


 K60950-1
 (Only GSM40B48-P1J)

 J60950-1
 (Only GSM40B48-P1J)


IEC60601-1/1-11



ANSI/AAMI ES60601-1/1-11



(V) for 5~9V



BS EN/EN60601-1/1-11 TPTC004



■ 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)
- Comply with Korea K-MEPS(only GSM40B48-P1J)
- -30~+70°C wide range working temperature
- Protections: Short circuit / Overload / Over voltage
- LED indicator for power on
- Lifetime > 90 K hours
- [Various DC plug quick adapter accessory available](#)
 (Plug kit sold separately, 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

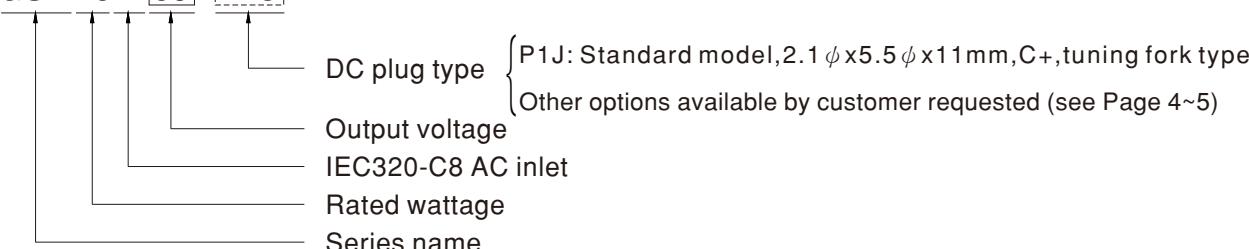
■ Description

GSM40B is a highly reliable, 40W 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 (<50 μ A), fitting the medical devices in direct electrical contact with the patients.

With the efficiency up to 91% and the extremely low no-load power consumption below 0.1W, GSM40B 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. GSM40B is approved with the international medical safety certificates.

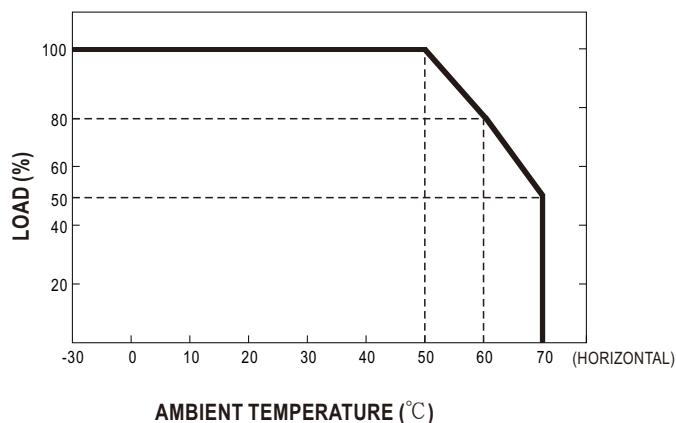
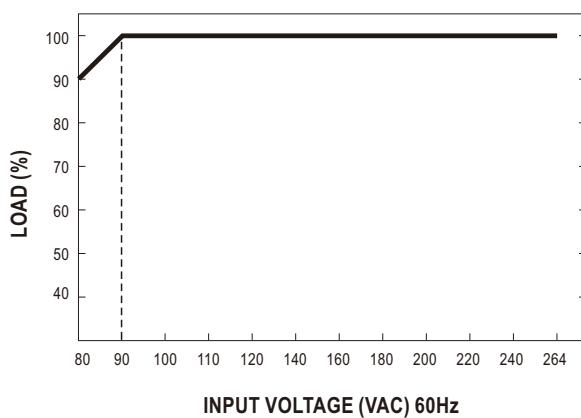
■ Model Encoding

GSM40B 05 - P1J

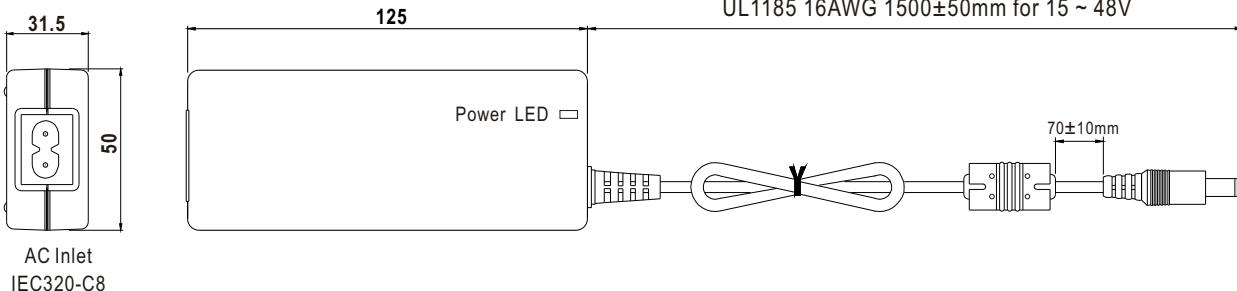


SPECIFICATION

ORDER NO.	GSM40B05-P1J	GSM40B07-P1J	GSM40B09-P1J	GSM40B12-P1J	GSM40B15-P1J	GSM40B18-P1J	GSM40B24-P1J	GSM40B48-P1J																
OUTPUT	SAFETY MODEL NO.	GSM40B05	GSM40B07	GSM40B09	GSM40B12	GSM40B15	GSM40B18	GSM40B24	GSM40B48															
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V															
	RATED CURRENT	5A	5.34A	4.45A	3.34A	2.67A	2.22A	1.67A	0.84A															
	CURRENT RANGE	0 ~ 5A	0 ~ 5.34A	0 ~ 4.45A	0 ~ 3.34A	0 ~ 2.67A	0 ~ 2.22A	0 ~ 1.67A	0 ~ 0.84A															
	RATED POWER (max.)	25W	40W	40W	40W	40W	40W	40W	40W															
	RIPLPE & NOISE (max.) Note.3	80mVp-p	80mVp-p	100mVp-p	100mVp-p	100mVp-p	120mVp-p	150mVp-p	150mVp-p															
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.5%	±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%	±2.5%	±2.5%															
	SETUP, RISE TIME Note.6	1000ms, 30ms / 230VAC		1500ms, 30ms / 115VAC																				
INPUT	HOLD UP TIME (Typ.)	50ms / 230VAC		24ms / 115VAC																				
	VOLTAGE RANGE Note.7	80 ~ 264VAC																						
	FREQUENCY RANGE	47 ~ 63Hz																						
	EFFICIENCY (Typ.)	81%	85.5%	86%	88%	88.5%	89%	90%	91%															
	AC CURRENT (Typ.)	1A / 115VAC	0.5A / 230VAC																					
	INRUSH CURRENT (Typ.)	Cold start 30A / 115VAC	60A / 230VAC																					
PROTECTION	LEAKAGE CURRENT(max.)	Touch current < 50µA/264VAC																						
	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																						
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 9)	OPERATING ALTITUDE Note.8	3000 meters																						
	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), PSE J60950-1(48V only), KC K60950-1(48V only), 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),MSIP KN32			Class B																		
		Radiated emission	BS EN/EN55011 (CISPR11), FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B),MSIP KN32			Class B																		
		Harmonic current	BS EN/EN61000-3-2			Class A																		
		Voltage flicker	BS EN/EN61000-3-3			-----																		
	EMC IMMUNITY	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	740K hrs min. MIL-HDBK-217F(25°C)																						
OTHERS	DIMENSION	125*50*31.5mm (L*W*H)																						
OTHERS	PACKING	0.29Kg; 40pcs/12.6Kg/1.04CUFT																						
CONNECTOR	PLUG	See page 4~5 ; Other type available by customer requested																						
CONNECTOR	CABLE	See page 4~5 ; Other type available by customer requested																						
NOTE	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 f & 47 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 voltages. 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-confirmed 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)																							
NOTE	※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx																							

■ Derating Curve

■ Static Characteristics

■ Mechanical Specification

Case No. GS60B Unit:mm

 UL2464 16AWG 1000±50mm for 5 ~ 7.5V
 UL1185 16AWG 1000±50mm for 9 ~ 12V
 UL1185 16AWG 1500±50mm for 15 ~ 48V

■ DC output plug

◎ Standard plug: P1J

P1J	Pin Assignment
	C"+"

◎ DC plug changeable through:

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

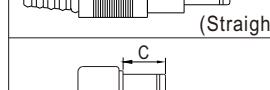
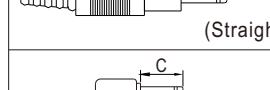
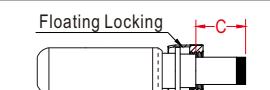
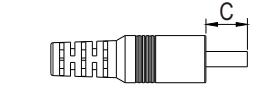
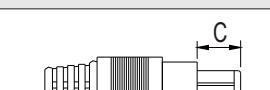
(2) Quick adapter accessory (sold separately without MOQ)

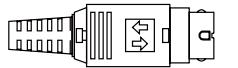
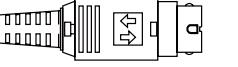
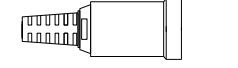
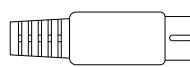
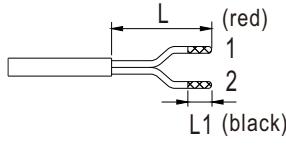
Please refer to below table and online selection guide : https://www.meanwell.com/upload/pdf/DC_plug.pdf

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)	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	
  (Straight)	Type No.	A	B	C	None
	P2I	5.5	2.1	9.5	
	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	
	Type No.	A	B	C	
  Floating Locking	OD	ID	L	None	
	P2S(S761K)	5.53	2.03	12.06	
	P2K(761K)	5.53	2.54	12.06	
	P2C(S760K)	5.53	2.03	9.52	
	P2D(760K)	5.53	2.54	9.52	
  EIAJ equivalent	Type No.	A	B	C	Available (Current rating: 5A max.)
	OD	ID	L		
	P3A	2.35	0.7	11.0	
	P3B	4.0	1.7	11.0	
	P3C	4.75	1.7	11.0	
  EIAJ equivalent	Type No.	A	B	C	Available (Current rating: 7.5A max.)
	OD	ID	L	Center Pin	
	P4A	5.5	3.4	11.0	1.0
	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.)
 1 2 3		2	-Vo	
		3	+Vo	
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)
		PIN No.	Output	
	R7B	1	+Vo	
 2 3 1 4		2	-Vo	
		3	-Vo	
		4	+Vo	
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment		None
		PIN No.	Output	
	R7BF	1	+Vo	
 2 3 14		2	-Vo	
		3	-Vo	
		4	+Vo	
DIN 5 Pin (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)
		PIN No.	Output	
	R1B	1	-Vo	
 1 2 3 4 5		2	-Vo	
		3	+Vo	
		4	-Vo	
		5	+Vo	
Stripped and tinned leads	Type No.	Pin Assignment		None
		PIN No.	Output	
	by customer	1	+Vo	
 L (red) 1 L1 (black) 2		2	-Vo	
Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>5</u> mm)				

■ Installation Manual

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