


 UL60601-1
UL60601-1-11


IEC60601-1



IP22



(V for 5~9V)



ECO



Medical



2xMOPP



BF rated

■ Features

- Ultra slim, compact size
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1/ES60601-1-11
- Extremely Low leakage current
- 2 pole USA plug, Class II power unit
- No load power consumption <0.15W
- **Energy efficiency Level VI** (except 5~9V for Level V)
- -30~+70°C wide range working temperature
- Protections: Short circuit / Overload / Over voltage
- Fully enclosed plastic case
- **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

- Blood glucose meter
- Blood pressure meter
- Nebulizer
- Inhaler
- Portable medical device
- Sleep apnea devices

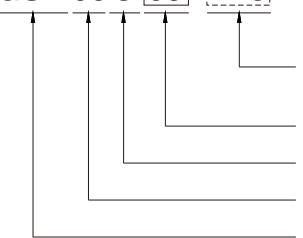
■ Description

GSM60U is a 60W ultra slim wall-mounted style single-output green medical adaptor series, which is compact and convenient for carry. GSM60U is a class II power unit (no FG) equipped with the standard 2-Pin U.S. plug, accepting the input range from 80VAC to 264VAC. The whole series provides different models with output voltages ranging between 5VDC and 48VDC that it can satisfy the demands for various types of medical electronic devices. The circuitry design meets the international medical standards (2*MOPP), having an ultra low leakage current (<100µA), fitting the medical devices in direct electrical contact with the patients.

With the efficiency up to 90% and the extremely low no-load power consumption below 0.15W, GSM60U is compliant with the latest U.S. energy regulation EISA 2007/DoE(Level VI). The supreme feature allows the adaptor to save the energy when it is under either the operating mode or the standby mode. The entire series is approved for international safety regulations; moreover, it adopts the 94V-0 flame retardant plastic case that it can effectively prevent users from electric hazards.

■ Model Encoding

GSM60 U 05 -P1J



DC plug type: P1J: Plug for standard model, 2.1ψ × 5.5ψ × 11mm,
 C+ tuning fork type
 Other options available by customer requested (see Page 4~5)
 Output voltage
 US 2 pin AC plug
 Rated wattage
 Series name

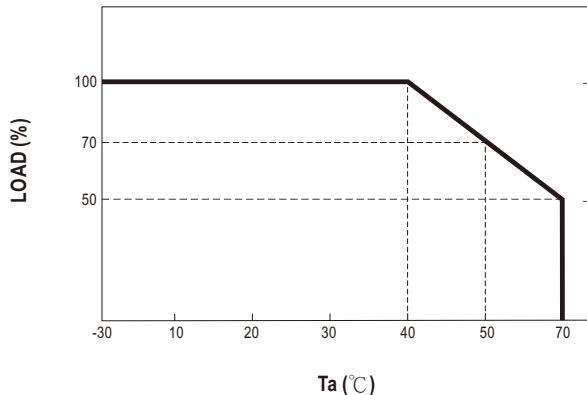
**SPECIFICATION**

ORDER NO.		GSM60U05-P1J	GSM60U07-P1J	GSM60U09-P1J	GSM60U12-P1J	GSM60U15-P1J	GSM60U18-P1J	GSM60U24-P1J	GSM60U48-P1J						
OUTPUT	SAFETY MODEL NO.	GSM60U05	GSM60U07	GSM60U09	GSM60U12	GSM60U15	GSM60U18	GSM60U24	GSM60U48						
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V						
	RATED CURRENT	6A	6A	5.5A	4.5A	4A	3.33A	2.5A	1.25A						
	CURRENT RANGE	0 ~ 6A	0 ~ 6A	0 ~ 5.5A	0 ~ 4.5A	0 ~ 4A	0 ~ 3.33A	0 ~ 2.5A	0 ~ 1.25A						
	RATED POWER (max.)	30W	45W	50W	54W	60W	60W	60W	60W						
	RIPPLE & NOISE (max.) Note.3	100mVp-p	100mVp-p	100mVp-p	100mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p						
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%						
	LINE REGULATION Note.5	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%						
	LOAD REGULATION Note.6	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±2.0%	±2.0%	±2.0%						
SETUP, RISE, HOLD UP TIME		1000ms, 100ms, 10ms/230VAC				1000ms, 100ms, 10ms/115VAC at full load									
INPUT	VOLTAGE RANGE Note.7	80 ~ 264VAC	113 ~ 370VDC												
	FREQUENCY RANGE	47 ~ 63Hz													
	EFFICIENCY (Typ.)	80%	85%	87%	88%	88%	88%	88%	90%						
	AC CURRENT	1.5A / 115VAC	0.8A / 230VAC												
	INRUSH CURRENT (max.)	Cold start 50A / 115VAC 100A / 230VAC													
	LEAKAGE CURRENT(max.)	Touch current < 100µA/264VAC													
PROTECTION	OVERLOAD	105 ~ 160% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed													
	OVER VOLTAGE	110 ~ 140% rated output voltage Protection type : Clamp by zener diode, output short													
	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")													
ENVIRONMENT	WORKING HUMIDITY	20% ~ 90% RH non-condensing													
	STORAGE TEMP., HUMIDITY	-30 ~ +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 STANDARDS	ANSI/AAMI ES60601-1/ES60601-1-11(3.1 version), CAN/CSA-C22 NO. 60601-1 3 rd edition approved													
SAFETY & EMC (Note. 8)	ISOLATION LEVEL	Primary - Secondary: 2 x MOPP													
	WITHSTAND VOLTAGE	I/P-O/P:5656VDC													
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH													
	EMC EMISSION	Parameter		Standard		Test Level / Note									
		Conducted emission		FCC PART 18		Class B									
		Radiated emission		FCC PART 18		Class B									
OTHERS	LIFE	3 years : 100% load 40°C, 8hours / day													
	MTBF	400Khrs min. MIL-HDBK-217F(25°C)													
	DIMENSION	75.5*32*47.5mm (L*W*H)													
	PACKING	200g ; 60pcs / 13kg / 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	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 0.1µf & 47µf 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.Load regulation is measured from 10% to 100% rated load. 7.Derating may be needed under low input voltage. Please check the derating curve for more details. 8.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) ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx														

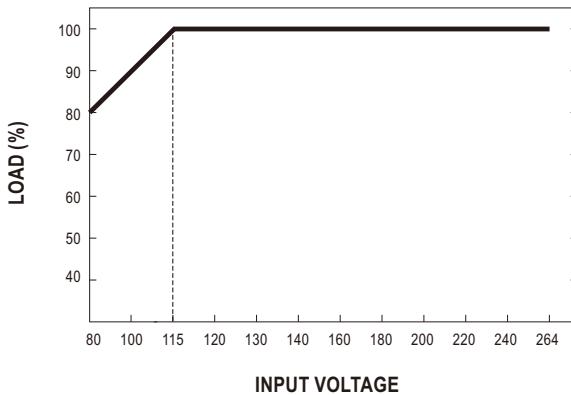


60W AC-DC Reliable Green Slim Wall-mounted Medical Adaptor **GSM60U** series

■ Derating Curve

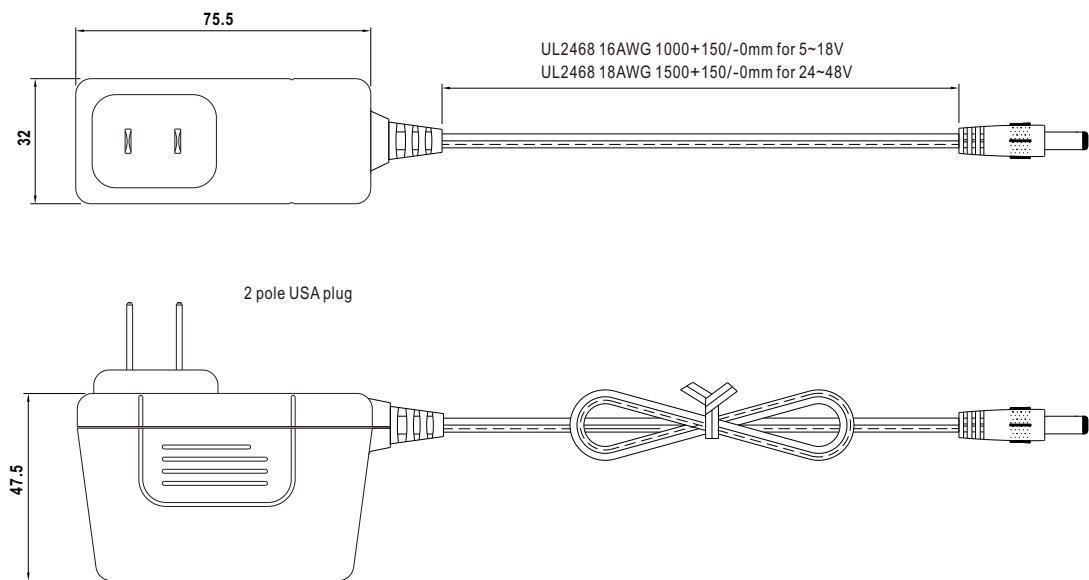


■ Static Characteristics



■ Mechanical Specification

Unit:mm



■ DC output plug

- ◎ Standard plug: P1J

Unit:mm

P1J	Pin Assignment
	
5.5 2.1 11±0.5mm	Outside  Inside

- ◎ DC plug changeable through:

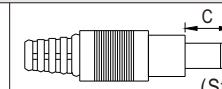
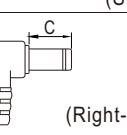
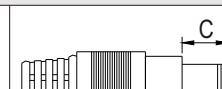
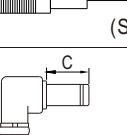
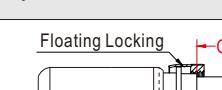
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

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

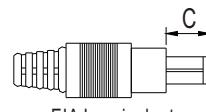
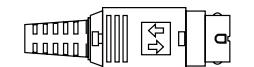
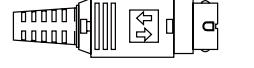
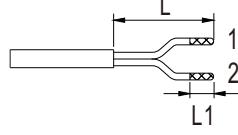
Example quick adapter accessory:



- ◎ 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
   	Type No.	OD	ID	L	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	
Lock Style		Type No.	A	B	C
   	Type No.	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	
Min. Pin Style		Type No.	A	B	C
  	Type No.	OD	ID	L	Available (Current rating: 5A max.)
	P3A	2.35	0.7	11.0	
	P3B	4.0	1.7	11.0	
	P3C	4.75	1.7	11.0	

60W AC-DC Reliable Green Slim Wall-mounted Medical Adaptor **GSM60U** series

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				Available (Current rating: 7.5A max.)
		PIN No.	Output			
	R6B	1	+Vo			
		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	-Vo			
		3	-Vo			
		4	+Vo			
Stripped and tinned leads	Type No.	Pin Assignment				None
		PIN No.	Output			
	by customer	1 (Ribbed)	+Vo			
		2 (Letter)	-Vo			
Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>10</u> mm)						

■ Installation Manual

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