



# TR18RDM SERIES

## 18W MEDICAL SWITCHING ADAPTER



### Features

- \* Universal Input Range 80~264VAC
- \* Interchangeable AC Plugs
- \* Leakage Current < 30uA
- \* Over Voltage Protection
- \* Continuous Short Circuit Protection
- \* No Load Power Consumption<75mW
- \* Approved EN55011, FCC CFR47 Part 18 Class B
- \* Approved EN60601-1-11 for Home Healthcare Applications
- \* Meets IP22
- \* Meets 2MOPP Class II
- \* Meets EN60335-1
- \* Meets CoC Tier 2 & DoE Level VI  
(Output Cable Length  $\leq$  1800mm)



### Ordering information

| TR18RDMXXX | -XX          | G               | XX   | -XX-BK              |
|------------|--------------|-----------------|--|---------------------|
| Model No.  | DC Plug Type | UL1571 WITH OVP | DC Cable Length and Type                                     | Color of Top Case   |
|            |              |                 | 01: 720mm  | BK-BK : Black-Black |
|            |              |                 | 02: 1220mm   | BE-BK : Blue-Black  |
|            |              |                 | 03: 1800mm   |                     |
|            |              |                 | 11: 720mm with Ferrite Core                                  |                     |
|            |              |                 | 12: 1220mm with Ferrite Core                                 |                     |
|            |              |                 | 13: 1800mm with Ferrite Core                                 |                     |
|            |              |                 | * 18AWG / UL1571 or Equivalent for Vo: 5V                    |                     |
|            |              |                 | * 22AWG / UL1571 or Equivalent for Vo: 9V, 12, 15V, 18V, 24V |                     |

| MODEL      | OUTPUT VOLTAGE | OUTPUT CURRENT | RIPPLE & NOISE<br>NOTE 1 | VOLTAGE ACCURACY<br>NOTE 2 | LINE REGULATION<br>NOTE 3 | LOAD REGULATION<br>NOTE 4 | % EFF. (Typ.)<br>NOTE 5 |
|------------|----------------|----------------|--------------------------|----------------------------|---------------------------|---------------------------|-------------------------|
| TR18RDM050 | 5 V            | 3 A            | 100mVp-p                 | $\pm 5\%$                  | $\pm 1\%$                 | $\pm 5\%$                 | 81.84%                  |
| TR18RDM090 | 9 V            | 2 A            | 100mVp-p                 | $\pm 3\%$                  | $\pm 1\%$                 | $\pm 3\%$                 | 85.45%                  |
| TR18RDM120 | 12 V           | 1.5 A          | 120mVp-p                 | $\pm 3\%$                  | $\pm 1\%$                 | $\pm 2\%$                 | 85.45%                  |
| TR18RDM150 | 15 V           | 1.2 A          | 120mVp-p                 | $\pm 3\%$                  | $\pm 1\%$                 | $\pm 2\%$                 | 85.45%                  |
| TR18RDM180 | 18 V           | 1 A            | 120mVp-p                 | $\pm 3\%$                  | $\pm 1\%$                 | $\pm 2\%$                 | 85.45%                  |
| TR18RDM240 | 24 V           | 0.75 A         | 120mVp-p                 | $\pm 3\%$                  | $\pm 1\%$                 | $\pm 2\%$                 | 85.45%                  |

Specifications are subject to change without notice.

## Specifications

### INPUT SPECIFICATIONS:

|                       |                                  |
|-----------------------|----------------------------------|
| Voltage .....         | 80~264Vac                        |
| Frequency .....       | 47 to 63Hz                       |
| Input Current .....   | 0.5A max.                        |
| Inrush Current .....  | Cold start@25°C 45A max. @240Vac |
| Leakage Current ..... | 30uA max.                        |

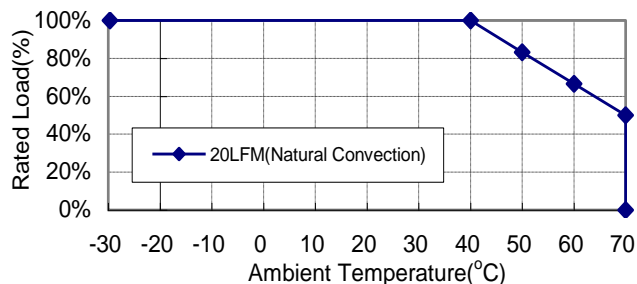
### OUTPUT SPECIFICATIONS:

|                                |                                       |
|--------------------------------|---------------------------------------|
| Hold-up Time .....             | 12ms typ. @115Vac                     |
| Short Circuit Protection ..... | Hiccup Mode Continuous(Auto Recovery) |
| Over Voltage Protection .....  | TVS Component to Clamp                |

### GENERAL SPECIFICATIONS:

|                             |  |
|-----------------------------|--|
| Isolation .....             | Input to output 4,000VAC                         |
| Operating Temperature ..... | -30 ~ 70°C (see derating curve)                  |
| Storage Temperature .....   | -30~85°C   |
| Humidity .....              | 93% RH max. Non condensing                       |
| Cooling .....               | Natural Convection                               |
| Switching Frequency .....   | 65KHz Typical                                    |
| MTBF .....                  | MIL-HDBK-217F, GB, 25°C/115VAC .....750Khrs min. |
| Altitude .....              | 5000m  |
| Dimensions .....            | 3.165x1.693x1.453 inches (80.40x43.00x36.90mm)   |
| Weight .....                | 115g(0.253Pounds)                                |

## TR18RDM Series Derating Curve



### SAFETY AND EMC:

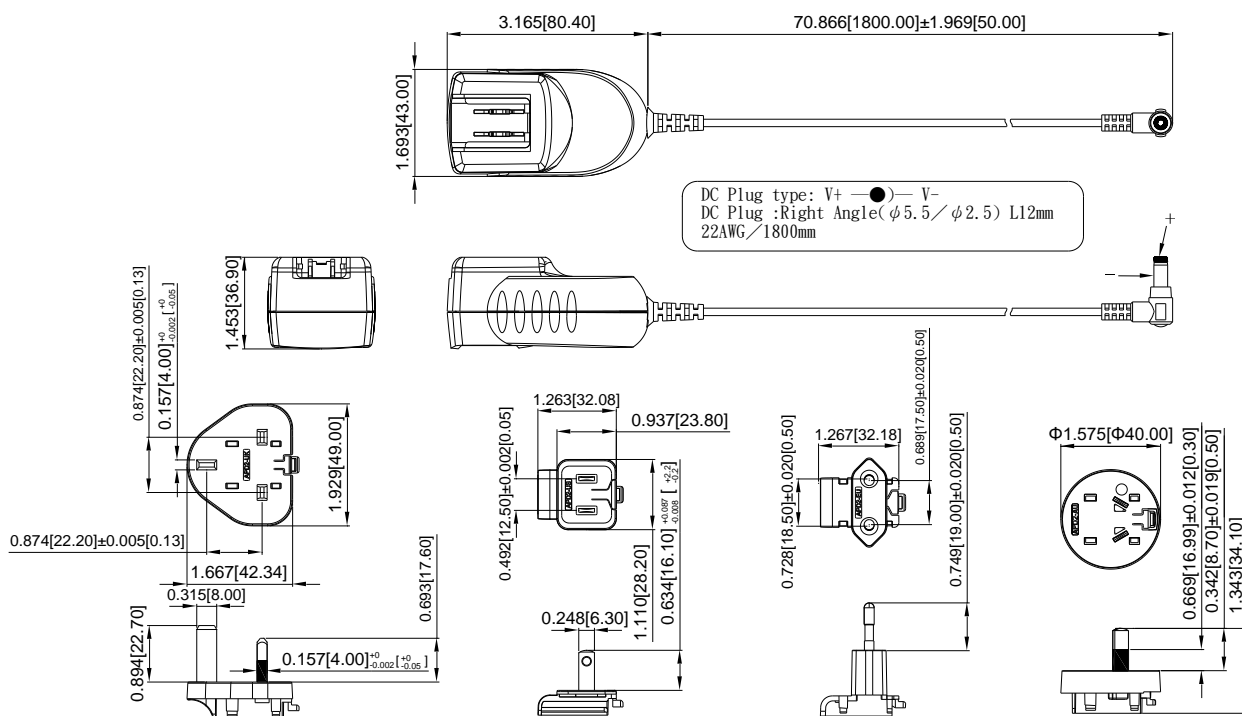
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|------------------------------------|--|
| Emission and Immunity(Ed4.0) ..... | EN55011 Class B, EN61000-3-2, 3<br>EN60601-1-2, IEC61000-4-2,4,5,6,8,11<br>FCC CFR47 Part 18 Class B |
| Safety (Medical Ed3.1) .....       | IEC 60601-1:2005+A1:2012<br>EN 60601-1:2006+A11:2011+A1+A12:2013<br>ANSI/AAMI ES60601-1:2005/A1:2012 |

### NOTE:

1. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for ripple&noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation is measured from 100Vac to 240Vac full load.
4. Load regulation is measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%, 50%, 75%, 100% load and input.

## Mechanical Specification

All Dimensions are in inches[mm]  
Tolerance:Inches:X.XXX±0.02  
Millimeters:X.XX±0.5  
UNIT: inches[mm]



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