



### ■ 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 \(Plug kit sold sperately, please refer to : https://www.meanwell.com/upload/pdf/DC\\_plug.pdf \)](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

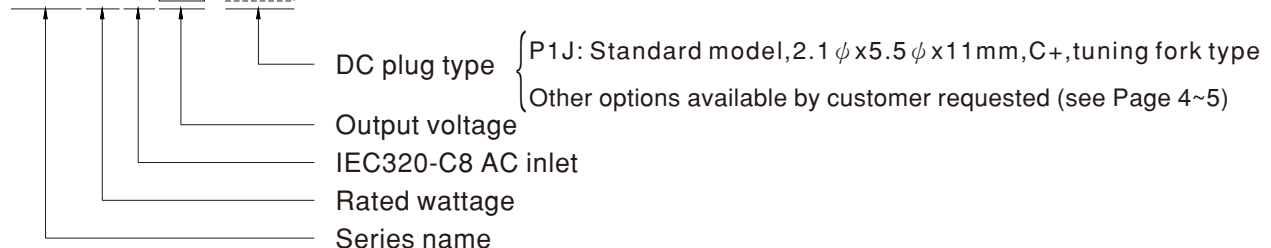
### ■ Description

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 (<50μ 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

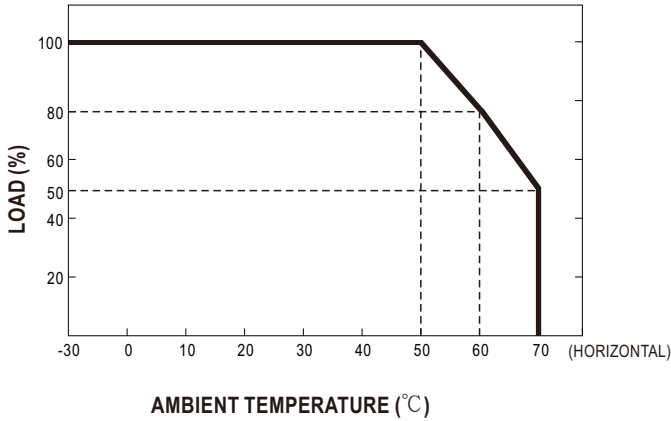
**GSM40B 05 - P1J**



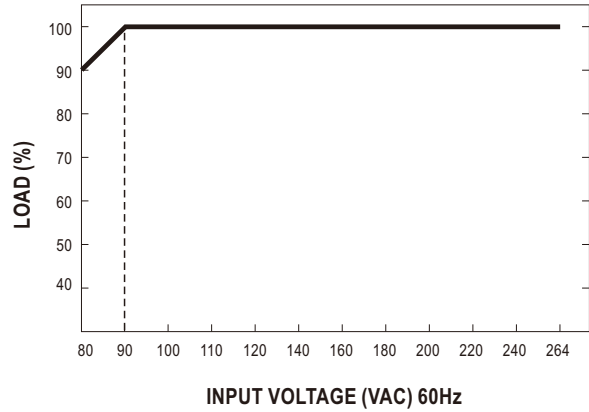
**SPECIFICATION**

ORDER NO.	GSM40B05-P1J	GSM40B07-P1J	GSM40B09-P1J	GSM40B12-P1J	GSM40B15-P1J	GSM40B18-P1J	GSM40B24-P1J	GSM40B48-P1J			
OUTPUT	<b>SAFETY MODEL NO.</b>	GSM40B05	GSM40B07	GSM40B09	GSM40B12	GSM40B15	GSM40B18	GSM40B24	GSM40B48		
	<b>DC VOLTAGE</b> Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V		
	<b>RATED CURRENT</b>	5A	5.34A	4.45A	3.34A	2.67A	2.22A	1.67A	0.84A		
	<b>CURRENT RANGE</b>	0 ~ 5A	0 ~ 5.34A	0 ~ 4.45A	0 ~ 3.34A	0 ~ 2.67A	0 ~ 2.22A	0 ~ 1.67A	0 ~ 0.84A		
	<b>RATED POWER (max.)</b>	25W	40W	40W	40W	40W	40W	40W	40W		
	<b>RIPPLE &amp; NOISE (max.)</b> Note.3	80mVp-p	80mVp-p	100mVp-p	100mVp-p	100mVp-p	120mVp-p	150mVp-p	150mVp-p		
	<b>VOLTAGE TOLERANCE</b> Note.4	± 5.0%	± 5.0%	± 5.0%	± 3.0%	± 3.0%	± 3.0%	± 2.5%	± 2.5%		
	<b>LINE REGULATION</b> Note.5	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%		
	<b>LOAD REGULATION</b>	± 5.0%	± 5.0%	± 5.0%	± 3.0%	± 3.0%	± 3.0%	± 2.5%	± 2.5%		
	<b>SETUP, RISE TIME</b> Note.6	1000ms, 30ms / 230VAC      1500ms, 30ms / 115VAC at full load									
<b>HOLD UP TIME (Typ.)</b>	50ms / 230VAC      24ms / 115VAC at full load										
INPUT	<b>VOLTAGE RANGE</b> Note.7	80 ~ 264VAC									
	<b>FREQUENCY RANGE</b>	47 ~ 63Hz									
	<b>EFFICIENCY (Typ.)</b>	81%	85.5%	86%	88%	88.5%	89%	90%	91%		
	<b>AC CURRENT (Typ.)</b>	1A / 115VAC      0.5A / 230VAC									
	<b>INRUSH CURRENT (Typ.)</b>	Cold start 30A / 115VAC      60A / 230VAC									
<b>LEAKAGE CURRENT(max.)</b>	Touch current < 50µA/264VAC										
PROTECTION	<b>OVERLOAD</b>	105 ~ 160% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed									
	<b>OVER VOLTAGE</b>	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	<b>WORKING TEMP.</b>	-30 ~ +70°C (Refer to "Derating Curve")									
	<b>WORKING HUMIDITY</b>	20% ~ 90% RH non-condensing									
	<b>STORAGE TEMP., HUMIDITY</b>	-40 ~ +85°C, 10 ~ 95% RH non-condensing									
	<b>TEMP. COEFFICIENT</b>	± 0.03% / °C (0 ~ 50°C)									
	<b>VIBRATION</b>	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes									
<b>OPERATING ALTITUDE</b> Note.8	3000 meters										
SAFETY & EMC (Note 9)	<b>SAFETY STANDARDS</b>	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									
	<b>ISOLATION LEVEL</b>	Primary-Secondary: 2xMOPP									
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P:4KVAC									
	<b>ISOLATION RESISTANCE</b>	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH									
	<b>EMC EMISSION</b>	<b>Parameter</b>	<b>Standard</b>					<b>Test Level / Note</b>			
		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					----				
	<b>EMC IMMUNITY</b>	BS EN/EN60601-1-2, BS EN/EN61204-3									
		<b>Parameter</b>	<b>Standard</b>					<b>Test Level / Note</b>			
		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	<b>MTBF</b>	740K hrs min. MIL-HDBK-217F(25°C)									
	<b>DIMENSION</b>	125*50*31.5mm (L*W*H)									
	<b>PACKING</b>	0.29Kg; 40pcs/12.6Kg/1.04CUFT									
CONNECTOR	<b>PLUG</b>	See page 4~5 ; Other type available by customer requested									
	<b>CABLE</b>	See page 4~5 ; Other type available by customer requested									
NOTE	<p>1. All parameters are specified at 230VAC input, rated load, 25°C 70% RH ambient.</p> <p>2. DC voltage: The output voltage set at point measure by plug terminal &amp; 50% load.</p> <p>3. Ripple &amp; noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1 f &amp; 47µ f capacitor.</p> <p>4. Tolerance: includes set up tolerance, line regulation, load regulation.</p> <p>5. Line regulation is measured from low line to high line at rated load.</p> <p>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.</p> <p>7. Derating may be needed under low input voltages. Pleas check the derating curve for more details.</p> <p>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).</p> <p>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 <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>										

### Derating Curve

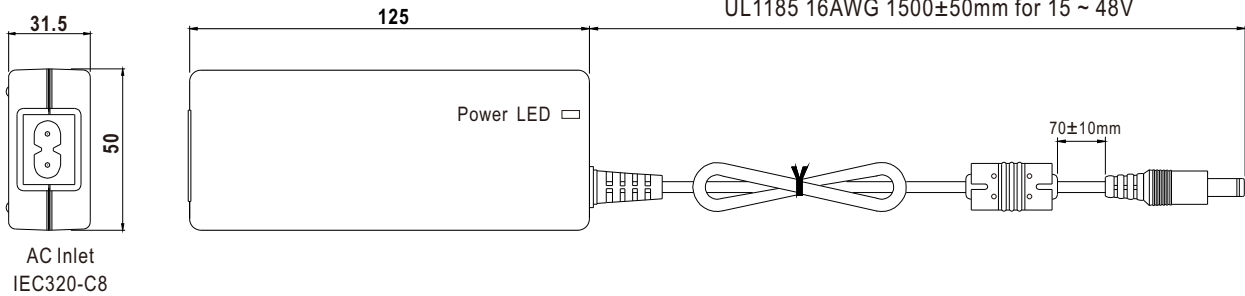


### Static Characteristics



### Mechanical Specification

Case No. GS60B Unit:mm



### DC output plug

Standard plug: P1J

P1J	Pin Assignment
	Outside ⊖ ⊕ Inside

◎ DC plug changeable through:



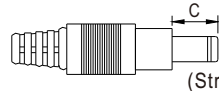
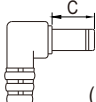


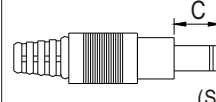
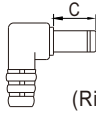


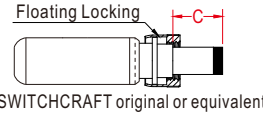




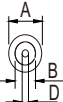
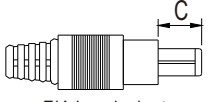
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)


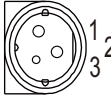
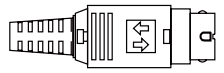

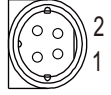
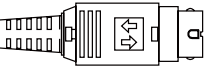


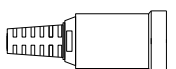




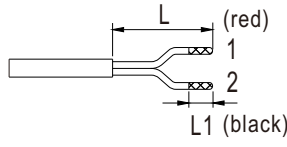
Please refer to below table and online selection guide : [https://www.meanwell.com/upload/pdf/DC\\_plug.pdf](https://www.meanwell.com/upload/pdf/DC_plug.pdf)

Example quick adapter accessory:



◎ Optional DC plug: (Available in customized cable or quick adapter)

Tuning Fork Style		Type No.	A OD	B ID	C L	Quick Adapter Accessory	
 	 (Straight)  (Right-angled)	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 OD	B ID	C L	Quick Adapter Accessory	
 	 (Straight)  (Right-angled)	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 OD	B ID	C L	Quick Adapter Accessory	
 	 Floating Locking SWITCHCRAFT original or equivalent	P2S(S761K)	5.53	2.03	12.06	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 OD	B ID	C L	Quick Adapter Accessory	
 	 EIAJ equivalent	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 OD	B ID	C L	D Center Pin	Quick Adapter Accessory
 	 EIAJ equivalent	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	
   <p>KYCON KPPX-3P equivalent</p>	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.)
   <p>KYCON KPPX-4P equivalent</p>	R7B	1	+Vo	
		2	-Vo	
		3	-Vo	
		4	+Vo	
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment		None
   <p>KYCON KPJX-CM-4S equivalent</p>	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)</p>	by customer	1	+Vo	
		2	-Vo	

■ **Installation Manual**

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