



Features

- 2 pole AC inlet IEC320-C8, Class II power unit
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1/-1-11 and IEC/BS EN/EN60601-1/-1-11
- Extremely low leakage current
- No load power consumption < 0.1W
- Energy efficiency level VI and meet CoC Version 5 (Except 5~9V for Level V)
- -30~+70°C wide range working temperature
- Protections: Short circuit / Overload / Over voltage / Over temperature
- LED indicator for power on
- Lifetime > 95 K hours
- 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

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

GTIN CODE

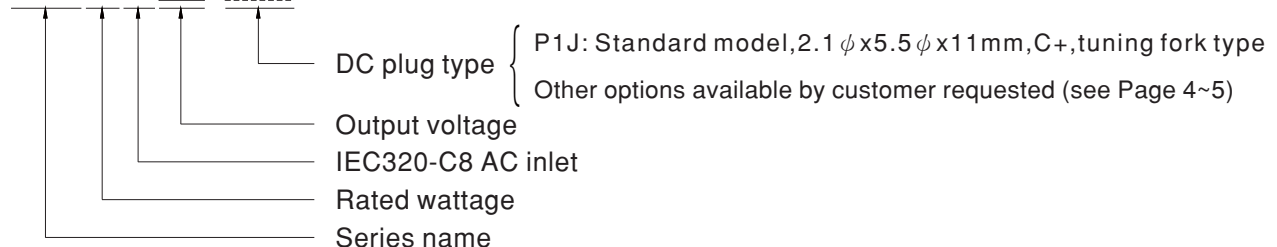
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

Description

GSM60B is a highly reliable, 60W 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 5VDC 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 (< 50µA), 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 0.1W, GSM60B is compliant with USA ETL, CSA 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. GSM60B is approved with the international medical safety certificates.

Model Encoding

GSM60B 05 - P1J



SPECIFICATION

ORDER NO.	GSM60B05-P1J	GSM60B07-P1J	GSM60B09-P1J	GSM60B12-P1J	GSM60B15-P1J	GSM60B18-P1J	GSM60B24-P1J	GSM60B48-P1J		
OUTPUT	SAFETY MODEL NO.	GSM60B05	GSM60B07	GSM60B09	GSM60B12	GSM60B15	GSM60B18	GSM60B24	GSM60B48	
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V	
	RATED CURRENT	6A	6A	6A	5A	4A	3.33A	2.5A	1.25A	
	CURRENT RANGE	0 ~ 6A	0 ~ 6A	0 ~ 6A	0 ~ 5A	0 ~ 4A	0 ~ 3.33A	0 ~ 2.5A	0 ~ 1.25A	
	RATED POWER (max.)	30W	45W	54W	60W	60W	60W	60W	60W	
	RIPPLE & NOISE (max.) Note.3	80mVp-p	80mVp-p	100mVp-p	100mVp-p	100mVp-p	120mVp-p	150mVp-p	200mVp-p	
	VOLTAGE TOLERANCE Note.4	± 5.0%	± 5.0%	± 5.0%	± 3.0%	± 3.0%	± 3.0%	± 3.0%	± 2.5%	
	LINE REGULATION Note.5	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	
	LOAD REGULATION	± 5.0%	± 5.0%	± 5.0%	± 3.0%	± 3.0%	± 3.0%	± 3.0%	± 2.5%	
	SETUP, RISE TIME Note.6	1000ms, 30ms / 230VAC 1500ms, 30ms / 115VAC at full load								
HOLD UP TIME (Typ.)	50ms / 230VAC 16ms / 115VAC at full load									
INPUT	VOLTAGE RANGE Note.7	80 ~ 264VAC								
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY (Typ.)	81.5%	86%	87.5%	88%	88.5%	89%	90%	91.5%	
	AC CURRENT (Typ.)	1.4A / 115VAC 1A / 230VAC								
	INRUSH CURRENT (Typ.)	Cold start 30A / 115VAC 60A / 230VAC								
	LEAKAGE CURRENT(max.)	Touch current < 50µA/264VAC								
PROTECTION	OVERLOAD	105 ~ 160% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	5.2 ~ 7.0V	7.8 ~ 10.2V	9.4 ~ 12.2V	12.6 ~ 16.2V	15.7 ~ 20.3V	18.9 ~ 24.3V	25.2 ~ 32.4V	50.4 ~ 64.8V	
		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°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								
	OPERATING ALTITUDE Note.8	3000 meters								
SAFETY & EMC (Note. 9)	SAFETY STANDARDS	IEC60601-1/IEC60601-1-11, BS EN/EN60601-1/ BS EN/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	BS EN/EN55011 (CISPR11), FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B)						Class B	
		Radiated emission	BS EN/EN55011 (CISPR11), FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B)						Class B	
		Harmonic current	BS EN/EN61000-3-2						Class A	
		Voltage flicker	BS EN/EN61000-3-3						-----	
		BS EN/EN60601-1-2, BS EN/EN61204-3								
		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 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz)	
		EFT bursts	BS EN/EN61000-4-4						Level 3, 2KV	
Surge susceptibility	BS EN/EN61000-4-5						Level 3, 1KV/Line-Line			
Conducted susceptibility	BS EN/EN61000-4-6						Level 3, 10V			
Magnetic field immunity	BS EN/EN61000-4-8						Level 4, 30A/m			
Voltage dip, interruption	BS EN/EN61000-4-11						100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods			
OTHERS	MTBF	3491.2K hrs min. Telcordia SR-332 (Bellcore) ; 694.3K hrs min. MIL-HDBK-217F (25°C)								
	DIMENSION	125*50*31.5mm (L*W*H)								
	PACKING	0.32Kg; 40pcs/13.8Kg/1.04CUFT								
CONNECTOR	PLUG	See page 4~5; Other type available by customer requested								
	CABLE	See page 4~5; Other type available by customer requested								

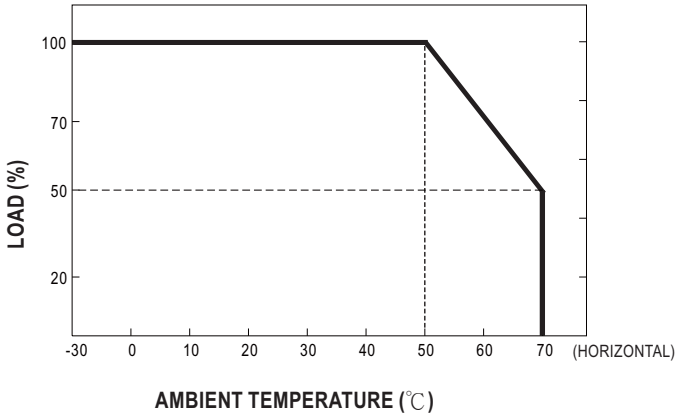


Length of Land L1 by request
(MW's standard length, L: 25 mm, L1: 5 mm)
The wire color is not reference only, please refer to the actual product.

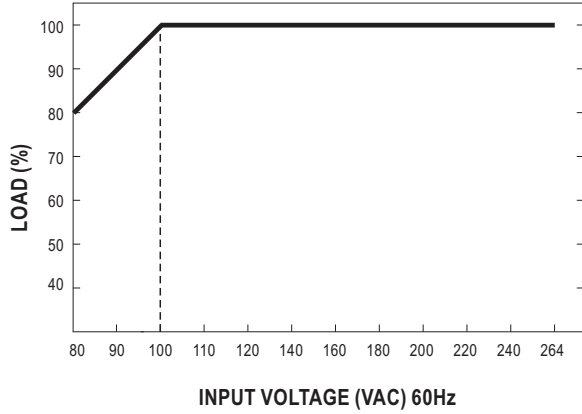
NOTE

- 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 voltages. Please check the derating curve for more details.
 - 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).
 - 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>

Derating Curve

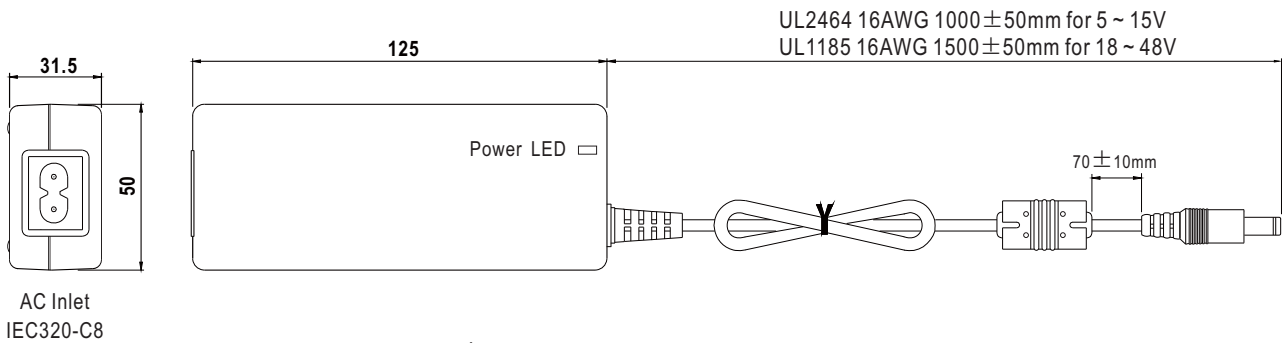


Static Characteristics

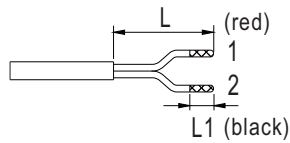


Mechanical Specification

Case No. GSM60B Unit:mm



AC Inlet
IEC320-C8



by customer

1 +Vo

2 -Vo

None

DC output plug

Length of Land L1 by request

(MW's standard length, L: 25 mm, L1: 5 mm)

Standard plug: P1J

(NOTE: The wire color is for reference only, please refer to the actual product)

			Pin Assignment	
			C ⁺	
			Outside	Inside

◎ 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)

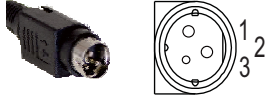
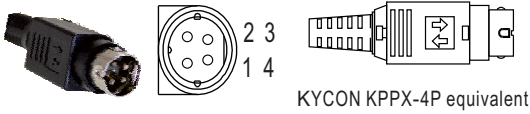
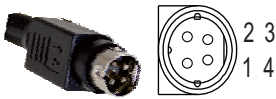


Please refer to below table and online selection guide : https://www.meanwell.com/upload/pdf/DC_plug.pdf

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		
		P1I	5.5	2.1	9.5	Available (Current rating: 7.5A max.)	
		P1L	5.5	2.5	9.5		
		P1M	5.5	2.5	11.0		
		P1IR	5.5	2.1	9.5		
		P1JR	5.5	2.1	11.0		
		P1LR	5.5	2.5	9.5		
		P1MR	5.5	2.5	11.0		
Barrel Style		Type No.	A	B	C	Quick Adapter Accessory	
			OD	ID	L		
		P2I	5.5	2.1	9.5	None	
		P2J	5.5	2.1	11.0		
		P2L	5.5	2.5	9.5		
		P2M	5.5	2.5	11.0		
		P2IR	5.5	2.1	9.5		
		P2JR	5.5	2.1	11.0		
		P2LR	5.5	2.5	9.5		
P2MR	5.5	2.5	11.0				
Lock Style		Type No.	A	B	C	Quick Adapter Accessory	
			OD	ID	L		
	P2S(S761K)	5.53	2.03	12.06	None None		
	P2K(761K)	5.53	2.54	12.06			
	P2C(S760K)	5.53	2.03	9.52			
	P2D(760K)	5.53	2.54	9.52			
Min. Pin Style		Type No.	A	B	C	Quick Adapter Accessory	
			OD	ID	L		
	P3A	2.35	0.7	11.0	Available (Current rating: 5A max.)		
	P3B	4.0	1.7	11.0			
	P3C	4.75	1.7	11.0			
Center Pin Style		Type No.	A	B	C	D	Quick Adapter Accessory
			OD	ID	L	Center Pin	
	P4A	5.5	3.4	11.0	1.0	Available (Current rating: 7.5A max.)	
	P4B	6.5	4.4	11.0	1.4		
	P4C	7.4	5.1	11.0	0.6		

Min. DIN 3 Pin with Lock (male)	Type No.	Pin Assignment		Quick Adapter Accessory
		PIN No.	Output	
	R6B	1	+Vo	Available (Current rating: 7.5A max.)
		2	-Vo	
		3	+Vo	
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)
	R7B	1	+Vo	
		2	-Vo	
		3	-Vo	
		4	+Vo	
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment		None
	R7BF	1	+Vo	
		2	-Vo	
		3	-Vo	
		4	+Vo	
DIN 5 Pin (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)
	R1B	1	-Vo	
		2	-Vo	
		3	+Vo	
		4	-Vo	
		5	+Vo	
Stripped and tinned leads	Type No.	Pin Assignment		None
 <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	
		2	-Vo	

■ **Installation Manual**

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