



### ■ Features

- 2 pole EURO plug , Class II power unit
- Medical safety approved (2 × MOPP) according to EN60601-1/-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](http://www.meanwell.com/upload/pdf/DC_plug.pdf))
- 3 years warranty

### ■ Applications

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

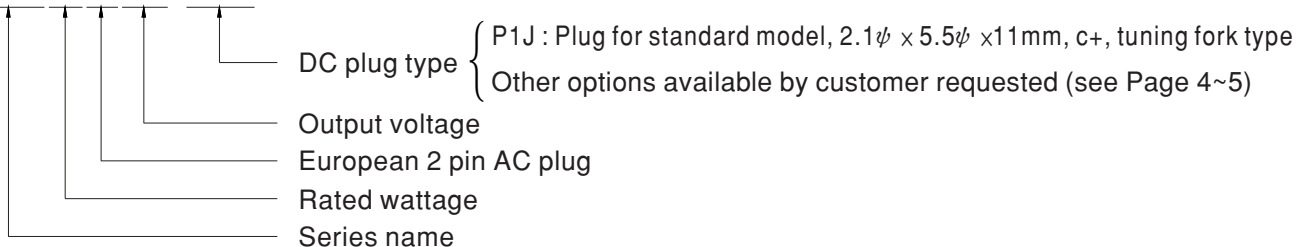
### ■ Description

GSM36E is a highly reliable, 36W wall-mounted style single-output green medical adaptor series. This product is equipped with a 2-pin (no FG) standard European 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 (<50 $\mu$ A), 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, GSM36E is compliant with 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. GSM36E is approved with the international medical safety certificates.

### ■ Model Encoding

**GSM36E 05 -P1J**

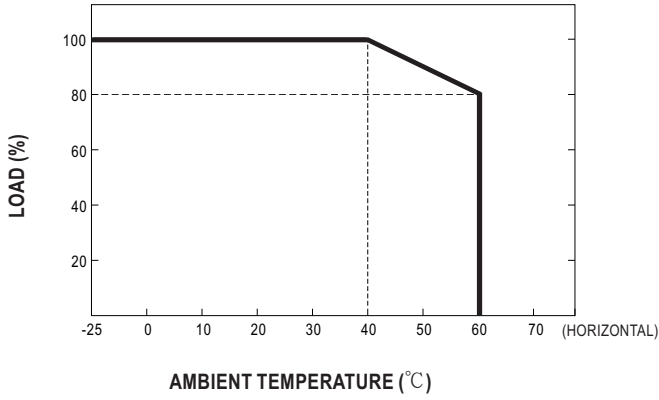




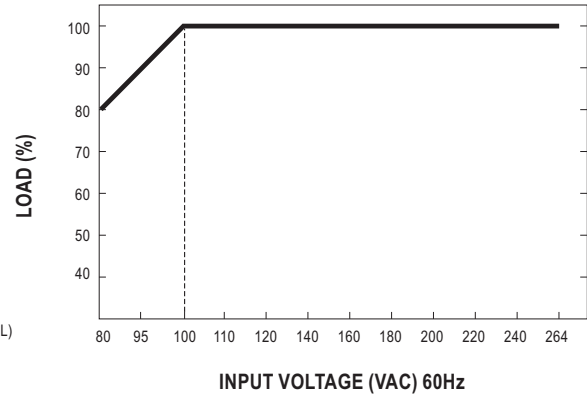
**SPECIFICATION**

ORDER NO.	GSM36E05-P1J	GSM36E07-P1J	GSM36E09-P1J	GSM36E12-P1J	GSM36E15-P1J	GSM36E18-P1J	GSM36E24-P1J	GSM36E48-P1J		
OUTPUT	<b>SAFETY MODEL NO.</b>	GSM36E05	GSM36E07	GSM36E09	GSM36E12	GSM36E15	GSM36E18	GSM36E24	GSM36E48	
	<b>DC VOLTAGE</b> Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V	
	<b>RATED CURRENT</b>	4.5A	4.32A	4A	3A	2.4A	2A	1.5A	0.75A	
	<b>CURRENT RANGE</b>	0 ~ 4.5A	0 ~ 4.32A	0 ~ 4A	0 ~ 3A	0 ~ 2.4A	0 ~ 2A	0 ~ 1.5A	0 ~ 0.75A	
	<b>RATED POWER (max.)</b>	22.5W	32.4W	36W	36W	36W	36W	36W	36W	
	<b>RIPPLE &amp; NOISE (max.)</b> Note.3	80mVp-p	80mVp-p	80mVp-p	120mVp-p	120mVp-p	150mVp-p	180mVp-p	240mVp-p	
	<b>VOLTAGE TOLERANCE</b> Note.4	±6.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%	
	<b>LINE REGULATION</b> Note.5	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	<b>LOAD REGULATION</b>	±6.0%	±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%	
	<b>SETUP, RISE TIME</b> Note.6	500ms, 30ms / 230VAC    100ms, 30ms / 115VAC at full load								
<b>HOLD UP TIME (Typ.)</b>	16ms / 230VAC    10ms / 115VAC at full load									
INPUT	<b>VOLTAGE RANGE</b> Note.7	80 ~ 264VAC    113 ~ 370VDC								
	<b>FREQUENCY RANGE</b>	47 ~ 63Hz								
	<b>EFFICIENCY (Typ.)</b>	80%	83%	84%	86%	87%	87%	87%	88%	
	<b>AC CURRENT (Typ.)</b>	0.9A / 115VAC		0.45A / 230VAC						
	<b>INRUSH CURRENT (Typ.)</b>	55A / 230VAC		30A / 115VAC						
	<b>LEAKAGE CURRENT(max.)</b>	Touch current < 50µA/264VAC								
PROTECTION	<b>OVERLOAD</b>	105 ~ 170% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	<b>OVER VOLTAGE</b>	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	<b>WORKING TEMP.</b>	-25 ~ +60°C (Refer to "Derating Curve")								
	<b>WORKING HUMIDITY</b>	20% ~ 90% RH non-condensing								
	<b>STORAGE TEMP., HUMIDITY</b>	-40 ~ +85°C, 10 ~ 95% RH non-condensing								
	<b>TEMP. COEFFICIENT</b>	±0.03% / °C (0~40°C)								
	<b>VIBRATION</b>	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
SAFETY & EMC (Note. 8)	<b>SAFETY STANDARDS</b>	TUV EN60601-1 / EN60601-1-11, EAC TP TC 004 approved								
	<b>ISOLATION LEVEL</b>	Primary-Secondary: 2xMOPP								
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P:4KVAC								
	<b>ISOLATION RESISTANCE</b>	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH								
	EMC EMISSION	<b>Parameter</b>	<b>Standard</b>				<b>Test Level / Note</b>			
		Conducted emission	EN55011 (CISPR11)				Class B			
		Radiated emission	EN55011 (CISPR11)				Class B			
		Harmonic current	EN61000-3-2				Class A			
		Voltage flicker	EN61000-3-3				-----			
	EMC IMMUNITY	EN60601-1-2, EN61204-3								
		<b>Parameter</b>	<b>Standard</b>				<b>Test Level / Note</b>			
		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	<b>MTBF</b>	657.4K hrs min. MIL-HDBK-217F(25°C)								
	<b>DIMENSION</b>	79*54*33mm (L*W*H)								
	<b>PACKING</b>	230g ; 60pcs / 14.8Kg / CARTON								
CONNECTOR	<b>PLUG</b>	See page 4-5 ; Other type available by customer requested								
	<b>CABLE</b>	See page 4-5 ; Other type available by customer requested								
NOTE	<ol style="list-style-type: none"> <li>All parameters are specified at 230VAC input, rated load, 25°C 70% RH ambient.</li> <li>DC voltage: The output voltage set at point measure by plug terminal &amp; 50% load.</li> <li>Ripple &amp; noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µf &amp; 47µf capacitor.</li> <li>Tolerance: includes set up tolerance, line regulation, load regulation.</li> <li>Line regulation is measured from low line to high line at rated load.</li> <li>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.</li> <li>Derating may be needed under low input voltage. Please check the derating curve for more details.</li> <li>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>)</li> </ol>									

■ Derating Curve

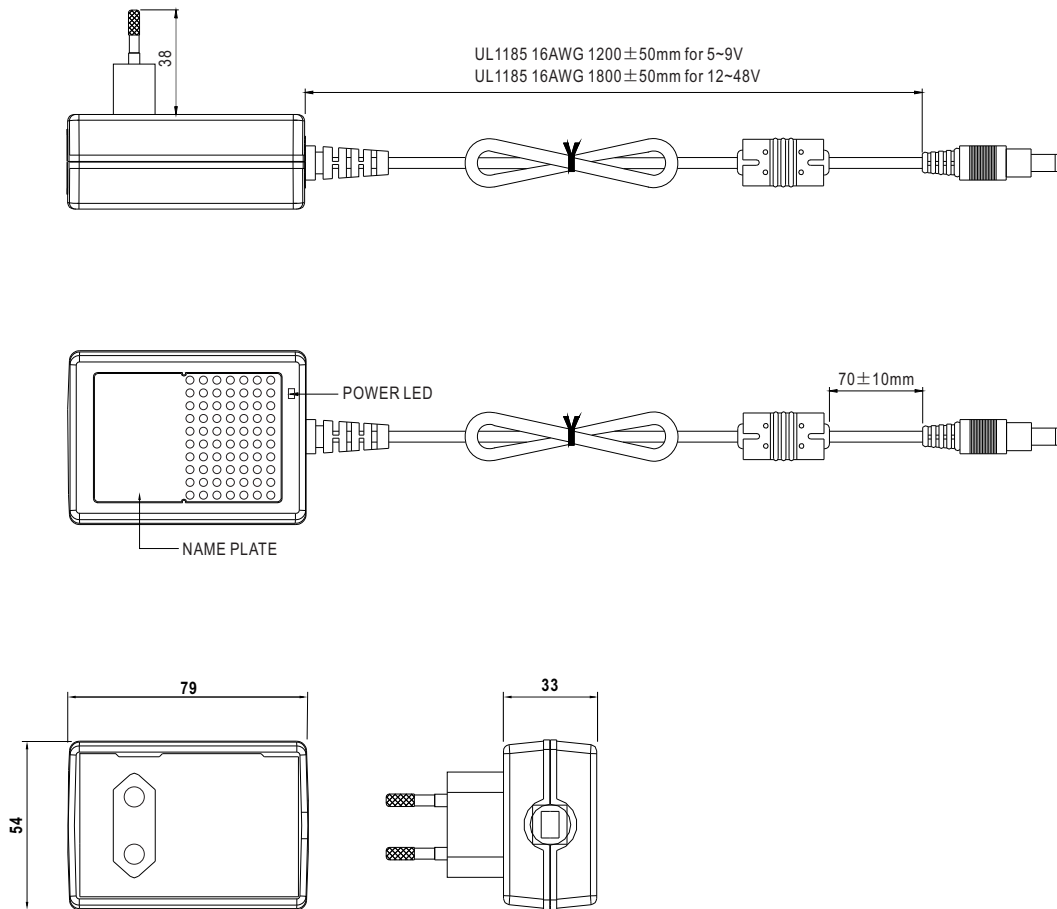


■ Static Characteristics



■ Mechanical Specification

Unit:mm



■ DC output plug

☉ Standard plug: P1J

P1J	Pin Assignment
	Outside  Inside





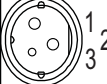
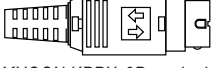


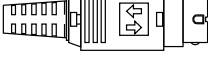


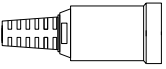




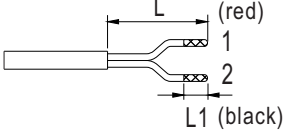
☉ Plug changeable with quick adapter (sold seperately)  
 (Changeable DC plug selection guide : [http://www.meanwell.com/upload/pdf/DC\\_plug.pdf](http://www.meanwell.com/upload/pdf/DC_plug.pdf) )

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>