

# TOTAL POWER INT.

## PCB-MOUNT UNIVERSAL INPUT AC-DC POWER SUPPLIES ENCAPSULATED MODULES 16-WATTS SINGLE & DUAL OUTPUT TPAM16S & TPAM16D SERIES



### FEATURES:

- ON-BOARD AC/DC MODULAR POWER SUPPLIES.
- WIDE INPUT VOLTAGE FOR THE WORLD WIDE USE.
- COMPACT IN SIZE.
- DESIGNED TO MEET UNIVERSAL SAFETY STANDARDS.
- EMI MEET CISPR PUB.22/ FCC CLASS B.
- CE MARKING COMPLIANCE.

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** 90-264Vac.(Or 110-340VDC).  
**Input Frequency:** 47-63 Hz. or DC.  
**Input Current:** 0.33A @115Vac/0.16A @230Vac.  
**Inrush Current:** 32.5A peak @ 230Vac.  
**Input Fuse:** Use external fuse. 1.0A/250Vac. for the primary fuse is suggested  
**Dielectric Withstand:** Meet IEC950.  
3,000Vac-Output/Input.  
1,500Vac-Input/GND.  
500Vac-Output/GND.  
**EMI:** Meet CISPR PUB.22 / FCC Class B.  
**Hold-up time:** 20ms @115Vac, 120ms @230Vac.  
**Earth Leakage:** Less than 3.5mA @230Vac.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Wattage:** Typ.12 to17 Watts.  
**Output Indicator:** LED  
**Line Regulation:** TPAM16S  $\pm 0.1\%$  typ.  
TPAM16D  $\pm 0.5\%$  typ.  
**Load Regulation:** TPAM16S  $\pm 1.0\%$  typ.  
TPAM16D  $\pm 2.0\%$  typ.  
**Noise & ripple:** Typ. 1.0% peak to peak.  
**OVP:** Built-in on main output.  
**Adjustability:** From -10% of main output till OVP  
**Short Circuit Protection:** Power fold back, self-recovering  
**Overload Protection:** About 130% of overrange foldback type.

#### GENERAL SPECIFICATION

**Efficiency:** Typ.73 - 75%.  
**Switching Frequency:** 83K Hz.  
**Circuit Topology:** Fixed Frequency Flyback circuit.  
**Transient Response:** Output voltage returns in less than 3mS following a 50% load change.  
**Case:** Impact resistant thermo-plastic enclosure.  
**Weight:** 145.0g (5.11Oz).  
**Power Density:** 3.10Watts./ Cubic inch.  
**Safety Standard:** EN60950/ UL1950 Class I

**Operating Temperature:** -25 to +71°C range.  
-10°C to +50°C without derating. Derating linearly 2.5%/°C from +50°C @F-L to +71°C @ H-L.  
(Refer to Derating Chart.)  
**Storage Temperature:** -40°C to +85°C.  
**Temperature Coefficient:** 0.02% /°C.  
**Humidity:** Up to 95%RH, Non-condensing.  
**Cooling:** Convection cooling for +50°C @ full load.  
At least 100LFM moving air is recommended for full load >+50°C in a confined area.  
**Commercial Grade only.**

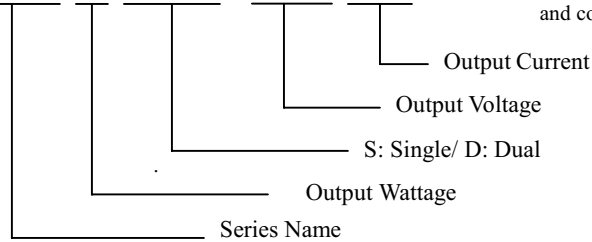
Note: (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.

(2) Load Regulation measured from Full-Load(F-L) to Half-Load (H-L) at nominal input and others loaded at half load.



## MODEL NO. DESCRIPTION: TPAM 16 S / D - XXX YYY

Remark: Please specify the V/A ratings and consult for Model No



## OUTPUT VOLTAGE/ CURRENT RATINGS CHART

### SINGLE OUTPUT

MODEL NO.	VO1 ★ @		
	TYP.	VOLT.	PEAK
TPAM16S-033370	3.70A	3.3V	4.44A
TPAM16S-050300	3.00A	5.0V	3.60A
TPAM16S-090170	1.70A	9.0V	2.04A
TPAM16S-120135	1.35A	12.0V	1.62A
TPAM16S-150110	1.10A	15.0V	1.32A
TPAM16S-240070	0.70A	24.0V	0.84A
TPAM16S-480035	0.35A	48.0V	0.42A

### DUAL OUTPUT

MODEL NO.	+VO1 ★ @			-VO2 ¶		
	TYP.	VOLT.	MAX.	TYP.	VOLT.	MAX.
TPAM16D-033180	1.80A	+3.3V	2.07A	1.80A	-3.3V	2.07A
TPAM16D-050150	1.50A	+5.0V	1.72A	1.50A	-5.0A	1.72A
TPAM16D-120068	0.68A	+12.0V	0.78A	0.68A	-12.0V	0.78A
TPAM16D-150055	0.55A	+15.0V	0.63A	0.55A	-15.0V	0.63A

Symbols: "★" OVP built-in. "@" Adjustable. "¶" Double Feedback.

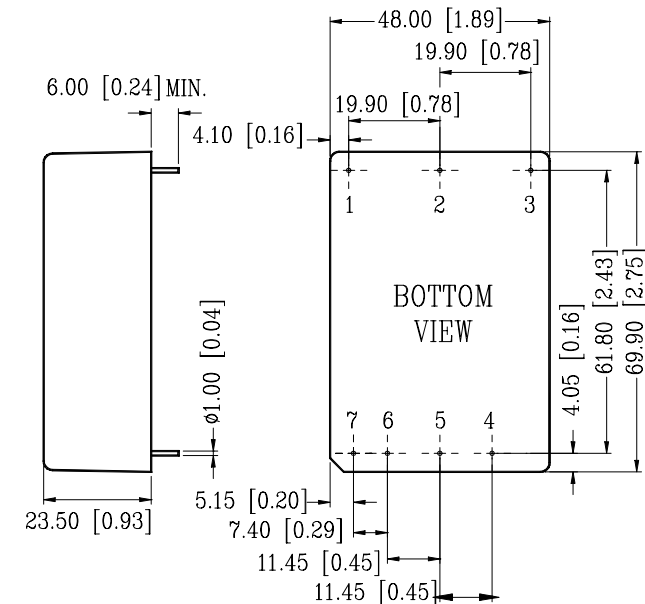
Note: (1). Max. (maximum load) is the continuous operating load of each rail.

But the max. load of each rail can not be drawn from all outputs at the same time.

(2). Peak output, less than 60 Sec. with duty cycle <10%.

## MECHANICAL DIMENSIONS: MM [INCHES]

Weight: 145.0g(5.11Oz)



CASE SIZE: AM03

## PIN ASSIGNMENT

PIN NO.	SINGLE	DUAL
PIN #1.	AC-GROUND	AC-GROUND
PIN #2.	AC-NEUTRAL	AC-NEUTRAL
PIN #3.	AC-LINE	AC-LINE
PIN #4.	+ VO1	+ VO1
PIN #5.	NC	DC-COM
PIN #6.	DC COM	-VO2
PIN #7.	Remote ON/OFF	Remote ON/OFF

## DERATING CHART

