

40-65W Medical Class I AC-DC External Power Supplies

<https://product.tdk.com/en/power/dtm>
www.emea.lambda.tdk.com/dtm



Medical Home Medical

The DTM65-D Class I 40 to 65W external power supplies are certified to IEC/ES/EN/UL/CSA 60601-1 and are compliant to EN60601-1-2 (Ed4). With an average efficiency of greater than 89% and an off-load power consumption of less than 0.15W, this series also complies with DoE Level VI and EU Tier 2 v5 standards for efficiency and off-load power. The DTM65-D series is ideally suited for a variety of hospital, dental and healthcare applications, including diagnostic and monitoring equipment.

Features	Benefits
• Medical Safety Certifications and Immunity	• Suitable for Medical and Clinical Use
• Meets DoE Level VI & EU Tier 2 Efficiency	• Meets US and EU Energy Saving Legislation
• >89% Average Efficiency, <0.15W No Load Power	• Consumes Less Energy
• 4kV (2xMOPP) Input to Output Isolation	• Suitable for B and BF Rated Equipment
• Wide Range Input (90-264VAC)	• Global Operation

Model Selector					
Model	Output Voltage (V)	Max Current (A)	Max Power (W)	Overvoltage Protection (V)	Ripple & Noise (mVpk-pk)
DTM65PW050D	5	8.0	40	5.5 - 8.5	120
DTM65PW120D	12	5.0	60	13.2 - 16.0	120
DTM65PW150D	15	4.0	60	16.5 - 30.0	150
DTM65PW190D	19	3.42	65	20.9 - 35.0	190
DTM65PW240D	24	2.70	65	26.4 - 35.0	240
DTM65PW280D	28	2.32	65	30.0 - 35.0	280
DTM65PW360D	36	1.81	65	41.0 - 50.0	360
DTM65PW480D	48	1.35	65	52.8 - 60.0	480

DTM65PW	240D
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050D	5V Output Voltage
120D	12V Output Voltage
150D	15V Output Voltage
190D	19V Output Voltage
240D	24V Output Voltage
280D	28V Output Voltage
360D	36V Output Voltage
480D	48V Output Voltage

Specification		
Model		DTM65-D
Input		
Input Voltage range	Vac	90 - 264
Input Frequency	Hz	47 - 63
Input Current (90/264Vac)	A	2 / 1
Inrush Current at 230Vac (Cold Start) (1)	A	<90 (25°C ambient)
Touch Current	uA	<100
No Load Power Consumption	mW	<150
Hold Up Time (typ) at 115Vac Input	ms	16
Average Efficiency (2)	%	>89 (5V Model: 87.3)
Conducted & Radiated EMI	-	EN55011-B, FCC Part 18 Class B
Immunity	-	IEC60601-1-2 Ed4:2014
Safety Agency Certifications	-	IEC/ES/UL/CSA/EN60601-1, CE Mark (LVD, EMC and RoHS)
Output		
Voltage Accuracy	%	Included in Total Regulation Specification
Output Voltage Adjustment	-	None
Switching Frequency (Full Load)	kHz	50 - 70
Total Regulation	%	±5
Ripple & Noise (3)	-	See Model Selector Table
Temperature Coefficient	%/°C	±0.05
Minimum Load	-	No minimum load required
Overcurrent Protection	%	170 (Auto-Recovery)
Overvoltage Protection	-	See Model Selector Table (Cycle input power to reset)
Short Circuit Protection	-	Continuous - Hiccup Mode (Auto-Recovery)
Indicators	-	LED indicates DC output is on
Parallel Operation	-	Not possible
Environmental		
Operating Temperature (4)	°C	-20 to 60 derate linearly to 50% load from 50 to 60
Storage Temperature	°C	-20 to 85
Humidity (non condensing)	%RH	10 - 90
Cooling	-	Convection
Altitude	m	5,000
Withstand Voltage (For 1 minute)	Vac	Input to Output 4,000 (2xMoPP), Input to Ground 1,500 (1xMoPP); Output is connected to Ground
Isolation Resistance	MΩ	20
IP Rating	-	IP20
Other		
Weight (Typ)	g	390
Size (LxWxH)	mm	132 x 69 x 40
Size (LxWxH)	Inches	5.20 x 2.72 x 1.57
AC Input Connector	-	IEC 320-C14 (3 prong)
DC Output Connector	-	Kycon KPPx-4P or equivalent, Pins 1 & 2: -Vout, Pins 3 & 4: +Vout
Cable Length & Thickness		5V Model: 600mm; UL 1571 #14AWG; 12 to 48V Models: 1,000mm; UL 1571 #14AWG
MTBF (MIL-HDBK-217), 100% load, 25°C	hrs	100,000
Warranty	yrs	3

Notes

See website for detailed specifications, test methods and installation manual

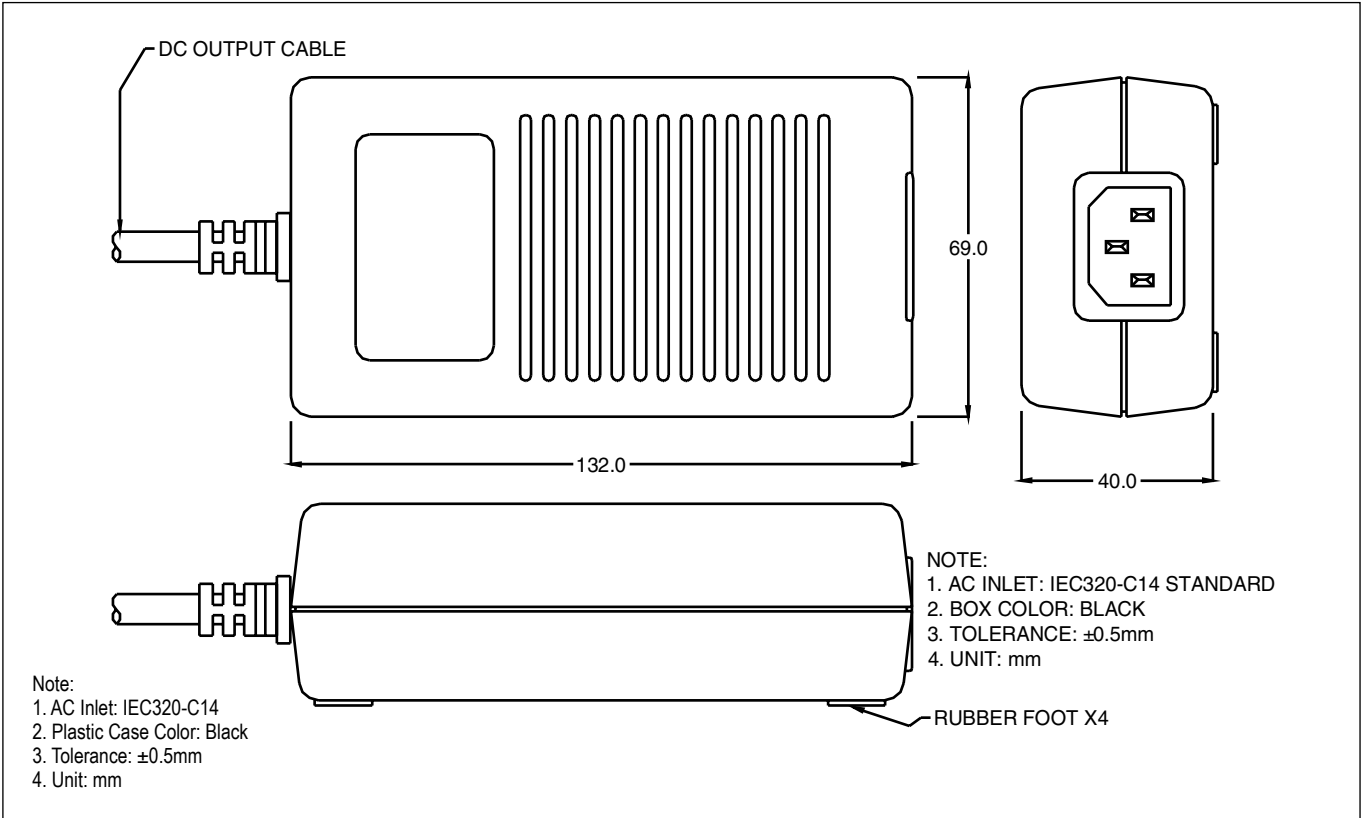
(1) Inrush current for 5V model is 120A peak @ 230VAC cold start (25°C ambient)

(2) Measured at 25%, 50%, 75% and 100% load conditions

(3) Ripple and noise is measured at 20MHz BW. Add 0.1uF ceramic capacitor and 47uF Electrolytic capacitor in parallel across the output

(4) Derate linearly to 80% load from 0 to -20°C

Outline Drawing





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