



## TRH21A SERIES 20W SWITCHING ADAPTER



### Features

- \* Universal Input Range 90~264VAC
- \* Efficiency to 88%
- \* Continuous Short Circuit Protection
- \* Over Voltage Protection
- \* No Load Input Power < 0.075W
- \* Leakage Current < 0.25mA
- \* IEC60950-1/EN60950-1 ITE Approved
- \* AC Inlet IEC320/C8
- \* Meets 2MOOP
- \* Meet CoC Tier 2 & DoE Level VI

(TRH21A050: Length  $\leq$  1220mm 18AWG)

(TRH21A090, TRH21A120: Length  $\leq$  1800mm 18AWG)

(TRH21A150: Length  $\leq$  1800mm 20AWG)

(TRH21A180, TRH21A240: Length  $\leq$  1800mm 22AWG)



MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE NOTE2	VOLTAGE ACCURACY NOTE1	LINE REGULATION NOTE3	LOAD REGULATION NOTE4	EFFICIENCY (typ.) NOTE5
TRH21A050	5.0 V	3.0 A	50 mV	$\pm 2\%$	1%	$\pm 5\%$	82%
TRH21A090	9.0 V	2.3 A	50 mV	$\pm 2\%$	1%	$\pm 4\%$	86.5%
TRH21A120	12 V	1.8 A	90 mV	$\pm 2\%$	1%	$\pm 3\%$	86.5%
TRH21A150	15 V	1.4 A	100 mV	$\pm 2\%$	1%	$\pm 3\%$	86.5%
TRH21A180	18 V	1.2 A	100 mV	$\pm 2\%$	1%	$\pm 2\%$	87%
TRH21A240	24 V	0.9 A	100 mV	$\pm 2\%$	1%	$\pm 2\%$	88%

Specifications are subject to change without notice.

## Specifications

## TRH21A Series De-rating Curve

### INPUT SPECIFICATIONS:

Voltage .....	90~264Vac
Frequency .....	47 to 63Hz
Input Current .....	0.3 to 0.5A
Inrush Current .....	Cold Start@25°C ..... 50A max. @240Vac
Leakage Current .....	0.25mA max.

### OUTPUT SPECIFICATIONS:

Voltage Accuracy .....	±2.0% max.
Line Regulation .....	±1.0% max.
Load Regulation .....	see table
Hold-up Time .....	8ms typ. @115Vac
Short Circuit Protection .....	Continuous
Over Voltage Protection(TVS) .....	115%-140% of nominal output voltage

### GENERAL SPECIFICATIONS:

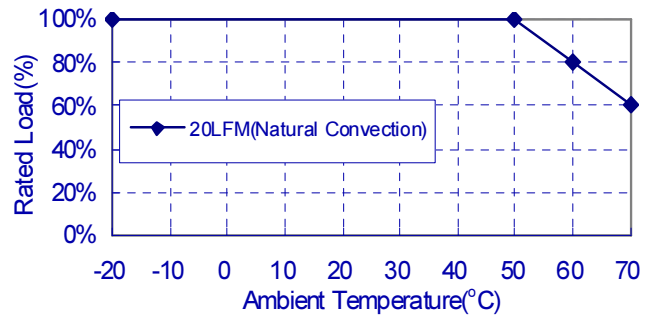
Isolation .....	Input to output = 4,000VAC
Efficiency .....	see table
Switching Frequency .....	65KHz typ.
Operating Temperature .....	-20 ~ 70°C (see derating curve)
Storage Temperature .....	-25~85°C
Cooling .....	Natural Convection
Humidity .....	93% RH max. Non condensing
MTBF .....	MIL-STD-217F, GB, at 25°C/115VAC ..... 400Khrs min.
Dimensions .....	3.000x1.780x0.870 inches (76.20x45.20x22.10mm)
Weight .....	140g(0.31Pounds)

### Mechanical Specification

All Dimensions are in inches(mm)

Tolerance: Inches:X.XXX±0.02

Millimeters:X.XX±0.5

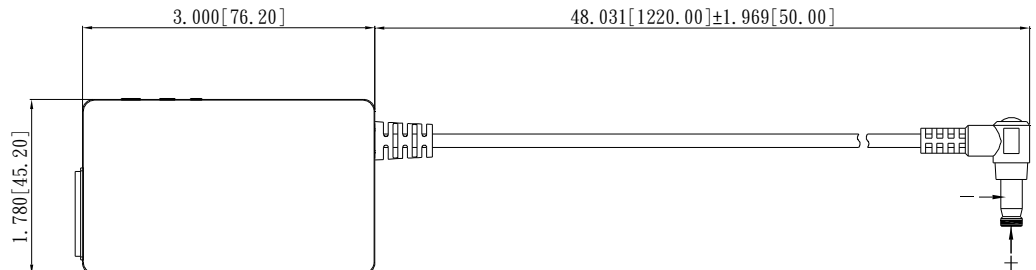


### SAFETY AND EMISSION:

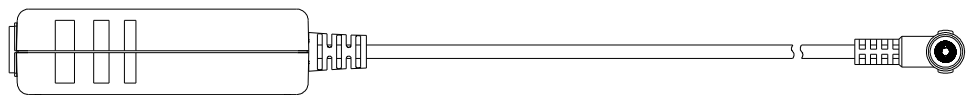
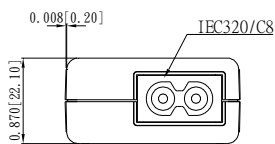
CE Directive .....	2014/108/EC
Emissions .....	EN55022/CISPR Class B, EN55024
Safety Approvals .....	IEC60950-1, EN60950-1, UL60950-1

### NOTE:

1. Voltage accuracy is set of 60% rated load.
2. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for Ripple & Noise measuring @20MHz BW.
3. Line regulation is measured from high line to low line with full load.
4. Load regulation is measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Typical efficiency at 230VAC and 75% load at 25°C.



DC Plug type: V+ —●— V-  
 DC Plug :Right Angle(φ5.5/φ2.1) L12mm  
 18AWG / 1220mm



Typical at 25°C, nominal line and 75% load, unless otherwise Specified

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