


 Energy Verified
Rendement
Énergétique Vérifié


■ Features

- Universal AC input / Full range
- 3 pole AC inlet IEC320-C14
- Medical safety approved (2 x MOPP between primary to secondary)
- Optional models suitable for BF application with appropriate system consideration
- Low leakage current <100uA
- No load power consumption<0.15W
- Energy efficiency level VI
- Comply with EISA 2007/DoE,NRCan, AU/NZ MEPS, EU ErP and meet CoC Version 5
- Built-in active PFC function
- High efficiency up to 94%
- Fanless design with -30~+70°C working temperature
- Class I power (with earth pin)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Fully enclosed plastic case
- LED indicator for power on
- 100% full load burn-in test
- 3 years warranty

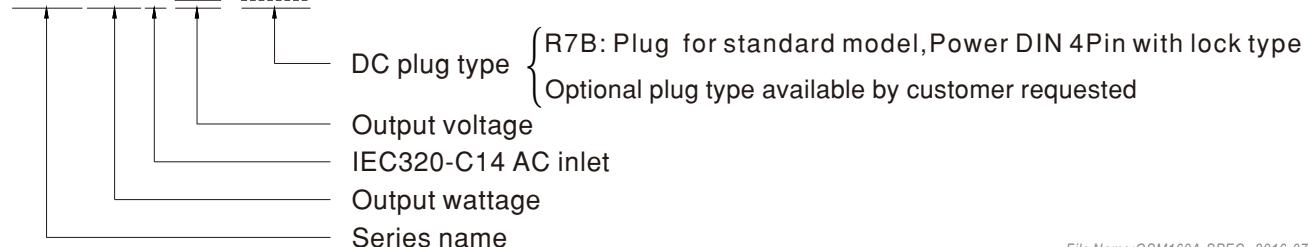
■ Description

GSM160A is a highly reliable, 160W desktop style single-output green medical adaptor series. This product is equipped with a 3-pin (with FG) standard IEC320-C14 power plug, adopting the input range from 80VAC to 264VAC. The entire series supplies different output voltages between 12VDC and 48VDC that can satisfy the demands for various kinds of medical electrical devices. The circuitry design meets the international medical standards (2*MOPP), having an ultra low leakage current (<100uA), fitting the medical devices in direct electrical contact with the patients.

With the efficiency up to 94% and the extremely low no-load power consumption below 0.15W, GSM160A is compliant with USA EISA 2007/DoE, Canada NRCan, Australia and New Zealand MEPS, EU ErP, and meet 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. GSM160A is approved with the international medical safety certificates.

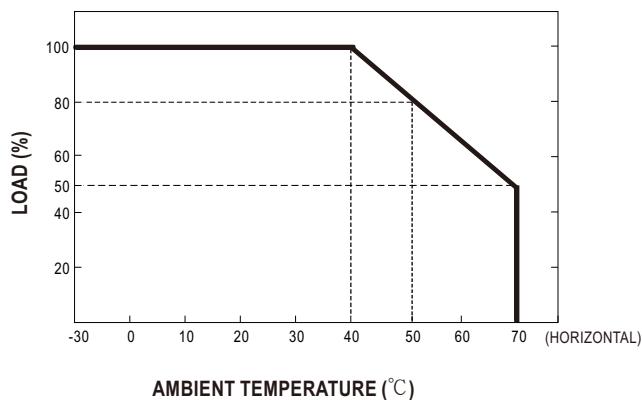
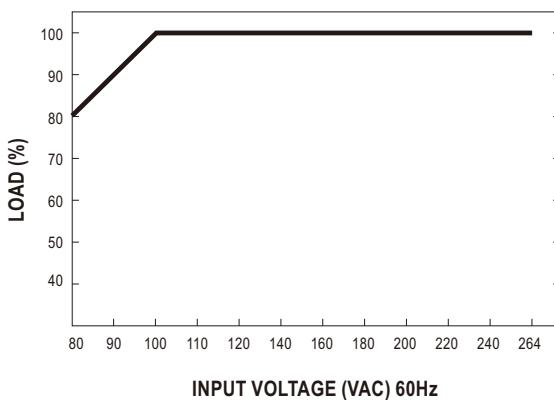
■ Model Encoding

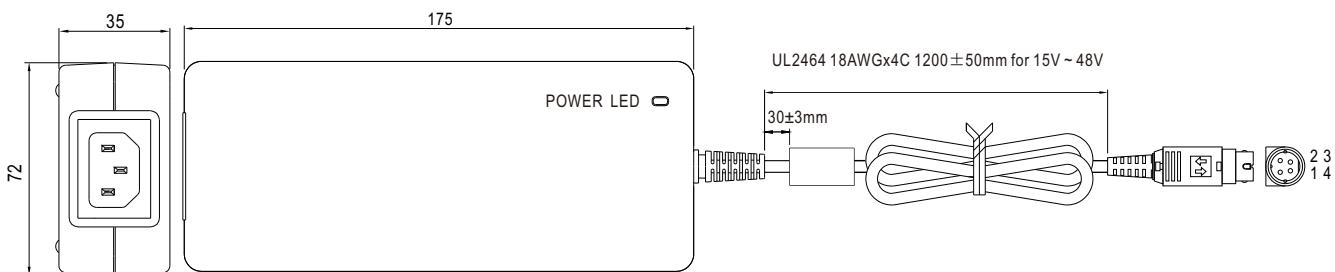
GSM160A 12 - R7B



SPECIFICATION

ORDER NO.	GSM160A12-R7B	GSM160A15-R7B	GSM160A20-R7B	GSM160A24-R7B	GSM160A48-R7B					
OUTPUT	SAFETY MODEL NO.	GSM160A12	GSM160A15	GSM160A20	GSM160A24					
	DC VOLTAGE Note.2	12V	15V	20V	24V					
	RATED CURRENT	11.5A	9.6A	8A	6.67A					
	CURRENT RANGE	0 ~ 11.5A	0 ~ 9.6A	0 ~ 8A	0 ~ 6.67A					
	RATED POWER (max.)	138W	144W	160W	160W					
	RIPPLE & NOISE (max.) Note.3	80mVp-p	100mVp-p	150mVp-p	180mVp-p					
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±4.0%	±3.0%					
	LINE REGULATION Note.5	±1.0%	±1.0%	±1.0%	±1.0%					
	LOAD REGULATION	±5.0%	±5.0%	±4.0%	±3.0%					
INPUT	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						
PROTECTION	VOLTAGE RANGE Note.7	80 ~ 264VAC								
	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%	92.5%	93%					
	AC CURRENT (Typ.)	1.85A / 115VAC	1A / 230VAC							
	INRUSH CURRENT (Typ.)	120A / 230VAC								
ENVIRONMENT	LEAKAGE CURRENT(max.)	Earth leakage current < 100µA/264VAC , Touch current <100µA/264VAC								
	OVERLOAD	105 ~ 150% rated output power								
		Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	105 ~ 135% rated output voltage								
SAFETY & EMC (Note. 9)	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover								
	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								
OTHERS	TEMP. COEFFICIENT	±0.03% / °C (0~50°C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
	SAFETY STANDARDS	ANSI/AAMI ES60601-1, TUV EN60601-1 approved								
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP								
CONNECTOR	WITHSTAND VOLTAGE Note.8	I/P-O/P:4KVAC	I/P-FG:2KVAC	O/P-FG:0.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms	500VDC / 25°C	70% RH						
NOTE	EMC EMISSION	Compliance to EN55011 (CISPR11) Class B, EN61000-3-2,-3, FCC PART 15 class B								
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN60601-1-2, EN61204-3 medical level, criteria A								
DIMENSION	MTBF	290.3K hrs min. MIL-HDBK-217F(25°C)								
	DIMENSION	175*72*35mm (L*W*H)								
	PACKING	0.66Kg; 20pcs/14.2Kg/1.06CUFT								
PLUG	PLUG	See page 3 ; Other type available by customer requested								
	CABLE	See page 3 ; Other type available by customer requested								
1. All parameters are specified at 230VAC input, rated load, 25°C 70% RH ambient. 2. DC voltage: The output voltage set at point measure by plug terminal & 50% load. 3. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor. 4. Tolerance: includes set up tolerance, line regulation, load regulation. 5. Line regulation is measured from low line to high line at rated load. 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. 7. Derating may be needed under low input voltages. Please check the derating curve for more details. 8. Optional for 1.5KVAC with BF rated. 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.										

■ Derating Curve

■ Static Characteristics

■ Mechanical Specification

 Case No. GS160A
 Unit:mm

■ Plug Assignment

Output plug (Power DIN 4 pin with lock type) : KYCON KPPX-4P equivalent

Mating plug (customer side, not provide with power supply) : KYCON KPJX-CM-4S equivalent

R7B		
	PIN NO.	OUTPUT
2	1,4	+V
1	2,3	-V

Outer shell -V not connected to AC FG

■ Installation Manual

 Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>