

# MENT1220

Universal 220 Watt Series

Medical Switch-Mode Power Supply



3Year Warranty

- Universal Input 100Vac – 240Vac
- 12V to 48V Single Output Models up to 220W
- Desktop Style/Non-vented case - No internal fan!
- Ribbed Case Surface to improve cooling
- Energy Star 2.0, Level V
- Certified to Medical (UL/IEC/EN60601-1) and ITE (UL/IEC/EN60950-1) Standards
- IPX1 Rated Enclosure
- Class I and Class II input versions available.
- Modified and Custom Designs



International Safety Standard Approvals



## Specifications

All Specifications are typical at nominal input, full load at 25°C unless otherwise stated.

|                       |                                                   |                          |                                                                   |
|-----------------------|---------------------------------------------------|--------------------------|-------------------------------------------------------------------|
| AC Input              | 100-240VAC, +/-10%, 47-63 Hz single phase         | MTBF                     | >100,000 hours (calculated)                                       |
| Input Current         | 115VAC: 4A max, 230VAC: 1.5A max                  | Hold-up Time             | 21 ms min. @ 100VAC                                               |
| Inrush Current        | 75A max. @ 264VAC, Cold Start                     | Overvoltage Protection   | 130% of nominal output voltage                                    |
| Input Fuses           | Internal 6.3A Primary Current Fuses are provided  | Overload Protection      | 110-150% of full rated load, auto-recovery                        |
| PFC, Harmonics        | IEC61000-3-2                                      | Short Circuit Protection | Hiccup Mode, auto-recovery                                        |
| Earth Leakage Current | <350µA typical @264VAC, 50Hz                      | Switching Frequency      | 50-120kHz, variable                                               |
| Efficiency            | 88% typical                                       | Medical Safety Standards | EN/IEC/UL60601-1                                                  |
| No Load Power         | <0.5W                                             | ITE Safety Standards     | EN/IEC/UL60950-1                                                  |
| Transient Response    | 5ms max. for 50% load step<br>Max deviation is 5% | Isolation:               | Input-Output: 4KVac, Input-GND: 1.5KVac<br>Output-GND: 700Vdc     |
| Output Voltage        | See chart                                         | Operating Temp.          | 0° - 70°C, derate above 40°C to<br>60% of full rated load at 70°C |
| Line Regulation:      | +/-0.5% max                                       | Storage Temperature      | -20 to +85°C                                                      |
| Load Regulation       | +/-3% max                                         | Relative Humidity        | 5% to 95%, non-condensing                                         |
| Minimum Load          | Not required                                      | Altitude                 | 0 to 10,000 ft                                                    |
| Ripple and Noise      | 1% pk-pk max., 20MHz BW, differential mode        | Case Material            | Black 94V-0 rated Polycarbonate                                   |
| Turn-on Time          | 3 sec. maximum @ 115VAC                           | Case Dimensions          | Desktop Style: 8.4" x 4.25" x 1.85"                               |
| Output Connections    | See chart and outline drawing                     | Weight                   | 1200g                                                             |

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| Model Number     | Output Volts | OUTPUT PARAMETERS    |           |                   |
|------------------|--------------|----------------------|-----------|-------------------|
|                  |              | Output Current (max) | Max Watts | Ripple (Vp-p max) |
| MENT1220A1251F01 | 12V          | 15.0A                | 180W      | 120mV             |
| MENT1220A1551F01 | 15V          | 13.0A                | 195W      | 150mV             |
| MENT1220A1851F01 | 18V          | 11.7A                | 210W      | 240mV             |
| MENT1220A2451F01 | 24V          | 9.2A                 | 220W      | 240mV             |
| MENT1220A2851F01 | 28V          | 7.9A                 | 220W      | 280mV             |
| MENT1220A3251F01 | 32V          | 6.9A                 | 220W      | 320mV             |
| MENT1220A4851F01 | 48V          | 4.6A                 | 220W      | 480mV             |

## Model Number Key

MENT 1 220 A VV 51 F 01

|                      |                                                                                                  |
|----------------------|--------------------------------------------------------------------------------------------------|
| Model Configuration: | "01" = Standard. "02" and higher indicates a modified model.                                     |
| Input Connector:     | "F" = IEC320 C14 grounded. See below for other options (consult factory for availability)        |
| Output Connector:    | "51" - Molex 39-01-2060 or equivalent. Other options available, consult factory.                 |
| Output Voltage:      | "12" = 12Vdc, "15" = 15Vdc, "18" = 18Vdc, "24" = 24Vdc, "28" = 28Vdc, "32" = 32Vdc, "48" = 48Vdc |
| Model Configuration: | "A" = Model Configuration                                                                        |
| Output Power:        | "220" = 220 Watts                                                                                |
| # of Outputs         | "1" = Single Output                                                                              |
| Product Family:      | "M" = Medical, "E" = External, "NT" = Model Series Designator                                    |

## EMI/EMC Compliance

|                                         |                                                                     |
|-----------------------------------------|---------------------------------------------------------------------|
| Conducted Emissions                     | FCC Part 15, Subpart B, EN55011 Class B                             |
| Radiated Emissions                      | FCC Part 15, Subpart B, EN55011 Class B                             |
| Voltage Fluctuations                    | EN61000-3-3, Line Flicker                                           |
| Static Discharge Immunity               | EN61000-4-2, 6kV Contact Discharge, 8kV air discharge               |
| Radiated RF Immunity                    | EN61000-4-3, 3V/m.                                                  |
| EFT/Burst Immunity                      | EN61000-4-4, 2kV/5kHz..                                             |
| Line Surge Immunity                     | EN61000-4-5, 1kV differential, 2kV common-mode                      |
| Conducted RF Immunity                   | EN61000-4-6, 3Vrms                                                  |
| Power Frequency Magnetic Field Immunity | EN61000-4-8, 3A/m                                                   |
| Voltage Dip Immunity                    | EN61000-4-11 crit. A, 100Vac 60Hz, 40%/5 cycles with 70% full load. |
| Line Frequency Harmonics                | EN61000-3-2, Class A                                                |

## Input Receptacle Options



"N" = IEC320 C8  
Ungrounded



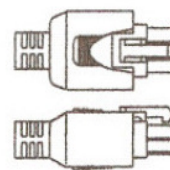
"F" = IEC320 C14  
Grounded



"Q" = IEC320 C18  
Ungrounded

## Output Connector

51



See outline drawings below for connector information and pinout.

# MENT1220

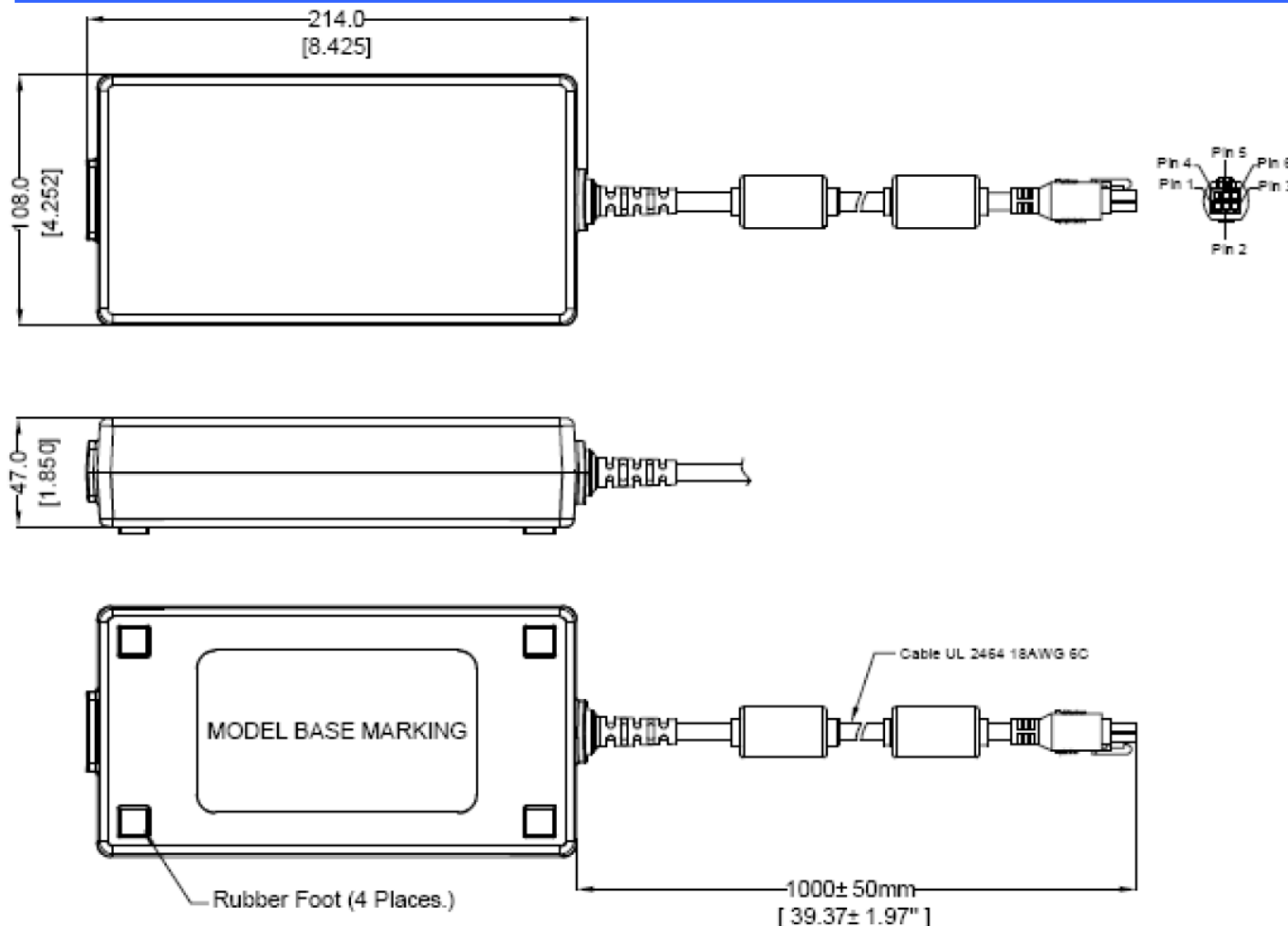
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## Outline Drawing: ("F" input receptacle shown)



## Output Connector Pinouts

| 12V thru 18V Models: |            |        | 24V thru 48V Models: |        |
|----------------------|------------|--------|----------------------|--------|
| Pin                  | Wire Color | Desig. | Wire Color           | Desig. |
| 1                    | Red        | +Vout  | Red                  | +Vout  |
| 2                    | Blue       | GND    | N/A                  | N/C    |
| 3                    | Green      | GND    | Green                | GND    |
| 4                    | White      | +Vout  | White                | +Vout  |
| 5                    | Yellow     | +Vout  | N/A                  | N/C    |
| 6                    | Black      | GND    | Black                | GND    |

**OUTPUT CONNECTOR:** Molex 39-01-2060 or equiv.

**MATING CONNECTOR:** Molex 39-01-2061 or equiv.

## Данный компонент на территории Российской Федерации

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Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

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