



**Total Power International, Inc.**

**UNIVERSAL INPUT AC-DC MEDICAL & ITE APPLICATION  
OPEN FRAME INTERNAL SWITCHING POWER SUPPLIES  
50WATTS GREEN POWER SINGLE OUTPUT TPICM50G SERIES**



**FEATURES:**

- COMPACT 4"x2" PCB FORMAT
- FREE AIR CONVECTION
- NO LOAD POWER CONSUMPTION <0.3W
- MEET MEDICAL STANDARDS IEC60601-1 & ITE STANDARDS IEC60950-1
- EMI MEET CISPR EN55022 CLASS B
- CE MARKING COMPLIANCE

**SPECIFICATION**

**INPUT SPECIFICATION**

**Input Voltage:** Range typ. 90-264Vac.  
Rating 100 to 240Vac.  
**Input Connector:** V-M connector.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** ≤10A rms at cold start 230Vac.  
**Input Current:** Typ. 0.7A at 115Vac, 0.4A at 230Vac.  
**Dielectric Withstand:** Meet IEC 60950-1 & IEC60601-1.  
**EMI:** Meet CISPR EN55022 Class B (Please refer to note 4).  
**Hold-up Time:** Typ. 16mS at 115Vac, 90.mS at 230Vac.  
**Earth Leakage:** Less than 0.2mA at 230Vac.  
**No Load Power:** Less than 0.3Watt.

**OUTPUT SPECIFICATION**

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Connector:** V-M connector.  
**Output Wattage:** 20-50 watts.  
**Line Regulation:** Typical 0.1%.  
**Load Regulation:** Typical ±1.5%.  
**Noise & Ripple:** Typical 1.0% peak to peak.  
**OVP:** Built-in at VO1(Latch).  
**Adjustability:** Not available.  
**Overload Protection (OLP):**  
Fully protected against outputs overload and short circuit.  
Typ. OLP set at 125-150% of rating output power.  
Consult the factory for OLP setting.

**GENERAL SPECIFICATION**

<b>Efficiency:</b> Typ. 83-90% (various with the output voltage)	<b>Operating Temperature:</b> -20 to +50 °C at full load without forced air flow.
<b>Switching Frequency:</b> 65K Hz.	<b>Storage Temperature:</b> -25 to +85°C.
<b>Circuit Topology:</b> Fixed frequency flyback circuit.	<b>Cooling:</b> Free air convection.
<b>Transient Response:</b> Output voltage returns in less than 1mS following a 25% load change.	<b>Construction:</b> 4"x2"x1.01" PCB format.
<b>Safety Standard:</b> IEC 60950-1 & IEC60601-1 Class I.	<b>Power Density:</b> 6.2 Watts / Cubic Inch.

NOTE: (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.

(2) Load regulation is measured at 115Vac or 230Vac in percentage to indicate the change in output voltage as the load varied from half load to full load (±%).

(3) Due to requests in market and advances in technology, specifications subject to change without notice.

(4) Radiated EMI can pass Class B with external T core input and output added.



In application



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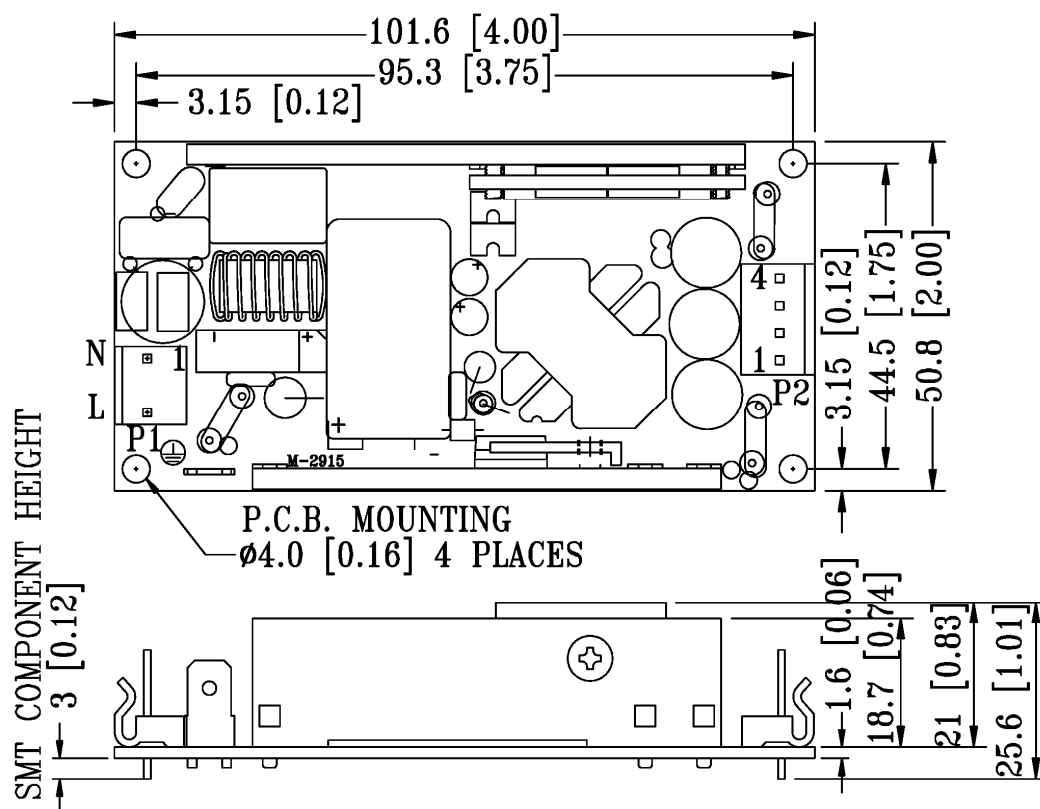
## OUTPUT VOLTAGE / CURRENT RATINGS CHART

### SINGLE OUTPUT

MODEL NO.	MAIN VO1 ★			
	Min.	Typ.	Volt.	Max.
TPICM50G-S033600	0.0A	6.00A	3.3V	6.00A
TPICM50G-S050600	0.0A	6.00A	5.0V	6.00A
TPICM50G-S120416	0.0A	4.16A	12.0V	4.16A
TPICM50G-S150340	0.0A	3.40A	15.0V	3.40A
TPICM50G-S240210	0.0A	2.10A	24.0V	2.10A
TPICM50G-S360140	0.0A	1.40A	36.0V	1.40A
TPICM50G-S480105	0.0A	1.05A	48.0V	1.05A

**MECHANICAL DIMENSIONS: MM [INCHES]**

**WEIGHT: 141g (4.79 Oz.)**



### INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	AC INPUT			SINGLE OUTPUT	
	AC-L	AC-N	AC-G	VO1	DC COM
CNTR/PIN#	P1-3	P1-1	G	P2-3,4	P2-1,2

Mating connector: P1,2 Molex # 5195 or 5239 series.