TR60M SERIES
60W MEDICAL SWITCHING ADAPTER

Features

* Universal Input Range 90~264VAC
* Meets EN60601-1 and EN55011 Class B
* Continuous Short Circuit Protection
* Over Voltage Protection
* Meet CEC Level Ⅳ
  (Output Cable Length≦1800mm)
  (TR60M Series meets CEC IV except TR60M05 is Non-CEC Compliant)
  (TR60M12: Output Cable Length≦1220mm 16AWG)
* Efficiency & Standby Power Meet Level V (Option)
  (Output Cable Length≦1800mm)
  (TR60M12：Output Cable Length≦720mm 16AWG)
  (TR60M15：Output Cable Length≦1220mm 16AWG)
  (TR60M18,TR60M19：Output Cable Length≦1500mm 18AWG)
* Meets 2MOPP

Ordering information

TR60MXX-	XX	X	XX
Model No.	**DC Plug Type**	**OVP**	**DC Cable Length and Type**
		E: With OVP	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	OUTPUT CURRENT	RIPPLE & NOISE NOTE 2	VOLTAGE ACCURACY NOTE 1	LINE REGULATION NOTE 3	LOAD REGULATION NOTE 4	% EFF. (Typ.) NOTE 5
TR60M05	5V	6A	50mVp-p	±4%	±1%	±6%	75%
TR60M12	12V	5A	120mVp-p	±2%	±1%	±5%	85%
TR60M15	15V	4A	150mVp-p	±2%	±1%	±3%	85%
TR60M18	18V	3.33A	180mVp-p	±2%	±1%	±2%	86%
TR60M19	19V	3.15A	190mVp-p	±2%	±1%	±2%	86%
TR60M24	24V	2.5A	240mVp-p	±2%	±1%	±2%	87%
TR60M36	36V	1.66A	360mVp-p	±2%	±1%	±2%	87%
TR60M48	48V	1.25A	480mVp-p	±2%	±1%	±2%	87%

Specifications are subject to change without notice.

Specifications

INPUT SPECIFICATIONS:

Voltage ..... 90~264Vac
Frequency ..... 47 to 63Hz
Inrush Current ..... Cold Start @25℃80A max. @240Vac
Conducted EMI ..... CISPR/FCC Class B
Leakage Current ..... 0.1mA max.

OUTPUT SPECIFICATIONS:

Holdup Time ..... 8ms typ. @115Vac
Short Circuit Protection ..... Continuous
Over Voltage Protection ..... Yes
Temperature Coefficient .....±0.05%/℃

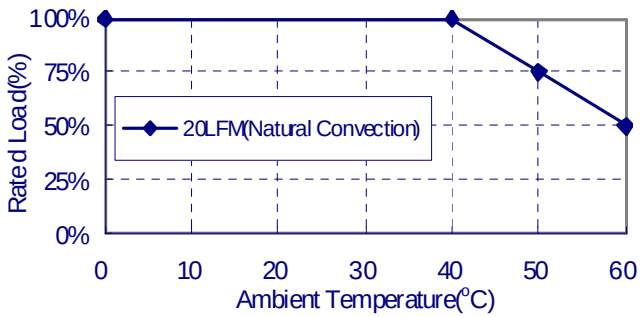
GENERAL SPECIFICATIONS:

Isolation ..... Input to output =5,656VDC
Operating Temperature ..... 0 ~ 60℃ (see derating curve)
Storage Temperature ..... -20 ~ 85℃
Humidity ..... 93% RH max. Non condensing
Cooling ..... Natural Convection
Switching Frequency ..... 100KHz Typical
MTBF ..... MIL-HDBK-217F, GB, at 25℃/115VAC ..... 200K hrs min.
Altitude 3000m
Dimensions 5.197x2.283x1.201inches (132.00x58.00x30.50mm)
Weight .... 345g(0.76 Pounds)

SAFETY AND EMC:

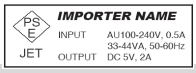
Emission and Immunity EN55011, EN60601-1-2, EN61000-3-2
EN61000-3-3
Safety ..... IEC60601-1, EN60601-1, UL ANSI/AAMI ES60601-1:2005

TR60M Series Derating Curve



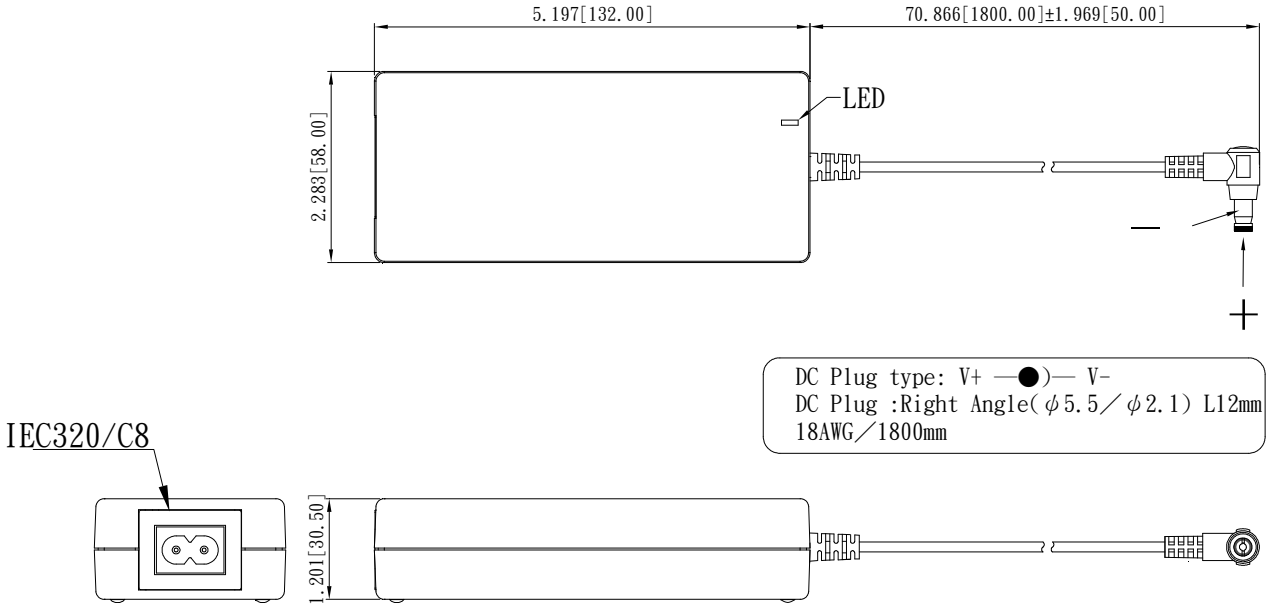
NOTE:

1. Voltage accuracy at 60% full load.
2. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for Ripple & Noise measurement @20MHz BW.
3. Line regulation measured from 100Vac to 240Vac, full load.
4. Load regulation measured from 60% to 100% full load and from 60% to 20% full load (60% +/- 40% full load).
5. Typical efficiency at 230VAC and full load at 25℃.
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 represen tative 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:

TR60M12-11E03 TR60M15-11E03 TR60M18-12E03 TR60M18-11E03 TR60M24-12E03 TR60M19-11E03 TR60M24-35E03-Level-V TR60M24-36E03-Level-V TR60M24-39E03-Level-V TR60M24-40E03-Level-V TR60M24-48E03-Level-V TR60M24-49E03-Level-V TR60M19-12E03 TR60M24-11E03 TR60M15-12E03 TR60M12-12E03 TR60M05-11E03 TR60M05-12E03 TR60M12-11E01-Level-V TR60M12-12E01-Level-V TR60M15-11E02-Level-V TR60M15-12E02-Level-V TR60M18-11E02-Level-V TR60M18-12E02-Level-V TR60M19-11E02-Level-V TR60M19-12E02-Level-V TR60M24-11E03-Level-V TR60M24-12E03-Level-V TR60M36-11E03-Level-V TR60M36-12E03-Level-V TR60M48-11E03-Level-V TR60M48-12E03-Level-V TR60M15-11E11-LVLV TR60M24-01E03-Level-V TR60M24-02E03-Level-V TR60M36-01E03-Level-V TR60M36-02E03-Level-V TR60M48-01E03-Level-V TR60M48-02E03-Level-V TR60M12-24E12-Level-V TR60M12-24E11-Level-V TR60M19-01E11-Level-V TR60M12-11E02-Level-V