



**30W Wall Mount interchangeable Medical power supply > GEM30I**



**■ Features**

- Interchangeable AC plugs (plug kit sold sperately)
- Medical safety approved (2 x MOPP) accrodging to ANSI/AAMI ES60601-1/ES60601-1-11,EN60601-1/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
- 3 years warranty

**■ Applications**

- Blood glucose meter
- Blood pressure meter
- Nebulizer
- Inhaler
- Portable medical device
- Sleep apnea devices

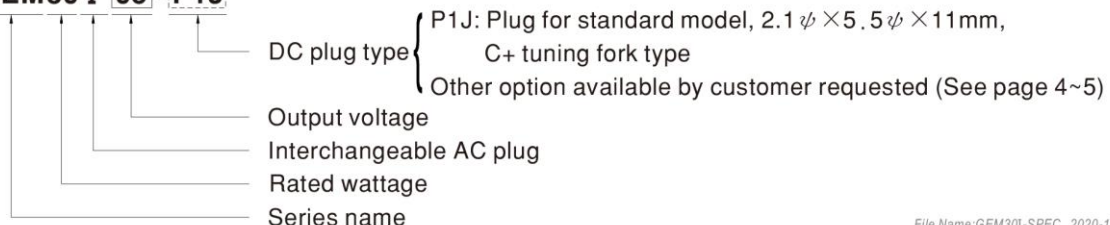
**■ Description**

GEM30I is a highly reliable, 30W 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. GEM30I 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% and the extremely low no-load power consumption below 0.1W, GEM30I 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**

**GEM30 I 05 - P1J**





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**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**

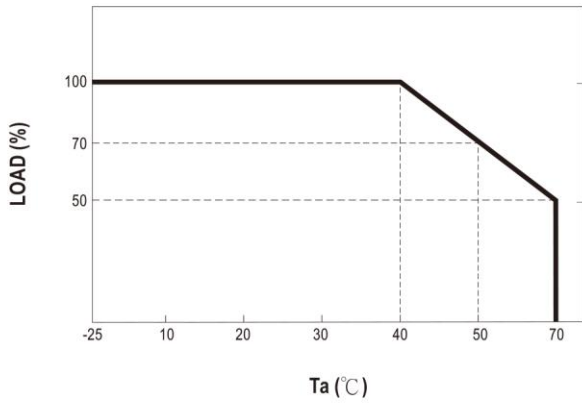
ORDER NO.	GEM30I05-P1J	GEM30I07-P1J	GEM30I09-P1J	GEM30I12-P1J	GEM30I15-P1J	GEM30I18-P1J	GEM30I24-P1J	GEM30I48-P1J					
OUTPUT	SAFETY MODEL NO.	GEM30I05	GEM30I07	GEM30I09	GEM30I12	GEM30I15	GEM30I18	GEM30I24	GEM30I48				
	DC VOLTAGE Note.2	5V	7.5V	9V	12V	15V	18V	24V	48V				
	RATED CURRENT	4A	3.33A	3.33A	2.5A	2A	1.66A	1.25A	0.625A				
	CURRENT RANGE	0 ~ 4A	0 ~ 3.33A	0 ~ 3.33A	0 ~ 2.5A	0 ~ 2A	0 ~ 1.66A	0 ~ 1.25A	0 ~ 0.625A				
	RATED POWER (max.)	20W	25W	30W	30W	30W	30W	30W	30W				
	RIPPLE & NOISE (max.) Note.3	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p				
	VOLTAGE TOLERANCE Note.4	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±2.0%	±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 Note.6	±5.0%	±5.0%	±5.0%	±3.0%	±3.0%	±2.0%	±2.0%	±2.0%				
	SETUP, RISE, HOLD UP TIME	500ms, 100ms, 16ms/230VAC      500ms, 100ms, 16ms/115VAC at full load											
INPUT	VOLTAGE RANGE Note.7	80 ~ 264VAC		113 ~ 370VDC									
	FREQUENCY RANGE	47 ~ 63Hz											
	EFFICIENCY (Typ.)	82%	86%	87%	87%	87%	88%	88.5%	90%				
	AC CURRENT	1A / 115VAC		0.6A / 230VAC									
	INRUSH CURRENT (max.)	Cold start 30A / 115VAC		65A / 230VAC									
LEAKAGE CURRENT(max.)	Touch current < 100µA/264VAC												
PROTECTION	OVERLOAD	120 ~ 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.	-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	ANSI/AAMI ES60601-1 / 60601-1-11, TUV EN60601-1 / 60601-1-11, 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	EN55011 (CISPR11), FCC PART 18				Class B						
		Radiated emission	EN55011 (CISPR11), FCC PART 18				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 2, 3V							
Magnetic field immunity		EN61000-4-8				Level 4, 30A/m							
Voltage dip, interruption		EN61000-4-11				>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods							
OTHERS	LIFE	3 years : 100% load 40°C, 12hours / day											
	MTBF	400Khrs min. MIL-HDBK-217F(25°C)											
	DIMENSION	75.5*39.1*56.2mm (L*W*H)											
	PACKING	192g ; 60pcs / 12.5kg / 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°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."												



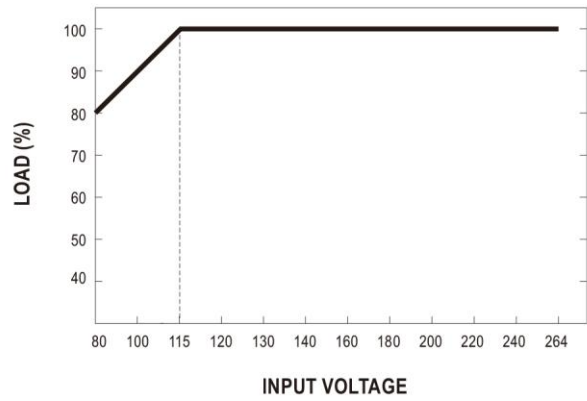
E-Star Power Development Co., Ltd. (E-STAR)  
 1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City  
 22069, Taiwan (R.O.C.)  
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**Derating Curve**



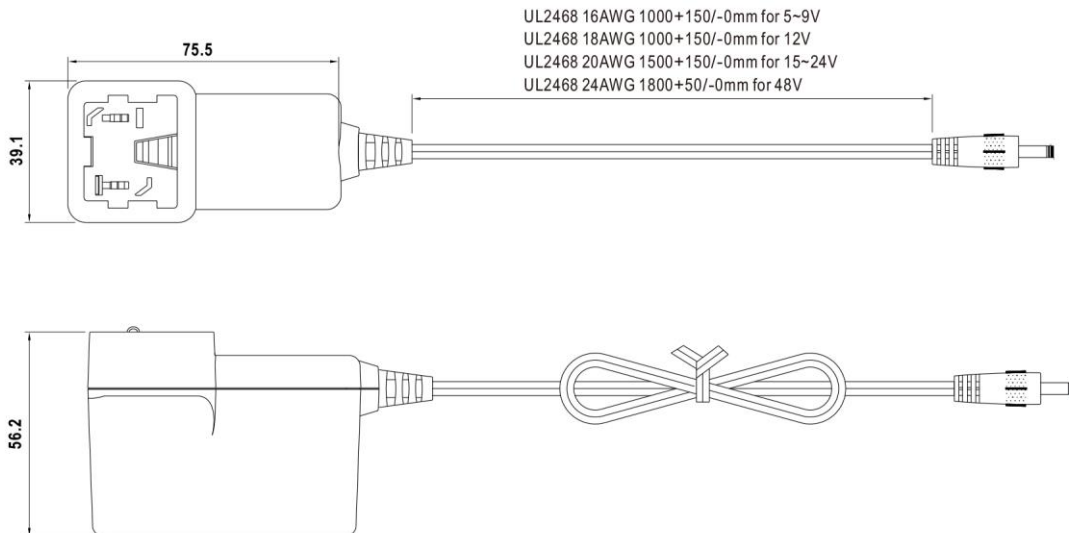
**Static Characteristics**



**Mechanical Specification**

Unit:mm

TYPE	Australian type	U.K type	European type	US type







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■ DC output plug

◎ Standard plug: P1J

Unit:mm

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)

Example quick adapter accessory:

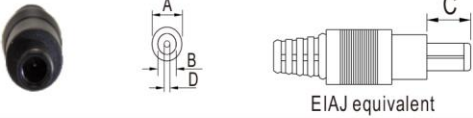
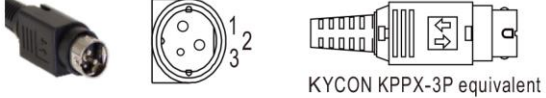





◎ Optional DC plug: (Available in customized cable or quick adapter)

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	
	 (Right-angled)	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	
Barrel Style		Type No.	A	B	C	None
			OD	ID	L	
	 (Straight)	P2I	5.5	2.1	9.5	
		P2J	5.5	2.1	11.0	
	 (Right-angled)	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	None
			OD	ID	L	
 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	B
			OD	ID	L	
 EIAJ equivalent		P3A	2.35	0.7	11.0	
		P3B	4.0	1.7	11.0	
		P3C	4.75	1.7	11.0	



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Center Pin Style	Type No.	A	B	C	D	Quick Adapter Accessory	
		OD	ID	L	Center Pin		
 <p>EIAJ equivalent</p>	P4A	5.5	3.4	11.0	1.0	<b>Available</b> (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					
 <p>KYCON KPPX-3P equivalent</p>	R6B	PIN No.	Output				
		1	+Vo				
		2	-Vo				
3	+Vo				<b>Available</b> (Current rating: 7.5A max.)		
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment					
 <p>KYCON KPPX-4P equivalent</p>	R7B	PIN No.	Output				
		1	+Vo				
		2	-Vo				
		3	-Vo				
4	+Vo				<b>Available</b> (Current rating: 7.5A max.)		
Min. DIN 4 Pin with Lock (female)	Type No.	Pin Assignment					
 <p>KYCON KPJX-CM-4S equivalent</p>	R7BF	PIN No.	Output				
		1	+Vo				
		2	-Vo				
		3	-Vo				
4	+Vo				<b>None</b>		
Stripped and tinned leads	Type No.	Pin Assignment					
 <p>Length of Land L1 by request            (MW's standard length, L: <u>25</u>_mm, L1: <u>10</u>_mm)</p>	by customer	PIN No.	Output				
		1 (Ribbed)	+Vo				
		2 (Letter)	-Vo				
				<b>None</b>			