

TR30RAM

S E R I E S

30W MEDICAL SWITCHING ADAPTER



Features

- Universal Input Range 90-264VAC
- Continuous Short Circuit Protection
- Meets EN60601-1 and EN55011 Class B
- Over Voltage Protection
- 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				
	* Please see Page215 for more detailed descriptions	01 : 720mm 02 : 1220mm 03 : 1800mm 11 : 720mm with Ferrite Core 12 : 1220mm with Ferrite Core 13 : 1800mm with Ferrite Core	BE : Blue GY : Gray RD : Red PE : Purple OR : Orange				
		* 18AWG / UL1185 * 16AWG / UL1185 for 5V, 9V					

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	MINI. LOAD	RIPPLE & NOISE	VOLTAGE SETPOINT	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

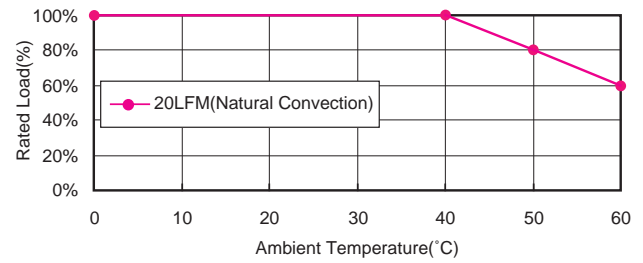
GENERAL SPECIFICATIONS:

Isolation	Input to output = 5,656VDC
Operating Temperature	0 ~ 60°C (see 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, at 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 EN60601-1-1-2, IEC61000-4-2,4,5,6,8,11 FCC CFR47 Part 18 Class B
Safety	IEC60601-1, EN60601-1, UL60601-1

TR30RAM Series Derating Curve



NOTE:

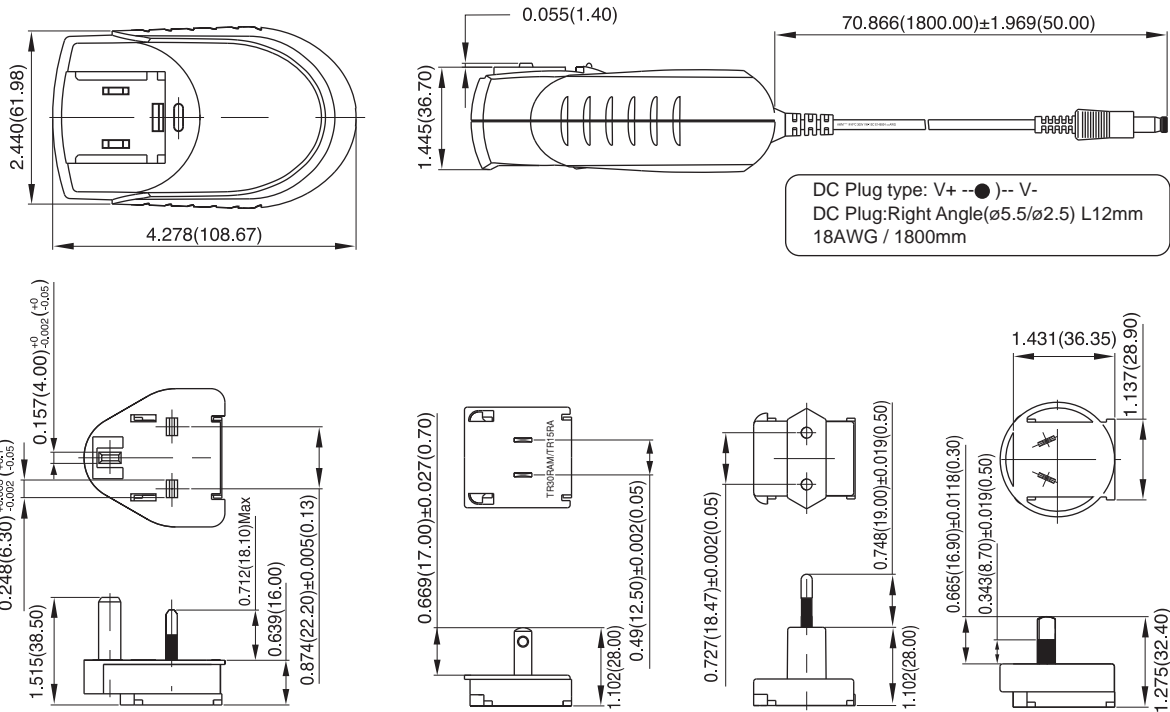
1. Voltage setpoint at 60% load.
2. Add a 0.1µF ceramic capacitor and a 10µF E.L. capacitor to output for Ripple & Noise measuring @20MHz BW.
3. Line regulation measured from 100Vac to 240Vac , full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load)
5. *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*



TR30RAM

Mechanical Specification

All Dimensions 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