



CB



CE

UK

CA

IP22


 BS EN/EN60601-1
BS EN/EN60601-11

 IEC60601-1
TPTC004


■ Features

- Ultra slim, compact size
- Medical safety approved (2 x MOPP) according to BS EN/EN60601-1/BS EN/EN60601-1-11
- Extremely Low leakage current
- 2 pole EURO 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

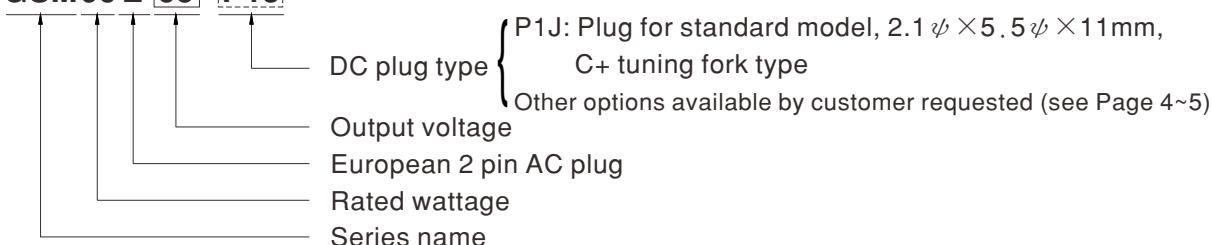
■ Description

GSM60E is a 60W ultra slim wall-mounted style single-output green medical adaptor series, which is compact and convenient for carry. GSM60E is a class II power unit (no FG) equipped with the standard 2-Pin European 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, GSM60E is compliant with EU ErP and meet CoC version 5 (5~9V for Level V). 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.

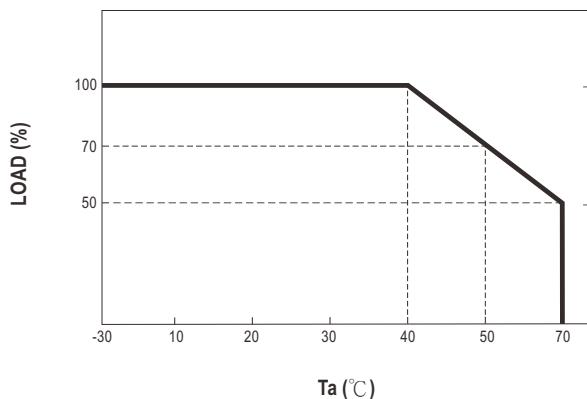
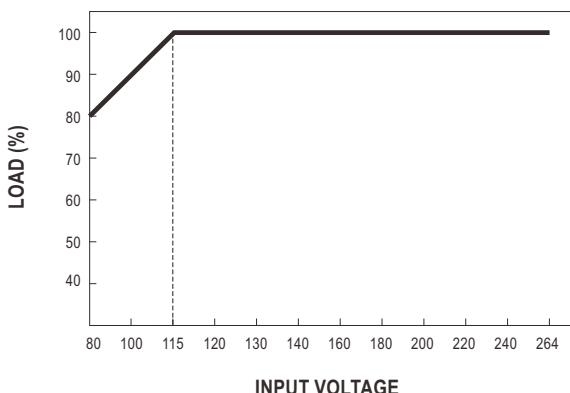
■ Model Encoding

GSM60 E 05 - P1J

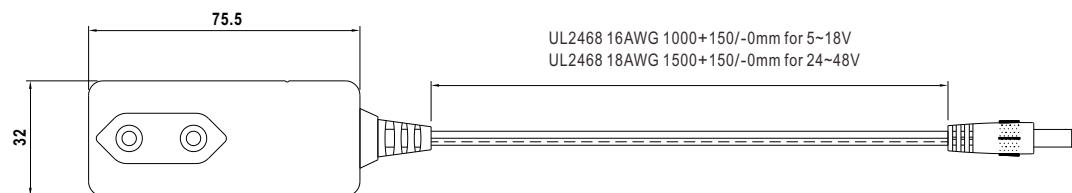


SPECIFICATION

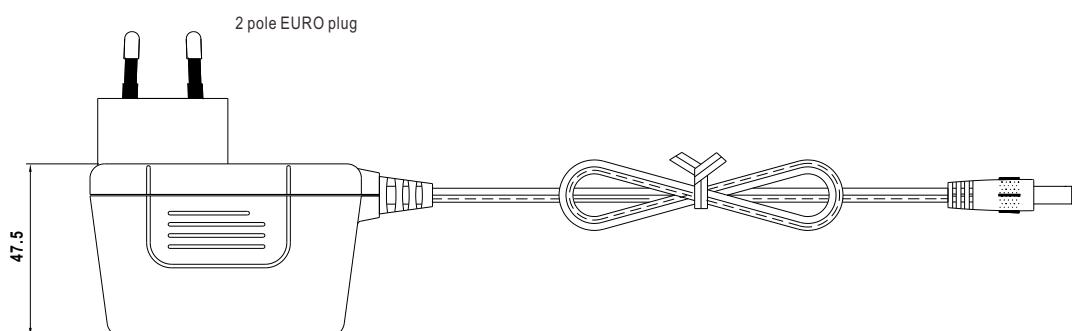
ORDER NO.	GSM60E05-P1J	GSM60E07-P1J	GSM60E09-P1J	GSM60E12-P1J	GSM60E15-P1J	GSM60E18-P1J	GSM60E24-P1J	GSM60E48-P1J															
OUTPUT	SAFETY MODEL NO.	GSM60E05	GSM60E07	GSM60E09	GSM60E12	GSM60E15	GSM60E18	GSM60E24	GSM60E48														
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V														
	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%														
INPUT	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																			
	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																					
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	TUV BS EN/EN60601-1, BS EN/EN60601-1-11, EAC TP TC 004 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	BS EN/EN55011 (CISPR11)	Class B																			
		Radiated emission	BS EN/EN55011 (CISPR11)	Class B																			
		Harmonic current	BS EN/EN61000-3-2	Class A																			
	EMC IMMUNITY	Voltage flicker	BS EN/EN61000-3-3	-----																			
		BS EN/EN55011, BS EN/EN60601-1-2																					
		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~6GHz)																			
		EFT bursts	BS EN/EN61000-4-4	Level 3, 2KV Line-Line, 1KV ineterconnect Lines at 100KHz rate																			
		Surge susceptibility	BS EN/EN61000-4-5	Level 3, 2KV/Line-Line																			
		Conducted susceptibility	BS EN/EN61000-4-6	Level 2, 3V																			
OTHERS	Magnetic field immunity	BS EN/EN61000-4-8	Level 4, 30A/m																				
	CONNECTOR	Voltage dip, interruption	BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods																			
		LIFE	3 years : 100% load 40°C, 8hours / day																				
		MTBF	400Khrs min. MIL-HDBK-217F(25°C)																				
DIMENSION	DIMENSION	75.5*32*47.5mm (L*W*H)																					
	PACKING	200g ; 60pcs / 13kg / CARTON																					
	PLUG	See page 4~5 ; other type available by customer requested																					
NOTE	CABLE	See page 4~5 ; other type available by customer requested																					
	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																							

■ Derating Curve**■ Static Characteristics****■ Mechanical Specification**

Unit:mm



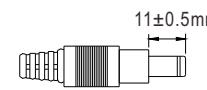
UL2468 16AWG 1000+150/-0mm for 5~18V
UL2468 18AWG 1500+150/-0mm for 24~48V



■ DC output plug

- ◎ Standard plug: P1J

Unit:mm

P1J	Pin Assignment
	 C"+"
5.5 2.1  11±0.5mm 	Outside ⊖ ⊕ Inside

- ◎ DC plug changeable through:

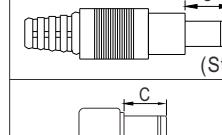
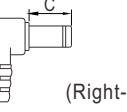
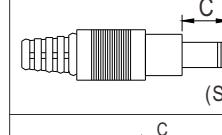
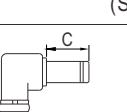
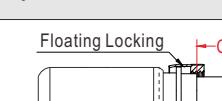
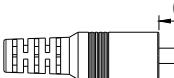
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

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

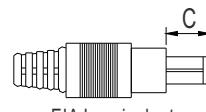
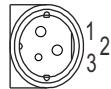
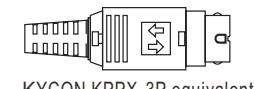
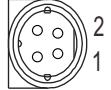
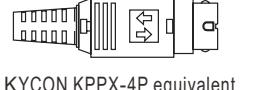
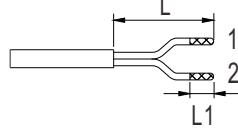
Example quick adapter accessory:



- ◎ 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	None
   	Type No.	OD	ID	L		
	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	Available (Current rating: 5A max.)
  	Type No.	OD	ID	L		
	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 **GSM60E** 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>