



## ■ 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
- 3 years warranty

## ■ Applications

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

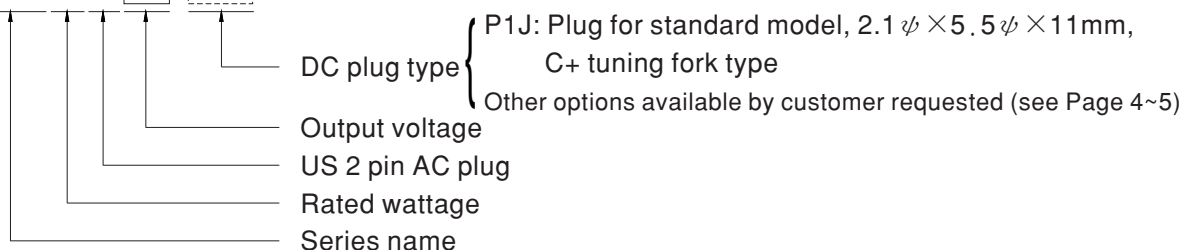
## ■ Description

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

**GSM60U 05 -P1J**



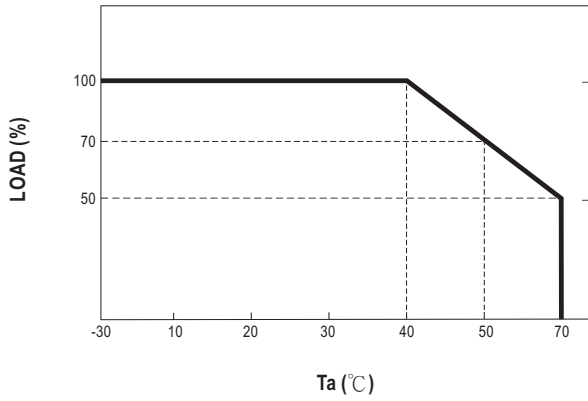


# 60W AC-DC Reliable Green Slim Wall-mounted Medical Adaptor **GSM60U** series

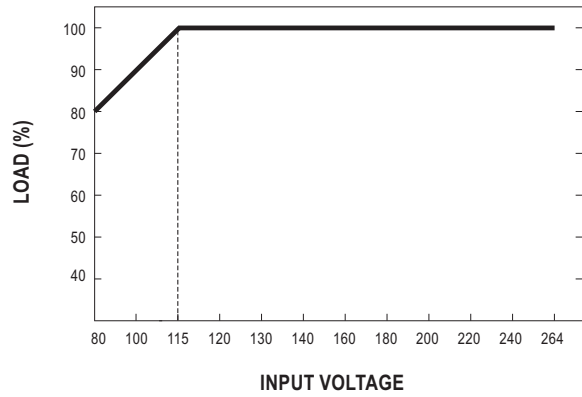
## SPECIFICATION

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 <span style="float:right">Note.2</span>	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	49.5W	54W	60W	60W	60W	60W	
	RIPPLE & NOISE (max.) <span style="float:right">Note.3</span>	100mVp-p	100mVp-p	100mVp-p	100mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p	
	VOLTAGE TOLERANCE <span style="float:right">Note.4</span>	±5.0%	±5.0%	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	
	LINE REGULATION <span style="float:right">Note.5</span>	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LOAD REGULATION <span style="float:right">Note.6</span>	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±2.0%	±2.0%	±2.0%	
	SETUP, RISE, HOLD UP TIME	500ms, 30ms, 10ms/230VAC      500ms, 30ms, 10ms/115VAC at full load								
INPUT	VOLTAGE RANGE <span style="float:right">Note.7</span>	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								
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")								
	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 & EMC (Note. 8)	SAFETY STANDARDS	ANSI/AAMI ES60601-1/ES60601-1-11(3.1 version), CAN/CSA-C22 3 <sup>rd</sup> edition approved								
	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	<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 0.1µf &amp; 47µf 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.Load regulation is measured from 10% to 100% rated load.</p> <p>7.Derating may be needed under low input voltage. Please check the derating curve for more details.</p> <p>8.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>									

■ Derating Curve

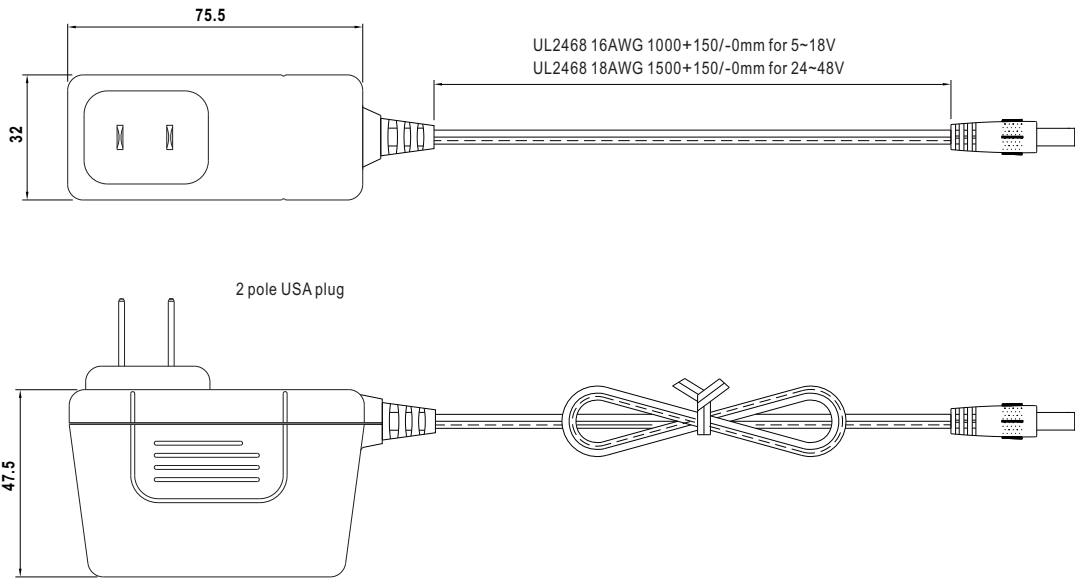


■ Static Characteristics



■ Mechanical Specification

Unit:mm





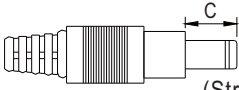
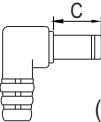



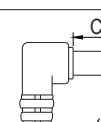


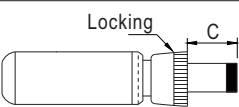


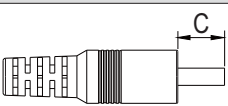

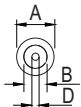
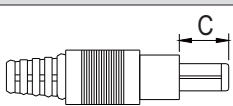

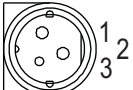
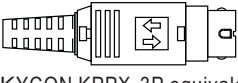
■ DC output plug

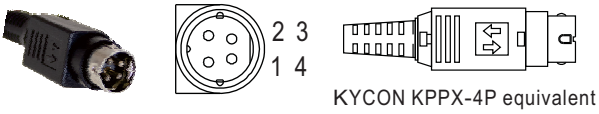
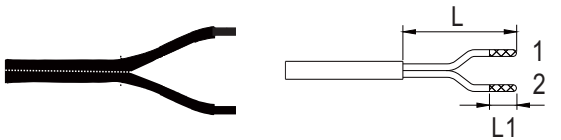
◎ Standard plug: P1J

Unit:mm

P1J		Pin Assignment
		C <sup>+</sup>
		Outside   Inside

◎ Optional DC plug:

Tuning Fork Style		Type No.	A OD	B ID	C L	
   (Straight)	 (Right-angled)	P1I	5.5	2.1	9.5	
		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	
   (Straight)	 (Right-angled)	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	
Lock Style		Type No.	A OD	B ID	C L	
   SWITCHCRAFT original or equivalent	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		
Min. Pin Style		Type No.	A OD	B ID	C L	
   EIAJ equivalent	P3A	2.35	0.7	11.0		
	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
   EIAJ equivalent	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			
   KYCON KPPX-3P equivalent	R6B	PIN No.	Output			
	1	+Vo				
	2	-Vo				
	3	+Vo				

Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment	
		PIN No.	Output
 <p>KYCON KPPX-4P equivalent</p>	R7B	1	+Vo
		2	-Vo
		3	-Vo
		4	+Vo
Stripped and tinned leads	Type No.	Pin Assignment	
		PIN No.	Output
 <p>Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>10</u> mm)</p>	by customer	1 (Ribbed)	+Vo
		2 (Letter)	-Vo

■ **Installation Manual**

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