

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) | Oversvoltage 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

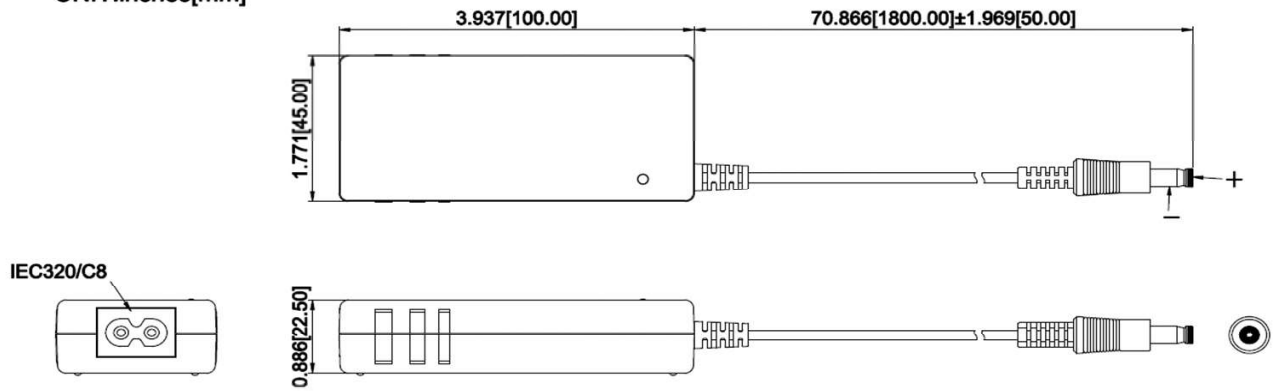
See website for detailed specifications, test methods and installation manual

- (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)

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

UNIT:inches[mm]





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