



# TRH50A SERIES

## 50W SWITCHING ADAPTER



### Features

- \* Universal Input Range 90~264VAC
- \* Meets EN55032 Class B and CISPR/FCC Class B
- \* Continuous Short Circuit Protection
- \* Over Voltage Protection
- \* Meet CoC Tier 2 & DoE Level VI
- \* No load Power Consumption < 150mW
- \* Approved IEC62368-1, UL62368-1, EN62368-1  
(Output Cable Length  $\leq$  1800mm)  
(TRH50A120, TRH50A150: Output Cable Length  $\leq$  1220mm)  
(TRH50A180, TRH50A190: Output Cable Length  $\leq$  1800mm 16AWG)



### Ordering information

TRH50XXX	- XX	E	XX
Model No.	DC Plug Type	OVP	DC Cable Length and Type
			01: 720mm
			02: 1220mm
			03: 1800mm
			11: 720mm with Ferrite Core
			12: 1220mm with Ferrite Core
			13: 1800mm with Ferrite Core
			* 16AWG / UL1185 FOR 12V,15V,18V,19V
			* 18AWG / UL1185 FOR 24V,28V,36V,48V

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE NOTE 1	VOLTAGE ACCURACY NOTE2	LINE REGULATION NOTE3	LOAD REGULATION NOTE4	AVERAGE EFFICIENCY min. NOTE5
TRH50A120	12V	4.2A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 3\%$	89%
TRH50A150	15V	3.36A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 3\%$	89%
TRH50A180	18V	2.8A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH50A190	19V	2.65A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH50A240	24V	2.1A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH50A280	28V	1.8A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH50A360	36V	1.4A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH50A480	48V	1.05A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%

## Specifications

### INPUT SPECIFICATIONS:

Voltage ..... 90~264Vac  
 Frequency ..... 47 to 63Hz  
 Input Current ..... 1.2A max.  
 Inrush Current ..... Cold Start @25°C 100A max. @ 240Vac  
 Leakage Current ..... 3.5mA max.

### OUTPUT SPECIFICATIONS:

Hold-up Time ..... 8ms typ. @115Vac  
 Short Circuit Protection ..... Continuous(Auto Recovery)  
 Over Voltage Protection ..... TVS Component to Clamp  
 Temperature Coefficient ..... ±0.05%/°C

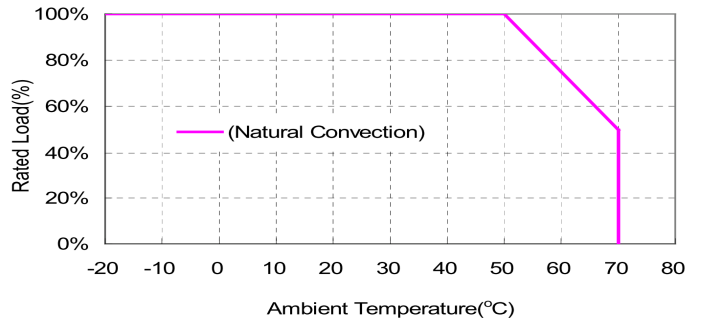
### GENERAL SPECIFICATIONS:

Isolation ..... Input to output = 3000VAC  
 Operating Temperature ..... -20 ~ 70°C (see derating curve)  
 Storage Temperature ..... -20 ~ 85°C  
 Humidity ..... 93% RH max. Non condensing  
 Cooling ..... Natural Convection  
 Switching Frequency ..... 65KHz Typical  
 MTBF ..... MIL-HDBK-217F, GB, at 25°C/115VAC ..... 200Khrs min.  
 Altitude ..... 5000m  
 Dimensions ..... 4.724x2.047x1.220 inches (120.00x52.00x31.00mm)  
 Weight ..... 300g  
 AC Inlet ..... IEC320/C14

### SAFETY AND EMC:

Emission and Immunity ..... EN55032 Class B, FCC Part 15 Class B  
 EN61000-6-3, EN61000-3-2, EN61000-3-3  
 EN55024, EN61204-3, EN61000-6-1  
 Safety ..... Class I, IEC62368-1/60950-1, UL62368-1/60950-1  
 EN62368-1/60950-1

## TRH50A Series Derating Curve

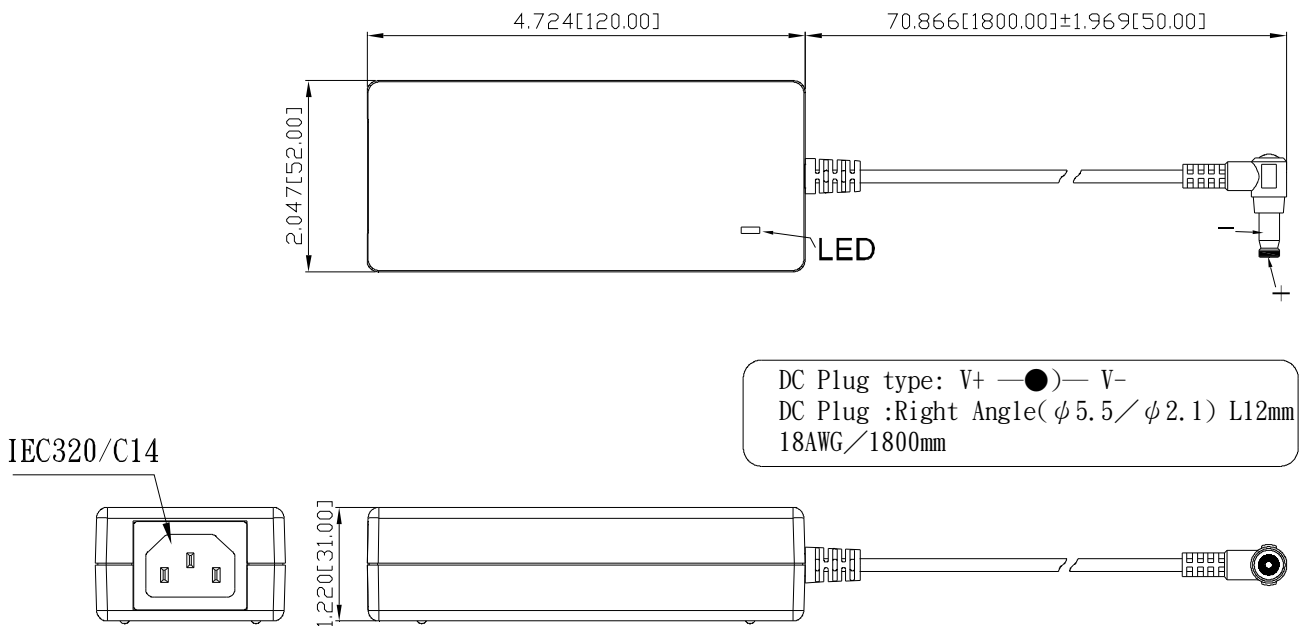


### NOTE:

1. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for Ripple & Noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100Vac to 240Vac full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%,50%,75%,100% load and input voltage is 115Vac / 230Vac.

## Mechanical Specification

All Dimensions are in inches(mm)  
 Tolerance:Inches:X.XXX±0.02  
 Millimeters:X.XX±0.5



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

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