



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 $\leq 1800\text{mm}$)
(TR30RAM050: Output Cable Length $\leq 1500\text{mm}$)
- * Efficiency & Standby Power Meet Level V (Option)
(Output Cable Length $\leq 1800\text{mm}$)
(TR30RAM050、TR30RAM090 : Output Cable Length $\leq 1220\text{mm}$)
- * 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 $\pm 0.05\%/^{\circ}\text{C}$

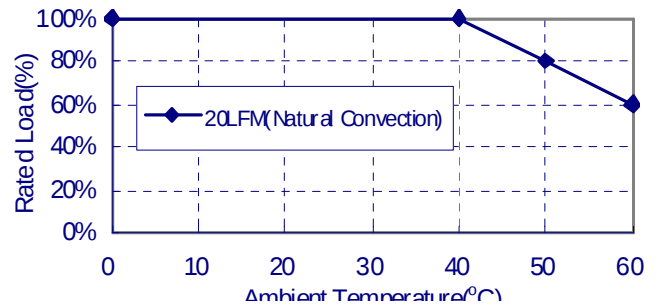
GENERAL SPECIFICATIONS:

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:

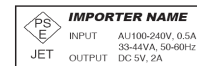
Emission and Immunity EN55011 Class B, EN61000-3-2, EN61000-3-3
 EN60601-1-2, IEC61000-4-2,4,5,6,8,11
 FCC CFR47 Part 18 Class B
 Safety IEC60601-1:2005, EN60601-1:2006, UL ANSI/AAMI ES60601-1:2005

TR30RAM Series Derating Curve



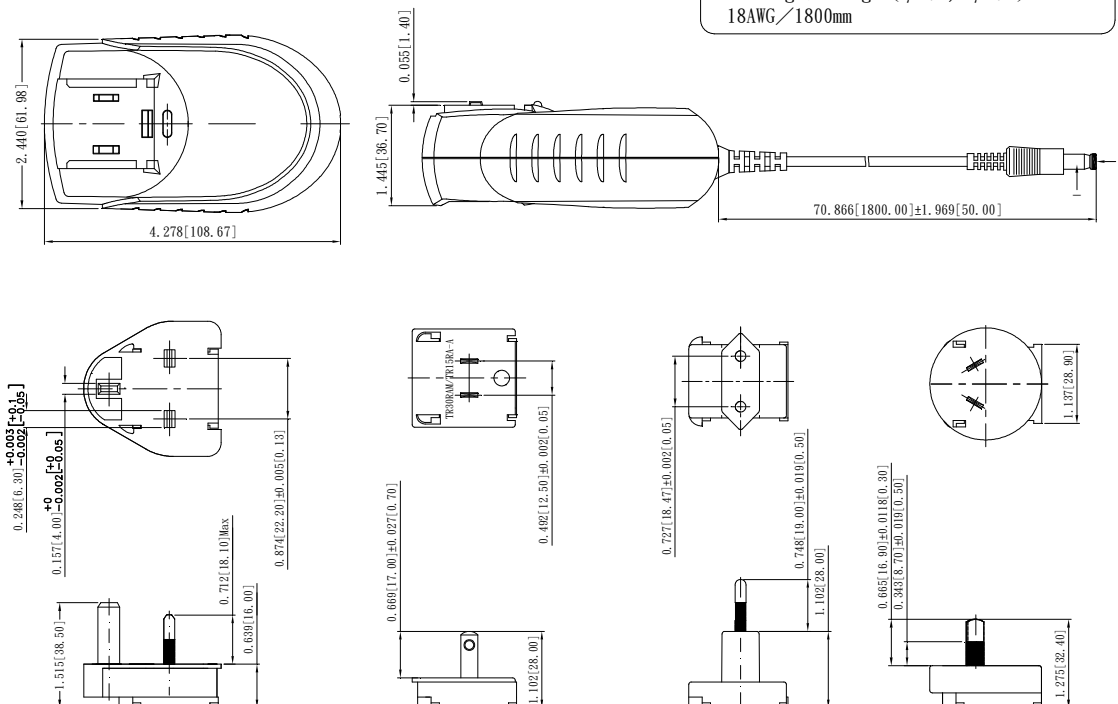
NOTE:

1. Voltage accuracy is set at 60% 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"



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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Cincon:

[TR30RAM050-35E02-GY-BK-LEVEL-V](#) [TR30RAM050-36E02-GY-BK-LEVEL-V](#) [TR30RAM050-39E02-GY-BK-LEVEL-V](#) [TR30RAM050-40E02-GY-BK-LEVEL-V](#) [TR30RAM050-48E02-GY-BK-LEVEL-V](#) [TR30RAM050-49E02-GY-BK-LEVEL-V](#) [TR30RAM120-35E03-GY-BK-LEVEL-V](#) [TR30RAM120-36E03-GY-BK-LEVEL-V](#) [TR30RAM120-39E03-GY-BK-LEVEL-V](#) [TR30RAM120-40E03-GY-BK-LEVEL-V](#) [TR30RAM120-48E03-GY-BK-LEVEL-V](#) [TR30RAM120-49E03-GY-BK-LEVEL-V](#) [TR30RAM240-35E03-GY-BK-LEVEL-V](#) [TR30RAM240-36E03-GY-BK-LEVEL-V](#) [TR30RAM240-39E03-GY-BK-LEVEL-V](#) [TR30RAM240-40E03-GY-BK-LEVEL-V](#) [TR30RAM240-48E03-GY-BK-LEVEL-V](#) [TR30RAM240-49E03-GY-BK-LEVEL-V](#) [TR30RAM050-11E02-GY-BK-Level-V](#) [TR30RAM050-12E02-GY-BK-Level-V](#) [TR30RAM090-11E02-GY-BK-Level-V](#) [TR30RAM090-12E02-GY-BK-Level-V](#) [TR30RAM120-11E03-GY-BK-Level-V](#) [TR30RAM120-12E03-GY-BK-Level-V](#) [TR30RAM150-11E03-GY-BK-Level-V](#) [TR30RAM150-12E03-GY-BK-Level-V](#) [TR30RAM180-11E03-GY-BK-Level-V](#) [TR30RAM180-12E03-GY-BK-Level-V](#) [TR30RAM240-11E03-GY-BK-Level-V](#) [TR30RAM240-12E03-GY-BK-Level-V](#) [TR30RAM050-01E02-GY-BK-Level-V](#) [TR30RAM050-02E02-GY-BK-Level-V](#) [TR30RAM090-01E02-GY-BK-Level-V](#) [TR30RAM090-02E02-GY-BK-Level-V](#) [TR30RAM120-01E03-GY-BK-Level-V](#) [TR30RAM120-02E03-GY-BK-Level-V](#) [TR30RAM150-01E03-GY-BK-Level-V](#) [TR30RAM150-02E03-GY-BK-Level-V](#) [TR30RAM180-01E03-GY-BK-Level-V](#) [TR30RAM180-02E03-GY-BK-Level-V](#) [TR30RAM240-01E03-GY-BK-Level-V](#) [TR30RAM240-02E03-GY-BK-Level-V](#) [TR30RAM120-ASUE-11E03-GY-BK-V](#)