



36W AC-DC Reliable Green Medical Adaptor

**GSM36B** series



### ■ Features

- 2 pole AC inlet IEC320-C8, Class II power unit
- Medical safety approved (2 × MOPP) according to ANSI/AAMI ES60601-1/-1-11, 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 )
- -25~+60°C wide range working temperature
- Protections: Short circuit / Overload / Over voltage
- LED indicator for power on
- 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

- Blood glucose meter
- Blood pressure meter
- Nebulizer
- Inhaler
- Portable medical device

### ■ GTIN CODE

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

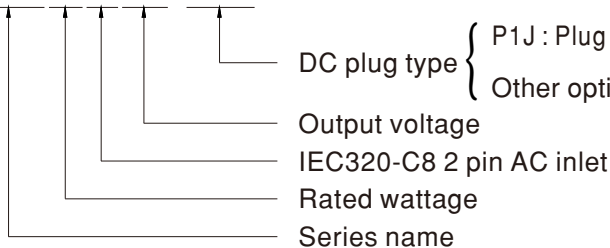
### ■ Description

GSM36B is a highly reliable, 36W 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 miniature medical 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 88% and the extreme low no-load power consumption below 0.1W, GSM36B 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. GSM36B is approved with the international medical safety certificates.

### ■ Model Encoding

**GSM36 B 05 - P1J**



DC plug type { P1J : Plug for standard model, 2.1φ × 5.5φ × 11mm, c+, tuning fork type  
Other options available by customer requested (see Page 4~5)



## SPECIFICATION

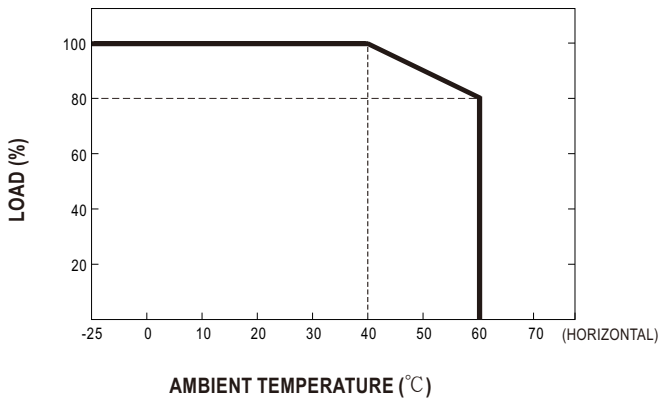
ORDER NO.	GSM36B05-P1J	GSM36B07-P1J	GSM36B09-P1J	GSM36B12-P1J	GSM36B15-P1J	GSM36B18-P1J	GSM36B24-P1J	GSM36B48-P1J		
OUTPUT	SAFETY MODEL NO.	GSM36B05	GSM36B07	GSM36B09	GSM36B12	GSM36B15	GSM36B18	GSM36B24	GSM36B48	
	DC VOLTAGE <b>Note.2</b>	5V	7.5V	9V	12V	15V	18V	24V	48V	
	RATED CURRENT	4.5A	4.32A	4A	3A	2.4A	2A	1.5A	0.75A	
	CURRENT RANGE	0 ~ 4.5A	0 ~ 4.32A	0 ~ 4A	0 ~ 3A	0 ~ 2.4A	0 ~ 2A	0 ~ 1.5A	0 ~ 0.75A	
	RATED POWER (max.)	22.5W	32.4W	36W	36W	36W	36W	36W	36W	
	RIPPLE & NOISE (max.) <b>Note.3</b>	80mVp-p	80mVp-p	80mVp-p	120mVp-p	120mVp-p	150mVp-p	180mVp-p	240mVp-p	
	VOLTAGE TOLERANCE <b>Note.4</b>	±6.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%	
	LINE REGULATION <b>Note.5</b>	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LOAD REGULATION	±6.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%	
	SETUP, RISE TIME <b>Note.6</b>	500ms, 30ms / 230VAC      1000ms, 30ms / 115VAC at full load								
HOLD UP TIME (Typ.)	16ms / 230VAC      10ms / 115VAC at full load									
INPUT	VOLTAGE RANGE <b>Note.7</b>	80 ~ 264VAC    113 ~ 370VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY (Typ.)	80%	83%	84%	86%	87%	87%	87%	88%	
	AC CURRENT (Typ.)	0.9A / 115VAC		0.45A / 230VAC						
	INRUSH CURRENT (Typ.)	55A / 230VAC		30A / 115VAC						
	LEAKAGE CURRENT(max.)	Touch current < 50 $\mu$ A/264VAC								
PROTECTION	OVERLOAD	105 ~ 170% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	5.25 ~ 7.5V	7.88 ~ 10.5V	9.45 ~ 13V	12.6 ~ 17.2V	15.75 ~ 20.25V	18.9 ~ 25.2V	25.2 ~ 32.4V	50.4 ~ 64.8V	
		Protection type : Shut down o/p voltage, re-power on to recover								
ENVIRONMENT	WORKING TEMP.	-25 ~ +60 $^{\circ}$ C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20% ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +85 $^{\circ}$ C, 10 ~ 95% RH non-condensing								
	TEMP. COEFFICIENT	±0.03% / $^{\circ}$ C (0~40 $^{\circ}$ C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
SAFETY & EMC (Note. 8)	SAFETY STANDARDS	IEC 60601-1:2005+A1+A2; IEC 60601-1-11:2015+A1, TUV BS EN/ EN 60601-1:2006+A1+A12+A2; BS EN/ EN 60601-1-11:2015+A1 ANSI/AAMI ES60601-1:2005+A2; ANSI/AAMI HA60601-1-11+A1, CAN/CSA C22.2 No. 60601-1:2014+A2; CSA C22.2 NO. 60601-1-11:2015+A1, 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 $^{\circ}$ 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	3777.8K hrs min.    Telcordia SR-332 (Bellcore) ; 651.4K hrs min.    MIL-HDBK-217F (25 $^{\circ}$ C)								
	DIMENSION	79*54*33mm (L*W*H)								
	PACKING	235g ; 60pcs / 15.1Kg / CARTON								
CONNECTOR	PLUG	See page 4~5 ; Other type available by customer requested								
	CABLE	See page 4~5 ; Other type available by customer requested								
NOTE	<ol style="list-style-type: none"> <li>All parameters are specified at 230VAC input, rated load, 25<math>^{\circ}</math>C 70% RH ambient.</li> <li>DC voltage: The output voltage set at point measure by plug terminal &amp; 50% load.</li> <li>Ripple &amp; noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1 <math>\mu</math> F &amp; 47 <math>\mu</math> F capacitor.</li> <li>Tolerance: includes set up tolerance, line regulation, load regulation.</li> <li>Line regulation is measured from low line to high line at rated load.</li> <li>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.</li> <li>Derating may be needed under low input voltage. Please check the derating curve for more details.</li> <li>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="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a>)</li> </ol> <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>									



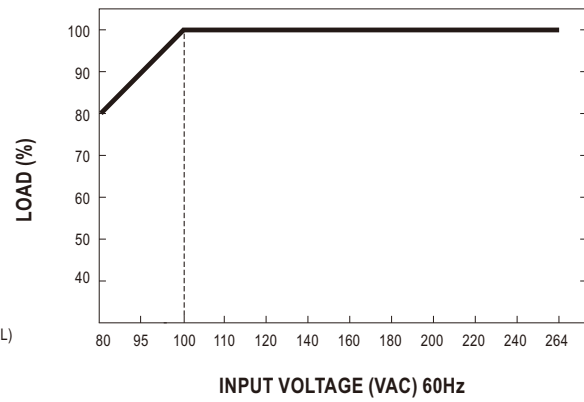
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■ Derating Curve



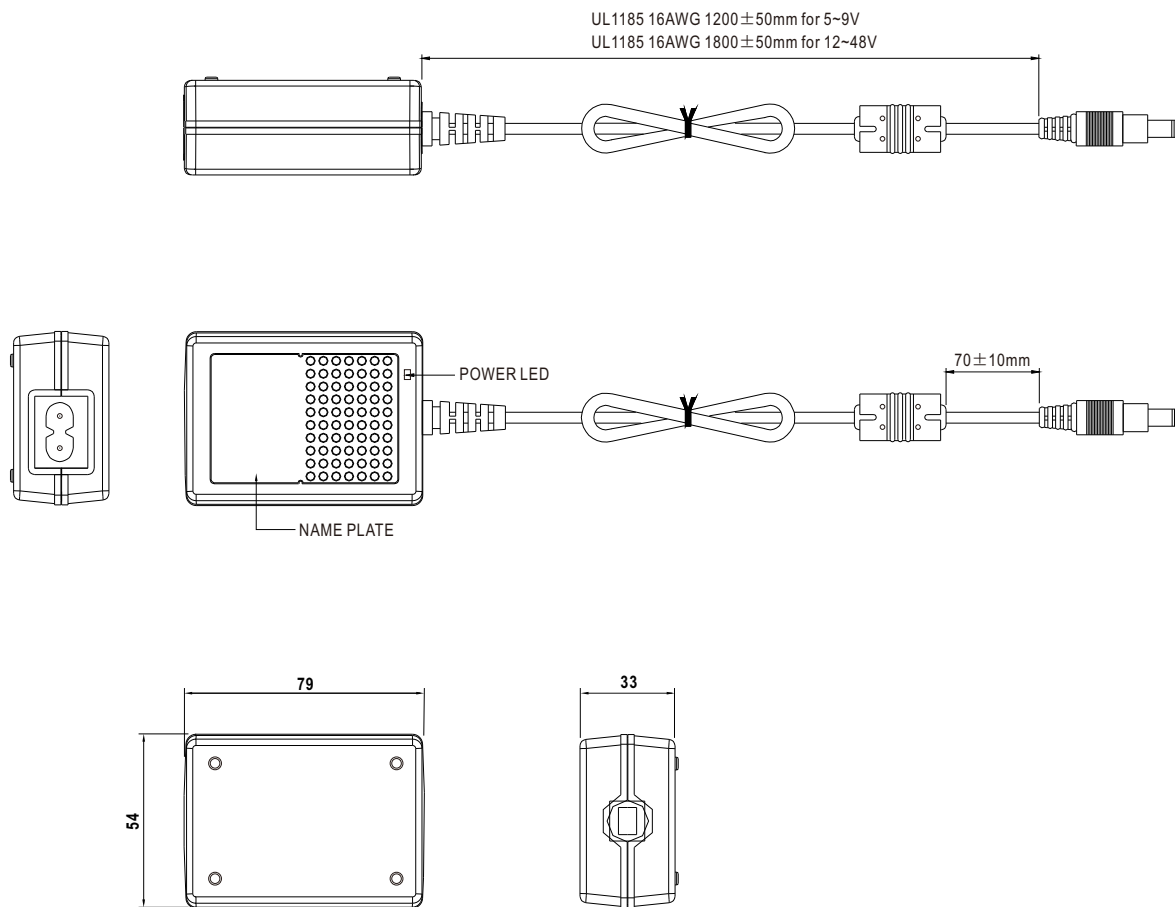
■ Static Characteristics



■ Mechanical Specification

(Unit: mm , tolerance  $\pm 1$ mm)

Case No. GSM36B





■ 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	B	C	Quick Adapter Accessory
		OD	ID	L	
	P1I (Straight)	5.5	2.1	9.5	Available (Current rating: 7.5A max.)
	P1L (Straight)	5.5	2.5	9.5	
	P1M (Straight)	5.5	2.5	11.0	
	P1IR (Right-angled)	5.5	2.1	9.5	
	P1JR (Right-angled)	5.5	2.1	11.0	
	P1LR (Right-angled)	5.5	2.5	9.5	
P1MR (Right-angled)	5.5	2.5	11.0		
Barrel Style	Type No.	A	B	C	Quick Adapter Accessory
		OD	ID	L	
	P2I (Straight)	5.5	2.1	9.5	None
	P2J (Straight)	5.5	2.1	11.0	
	P2L (Straight)	5.5	2.5	9.5	
	P2M (Straight)	5.5	2.5	11.0	
	P2IR (Right-angled)	5.5	2.1	9.5	
	P2JR (Right-angled)	5.5	2.1	11.0	
	P2LR (Right-angled)	5.5	2.5	9.5	
	P2MR (Right-angled)	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
	P2K(761K)	5.53	2.54	12.06	
	P2C(S760K)	5.53	2.03	9.52	
	P2D(760K)	5.53	2.54	9.52	



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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	Available (Current rating: 7.5A max.)
	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		Available (Current rating: 7.5A max.)		
	R6B	PIN No.	Output			
		1	+Vo			
		2	-Vo			
3	+Vo					
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)		
	R7B	PIN No.	Output			
		1	+Vo			
		2	-Vo			
		3	-Vo			
4	+Vo					
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment		None		
	R7BF	PIN No.	Output			
		1	+Vo			
		2	-Vo			
		3	-Vo			
4	+Vo					
DIN 5 Pin (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)		
	R1B	PIN No.	Output			
		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: 25 mm, L1: 5 mm) ( NOTE: The wire color is for reference only, please refer to the actual product)</p>	by customer	PIN No.	Output			
		1	+Vo			
		2	-Vo			

■ Installation Manual

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