



## 36 Watt Medical Switching Desk Top Adapter Series DVTR36M



### Features

- Universal Input Range 80 – 264Vac
- High Efficiency up to 89%
- Class II
- No Load Power Consumption < 75mW
- Approval IEC/EN/UL 60601-1 2 MOPP
- Approval EN60601-1-11 for Home Healthcare Applications
- Approval IP21
- Approved EN55011, FCC CFR47 Part15 Class B
- Meets IEC/EN 60335-1
- Over Voltage Protection
- Continuous Short Circuit Protection
- Meets CoC Tier 2 & DoE Level VI

MODEL NUMBER	OUTPUT VOLTAGE [ VDC ]	MAX. LOAD [ A ]	RIPPLE & NOISE [ mV p-p ] NOTE 2	VOLTAGE ACCURACY [ % ] NOTE 1	LOAD REGULATION [ % ] NOTE 4	EFF. TYP. [ % ] NOTE 5	LOAD CAPACITANCE MAX. [ μF ] NOTE 3
TR36M050	5,0	5,0	100	±2	±6	83	5000
TR36M090	9,0	3,3	120	±2	±4	87	3300
TR36M120	12	2,5	120	±2	±2	88	2500
TR36M135	13,5	2,4	130	±2	±2	89	2400
TR36M150	15	2,4	150	±2	±2	88	2400
TR36M180	18	2,0	180	±2	±2	88	2000
TR36M240	24	1,5	240	±2	±2	88	1500
TR36M360	36	1,0	360	±2	±2	89	1000
TR36M480	48	0,75	480	±2	±2	89	750

NOTE:

1. Voltage accuracy is set at 60% full load.
2. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
3. Vin=115Vac and 230Vac; Output is max. load
4. Load regulation is measured from 60% to 100% full load and from 60% to 20% full load (60%±40% full load).
5. Typical efficiency at 230 Vac and 75% full load at 25°C.

### Ordering Information

Model	Output	DC Plug Type	Cable	DC Cable Length
TR36M	XXX	-XX	X	XX
36W Medical Adapter	050 : 5V	STANDARD OUTPUT DC PLUG	G: UL1571 with OVP E: UL1185 with OVP	01: 720mm 02: 1220mm 03: 1800mm 11: 720mm with Ferrite Core 12: 1220mm with Ferrite Core 13: 1800mm with Ferrite Core
	090 : 9V			
	120 : 12V			
	135 : 13,5V			
	150 : 15V			
	180 : 18V			
	240 : 24V			
	360 : 36V			
	480 : 48V			
	240 : 24V			

Example:

TR36M120-01G03, 12V<sub>dc</sub> Output, DC Jack Type, Cable Length 1800mm

Technische Änderungen vorbehalten / Specifications are subject to change without notice

## INPUT SPECIFICATIONS:

Input Voltage Range.....	80-264Vac
	120 – 370Vdc
Input Frequency Range.....	47 to 63Hz
Input Current.....	100% Load, Vin=100Vac ..... 0,9A max.
Leakage Current.....	80µA max.
Inrush Current.....	Vin=240Vac, Cold start at 25°C ..... 100A max.

## OUTPUT SPECIFICATIONS:

Hold-up Time.....	Vin 115Vac ..... 10ms typ.
Line Regulation.....	Measured from 100Vac to 240Vac with 100% full load. .... ±1.0% max.
Over Voltage Protection.....	IC component to clamp (auto recovery)
Over Current Protection.....	Auto recovery ..... 110% min / 160% max.
Short Circuit Protection.....	Auto recovery ..... Continuous

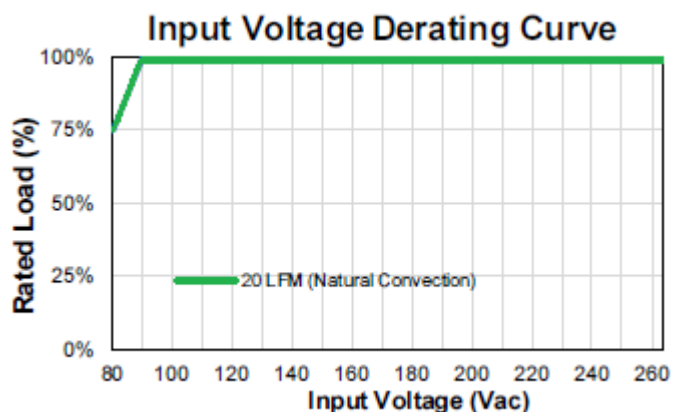
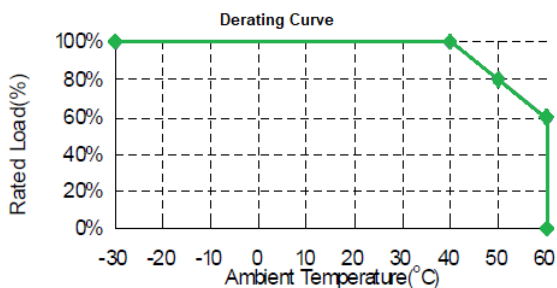
## GENERAL SPECIFICATIONS:

Isolation.....	Input to Output , 1 minute ..... 4000VAC max.
Isolation Resistance.....	Input to output ..... 100 MΩ min.
Switching Frequency.....	..... 65KHz typ.
Operating Temperature Range.....	see derating curve ..... -30°C to +60°C
Storage Temperature Range.....	..... -30°C to +85°C
Humidity.....	Non condensing ..... 93% RH max.
Cooling.....	Natural Convection
MTBF.....	Io=100%; Ta=25°C per MIL-HDBK-217F ..... 750Khrs min.
Altitude.....	..... 5000m max.
Shock.....	MIL-STD-810F Table 516.5 ..... 75g typ.
Vibration.....	MIL-STD-810F Table 514.5C-VIII ..... 4g typ
Dimensions.....	..... 100 x 45 x 50 mm
Weight.....	..... 150g typ.

## SAFETY & EMC:

Safety.....	Class II, IEC 60601-1, EN 60601-1-11, EN 60601-1, ANSI/AAMI ES 60601-1
EMC Emission.....	EN 55011:2016+A1:2017 Class B, EN 61000-3-2:2014, EN 6100-3-3:2013 CISPR PUB. 22, FCC Part 15 Subpart B
Conducted Disturbance.....	EN 55011:2016+A1:2017, FCC Part 15 Subpart B Class B
Radiated Disturbance.....	EN 55011:2016+A1:2017, FCC Part 15 Subpart B Class B
Harmonic Current Emissions.....	EN 61000-3-2
Voltage Fluctuations & Flicker.....	EN 61000-3-3
EMC Immunity.....	EN 60601-1-2:2015, IEC 61000-4-2, 3, 4, 5, 6, 8, 11
Electrostatic Discharge (ESD).....	IEC 61000-4-2:2008, Air Discharge: ±15kV, Contact Discharge: ±8kV
Radio-Frequency, Continuous, Radiated Disturbance.....	IEC 61000-4-3
Electrical Fast Transient (EFT).....	IEC 61000-4-4
Surge.....	IEC61000-4-5
Conducted Disturbances, Induced by RF Fields.....	IEC 61000-4-6
Voltage Dips.....	IEC 61000-4-11:2004+A1:2017, Dips: 30% Reduction, Dips: >95% Reduction
Voltage Interruptions.....	IEC 61000-4-11:2004+A1:2017, >95% reduction

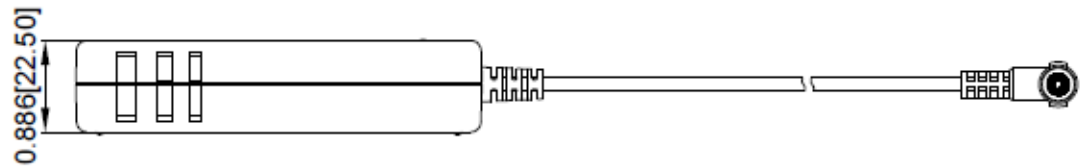
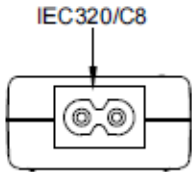
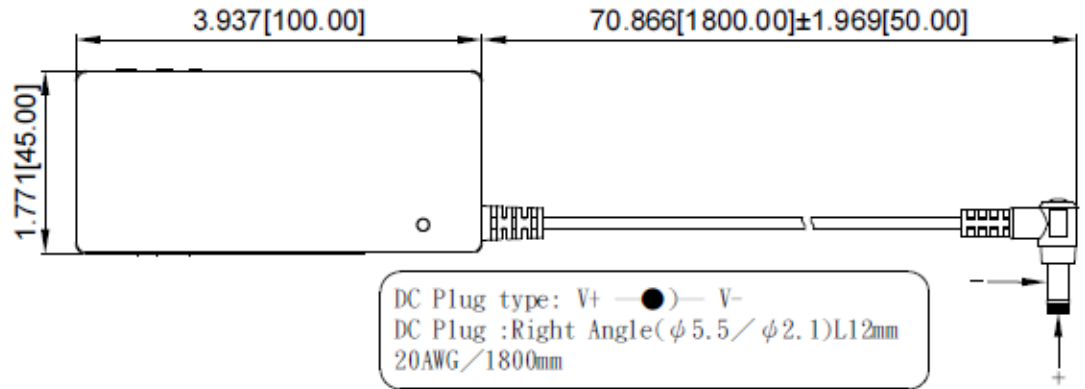
## Derating Curve

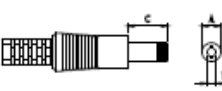
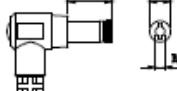
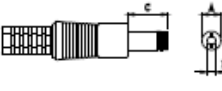

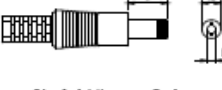



# MECHANICAL SPECIFICATION

# Series DVTR30RDM

All Dimensions in Inches (mm); Tolerance: x.xxx±0.02, mm: x.xx±0.5



DC Plug Type	Cable Number-XXXXX	A	B	C	Cable Type	Cable Length	Cable AWG
		OD (mm)	ID (mm)	L (mm)			
 Straight/Inner+Outer- + ● -	11G02	Φ5.5	Φ2.1	12	UL1571	1220mm without Core	16AWG for Vo: 5V
	12G02	Φ5.5	Φ2.5	12			
	23G02	Φ5.5	Φ2.1	9.5			
	26G02	Φ5.5	Φ2.5	9.5			
 Right Angle/Inner+Outer- + ● -	01G02	Φ5.5	Φ2.1	12			
	02G02	Φ5.5	Φ2.5	12			
	21G02	Φ5.5	Φ2.5	9.5			
	24G02	Φ5.5	Φ2.1	9.5			
 Straight/Inner+Outer- + ● -	11G03	Φ5.5	Φ2.1	12	UL1571	1800mm without Core	18AWG for Vo: 9V, 12V, 13.5V 20AWG for Vo: 15V, 18V, 24V
	12G03	Φ5.5	Φ2.5	12			
	23G03	Φ5.5	Φ2.1	9.5			
	26G03	Φ5.5	Φ2.5	9.5			
 Right Angle/Inner+Outer- + ● -	01G03	Φ5.5	Φ2.1	12			
	02G03	Φ5.5	Φ2.5	12			
	21G03	Φ5.5	Φ2.5	9.5			
	24G03	Φ5.5	Φ2.1	9.5			
 Straight/Inner+Outer- + ● -	11E03	Φ5.5	Φ2.1	12	UL1185	1800mm without Core	20AWG for Vo: 36V, 48V
	12E03	Φ5.5	Φ2.5	12			
	23E03	Φ5.5	Φ2.1	9.5			
	26E03	Φ5.5	Φ2.5	9.5			
 Right Angle/Inner+Outer- + ● -	01E03	Φ5.5	Φ2.1	12			
	02E03	Φ5.5	Φ2.5	12			
	21E03	Φ5.5	Φ2.5	9.5			
	24E03	Φ5.5	Φ2.1	9.5			

Other DC Plug Type on request

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