



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
- * 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	
	r	01: 720mm		BE: Blue	
		02: 1220mm		GY: Gray	
		03: 1800mm		RD: Red	
		11: 720mm with Ferrite Core		PE: Purple	
		12: 1220mm with Ferrite Core		OR: Orange	
		13: 1800mm with Ferrite Core			
		* 18AWG / UL1185			
		* 16AWG / UL1185 for 5V、9V			

MODEL	OUTPUT VOLTAGE	MAX. LOAD	MIN. LOAD	RIPPLE & NOISE	VOLTAGE ACCURACY	LINE REGULATION	LOAD REGULATION	%EFF. (Typ.)
TR30RAM050	5V	4.0A	0A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 6\%$	73%
TR30RAM090	9V	3.0A	0A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 3\%$	76%
TR30RAM120	12V	2.5A	0A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	79%
TR30RAM150	15V	2.0A	0A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	81%
TR30RAM180	18V	1.67A	0A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	81%
TR30RAM240	24V	1.25A	0A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	83%

Specifications

INPUT SPECIFICATIONS:

Voltage	90~264Vac
Frequency	47 to 63Hz
Input Current	0.4~0.8A 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:

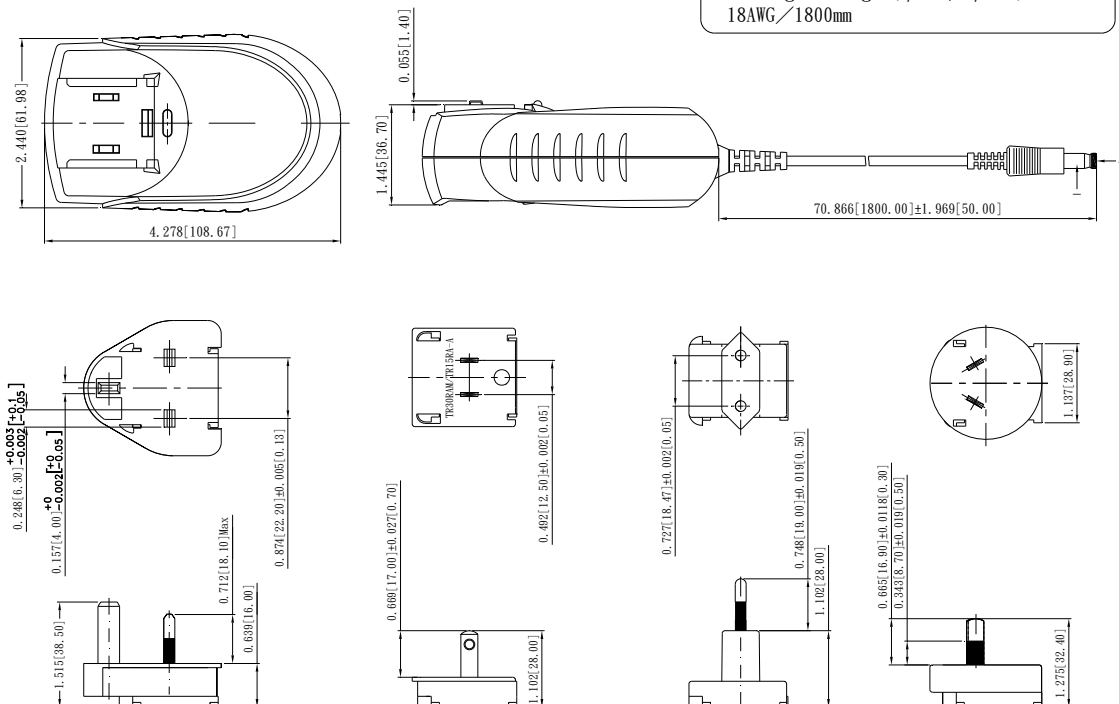
Isolation	Input to output = 5,656VDC
Operating Temperature	0 ~ 60°C(see Drating Curve)
Storage Temperature	-20~85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	70KHz Typical
MTBF	MIL-HDBK-217F, GB, 25°C/115VAC 200K hrs min.
Altitude	3000m
Dimensions	4.278x2.440x1.445Inches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

SAFETY AND EMC:

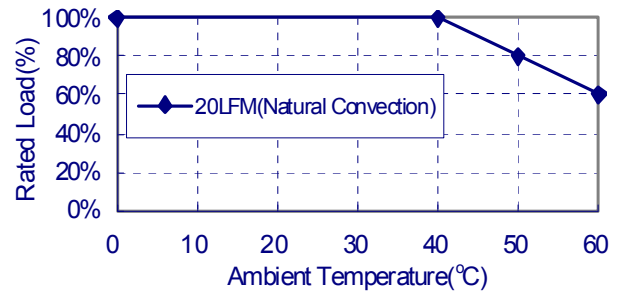
Emission and Immunity	EN55011 Class B, EN61000-3-2, EN61000-3-3 EN60601-1-2, IEC61000-4-2, 4, 5, 6, 8, 11 FCC CFR47 Part 18 Class B
Safety	IEC60601-1, EN60601-1, UL60601-1

Mechanical Specification

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



TR30RAM Series Derating Curve



NOTE:

- Voltage setpoint at 60% load
- Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for Ripple & Noise measuring @20MHz BW.
- Line regulation measured from 100Vac to 240Vac with full load.
- Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load)
- "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"

