

( Cable connection )



( USB connection )


 ANSI/AAMI ES60601-1  
ES60601-1-11


TPTC004



IP22



## ■ Features

- Universal AC input / Full range
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1/ES60601-1-11
- Extremely low leakage current
- No load power consumption < 0.075W (< 0.1W for 18V/48V)
- **Energy efficiency Level VI**
- -20~+70°C wide range working temperature
- Class II power (no earth pin)
- 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](https://www.meanwell.com/upload/pdf/DC_plug.pdf))
- 3 years warranty

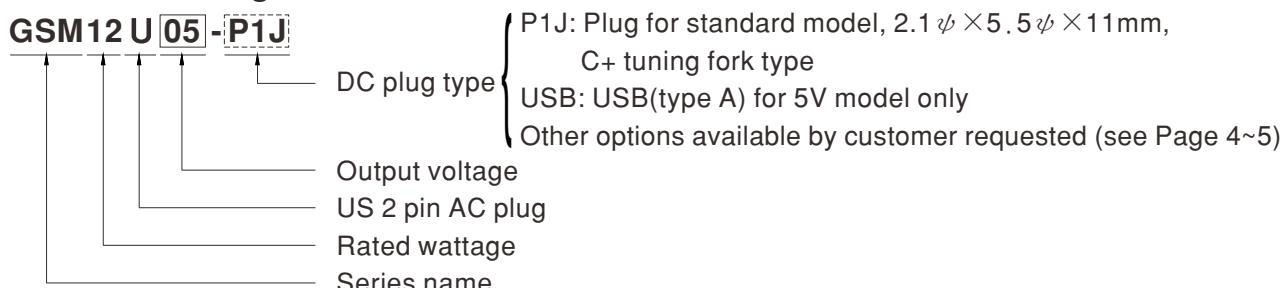
## ■ Description

GSM12U is a highly reliable, 12W wall-mounted style single-output green medical adaptor series, which is compact and convenient for carry. This product is equipped with the standard 2-pin U.S. plug. GSM12U is a class II power unit (no FG), accepting the input range from 80VAC to 264VAC that it can satisfy the demands for various types of medical electrical 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 working efficiency up to 87% and the extremely low no-load power consumption below 0.075W (< 0.1W for 18V/48V), GSM12U is compliant with the latest USA 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

## ■ Model Encoding

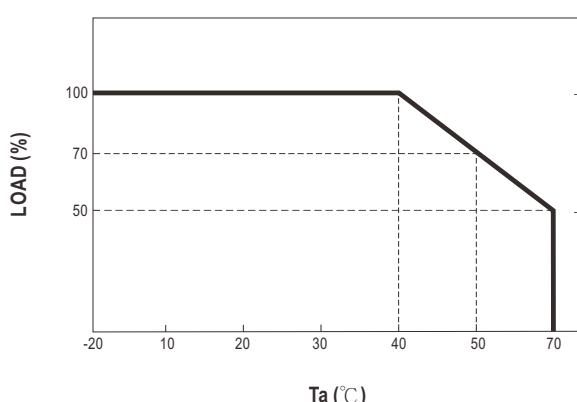
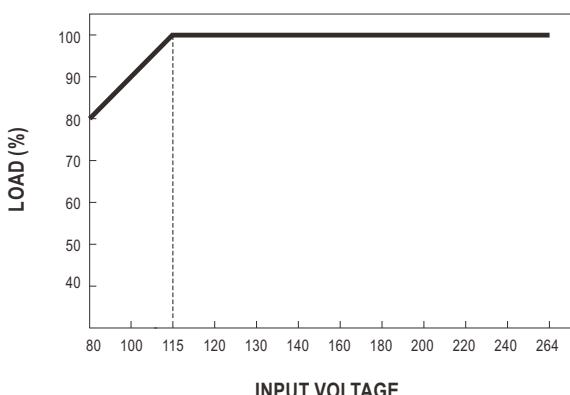
GSM12U[05]-P1J





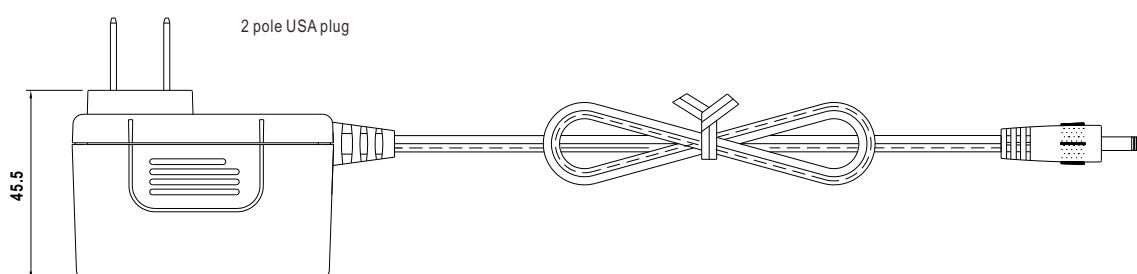
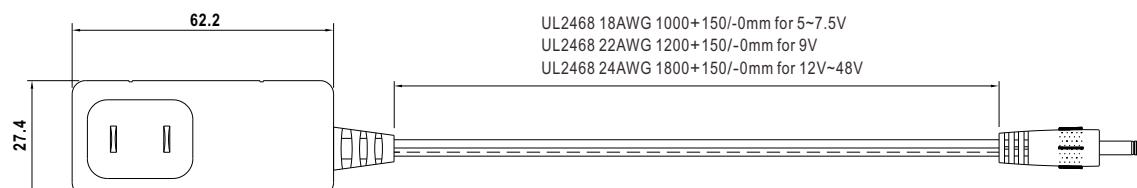
## SPECIFICATION

ORDER NO.	GSM12U05-□ □=P1J USB	GSM12U07-P1J	GSM12U09-P1J	GSM12U12-P1J	GSM12U15-P1J	GSM12U18-P1J	GSM12U24-P1J	GSM12U48-P1J						
OUTPUT	SAFETY MODEL NO.	GSM12U05	GSM12U07	GSM12U09	GSM12U12	GSM12U15	GSM12U18	GSM12U24	GSM12U48					
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V					
	RATED CURRENT	2.4A	1.6A	1.33A	1A	0.8A	0.66A	0.5A	0.25A					
	CURRENT RANGE	0 ~ 2.4A	0 ~ 1.6A	0 ~ 1.33A	0 ~ 1A	0 ~ 0.8A	0 ~ 0.66A	0 ~ 0.5A	0 ~ 0.25A					
	RATED POWER (max.)	12W	12W	12W	12W	12W	12W	12W	12W					
	ripple & noise (max.) Note.3	60mVp-p	60mVp-p	60mVp-p	80mVp-p	80mVp-p	80mVp-p	80mVp-p	100mVp-p					
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±4.0%	±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%					
INPUT	LOAD REGULATION Note.6	±5.0%	±5.0%	±4.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%					
	SETUP, RISE, HOLD UP TIME	500ms, 30ms, 16ms/230VAC 500ms, 30ms, 16ms/115VAC at full load												
	VOLTAGE RANGE Note.7	80 ~ 264VAC 113 ~ 370VDC												
	FREQUENCY RANGE	47 ~ 63Hz												
	EFFICIENCY (Typ.)	80%	82%	82%	82.5%	84%	85%	85%	87%					
	AC CURRENT	0.4A / 115VAC	0.2A / 230VAC											
	INRUSH CURRENT (max.)	Cold start 30A / 115VAC 60A / 230VAC												
	LEAKAGE CURRENT(max.)	Touch current < 100µA/264VAC												
PROTECTION	OVERLOAD	110 ~ 200% 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.	-20 ~ +70°C (Refer to "Derating Curve")												
	WORKING HUMIDITY	0 ~ 95% RH non-condensing												
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 0 ~ 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 NO. 60601-1 3 <sup>rd</sup> edition, EAC TP TC 004 approved GSM12U05-USB without ANSI/ AAMI ES60601-1-11												
	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 15 / CISPR22		Class B								
		Radiated emission		FCC PART 15 / CISPR22		Class B								
OTHERS	LIFE	3 years : 100% load 40°C, 12hours / day												
	MTBF	400Khrs min. MIL-HDBK-217F(25°C)												
	DIMENSION	62.2*27.4*45.5mm (L*W*H)												
	PACKING	109g, 110pcs / 13kg / CARTON for cable connection ; 73g, 150pcs / 12kg / CARTON for USB connection												
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 115VAC 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-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> ) ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>													

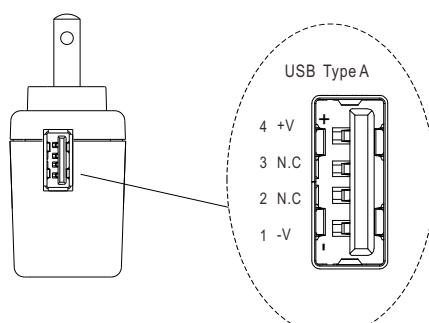
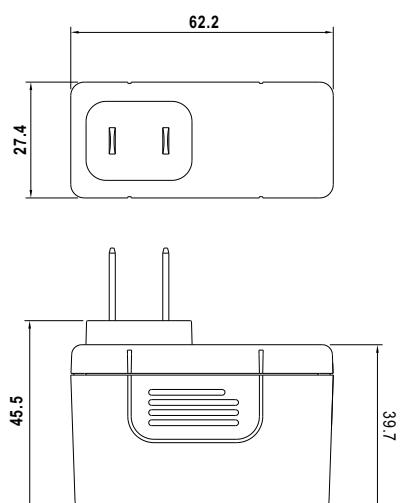
**■ Derating Curve**

**■ Static Characteristics**

**■ Mechanical Specification**

Unit:mm

※ Cable Connection



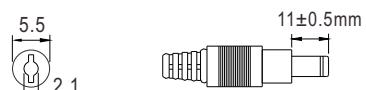
※ USB Connection



**■ DC output plug**

- ◎ Standard plug: P1J

Unit:mm

P1J	Pin Assignment
	
5.5 2.1 	Outside $\ominus$ $\ominus$ $\oplus$ Inside

- ◎ DC plug changeable through:

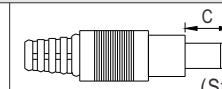
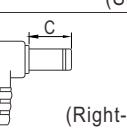
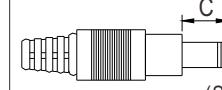
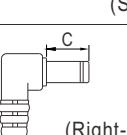
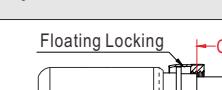
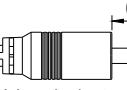
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

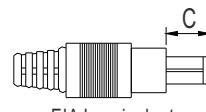
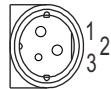
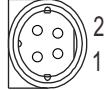
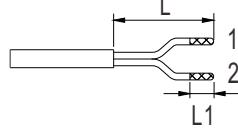
Please refer to below table and online selection guide : [https://www.meanwell.com/upload/pdf/DC\\_plug.pdf](https://www.meanwell.com/upload/pdf/DC_plug.pdf)

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	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
   	P2I	5.5	2.1	9.5	None
	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	B	C
   	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
  	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	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				
  KYCON KPPX-3P equivalent		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				
  KYCON KPPX-4P equivalent		R7B	1	+Vo			
			2	-Vo			
			3	-Vo			
			4	+Vo			
Stripped and tinned leads	Type No.	Pin Assignment				None	
		PIN No.	Output				
  Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>10</u> mm)		by customer	1 (Ribbed)	+Vo			
			2 (Letter)	-Vo			

## ■ Installation Manual

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