



# Total Power International, Inc.

## UNIVERSAL INPUT AC-DC MEDICAL APPLICATION OPEN FRAME SINGLE OUTPUT 43 WATTS INTERNAL SWITCHING POWER SUPPLIES TPMI43 SERIES



### FEATURES:

- ACCOMMODATE UNIVERSAL AC SOURCES
- COMPACT 4"x2"x1" PCB FORMAT
- MEET MEDICAL STANDARD EN 60601-1/  
UL 2601-1
- EMI MEET EN 55011 & FCC 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:**  $\leq 12A$  rms cold start @230Vac.

**Input Current:** Typ. 0.7A@115Vac, 0.35A @230Vac.

**Dielectric Withstand:** Meet IEC 60601-1.

**EMI:** Meet EN55011 & FCC Class B.

**Hold-up Time:** Typ. 20mS @115Vac, 100mS @ 230Vac.

**Earth Leakage:** Less than 0.1mA @230Vac.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.

**Output Current:** See Ratings Chart.

**Output Connector:** V-M connector.

**Output Wattage:** Typ. 42 watts.

**Line Regulation:** Typ. 0.2%.

**Load Regulation:** Typ.  $\pm 2-3\%$ .

**Noise & Ripple:** Typ. 1.0% peak to peak.

**OVP:** Built-in at main output (Latch).

**Adjustability:** Factory set.

**Overload Protection (OLP):**  
Fully protected against outputs overload and short circuit.  
Typ. OLP set at 105-120% of rating output power.  
Consult the factory for OLP setting.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 85-90%(Various with output voltage).

**Switching Frequency:** 85 KHz.

**Circuit Topology:** Fixed frequency flyback circuit.

**Transient Response:** Output voltage returns in less than  
0.5mS following a 50% load change.

**Safety Standard:** Meet Medical standards UL 2601-1/  
EN 60601-1 Class I.

**Power Density:** 5.5Watts / Cubic Inch.

**Operating Temperature:** 0 to +50 °C under forced air flow  
for full load. Derate by 1.3W/ °C  
from 40°C to 50 °C.

**Storage Temperature:** -20 to +85°C.

**Temperature Coefficient:** Typ. 0.04%/°C.

**Cooling:** At least 5 cfm(100LFM) direct forward air flow is  
required to achieve full rating power.

**Construction:** 4"x2"x1" PCB format.

Note: Due to requests in market and advances in technology, specifications subject to change without notification.



For the details of safety approval, please consult the factory.



# Total Power International, Inc.

## OUTPUT VOLTAGE/CURRENT RATINGS CHART

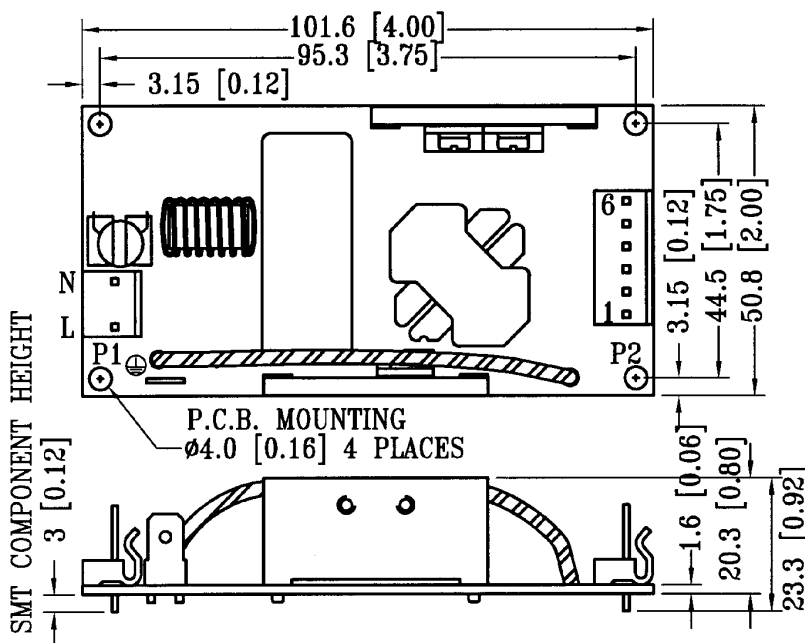
### SINGLE OUTPUT

MODEL NO.	MAIN OUTPUT	
	Typ.	Volt.
TPMI43-S120350	3.50A	12.0V
TPMI43-S150270	2.70A	15.0V
TPMI43-S240170	1.70A	24.0V
TPMI43-S480085	0.85A	48.0V

Symbol: "★" OVP built-in.

**MECHANICAL DIMENSIONS: MM [INCHES]**

**WEIGHT: 145g (5.12 Oz.)**



### INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

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

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