



Features

- 2 pole AC inlet IEC320-C8, Class II power unit
- Medical safety approved (2 × MOPP) according to ANSI/AAMI ES60601-1/-1-1-11, EN60601-1/-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 : http://www.meanwell.com/upload/pdf/DC_plug.pdf)
- 3 years warranty

Applications

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

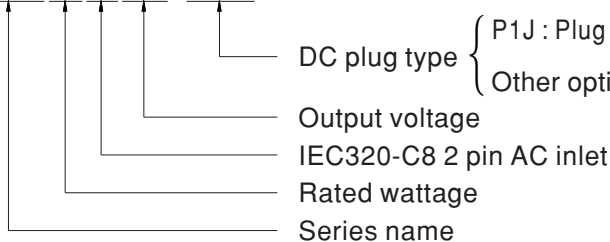
Description

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)

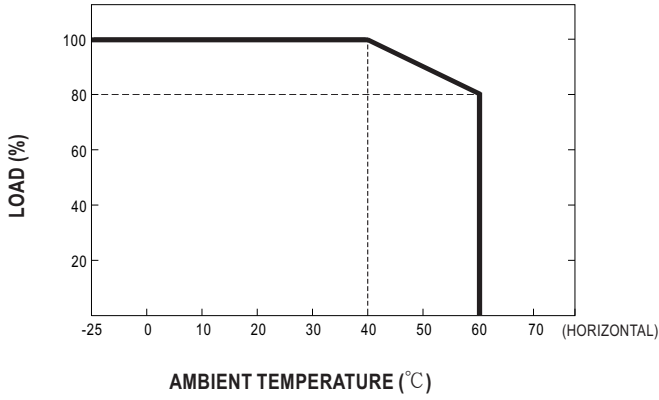
Output voltage
 IEC320-C8 2 pin AC inlet
 Rated wattage
 Series name



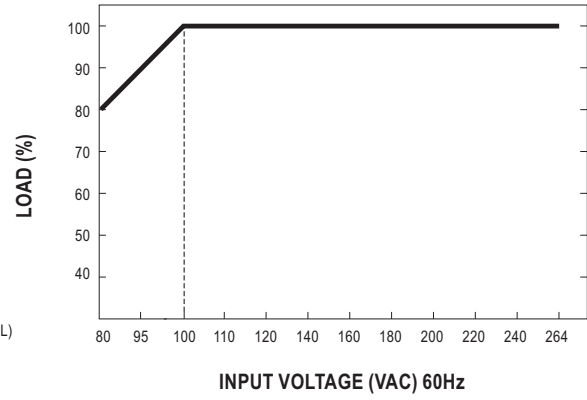
SPECIFICATION

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 Note.2	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.) Note.3	80mVp-p	80mVp-p	80mVp-p	120mVp-p	120mVp-p	150mVp-p	180mVp-p	240mVp-p		
	VOLTAGE TOLERANCE Note.4	±6.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%		
	LINE REGULATION Note.5	±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 Note.6	500ms, 30ms / 230VAC 100ms, 30ms / 115VAC at full load									
HOLD UP TIME (Typ.)	16ms / 230VAC 10ms / 115VAC at full load										
INPUT	VOLTAGE RANGE Note.7	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 < 50µA/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°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. 8)	SAFETY STANDARDS	ANSI/AAMI ES60601-1 / ES60601-1-11(3.1 version), CAN/CSA-C22 3 rd Edition, TUV EN60601-1 / EN60601-1-11, 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),MSIP KN32					Class B			
		Radiated emission	EN55011 (CISPR11), FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B),MSIP KN32					Class B			
		Harmonic current	EN61000-3-2					Class A			
		Voltage flicker	EN61000-3-3					-----			
	EMC IMMUNITY	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				
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					
OTHERS	MTBF	657.4K hrs min. MIL-HDBK-217F(25°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"> 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 voltage. Please check the derating curve for more details. 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

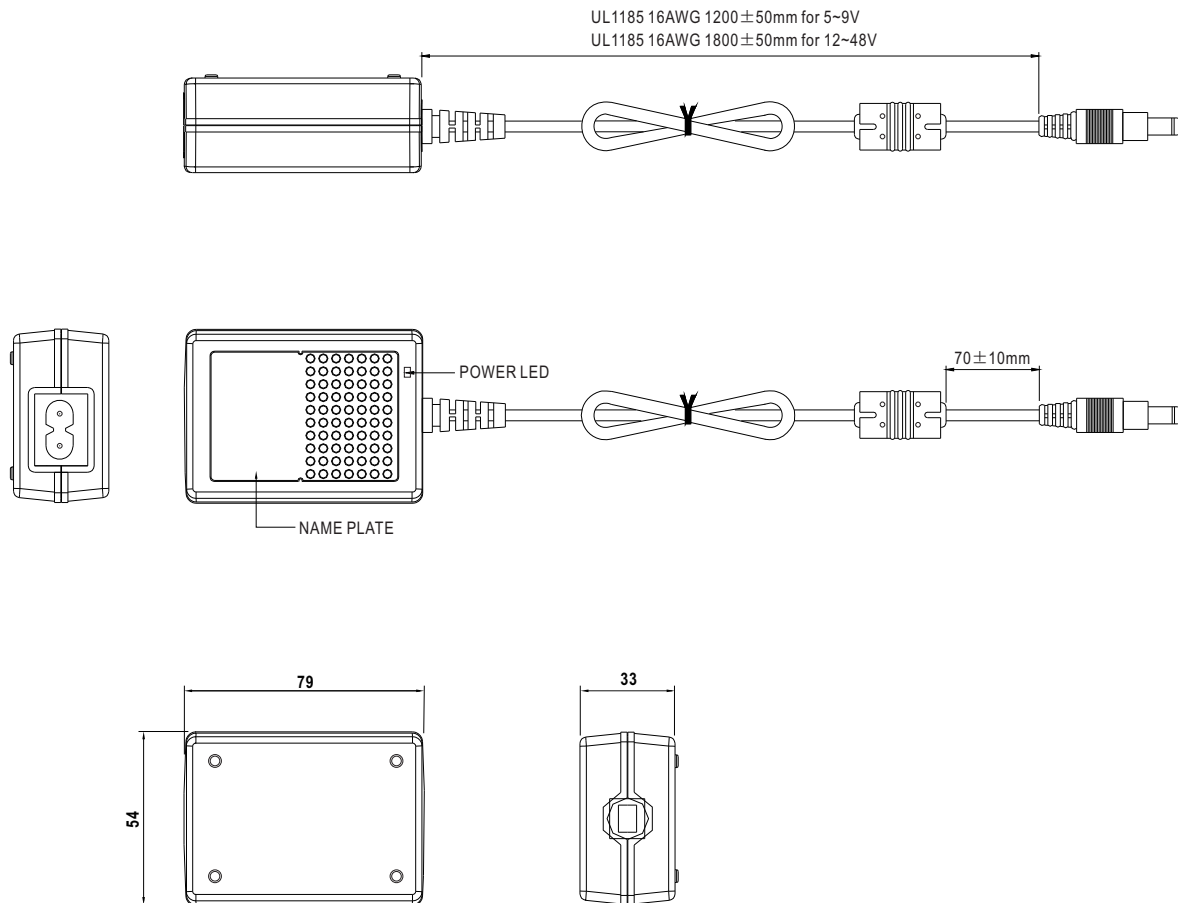


■ Static Characteristics



■ Mechanical Specification

Unit:mm



■ DC output plug

◎ Standard plug: P1J

P1J	Pin Assignment
	Outside Inside





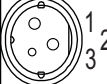
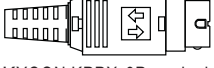


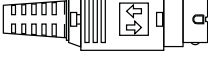


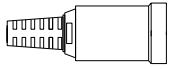




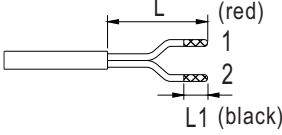
◎ Plug changeable with quick adapter (sold separately)
 (Changeable DC plug selection guide : http://www.meanwell.com/upload/pdf/DC_plug.pdf)

For example :



◎ Optional DC plug:

Tuning Fork Style		Type No.	A	B	C	Quick Adapter Accessory
			OD	ID	L	
<p>Current rating: 7.5A max.</p>	<p>(Straight)</p>	P1I	5.5	2.1	9.5	Available
		P1L	5.5	2.5	9.5	
		P1M	5.5	2.5	11.0	
	<p>(Right-angled)</p>	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	
			OD	ID	L	
<p>Current rating: 7.5A max.</p>	<p>(Straight)</p>	P2I	5.5	2.1	9.5	None
		P2J	5.5	2.1	11.0	
		P2L	5.5	2.5	9.5	
	<p>(Right-angled)</p>	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	
			OD	ID	L	
<p>Current rating: 7.5A max.</p> <p>SWITCHCRAFT original or equivalent</p>	<p>Floating Locking</p>	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	B	C	
			OD	ID	L	
<p>Current rating: 5A max.</p> <p>EIAJ equivalent</p>		P3A	2.35	0.7	11.0	Available
		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	
   <p>Current rating: 7.5A max.</p> <p>EIAJ equivalent</p>	P4A	5.5	3.4	11.0	1.0	None
	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
   <p>Current rating: 7.5A max.</p> <p>KYCON KPPX-3P equivalent</p>	R6B	PIN No.	Output			
		1	+Vo			
		2	-Vo			
3	+Vo					
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment				Available
   <p>Current rating: 7.5A max.</p> <p>KYCON KPPX-4P equivalent</p>	R7B	PIN No.	Output			
		1	+Vo			
		2	-Vo			
		3	-Vo			
4	+Vo					
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment				None
   <p>Current rating: 7.5A max.</p> <p>KYCON KPJX-CM-4S equivalent</p>	R7BF	PIN No.	Output			
		1	+Vo			
		2	-Vo			
		3	-Vo			
4	+Vo					
DIN 5 Pin (male)	Type No.	Pin Assignment				Available
   <p>Current rating: 7.5A max.</p>	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: <u>25</u> mm, L1: <u>5</u> mm)</p>	by customer	PIN No.	Output			
		1	+Vo			
2	-Vo					

Installation Manual

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