



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
- * CEC Level IV Compliant
(Output Cable Length $\leq$ 1800mm)
(TR30RAM050: Output Cable Length $\leq$ 1500mm)
- * Efficiency & Standby Power Meet Level V (Option)
(Output Cable Length $\leq$ 1800mm)
(TR30RAM050、TR30RAM090 : Output Cable Length $\leq$ 1220mm)
- * 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 NOTE 3	LOAD REGULATION NOTE 4	%EFF. (Typ.) NOTE 5
TR30RAM050	5V	4.0A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 6\%$	80%
TR30RAM090	9V	3.0A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 3\%$	84%
TR30RAM120	12V	2.5A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	84%
TR30RAM150	15V	2.0A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	85%
TR30RAM180	18V	1.67A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	85%
TR30RAM240	24V	1.25A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	86%

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:

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

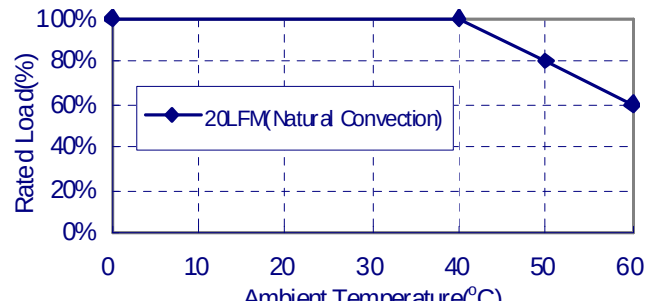
GENERAL SPECIFICATIONS:

Isolation	Input to output = 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 200K hrs min.
Altitude	3000m
Dimensions	4.278x2.440x1.445Inches (108.67x61.98x36.70mm)
Weight	300g(0.67 Pounds)

SAFETY AND EMC:

Emission and Immunity	EN55011 Class B, EN61000-3-2, EN61000-3-3 EN60601-1-2, IEC61000-4-2,4,5,6,8,11 FCC CFR47 Part 18 Class B
Safety	IEC60601-1:2005, EN60601-1:2006, UL ANSI/AAMI ES60601-1:2005

TR30RAM Series Derating Curve



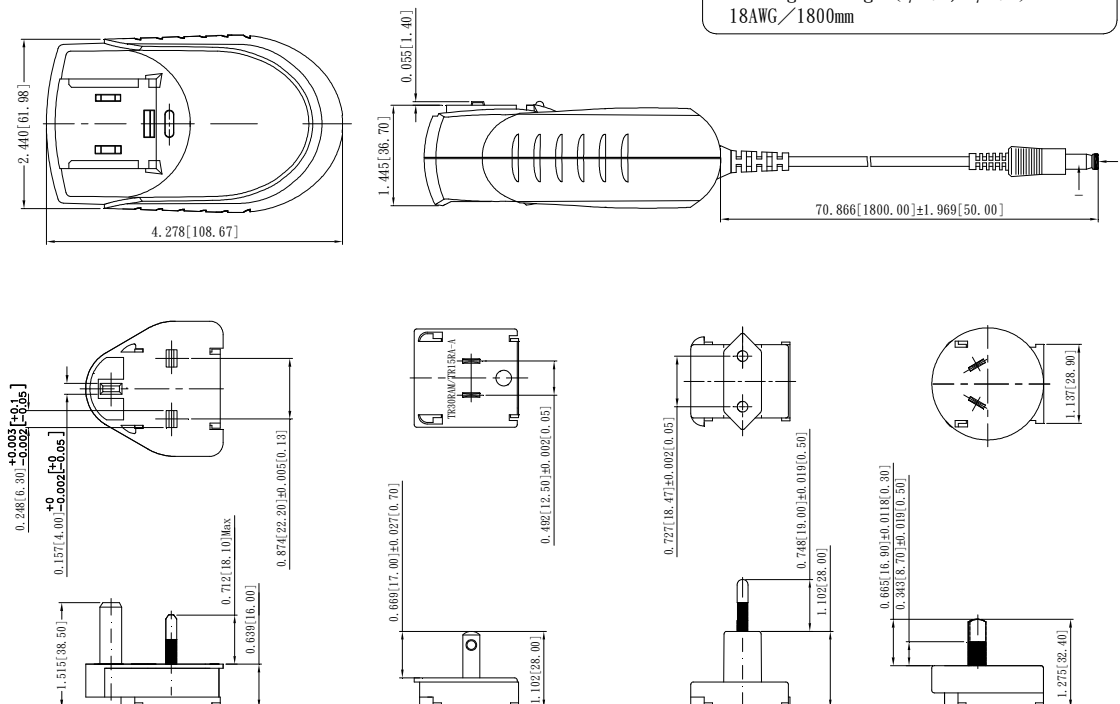
NOTE:

1. Voltage accuracy is set at 60%I 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"

IMPORTER NAME	
INPUT	AI100-240V, 0.5A
OUTPUT	DC 5V, 2A

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