



TR30RAM SERIES

30W MEDICAL SWITCHING ADAPTER



Features

- * Universal Input Range 90~264VAC
- * Continuous Short Circuit Protection
- * Over Voltage Protection
- * Meets EN60601-1 and EN55011 Class B
- * Meets 2MOPP
- * Efficiency & Standby Power Meet Level V (Output Cable Length \leq 1800mm)
- * Provide PSE Mark

Ordering information

TR30RAMXXX - XX	E XX	-	XX	-BK
Model No.	DC Plug Type	DC Cable Length and Type	Color of Overmold Case	
		01: 720mm	BE: Blue	
		02: 1220mm	GY: Gray	
		03: 1800mm	RD: Red	
		11: 720mm with Ferrite Core	PE: Purple	
		12: 1220mm with Ferrite Core	OE: Orange	
		13: 1800mm with Ferrite Core		
		* 18AWG / UL1185		
		* 16AWG / UL1185 for 5V · 9V		



MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE NOTE 2	VOLTAGE ACCURACY NOTE 1	LINE REGULATION NOET 3	LOAD REGULATION NOET 4	% EFF. (Typ.) NOTE 5
TR30RAM050	5 V	4.0 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 6\%$	80%
TR30RAM090	9 V	3.0 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 3\%$	84%
TR30RAM120	12 V	2.5 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	84%
TR30RAM150	15 V	2.0 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	85%
TR30RAM180	18 V	1.67 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	85%
TR30RAM240	24 V	1.25 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	86%

Specifications are subject to change without notice.

Specifications

INPUT SPECIFICATIONS:

Voltage	90~264Vac
Frequency	47 to 63Hz
Input Current	100Vac/0.8A max., 240Vac/0.4A max.
Inrush Current	Cold start@25°C 100A max. @240Vac
Leakage Current	100µA max.

OUTPUT SPECIFICATIONS:

Hold-up Time	10ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recovery)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

GENERAL SPECIFICATIONS:

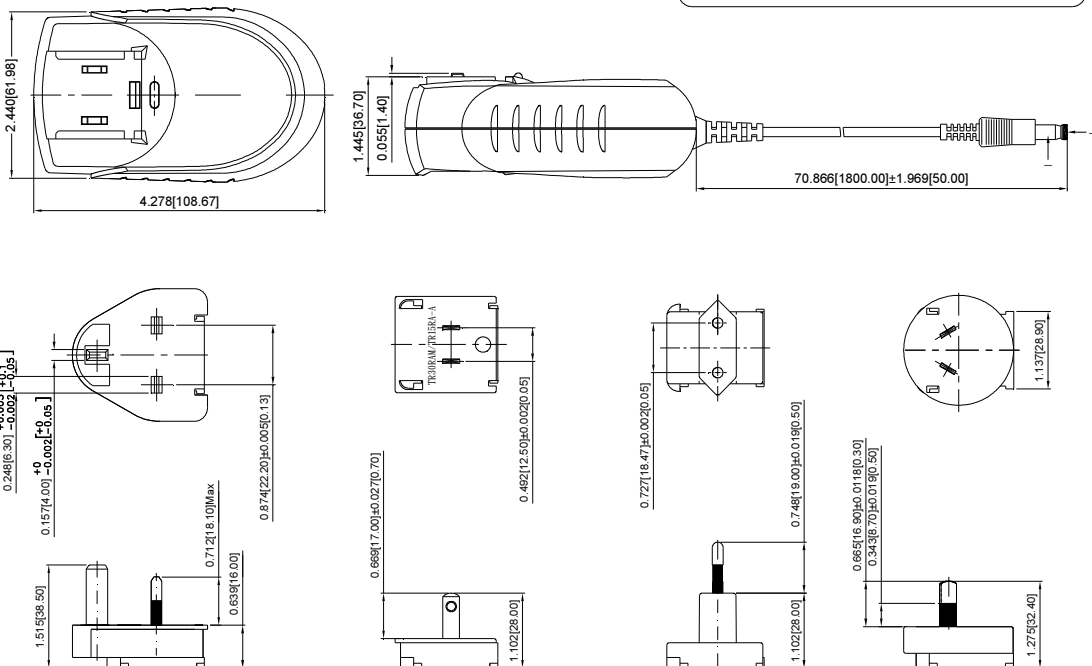
Isolation	Input to output = 4,000VAC (5,656VDC)
Operating Temperature	0 ~ 60°C (see derating curve)
Storage Temperature	-20~85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	70KHz Typical
MTBF	MIL-HDBK-217F, GB, 25°C/115VAC 200Khrs min.
Altitude	3000m
Dimensions	4.278x2.440x1.445Inches (108.67x61.98x36.70mm)
Weight	300g(0.67 Pounds)

SAFETY AND EMC:

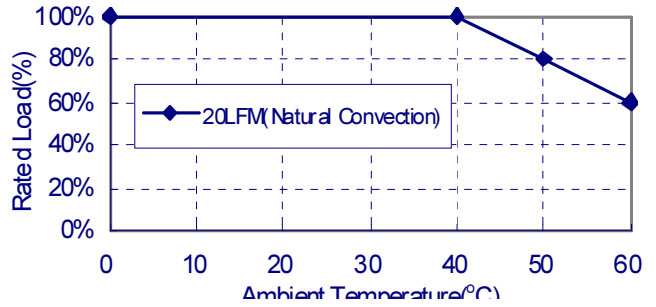
Emission and Immunity (Ed. 4.0)	EN55011 Class B, FCC CFR47 Part 18 Class B
	EN60601-1-2, EN61000-3-2-3, EN61000-4-2, 3, 4, 5, 6, 8, 11
Safety (Ed. 3.1)	IEC60601-1:2005+A1:2012
	EN60601-1:2006+A11:2011+A1+A12, UL ANSI/AAMI ES60601-1:2005
	IEC 60950-1, EN60950-1, UL60950-1

Mechanical Specification

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



TR30RAM Series Derating Curve



NOTE:

1. Voltage accuracy is set at 60% load and 25°C Ta.
2. Add a 0.1µF ceramic capacitor and a 10µF E.L. capacitor to output for Ripple & Noise measuring @20MHz BW.
3. Line regulation measured from 100Vac to 240Vac with full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load)
5. Typical efficiency with 230 VAC and max. load at 25°C.
6. "Various TR Series adapters are PSE certified. PSE certification alone is not sufficient for importation into Japan. A valid PSE mark must contain the name of the importer as shown in the example below. If PSE mark is required, the name of the registered importer must be supplied to Cincon on order placement. Product labels will not contain PSE mark if importer name is not supplied. Consult factory or local representative for details"



DC Plug type: V+ —●— V-
 DC Plug :Straight(φ 5.5 / φ 2.1) L12mm
 18AWG / 1800mm