

ANSI/AAMI ES60601-1
ES60601-1-11BS EN/EN60601-1-11
BS EN/EN60601-1-11IEC60950-1
TPTC004

■ Features

- Interchangeable AC plugs (plug kit sold separately)
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1/ES60601-1-11, BS EN/EN60601-1/BS EN/EN60601-1-11
- Extremely Low leakage current
- No load power consumption < 0.1W
- **Energy efficiency Level VI**
- -25~+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)
- 3 years warranty

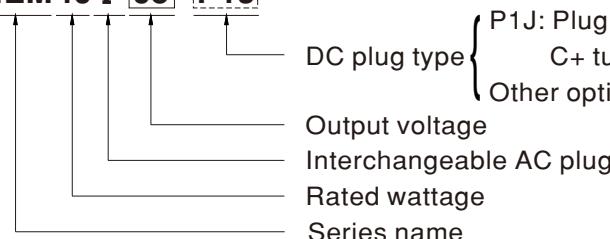
■ Description

GEM40I is a highly reliable, 40W wall-mounted style single-output green medical adaptor series, which is compact and convenient for carry. This product is equipped with an interchangeable AC plug (4 types, including European type, USA type, U.K. type and Australian type) that makes it very suitable for businessmen to use in the major countries around the globe. GEM40I 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 90.5% and the extremely low no-load power consumption below 0.1W, GEM40I is compliant with the latest USA energy regulation EISA 2007/DoE(Level VI) and EU ErP. 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 hazard.

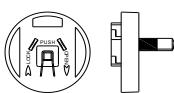
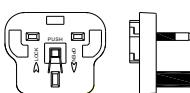
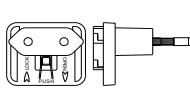
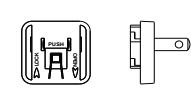
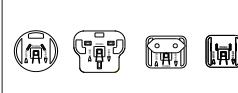
■ Model Encoding

GEM40 I [05]-[P1J]



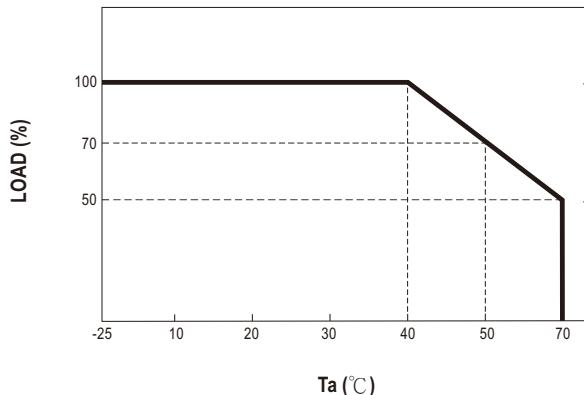
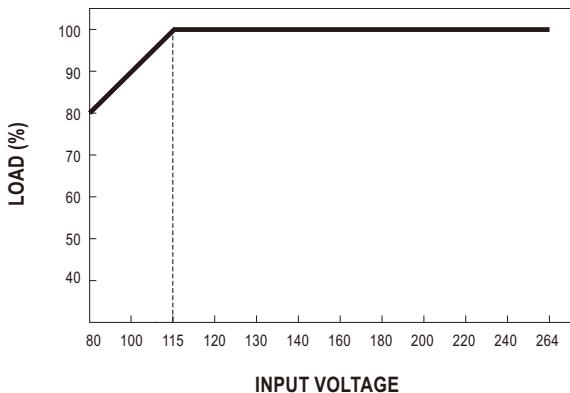
P1J: Plug for standard model, 2.1 ϕ × 5.5 ϕ × 11mm,
C+ tuning fork type
Other option available by customer requested (See page 4~5)

Interchangeable AC plug Specifically for GEM06/12/18/30/40/60I

TYPE					
	Australian type	U.K type	European type	US type	Mix four type
ORDER NO.	AC plug-AU2	AC plug-UK2	AC plug-EU2	AC plug-US2	AC plug-MIX2

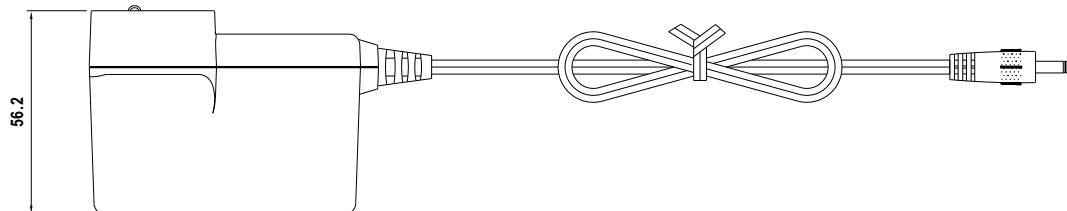
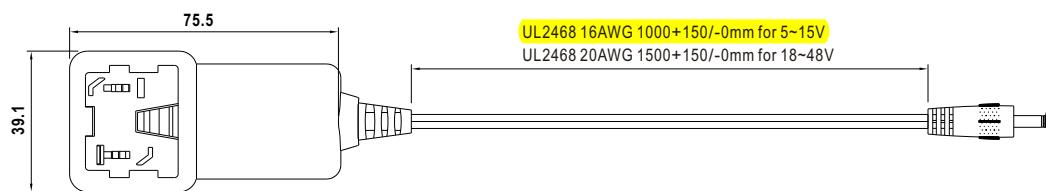
SPECIFICATION

ORDER NO.	GEM40I05-P1J	GEM40I09-P1J	GEM40I12-P1J	GEM40I15-P1J	GEM40I18-P1J	GEM40I24-P1J	GEM40I48-P1J													
OUTPUT	SAFETY MODEL NO.	GEM40I05	GEM40I09	GEM40I12	GEM40I15	GEM40I18	GEM40I24													
	DC VOLTAGE Note.2	5V	9V	12V	15V	18V	24V													
	RATED CURRENT	5A	4A	3.33A	2.66A	2.22A	1.66A													
	CURRENT RANGE	0 ~ 5A	0 ~ 4A	0 ~ 3.33A	0 ~ 2.66A	0 ~ 2.22A	0 ~ 1.66A													
	RATED POWER (max.)	25W	36W	40W	40W	40W	40W													
	RIPLINE & NOISE (max.) Note.3	100mVp-p	100mVp-p	100mVp-p	120mVp-p	120mVp-p	200mVp-p													
	VOLTAGE TOLERANCE Note.4	± 5.0%	± 5.0%	± 3.0%	± 3.0%	± 2.0%	± 2.0%													
	LINE REGULATION Note.5	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%													
	LOAD REGULATION Note.6	± 5.0%	± 5.0%	± 3.0%	± 3.0%	± 2.0%	± 2.0%													
SETUP, RISE, HOLD UP TIME		500ms, 30ms, 16ms/230VAC	500ms, 30ms, 16ms/115VAC	at full load																
INPUT	VOLTAGE RANGE Note.7	80 ~ 264VAC	113 ~ 370VDC																	
	FREQUENCY RANGE	47 ~ 63Hz																		
	EFFICIENCY (Typ.)	84%	87%	88%	88%	88%	89%	90.5%												
	AC CURRENT	1A / 115VAC	0.6A / 230VAC																	
	INRUSH CURRENT (max.)	Cold start 30A / 115VAC 65A / 230VAC																		
PROTECTION	LEAKAGE CURRENT(max.)	Touch current < 100µA/264VAC																		
	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.	-25 ~ +70°C (Refer to "Derating Curve")																		
	WORKING HUMIDITY	20% ~ 90% RH non-condensing																		
	STORAGE TEMP., HUMIDITY	-25 ~ +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,ANSI/AAMI ES60601-1/ES60601-1-11(3.1 version), CAN/CSA-C22 NO. 60601-1 3 rd edition, 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),FCC PART 18	Class B																
		Radiated emission	BS EN/EN55011 (CISPR11),FCC PART 18	Class B																
		Harmonic current	BS EN/EN61000-3-2	Class A																
	EMC IMMUNITY	Voltage flicker	BS EN/EN61000-3-3	-----																
		BS EN/EN60601-1-2, BS EN/EN61204-3																		
		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~5.78GHz)																
		EFT bursts	BS EN/EN61000-4-4	Level 3, 2KV																
		Surge susceptibility	BS EN/EN61000-4-5	Level 3, 1KV/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																	
	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, 12hours / day																		
CONNECTOR	MTBF	400Khrs min. MIL-HDBK-217F(25°C)																		
	DIMENSION	75.5*39.1*56.2mm (L*W*H)																		
	PACKING	200g ; 60pcs / 13kg / CARTON																		
NOTE	PLUG	See page 4~5 ; other type available by customer requested																		
	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-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 http://www.meanwell.com)																				
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx																				

40W AC-DC Reliable Green Interchangeable Medical Adaptor **GEM40I** series**■ Derating Curve****■ Static Characteristics****■ Mechanical Specification**

Unit:mm

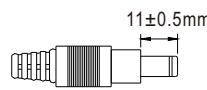
TYPE	Australian type	U.K type	European type	US type



■ DC output plug

- ◎ Standard plug: P1J

Unit:mm

P1J	Pin Assignment
	
5.5 2.1 	11±0.5mm 
Outside	- ⊕ Inside

- ◎ DC plug changeable through:

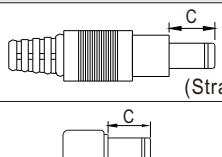
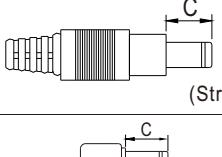
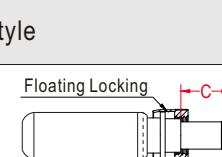
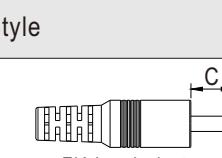
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

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

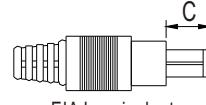
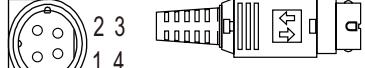
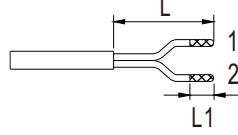
Example quick adapter accessory:



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

Tuning Fork Style	Type No.	A	B	C	Quick Adapter Accessory
		OD	ID	L	
  (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	
	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	None
  (Straight)	Type No.	OD	ID	L	
		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	None
  Floating Locking SWITCHCRAFT original or equivalent	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	Available (Current rating: 5A max.)
  EIAJ equivalent	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

40W AC-DC Reliable Green Interchangeable Medical Adaptor **GEM40I** 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			
		1		+Vo			
	R6B	2		-Vo		Available (Current rating: 7.5A max.)	
		3		+Vo			
Min. DIN 4 Pin with Lock (male)		Pin Assignment					
	R7B	PIN No.		Output		Available (Current rating: 7.5A max.)	
		1		+Vo			
		2		-Vo			
		3		-Vo			
		4		+Vo			
Min. DIN 4 Pin with Lock (female)	R7BF	Pin Assignment				None	
		PIN No.		Output			
		1		+Vo			
		2		-Vo			
		3		-Vo			
		4		+Vo			
Stripped and tinned leads	by customer	Pin Assignment				None	
		PIN No.		Output			
		1 (Ribbed or White)		+Vo			
Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>10</u> mm)		2 (Letter or Black)		-Vo			

■ Installation ManualPlease refer to : <http://www.meanwell.com/manual.html>