160W AC-DC High Reliability Medical Adaptor GSM160B series

Features

- Universal AC input / Full range
- 2 pole AC inlet IEC320-C8
- Medical safety approved (2 x MOPP between primary to secondary)
- 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℃ working temperature
- Class Ⅱ power (without 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

Applications

- Mobile clinical workstation
- Oral irrigator
- Portable hemodialysis machine
- Breath Machine
- Medical computer monitor

Description

GSM160B is a highly reliable, 160W desktop style single-output green medical adaptor series. This product is equipped with a 2-pin (no FG) standard IEC320-C8 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, GSM160B 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, providing the double insulation that effectively prevents electrical shock. GSM160B is approved with the international medical safety certificates.

Model Encoding

GSM160B 12 - R7B

- R7B → DC plug type: R7B: Plug for standard model,Power DIN 4Pin with lock type; Optional plug type available by customer requested
- 12 → Output voltage
- GSM160B → IEC320-C8 AC inlet; Output wattage; Series name

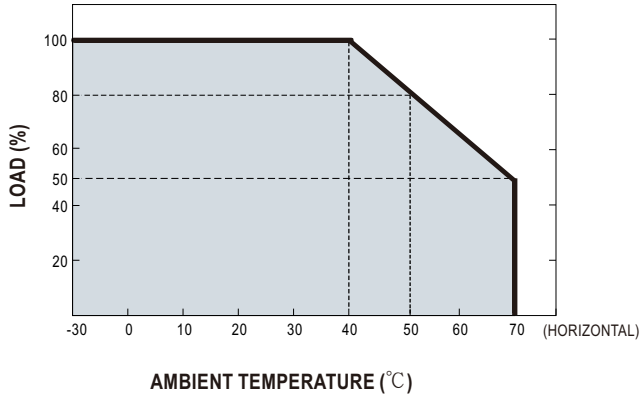
SPECIFICATION

ORDER NO.		GSM160B12-R7B	GSM160B15-R7B	GSM160B20-R7B	GSM160B24-R7B	GSM160B48-R7B
OUTPUT	SAFETY MODEL NO.	GSM160B12	GSM160B15	GSM160B20	GSM160B24	GSM160B48
	DC VOLTAGE Note.2	12V	15V	20V	24V	48V
	RATED CURRENT	11.5A	9.6A	8A	6.67A	3.34A
	CURRENT RANGE	0 ~ 11.5A	0 ~ 9.6A	0 ~ 8A	0 ~ 6.67A	0 ~ 3.34A
	RATED POWER (max.)	138W	144W	160W	160W	160W
	RIPPLE & NOISE (max.) Note.3	80mVp-p	100mVp-p	150mVp-p	180mVp-p	240mVp-p
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±4.0%	±3.0%	±3%
	LINE REGULATION Note.5	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±5.0%	±5.0%	±4.0%	±3.0%	±3%
	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	80 ~ 264VAC 113 ~ 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%	92.5%	93%	94%
	AC CURRENT (Typ.)	1.85A / 115VAC 1A / 230VAC				
	INRUSH CURRENT (Typ.)	120A / 230VAC				
	LEAKAGE CURRENT(max.)	Touch current < 100μA/264VAC				
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 : 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℃ (Refer to "Derating Curve")				
	WORKING HUMIDITY	20% ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03% / ℃ (0 ~ 50℃)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes				
SAFETY & EMC (Note. 8)	SAFETY STANDARDS	ANSI/AAMI ES60601-1 / ES60601-1-11, TUV EN60601-1 / EN60601-1-11 approved				
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP				
	WITHSTAND VOLTAGE	I/P-O/P: 4KVAC				
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH				
	EMC EMISSION	Compliance to EN55011(CISPR11) class B, EN61000-3-2,3, FCC PART 15 class B,CAN ICES-3(B)/NMB-3(B)				
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN60601-1-2, EN61204-3 medical level, criteria A				
OTHERS	MTBF	239.1K hrs min. MIL-HDBK-217F(25℃)				
	DIMENSION	175*72*35mm (L*W*H)				
	PACKING	0.66Kg; 20pcs/14.2Kg/1.06CUFT				
CONNECTOR	PLUG	See page 3 ; Other type available by customer requested				
	CABLE	See page 3 ; Other type available by customer requested				

NOTE

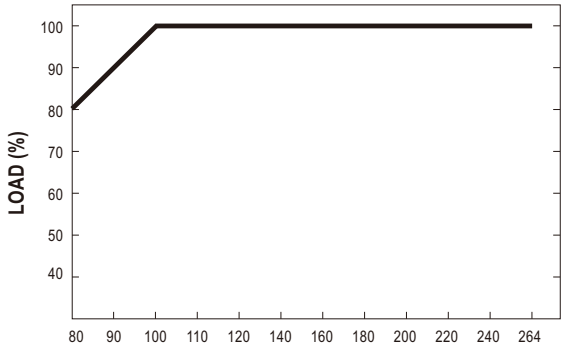
1. All parameters are specified at 230VAC input, rated load, 25℃ 70% RH ambient.
2. DC voltage: The output voltage set at point measure by plug terminal & 50% load.
3. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor.
4. Tolerance: includes set 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 voltage. Please check the derating curve for more details.
8. 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)

■ Derating Curve



AMBIENT TEMPERATURE (℃)

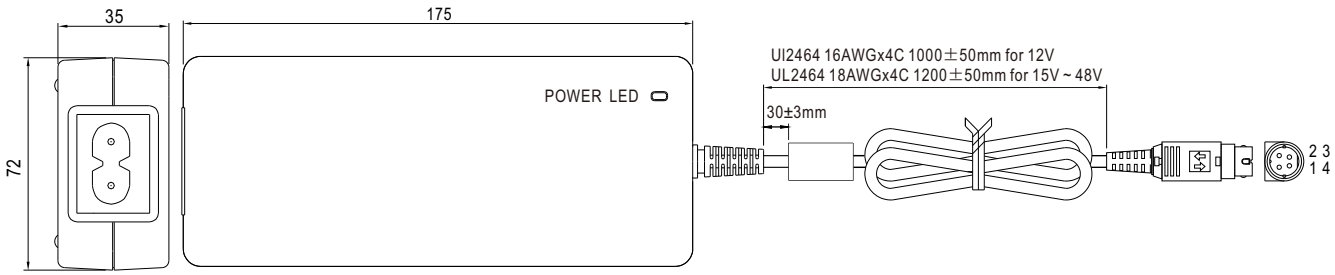
■ Static Characteristics



INPUT VOLTAGE (VAC) 60Hz

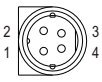
■ Mechanical Specification

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
	1,4	+V
	2,3	-V

■ Installation Manual

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