https://product.tdk.com/en/power/dtm
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25 to 36W Medical External Power Supplies



Medical Home Medical

The DTM36-C8 Class II 25 to 36W external power supplies are certified to IEC/ES/EN60601-1 and EN60601-1-11, are compliant to EN60601-1-2 (Ed4) and designed to meet IEC60335-1 (Household Appliances). Requiring no earth ground, the DTM series is ideally suited for Medical, Clinical and Home Healthcare applications. Alternative connectors and cable assemblies are available on request.

Features	Benefits
• Medical Safety Certifications and Immunity	• Suitable for Medical, Clinical and Home Healthcare Use
• Class II Input	• No Earth Ground Connection Needed
• Meets DoE Level VI and EU Tier 2 Efficiency, <75mW Off-load Power Consumption	• Meets US and EU Energy Saving Legislation
• 4kV (2xMOPP) Input to Output Isolation	• Fully Isolated For Use With B and BF Rated Equipment
• Alternative Connectors and Cable Assemblies	• Flexible System Integration

Model Selector

Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage Protection (V) (Typical)	Maximum Load Capacitance (uF)	Efficiency (%) (230Vac input, 75% Load)	Average Efficiency (%) (1)
DTM36CN050-C8	5	5	25	7.44	5,000	85	85.0
DTM36CN090-C8	9	3.3	29.7	12.6	3,300	88	87.7
DTM36CN120-C8	12	2.5	30	15.9	2,500	89	87.7
DTM36CN135-C8	13.5	2.4	32.4	18.5	2,400	89	87.9
DTM36CN150-C8	15	2.4	36	21.5	2,400	89	88.3
DTM36CN180-C8	18	2	36	24.8	2,000	89	88.3
DTM36CN240-C8	24	1.5	36	31.5	1,500	89	88.3
DTM36CN360-C8	36	1	36	45.2	1,000	89	88.3
DTM36CN480-C8	48	0.75	36	59.6	750	89	88.3

DTM36CN	120	C8	-	xxx
	Output voltage 5, 9, 12, 13.5, 15, 18, 24, 36, 48	IEC C8 input connector		Connector/Cable Options* (When applicable)

* Options
When no option code is stated:
5V output model has a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and a 16 AWG 1220mm long cable
9V, 12V and 13.5V output models have a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and an 18 AWG 1800mm long cable
≥15 models have a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and an 20 AWG 1800mm long cable

Specifications

Model		DTM36-C8
Input		
Input Voltage range (2)	Vac	80 - 264
Input Frequency	Hz	47 - 63
Input Current (110/230Vac)	A	< 0.9
Inrush Current at 240Vac (Cold Start)	A	≤ 100
Leakage Current	uA	≤ 80
Harmonic Compliance	-	Meets IEC61000-3-2
No Load Power Consumption	mW	< 75
Hold Up Time (typ) at 115Vac Input	ms	10
Efficiency	-	See model selector table
Average Efficiency	-	See model selector table
Conducted & Radiated EMI	-	EN55011-B Conducted, EN55011-B Radiated, EN60601-1-2
Immunity	-	See immunity table
Insulation Class	-	Class II
Safety Agency Certifications	-	IEC/ES/EN60601-1, EN60601-1-11, CE Mark (LVD, EMC and RoHS). Designed to meet IEC60335-1

Immunity

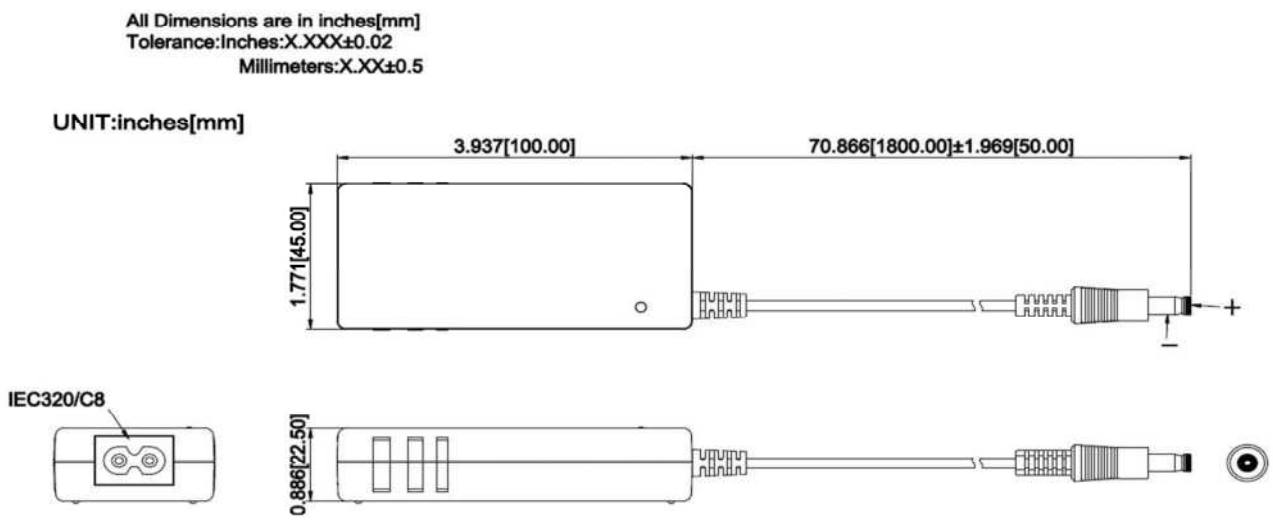
Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	4	A	
Radiated Susceptibility	EN61000-4-3	3	A	80-2700MHz
	EN60601-1-2 table 9	-	A	Pass
Electrical Fast Transient Burst	EN61000-4-4	3	A	(AC Port,100kHz)
Surge	EN61000-4-5	3	A	-
Conducted Susceptibility	EN61000-4-6	3	A	10V (61000-6-2)
	EN60601-1-2 table 6	-	A	6V (60601-1-2)
Magnetic fields	EN61000-4-8	N/A	N/A	-
Voltage Dips and Input Interruptions	EN61000-4-11 Class 2 Industrial, including EN60601-1-2 (100Vac)	0% for 1/2 cycle	A	
		0% for 1 cycle	A	
		70% for 25/30 cycles	A	
		0% for 250/300 cycles	B	

Specifications

Model		DTM36-C8
Output		
Output Voltage Tolerance	%	±2% at 60% load
Output Voltage Adjustment	-	None
Switching Frequency (Typical)	kHz	65
Line Regulation	%	±1% of rated output voltage from 100 to 240Vac
Load Regulation (3)	%	5V: ±6%, 9V: ±4%, 12-48V: ±2% of rated output voltage
External Load Capacitance	uF	See model selector table
Ripple & Noise (4)	mV	5V: 100, 9V & 12V: 120, 13.5V: 130, 15V: 150, 18V: 180, 24V: 240, 36V: 360, 48V: 480
Temperature Coefficient	%/°C	±0.05
Minimum Load	-	No minimum load required
Overcurrent Protection	-	Hiccup mode with auto recovery
Overvoltage Protection	V	Diode clamp, auto recovery. See model selector table
Indicators	-	LED indicates DC output is on
Parallel Operation	-	Not possible
Environmental		
Operating Temperature	°C	-30 to 60, derate linearly from 100% to 60% load from 40 to 60
Storage Temperature	°C	-30 to +85
Humidity (non condensing)	%RH	5 - 93%RH
Cooling	-	Convection
Altitude	m	5,000
Withstand Voltage (For 1 minute)	Vac	Input to Output 4,000 (2xMOPP)
Isolation Resistance	MΩ	>100 at 25°C
IP Rating	-	IP21
Vibration (Operating)	-	Meets MIL-STD-810F Table 516.5, Table 516.5-1, 10ms, each axis 3 times (± X, Y, Z axis)
Shock	-	Meets MIL-STD-810F Table 514.5C-VIII, 15~200Hz, X, Y, Z axis, 1hr each axis, total 3hrs
Other		
Weight (Typ)	g	150
Size (LxWxH)	mm	100 x 45 x 22.5
Size (LxWxH)	Inches	3.937 x 1.771 x 0.886
AC Input Connector	-	IEC 320-C8 (2 prong)
DC Output Connector	-	See model selector (options)
MTBF - MIL-HDBK-217F, GB, 25°C, 115Vac input	hrs	1,000,000 max
Warranty	yrs	3

Notes
See website for detailed specifications, test methods and installation manual
(1) Measured at 25%, 50%, 75% and 100% load conditions
(2) Derate linearly from 100% to 75% load from 90Vac input to 80Vac input
(3) Measured from 60 - 100% and 60 - 20% load
(4) Ripple and noise is measured at 20MHz BW. Add 0.1uF ceramic capacitor and 10uF Electrolytic capacitor in parallel across the output

Outline Drawing (Straight connector with 20AWG 1,800mm cable shown)



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