



# TRH160A SERIES

## 160W SWITCHING ADAPTER



### Features

- \* IEC320/C14 Compact Size
- \* Universal Input: 90~264Vac
- \* Over Voltage Protection
- \* Continuous Short Circuit Protection
- \* No Load Power Consumption <150mW
- \* Very Low Leakage Current <90uA
- \* Meet IEC/EN 60335-1
- \* Approved IEC/EN/UL62368-1
- \* Meets CoC Tier 2 & DoE Level VI
- \* CE EN55032 Class B & CISPR/FCC Class B  
 (12V: Output Cable Length ≤ 950mm, DIN Power Plug)  
 (24V: Output Cable Length ≤ 1220mm, DC Jack)  
 (28V~56V: Output Cable Length ≤ 1800mm, DC Jack)



### Ordering information

TRH160AXXX	-XX	X	XX
Model No.	DC Plug Type	OVP	DC Cable Length and Type
		E: with OVP	471:950mm with Ferrite Core 12:1220mm with Ferrite Core 13:1800mm with Ferrite Core *UL2464 Cable For all models

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE NOTE 1	VOLTAGE ACCURACY NOTE 2	LINE REGULATION NOTE 3	LOAD REGULATION NOTE 4	EFFICENTY TYP. NOTE 5
TRH160A120	12V	12.5A	1%	±2%	±1%	±4%	91%
TRH160A240	24V	6.66A	1%	±2%	±1%	±4%	92%
TRH160A280	28V	5.7A	1%	±2%	±1%	±4%	92%
TRH160A300	30V	5.31A	1%	±2%	±1%	±4%	92%
TRH160A360	36V	4.44A	1%	±2%	±1%	±4%	92%
TRH160A480	48V	3.33A	1%	±2%	±1%	±4%	93%
TRH160A560	56V	2.85A	1%	±2%	±1%	±4%	93%

Specifications are subject to change without notice.

# Specifications

# TRH160A Series Derating Curve

## INPUT SPECIFICATIONS:

Voltage ..... 90~264Vac  
 Frequency ..... 47 to 63Hz  
 Input Current ..... 100Vac/2.0 max.& 240Vac/1.0 max  
 Inrush Current ..... 120A max. @240Vac  
 Conducted EMI ..... CISPR/FCC Class B  
 Leakage Current ..... 90uA max.

## OUTPUT SPECIFICATIONS:

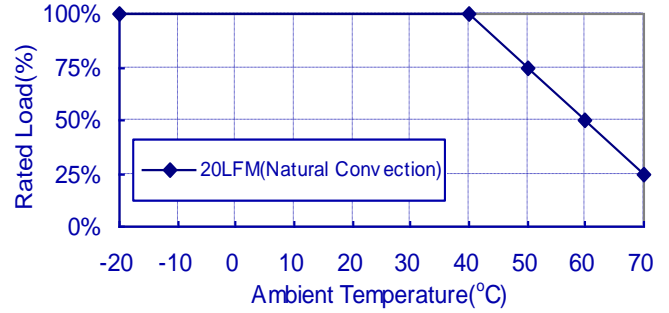
Holdup Time ..... 25ms typ. @115Vac  
 Short Circuit Protection ..... Continuous(Auto Recovery)  
 Over Voltage Protection ..... IC Component to Clamp  
 Temperature Coefficient .....  $\pm 0.05\%/^{\circ}\text{C}$  max.

## GENERAL SPECIFICATIONS:

Isolation ..... Input to output = 3,000VAC  
 Operating Temperature ..... -20~70°C (see derating curve)

-30°C Can be Start-Up

Storage Temperature ..... -40~85°C  
 Humidity ..... 93% RH max. Non Condensing  
 Cooling ..... Natural Convection  
 Switching Frequency ..... 110KHz typ.  
 MTBF ..... MIL-HDBK-217F, GB, 25°C/115VAC ..... 300Khrs typ.  
 Altitude ..... 5000m  
 Life time ..... Ambient 40°C 75% Load ..... 26Khrs min.  
 Dimensions ..... 5.906x2.756x1.497Inches (150x70x38mm)  
 Weight ..... 575g



## SAFETY AND EMC:

Emissions and Immunity ..... EN55032 Class B, FCC Part 15 Class B  
 EN61000-3-2, EN61000-3-3, EN55024, EN61204-3  
 Safety ..... Class I, IEC/EN/UL62368-1

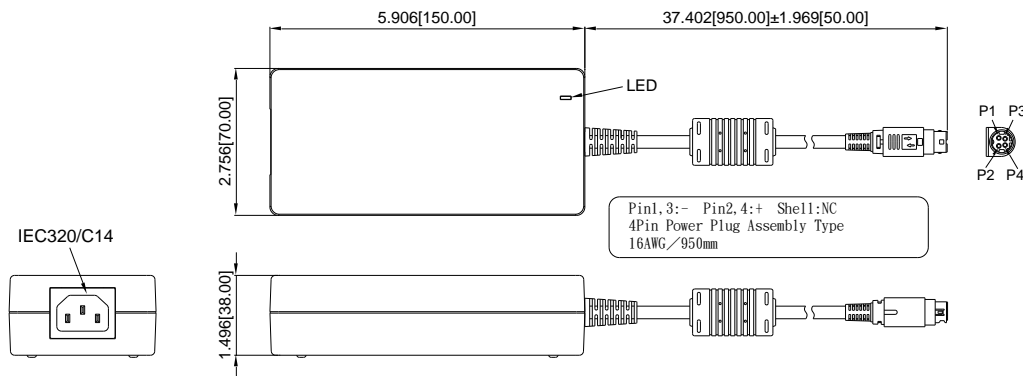
## NOTE:

1. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for ripple&noise measuring @20MHz BW.
2. Voltage set point at 60% full load.
3. Line regulation measured from 100Vac to 240Vac, full load.
4. Load regulation measured from 60% to 100% full load and from 60% to 20% load (60% +/- 40% full load).
5. Efficiency measured 75% load at 230Vac.

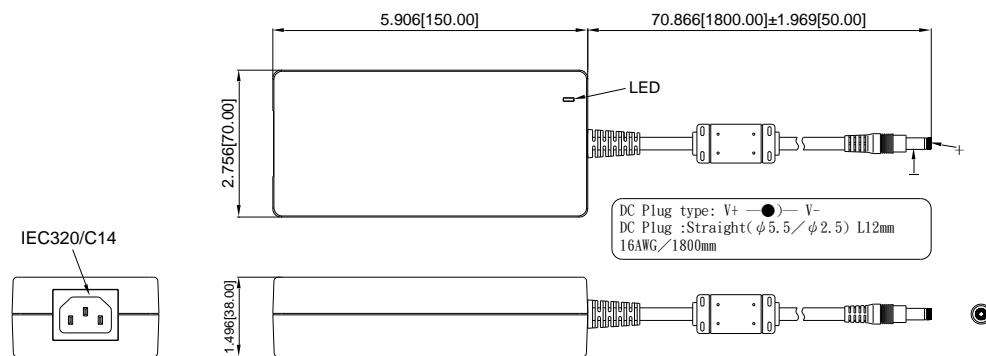
## Mechanical Specification

All Dimensions are in inches[mm]  
 Tolerance:Inches:X.XXX±0.02  
 Millimeters:X.XX±0.5  
 UNIT:inches[mm]

### Din Power Plug



### DC Jack



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

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