

# TR30M

S E R I E S

## 30W MEDICAL SWITCHING ADAPTER



### Features

- Universal Input Range 90-264VAC
- Meets EN60601-1 and EN55011 Class B
- Continuous Short Circuit Protection
- Over Voltage Protection
- TR30M Series meets CEC Level IV except TR30M050 Meets CEC Level III (Output Cable Length  $\leq$  1800mm) (TR30M050: Output Cable Length  $\leq$  720mm)
- Efficiency & Standby Power Meet Level V (Output Cable Length  $\leq$  1800mm) (TR30M050: Output Cable Length  $\leq$  720mm) (TR30M090: Output Cable Length  $\leq$  1220mm)
- Provide PSE Mark

### Ordering information

TR30MXXX	- XX	E XX
Model No.	DC Plug Type	DC Cable Length and Type
	* Please see Page 215 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 * 18AWG / UL1185

MODEL	OUTPUT VOLTAGE	MIN. LOAD	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE SETPOINT	LINE REGULATION	LOAD REGULATION	%EFF. (Typ.)
TR30M050	5V	0A	4A	50mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 6\%$	73%
TR30M090	9V	0A	3A	90mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 4\%$	77%
TR30M120	12V	0A	2.5A	120mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 3\%$	78%
TR30M150	15V	0A	2A	150mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 3\%$	80%
TR30M180	18V	0A	1.65A	180mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	80%
TR30M240	24V	0A	1.25A	240mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	82%

## Specifications

### INPUT SPECIFICATIONS:

Voltage ..... 90-264Vac  
 Frequency ..... 47 to 63Hz  
 Inrush Current ..... 50A max. @240Vac  
 Leakage Current ..... 0.6mA max.

### OUTPUT SPECIFICATIONS:

Holdup Time ..... 16ms typ. @115Vac  
 Short Circuit Protection ..... Continuous(Auto Recovery)  
 Over Voltage Protection ..... TVS Component to Clamp  
 Temperature Coefficient .....  $\pm 0.05\%/^{\circ}\text{C}$

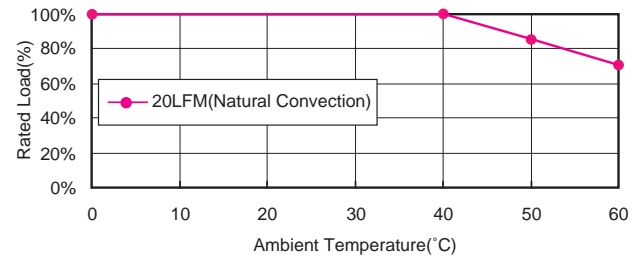
### GENERAL SPECIFICATIONS:

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  
 MTBF ..... MIL-HDBK-217F, GB, at 25°C/115VAC ..... 300K hrs min.  
 Altitude ..... 2000m  
 Dimensions ..... 4.331x1.969x1.181Inches (110.00x50.00x30.00mm)  
 Weight ..... 220g(0.49 Pounds)

### SAFETY AND EMC:

Emission and Immunity ..... EN55011, EN60601-1-2  
 EN61000-3-2, EN61000-3-3  
 Safety ..... IEC60950-1, IEC60601-1, EN60601-1, UL60601-1

## TR30M Series Derating Curve



### NOTE:

1. Voltage setpoint at 60% load.
2. Add a 0.1 $\mu\text{F}$  ceramic capacitor and a 10 $\mu\text{F}$  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"



TR30M

## Mechanical Specification

All Dimensions In Inches(mm)  
 Tolerance Inches: x.xxx=  $\pm 0.02$   
 Millimeters: x.xx=  $\pm 0.5$

