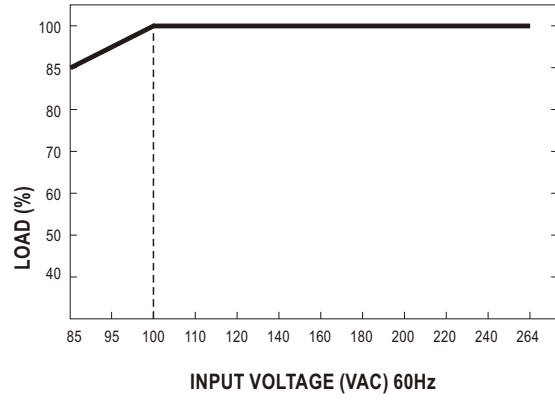
160W AC-DC Reliable Green Industrial Adaptor

GST160A series

■ Derating Curve



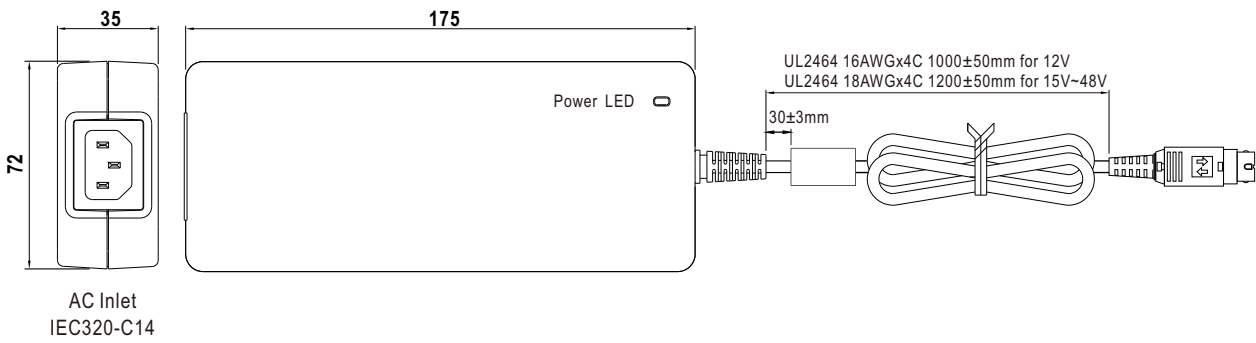
■ Static Characteristics



■ Mechanical Specification

(Unit: mm, tolerance ± 1 mm)

Case No. GS160A



■ DC output plug

☉ Standard plug: R7B

R7B		Pin Assignment											
	KYCON KPPX-4P equivalent	-V connected to AC FG											
			<table border="1"> <thead> <tr> <th>PIN NO.</th> <th>OUTPUT</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+Vo</td> </tr> <tr> <td>2</td> <td>-Vo</td> </tr> <tr> <td>3</td> <td>-Vo</td> </tr> <tr> <td>4</td> <td>+Vo</td> </tr> </tbody> </table>	PIN NO.	OUTPUT	1	+Vo	2	-Vo	3	-Vo	4	+Vo
PIN NO.	OUTPUT												
1	+Vo												
2	-Vo												
3	-Vo												
4	+Vo												

◎ DC plug changeable through:

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


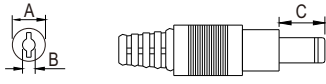








(2) Quick adapter accessory (sold separately without MOQ)

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

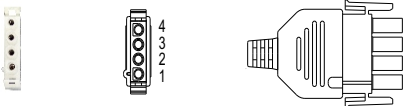
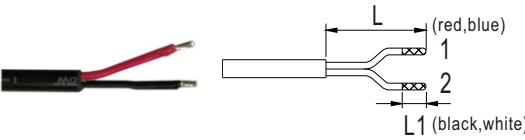
Example quick adapter accessory:



◎ 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
  23 14 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				



AMP 1-480702-0 (6.35mm) equivalent	Type No.	Pin Assignment		Quick Adapter Accessory
		PIN No.	Output	
 <p>FG not connected to output connector</p>	C4P	1	+Vo	None
		2	+Vo	
		3	-Vo	
		4	-Vo	
Stripped and tinned leads	Type No.	Pin Assignment		
		PIN No.	Output	
 <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	None
		2	-Vo	

■ **Installation Manual**

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