



EN60601-1 ANSI/AAMI ES60601-1 IEC60601-1



■ Features

- 2 pole AC inlet IEC320-C8, Class II power unit
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/EN60601-1
- Extremely low leakage current
- No load power consumption<0.15W
- Energy efficiency level VI and meet CoC Version 5
- -30~+70°C wide range working temperature
- Protections: Short circuit / Overload / Over voltage / Over temperature
- LED indicator for power on
- Lifetime > 105 K hours
- 3 years warranty

■ Applications

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

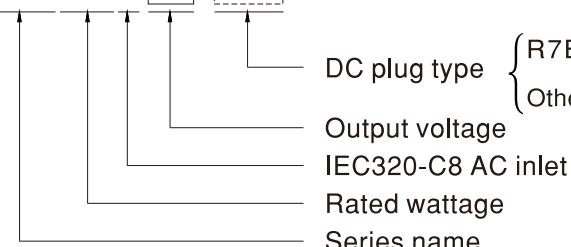
■ Description

GSM120B is a highly reliable, 120W 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 (<100μA), fitting the medical devices in direct electrical contact with the patients.

With the efficiency up to 91.5% and the extremely low no-load power consumption below 0.15W, GSM120B 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. GSM120B is approved with the international medical safety certificates.

■ Model Encoding

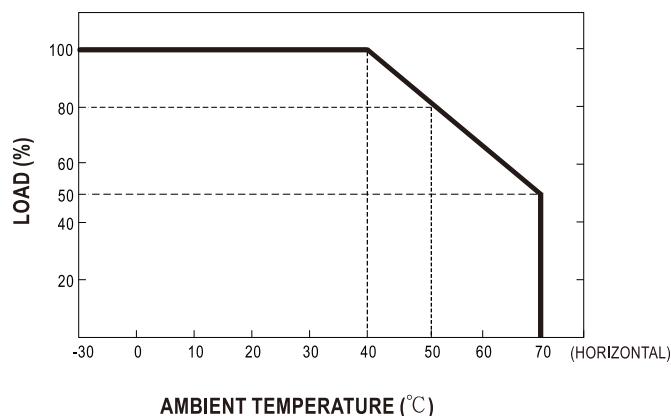
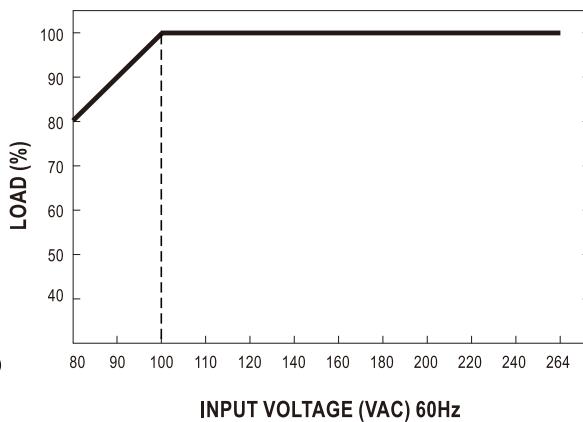
GSM120B 12-R7B



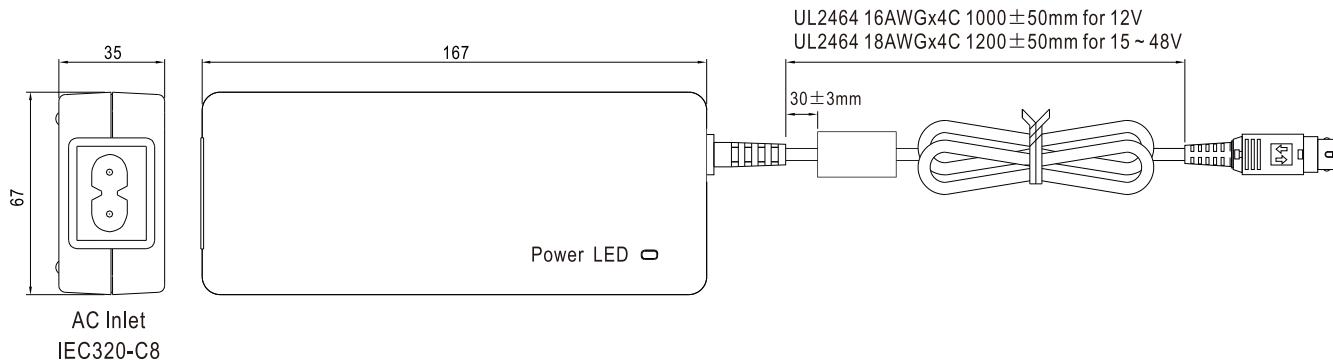
R7B: Standard model, Power DIN 4Pin with lock type
Other options available by customer requested (see Page 4~5)

SPECIFICATION

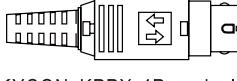
ORDER NO.	GSM120B12-R7B	GSM120B15-R7B	GSM120B20-R7B	GSM120B24-R7B	GSM120B48-R7B		
OUTPUT	SAFETY MODEL NO.	GSM120B12	GSM120B15	GSM120B20	GSM120B24		
	DC VOLTAGE Note.2	12V	15V	20V	24V		
	RATED CURRENT	8.5A	7A	6A	5A		
	CURRENT RANGE	0 ~ 8.5A	0 ~ 7A	0 ~ 6A	0 ~ 5A		
	RATED POWER (max.)	102W	105W	120W	120W		
	RIPPLE & NOISE (max.) Note.3	100mVp-p	120mVp-p	150mVp-p	180mVp-p		
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±5.0%	±3.0%		
	LINE REGULATION Note.5	±1.0%	±1.0%	±1.0%	±1.0%		
	LOAD REGULATION	±5.0%	±5.0%	±4.0%	±3.0%		
	SETUP, RISE TIME Note.6	1500ms, 30ms / 230VAC	2000ms, 30ms / 115VAC	at full load			
INPUT	HOLD UP TIME (Typ.)	40ms / 230VAC	24ms / 115VAC	at full load			
	VOLTAGE RANGE Note.7	80 ~ 264VAC	113 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF>0.93 / 230VAC	PF>0.97 / 115VAC	at full load			
	EFFICIENCY (Typ.)	88%	89%	89.5%	90%		
	AC CURRENT (Typ.)	1.4A / 115VAC	0.7A / 230VAC				
	INRUSH CURRENT (Typ.)	Cold start 35A / 115VAC	70A / 230VAC				
PROTECTION	LEAKAGE CURRENT(max.)	Touch current < 100 μ A/264VAC					
	OVERLOAD	105 ~ 160% 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					
ENVIRONMENT	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 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)	OPERATING ALTITUDE Note.8	3000 meters					
	SAFETY STANDARDS	IEC60601-1, EN60601-1/ EN60601-1-11, ANSI/AAMI ES60601-1 / ES60601-1-11(3.1 version), CAN/CSA-C22.2 No. 60601-1:14 - Edition 3, EAC TP TC 004 approved					
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP					
	WITHSTAND VOLTAGE	I/P-O/P: 4KVAC					
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH					
	EMC EMISSION	Parameter	Standard	Test Level / Note			
		Conducted emission	EN55011 (CISPR11), FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B)	Class B			
		Radiated emission	EN55011 (CISPR11), FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B)	Class B			
		Harmonic current	EN61000-3-2	Class A			
	EMC IMMUNITY	Voltage flicker	EN61000-3-3	----			
		EN55024, EN60601-1-2, EN61204-3					
		Parameter	Standard	Test Level / Note			
		ESD	EN61000-4-2	Level 4, 15KV air ; Level 4, 8KV contact			
		RF field susceptibility	EN61000-4-3	Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz)			
		EFT bursts	EN61000-4-4	Level 3, 2KV			
		Surge susceptibility	EN61000-4-5	Level 3, 1KV/Line-Line			
		Conducted susceptibility	EN61000-4-6	Level 3, 10V			
OTHERS	Magnetic field immunity	EN61000-4-8		Level 4, 30A/m			
	Voltage dip, interruption	EN61000-4-11		100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods			
CONNECTOR	MTBF	372K hrs min. MIL-HDBK-217F(25°C)					
	DIMENSION	167*67*35mm (L*W*H)					
CONNECTOR	PACKING	0.6Kg; 20pcs/13.0Kg/0.9CUFT					
	PLUG	See page 4~5; Other type available by customer requested					
NOTE	CABLE	See page 4~5; 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 0.1 μ f & 47 μ f 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 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).					
	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)					

Derating Curve

Static Characteristics

Mechanical Specification

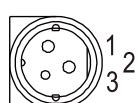
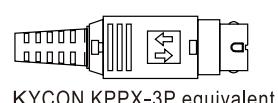
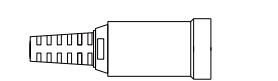
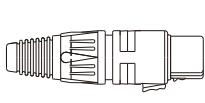
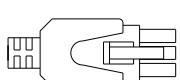
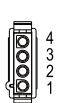
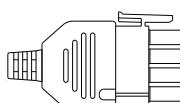
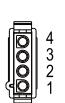
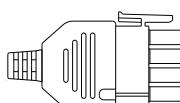
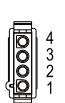
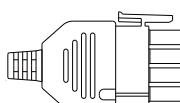
Case No. GS120A Unit:mm

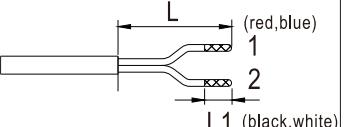

DC output plug

◎ Standard plug: R7B

R7B		Pin Assignment	
  2 3 1 4		 KYCON KPPX-4P equivalent	
		PIN NO.	OUTPUT
		1	+Vo
		2	-Vo
		3	-Vo
		4	+Vo

◎ Optional DC plug:

Min. DIN 3 Pin with Lock (male)	Type No.	Pin Assignment	
		PIN No.	Output
	R6B	1	+Vo
		2	-Vo
		3	+Vo
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment	
		PIN No.	Output
		1	+Vo
		2	-Vo
		3	-Vo
DIN 5 Pin (male)	Type No.	Pin Assignment	
		PIN No.	Output
		1	-Vo
		2	-Vo
		3	+Vo
NEUTRIK XLR NC4FX equivalent	Type No.	Pin Assignment	
		PIN No.	Output
		1	+Vo
		2	+Vo
		3	-Vo
MOLEX 39-01-2060 (4.2mm) equivalent	Type No.	Pin Assignment	
		PIN No.	Output
		1	+Vo
		2	+Vo
		3	+Vo
AMP 1-480702-0 (6.35mm) equivalent	Type No.	Pin Assignment	
		PIN No.	Output
		1	+Vo
		2	+Vo
		3	-Vo
FG not connected to output connector	Type No.	Pin Assignment	
		PIN No.	Output
		1	+Vo
		2	+Vo
		3	-Vo
FG not connected to output connector	Type No.	Pin Assignment	
		PIN No.	Output
		1	+Vo
		2	+Vo
		3	-Vo

Stripped and tinned leads	Type No. by customer	Pin Assignment	
		PIN No.	Output
		1	+Vo
		2	-Vo

Length of Land L1 by request
(MW's standard length, L: 25 mm, L1: 5 mm)

■ Installation Manual

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