



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

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)

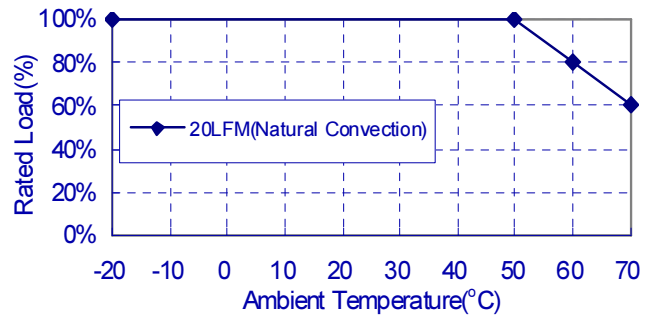
Mechanical Specification

All Dimensions are in inches(mm)

Tolerance: Inches: X.XXX±0.02

Millimeters: X.XX±0.5

TRH21A Series De-rating Curve

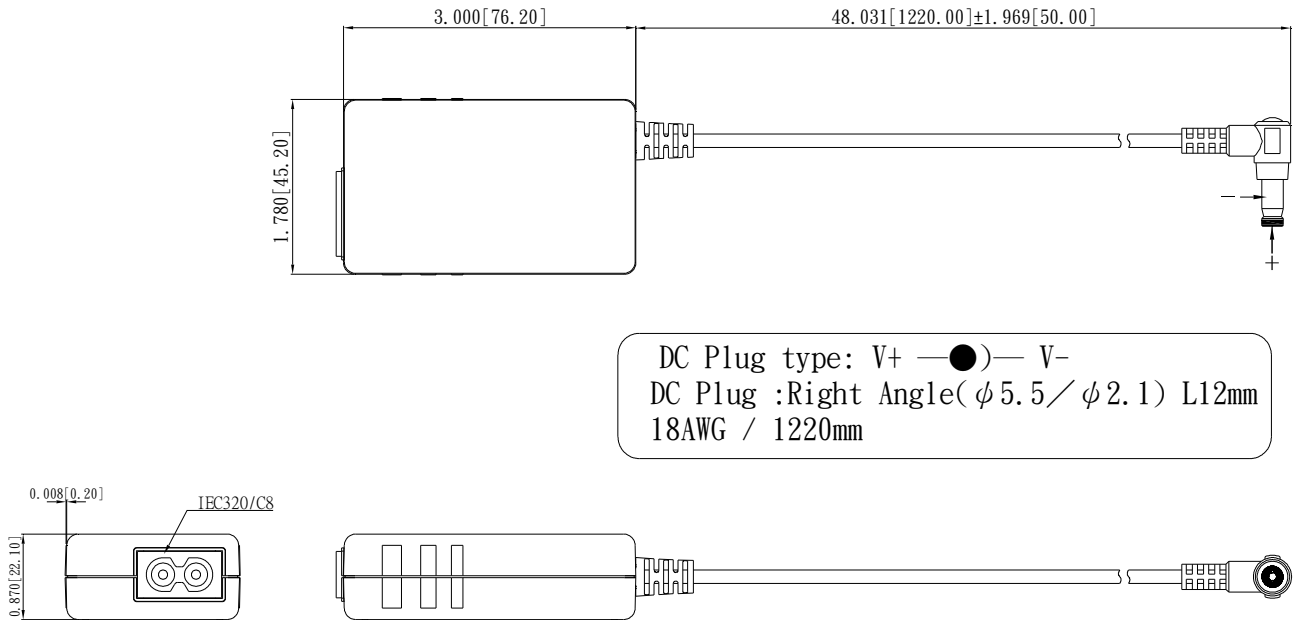


SAFETY AND EMISSION:

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.



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

Mouser Electronics

Authorized Distributor

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Cincon:

<u>TRH21A120-01E03-Level-VI</u>	<u>TRH21A050-01E02-Level-VI</u>	<u>TRH21A240-02E03-Level-VI</u>	<u>TRH21A090-01E03-Level-VI</u>
<u>TRH21A120-40E03-Level-VI</u>	<u>TRH21A090-02E03-Level-VI</u>	<u>TRH21A120-02E03-Level-VI</u>	<u>TRH21A120-35E03-Level-VI</u>
<u>TRH21A180-01E03-Level-VI</u>	<u>TRH21A180-12E03-Level-VI</u>	<u>TRH21A180-02E03-Level-VI</u>	<u>TRH21A090-36E03-Level-VI</u>
<u>TRH21A090-49E03-Level-VI</u>	<u>TRH21A240-01E03-Level-VI</u>	<u>TRH21A120-49E03-Level-VI</u>	<u>TRH21A150-02E03-Level-VI</u>
<u>TRH21A050-02E02-Level-VI</u>	<u>TRH21A150-01E03-Level-VI</u>		