



36W AC-DC Reliable Green Medical Adaptor

GSM36E series



User's Manual



Video



EN60601-1/-1-11

IEC60601-1/-1-11 TPTC004



■ 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 : https://www.meanwell.com/upload/pdf/DC_plug.pdf)
- 3 years warranty

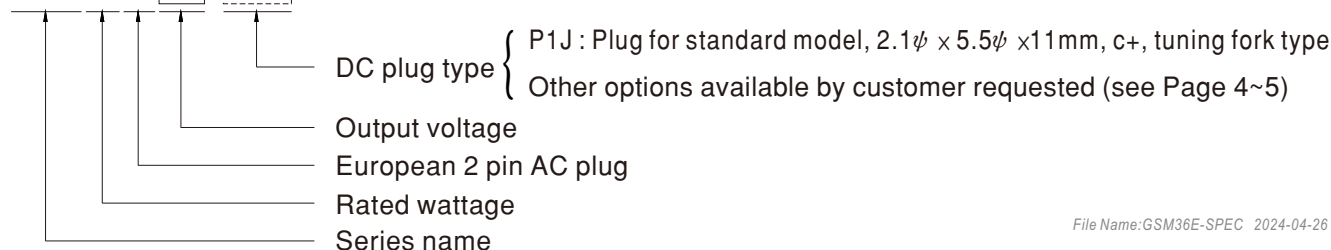
■ Description

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 (<50μA), 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



■ Applications

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

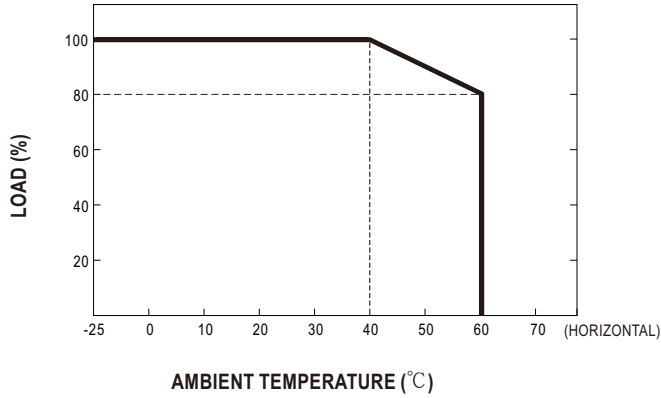
■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

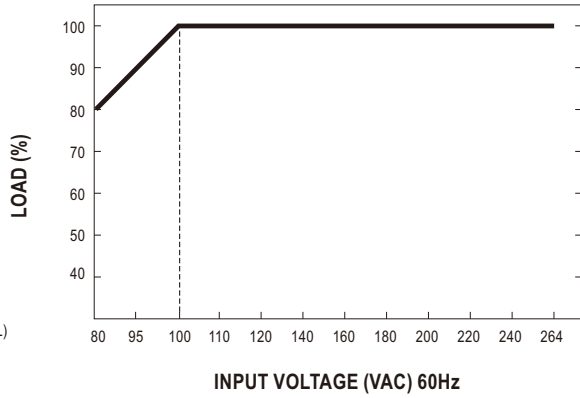
SPECIFICATION

ORDER NO.		GSM36E05-P1J	GSM36E07-P1J	GSM36E09-P1J	GSM36E12-P1J	GSM36E15-P1J	GSM36E18-P1J	GSM36E24-P1J	GSM36E48-P1J
OUTPUT	SAFETY MODEL NO.	GSM36E05	GSM36E07	GSM36E09	GSM36E12	GSM36E15	GSM36E18	GSM36E24	GSM36E48
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V
	RATED CURRENT	4.5A	4.32A	4A	3A	2.4A	2A	1.5A	0.75A
	CURRENT RANGE	0 ~ 4.5A	0 ~ 4.32A	0 ~ 4A	0 ~ 3A	0 ~ 2.4A	0 ~ 2A	0 ~ 1.5A	0 ~ 0.75A
	RATED POWER (max.)	22.5W	32.4W	36W	36W	36W	36W	36W	36W
	RIPPLE & NOISE (max.) Note.3	80mVp-p	80mVp-p	80mVp-p	120mVp-p	120mVp-p	150mVp-p	180mVp-p	240mVp-p
	VOLTAGE TOLERANCE Note.4	± 6.0%	± 5.0%	± 5.0%	± 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%
	LOAD REGULATION	± 6.0%	± 5.0%	± 5.0%	± 3.0%	± 3.0%	± 3.0%	± 2.0%	± 2.0%
	SETUP, RISE TIME Note.6	500ms, 30ms / 230VAC 1000ms, 30ms / 115VAC at full load							
HOLD UP TIME (Typ.)	16ms / 230VAC 10ms / 115VAC at full load								
INPUT	VOLTAGE RANGE Note.7	80 ~ 264VAC 113 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
	EFFICIENCY (Typ.)	80%	83%	84%	86%	87%	87%	87%	88%
	AC CURRENT (Typ.)	0.9A / 115VAC 0.45A / 230VAC							
	INRUSH CURRENT (Typ.)	55A / 230VAC 30A / 115VAC							
	LEAKAGE CURRENT(max.)	Touch current < 50 μ A/264VAC							
PROTECTION	OVERLOAD	105 ~ 170% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE	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	WORKING TEMP.	-25 ~ +60 $^{\circ}$ C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20% ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +85 $^{\circ}$ C, 10 ~ 95% RH non-condensing							
	TEMP. COEFFICIENT	± 0.03% / $^{\circ}$ C (0~40 $^{\circ}$ C)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
SAFETY & EMC (Note. 8)	SAFETY STANDARDS	IEC 60601-1:2005+A1+A2; IEC 60601-1-11:2015+A1, TUV BS EN/ EN 60601-1:2006+A1+A12+A2; BS EN/ EN 60601-1-11:2015+A1, EAC TP TC 004 approved							
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP							
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC							
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25 $^{\circ}$ C / 70% RH							
	EMC EMISSION	Parameter	Standard				Test Level / Note		
		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							
		Parameter	Standard				Test Level / Note		
		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	MTBF	3777.8K hrs min. Telcordia SR-332 (Bellcore) ; 651.4K hrs min. MIL-HDBK-217F (25 $^{\circ}$ C)							
	DIMENSION	79*54*33mm (L*W*H)							
	PACKING	230g ; 60pcs / 14.8Kg / 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 $^{\circ}$ 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 0.1 μ F & 47 μ F 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. 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. 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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx							

Derating Curve

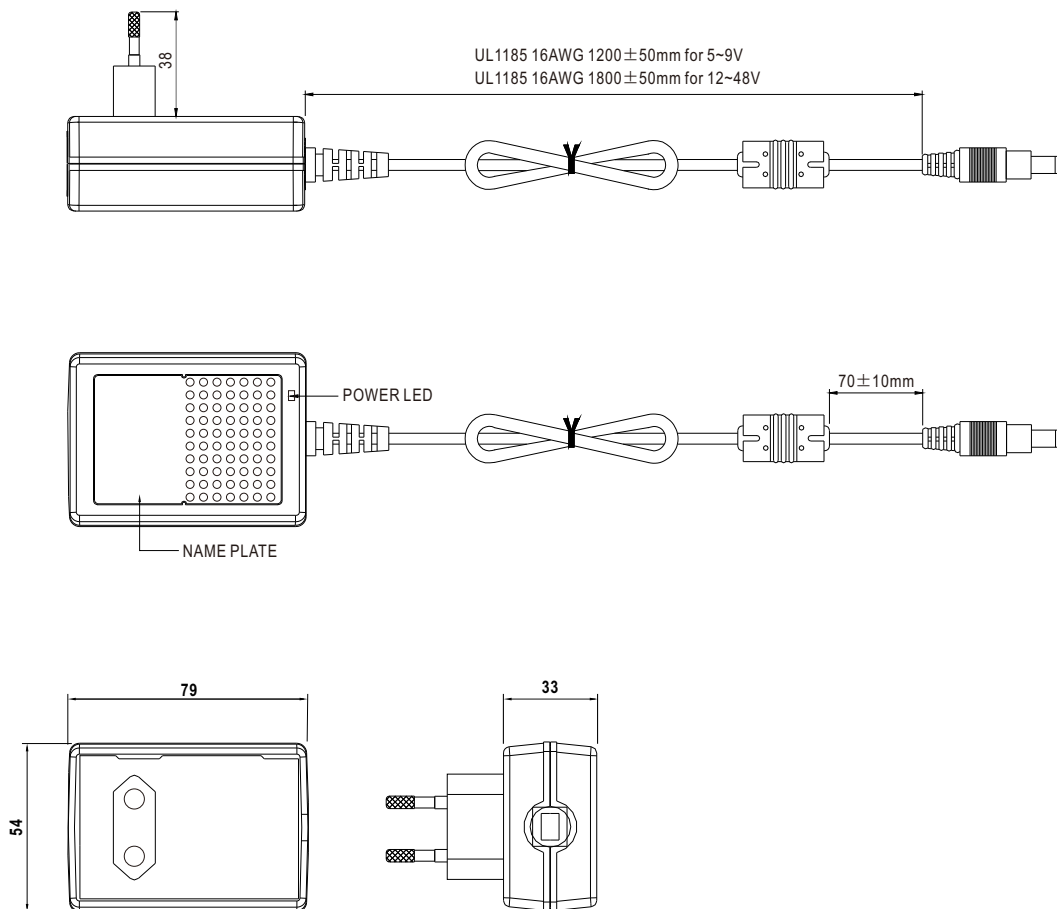


Static Characteristics



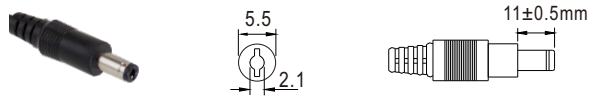
Mechanical Specification

Unit:mm



■ DC output plug

◎ Standard plug: P1J

P1J	Pin Assignment
	
	Outside  Inside

◎ DC plug changeable through:

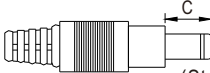
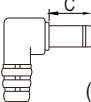
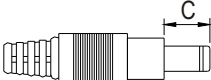
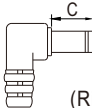
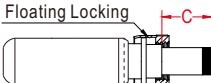
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

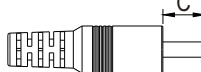
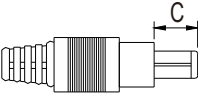
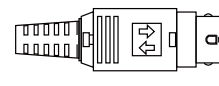
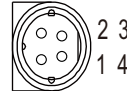
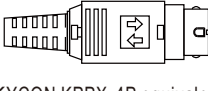
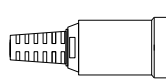
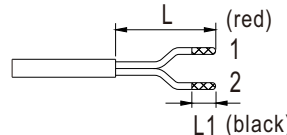
Please refer to below table and online selection guide : https://www.meanwell.com/upload/pdf/DC_plug.pdf

Example quick adapter accessory:



◎ Optional DC plug: (Available in customized cable or quick adapter)

Tuning Fork Style		Type No.	A OD	B ID	C L	Quick Adapter Accessory
 	 (Straight)	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	
	 (Right-angled)	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	None
 	 (Straight)	P2I	5.5	2.1	9.5	
		P2J	5.5	2.1	11.0	
		P2L	5.5	2.5	9.5	
	 (Right-angled)	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	None
 	 Floating Locking 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	Quick Adapter Accessory	
   EIAJ equivalent	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 OD	B ID	C L	D Center Pin	Available (Current rating: 7.5A max.)
   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		Available (Current rating: 7.5A max.)		
   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		Available (Current rating: 7.5A max.)		
   KYCON KPPX-4P equivalent	R7B	PIN No.	Output			
		1	+Vo			
		2	-Vo			
		3	-Vo			
		4	+Vo			
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment		None		
   KYCON KPJX-CM-4S equivalent	R7BF	PIN No.	Output			
		1	+Vo			
		2	-Vo			
		3	-Vo			
		4	+Vo			
DIN 5 Pin (male)	Type No.	Pin Assignment		Available (Current rating: 7.5A max.)		
  	R1B	PIN No.	Output			
		1	-Vo			
		2	-Vo			
		3	+Vo			
		4	-Vo			
		5	+Vo			
Stripped and tinned leads	Type No.	Pin Assignment		None		
  Length of Land L1 by request (MW's standard length, L: 25 mm, L1: 5 mm) (NOTE: The wire color is for reference only, please refer to the actual product)	by customer	PIN No.	Output			
		1	+Vo			
		2	-Vo			

Installation Manual

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