



# 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 are subject to change without notice.

## 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:

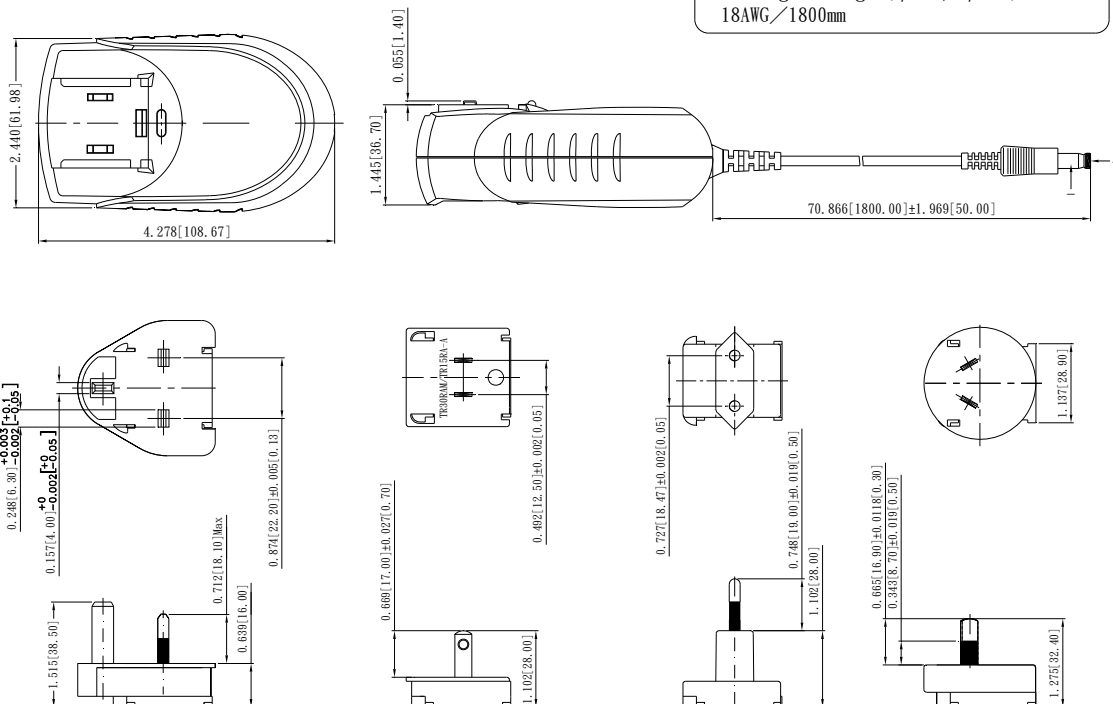
Isolation .....	Input to output = 5,656VDC
Operating Temperature .....	0 ~ 60°C(see Drating Curve)
Storage Temperature .....	-20~85°C
Humidity .....	93% RH max. Non condensing
Cooling .....	Natural Convection
Switching Frequency .....	70KHz Typical
MTBF .....	MIL-HDBK-217F, GB, 25°C/115VAC ..... 200K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

### SAFETY AND EMC:

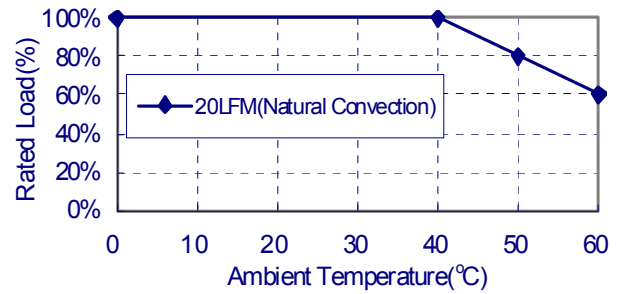
Emission and Immunity .....	EN55011 Class B, EN61000-3-2, EN61000-3-3 EN60601-1-2, IEC61000-4-2,4,5,6,8,11 FCC CFR47 Part 18 Class B
Safety .....	IEC60601-1, EN60601-1, UL60601-1

### Mechanical Specification

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

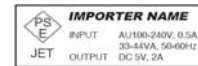


## TR30RAM Series Derating Curve



### NOTE:

- Voltage setpoint at 60% load
- Add a 0.1µF ceramic capacitor and a 10µF 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"



Typical at 25°C, nominal line and 75% load, unless otherwise Specified

# Mouser Electronics

Authorized Distributor

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## Cincon:

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