

# 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.

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

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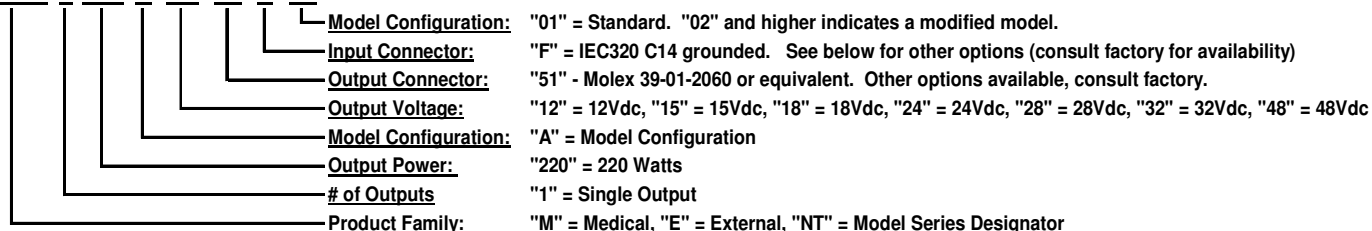
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Model Number	Output Volts	OUTPUT PARAMETERS		
		Output Current (max)	Max Watts	Ripple (Vp-p max)
MENT1220A1251F01	12V	15.0A	180W	120mV
MENT1220A1551F01	15V	13.0A	195W	150mV
MENT1220A1851F01	18V	11.7A	210W	240mV
MENT1220A2451F01	24V	9.2A	220W	240mV
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**



## 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



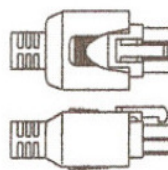
"F" = IEC320 C14  
Grounded



"Q" = IEC320 C18  
Ungrounded

51

## Output Connector



See outline drawings below for connector information and pinout.

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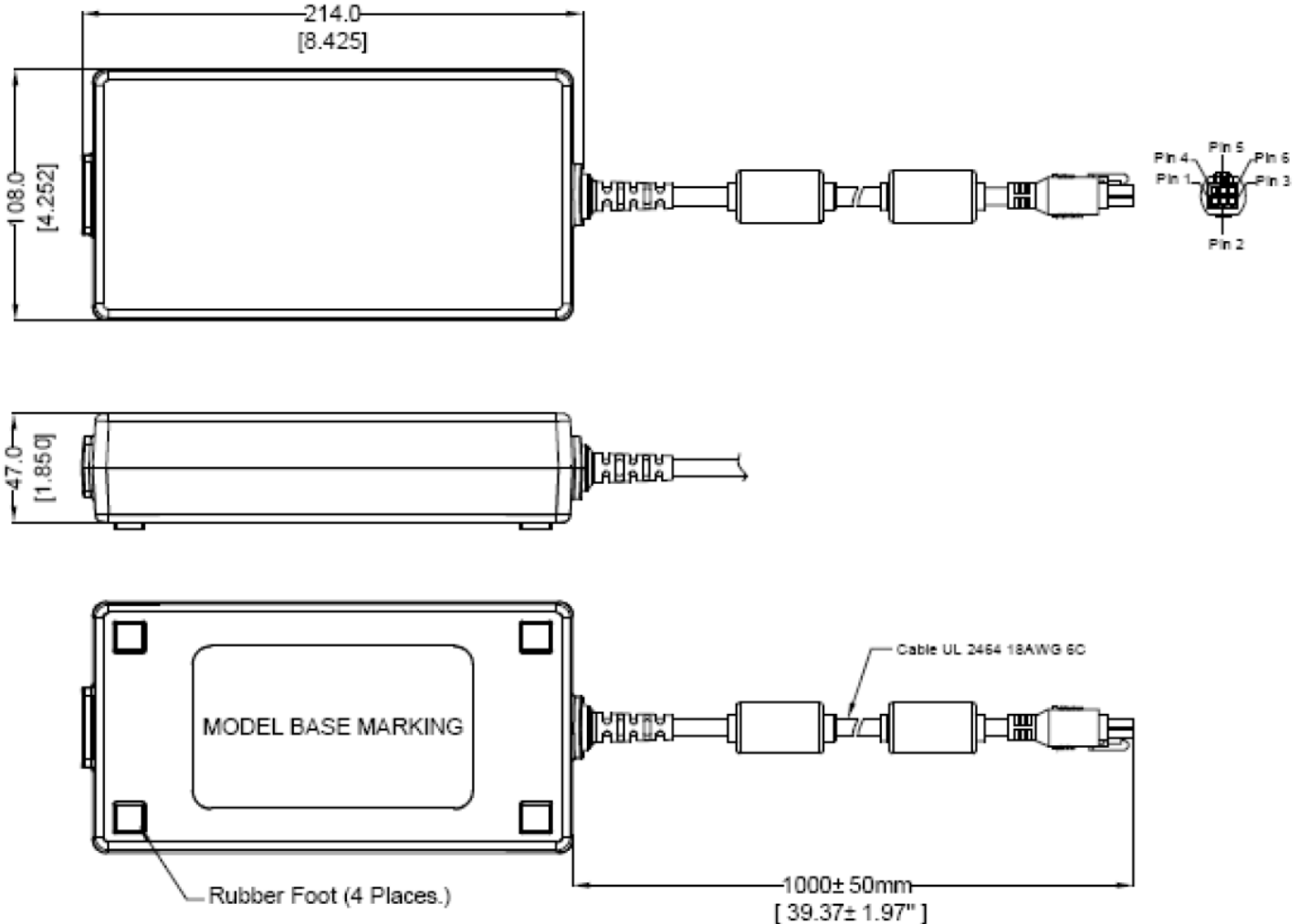
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## Outline Drawing: ("F" input receptacle shown)



## Output Connector Pinouts

Pin	12V thru 18V Models:		24V thru 48V Models:	
	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.