



TR36M SERIES

36W MEDICAL SWITCHING ADAPTER



Features

- * Universal Input Range 80~264VAC
- * Approved EN55011, FCC CFR47 Part15 Class B
- * Meets EN60335
- * Approved EN60601-1-11 for Home Healthcare Applications
- * Low Leakage Current < 80uA
- * Continuous Short Circuit Protection
- * Over Voltage Protection
- * No Load Power Consumption < 75mW
- * 2 MOPP Class II
- * Meet CoC Tier 2 & DoE Level VI
- (Output Cable Length $\leq$ 1800mm)
- (TR36M050: Output Cable Length $\leq$ 1220mm)



Ordering Information

TR36MXXX -XX	X	XX
Model No.	DC Plug Type	DC Cable Length and Type
	G: UL1571 WITH OVP	
	E: UL1185 WITH OVP	
	* 16AWG / UL1571 or Equivalent for Vo: 5V	01: 720mm
	* 18AWG / UL1571 or Equivalent for Vo: 9V, 12V, 13.5V	02: 1220mm
	* 20AWG / UL1571 or Equivalent for Vo: 15V, 18V, 24V	03: 1800mm
	* 20AWG / UL1185 or Equivalent for Vo: 36V, 48V	11: 720mm with Ferrite Core
		12: 1220mm with Ferrite Core
		13: 1800mm with Ferrite Core

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE NOTE 1	VOLTAGE ACCURACY NOTE 2	LINE REGULATION NOTE 3	LOAD REGULATION NOTE 4	% EFF. (Typ.) NOTE 5
TR36M050	5V	5.0A	100mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 6\%$	85%
TR36M090	9V	3.3A	120mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 4\%$	88%
TR36M120	12V	2.5A	120mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TR36M135	13.5V	2.4A	130mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TR36M150	15V	2.4A	150mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TR36M180	18V	2.0A	180mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TR36M240	24V	1.5A	240mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TR36M360	36V	1.0A	360mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TR36M480	48V	0.75A	480mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%

Specifications

INPUT SPECIFICATIONS:

Voltage 80~264Vac(see Derating Curve)
 120~370Vdc
 Frequency 47 to 63Hz
 Input Current 0.9A max.
 Inrush Current Cold start@25°C 100A max. @240Vac
 Leakage Current 80uA max.

OUTPUT SPECIFICATIONS:

Hold-up Time 10ms typ. @115Vac
 Short Circuit Protection Hiccup Mode Continuous(Auto Recovery)
 Over Voltage Protection IC Component to Clamp(Auto Recovery)
 Temperature Coefficient $\pm 0.05\%/^{\circ}\text{C}$

GENERAL SPECIFICATIONS:

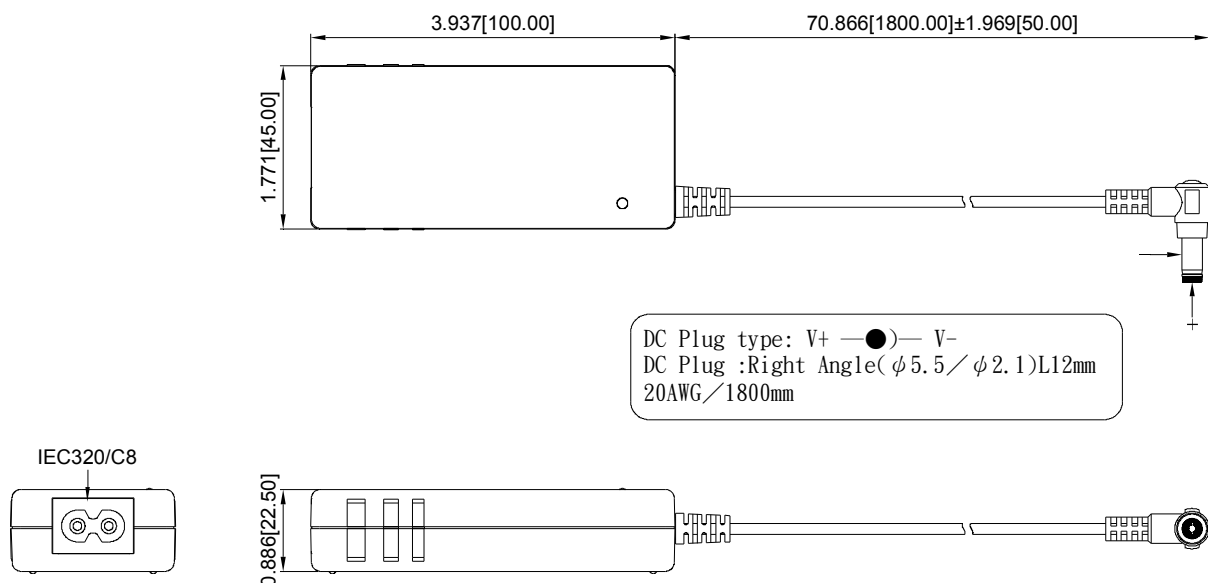
Isolation Input to output 4,000VAC
 Operating Temperature -30 ~ 60°C (see derating curve)
 Storage Temperature -30~85°C
 Humidity 93% RH max. Non condensing
 Cooling Natural Convection
 Switching Frequency 65KHz Typical
 MTBF MIL-HDBK-217F, GB, 25°C/115VAC 1000Khrs max.
 Altitude 5000m
 Dimensions 3.937x1.771x0.886 inches (100.00x45.00x22.50mm)
 Weight 150g(0.33 Pounds)

SAFETY AND EMC:

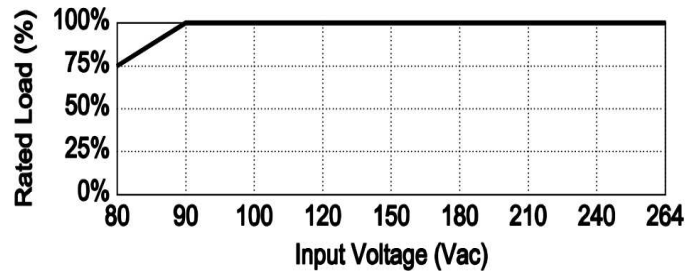
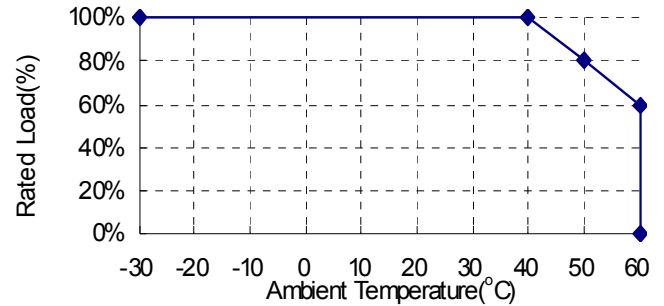
Emission and Immunity (Ed4.0) EN55011, EN60601-1-2
 EN61000-3-2, EN61000-3-3, IEC61000-4-2, 3, 4, 5, 6, 8, 11
 FCC CFR47 Part 15 Class B
 Safety Approved (Ed.3.1) IEC60601-1:2005+A1, EN60601-1-11
 EN60601-1:2006+A11:2011+A1+A12
 ANSI/AAMI ES60601-1:2005/A1:2012

Mechanical Specification

All Dimensions are in inches[mm]
 Tolerance:Inches:X.XXX $\pm$ 0.02
 Millimeters:X.XX $\pm$ 0.5



TR36M 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 is measured from 100Vac to 240Vac full load.
4. Load regulation is measured from 60% to full load and from 60% to 20% load (60% $\pm$ 40% load).
5. Efficiency measured at 75% load and input voltage is 230Vac.