TRUMPower

TM1100 Series

1100 Watts AC/DC Medical & ITE Grade Power Supplies

FEATURES

- BF Rated
- 5,000 Meters Operating Altitude
- 5.91" x 9.25" x 2.40" Compact Size
- Low Leakage Current
- Efficiency up to 89%



INPUT SPECIFICATIONS

Input Voltage Range	90-264 VAC, with active PFC
Input Frequency	47-63Hz
Input Current	16A rms @ 100 VAC, 60Hz 8A rms @ 240 VAC, 50Hz
Inrush Current	50A @ 115 VAC or 100A @ 230 VAC, at 25°C cold start
Earth Leakage Current	220μA max. @ 264 VAC, 63Hz

OUTPUT SPECIFICATIONS

Output Power Ratings	See table
Output Voltage	See table
Tolerance	±2%
Ripple and Noise*	1% peak to peak max.
Remote Sense	Compensation for cable losses up to 0.5V
Over Voltage Protection	Set at 112-140% of its nominal output voltage
Over Current Protection	Set at 120-140% of maximum output current
Thermal Shutdown	Protected to over-temperature conditions
Temperature Coefficient	±0.04%/°C max.
Transient Response	Max. excursion of 4% or better on all models, recovering to 1% of final value within 500 μs after a 25% step load change
Standby Power	5V/200mA max.
Fan Power	12V/1A max.

* Peak to peak with 20MHz bandwidth and 10μF tantalum capacitor in parallel with a 0.1μF ceramic capacitor at rated line voltage and load ranges

MODELS LIST

Product No.	Output					
	Voltage	Max. Current	Max. Power	Peak Current (1)	Peak Power (1)	Ripple & Noise*
TM1100-S24C	24V	45.84A	1100W	52.10A	1250W	240mV
TM1100-S28C	28V	39.29A	1100W	44.65A	1250W	280mV
TM1100-S32C	32V	34.38A	1100W	39.07A	1250W	320mV
TM1100-S34C	34V	32.25A	1100W	36.77A	1250W	340mV
TM1100-S36C	36V	30.56A	1100W	34.73A	1250W	360mV
TM1100-S42C	42V	26.20A	1100W	29.77A	1250W	420mV
TM1100-S48C	48V	22.92A	1100W	26.10A	1250W	480mV

NOTES:

1. Peak current and power possible at 170-260 VAC input, 10 seconds, 35% duty cycle.

GENERAL SPECIFICATIONS

Switching Frequency	40 KHz-200 KHz
Power Factor	0.98 typical
Efficiency	87% typical @ 115 VAC, 89% typical @ 230 VAC
Operating Altitude	5,000 meters max.
Hold-up Time	10ms @ 110 VAC
Line Regulation	±0.5% max. @ full load
Load Regulation	±2% max. @ full load
Operating Temperature	-10°C to +70°C
Storage Temperature	-40°C to +85°C
Derating	Derate from 100% @ +50°C linearly to 50% @ +70°C, applicable to convection and forced-air cooling conditions
Relative Humidity	5% to 95% non-condensing
Withstand Voltage	4,000 VAC input-output (2MOPP) 1,500 VAC input-ground (1MOPP) 1,500 VAC output-ground (1MOPP)
MTBF	300K hours minimum at full load, 25°C ambient, calculated per MIL-HDBK-217F

STANDARDS & COMPLIANCES

IEC 60601-1-2	EMC Performance
EN55011	Class B conducted, Class B radiated
FCC, VCCI	Class B conducted, Class B radiated
EN61000-3-2	Harmonic distortion, Class A & D
EN61000-3-3	Line flicker
EN61000-4-2	ESD, ±8 KV air and ±6 KV contact
EN61000-4-3	Radiated immunity, 3V/m
EN61000-4-4	Fast transient/burst, ±2 KV
EN61000-4-5	Surge, ±1 KV diff., ±2 KV com.
EN61000-4-6	Conducted immunity, 3 Vrms
EN61000-4-8	Magnetic field immunity, 3A/m
EN61000-4-11	Voltage dip immunity, 30% reduction for 500ms, 60% reduction for 100ms, >95% reduction for 10ms
Safety Standards	UL/IEC/EN 60601-1 (3rd Edition) ANSI/AAMI ES 60601-1:2005 CSA C22.2 No. 60601-1:2008 UL/IEC/EN 60950-1 (2nd Edition)
Agency Approvals	UL, TUV, CB, CE
Other Compliance	RoHS

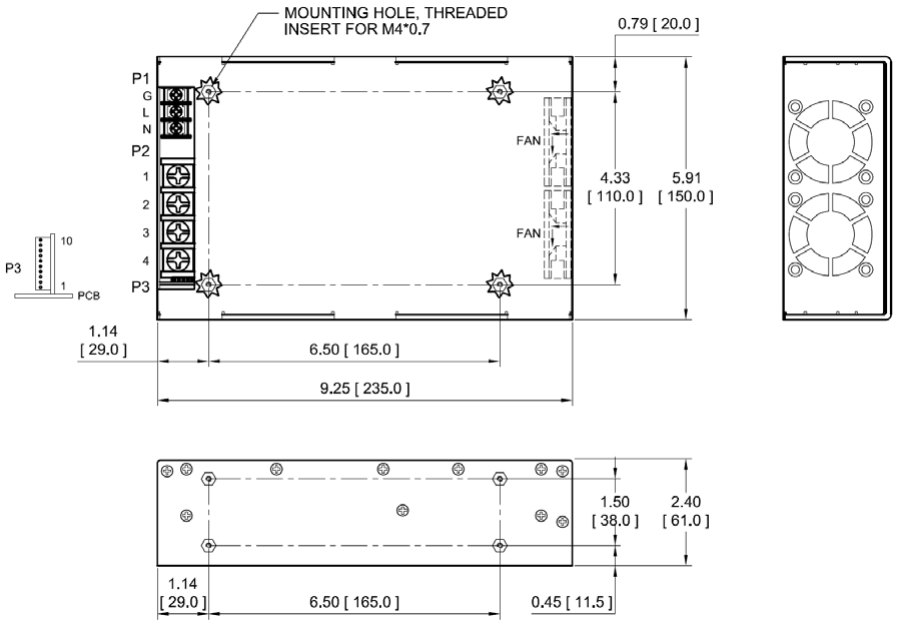
Tumbler Technologies + TRUMPower

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MECHANICAL SPECIFICATIONS



NOTES:

1. Dimensions: inches [mm]
2. Tolerance: 0.02 [0.5] maximum.
3. Input Connector P1: Dinkle terminal P/N DT-4C-B01W-03 with nickel plated M3.5 screws or equivalent.
4. Output Connector P2, P3: M5*0.8 screw connections.
5. Connector P4: Molex header 22-05-7105 or equivalent, mating with Molex housing 50-37-5103 or equivalent.
6. Weight: 2.89 Kg (6.35 lbs.) approx. for enclosed form.
7. Maximum penetration depth of fixing screws is 4mm from the outer surface of the chassis.

CONNECTORS & SIGNALS

CONNECTOR	PIN	FUNCTION
P1 (AC)	1	AC LIVE
	2	NEUTRAL
	3	AC GROUND
P2	1	+V
	2	
P3	1	+V RETURN
	2	
P4	1	COMMON RETURN
	2	+V SENSE
	3	-V SENSE
	4	PFD
	5	INHIBIT
	6	+5V STANDBY
	7	DC OK
	8	PS OFF
	9	+12V FAN
	10	FAN RETURN

CONTROL SIGNALS	
PFD	TTL high for normal operation, low upon loss of input power, turn-on delay time 100-2500ms, turn-off delay time 1ms minimum
INHIBIT	TTL low to turn off output
DC OK	TTL high when output voltage >95%
PS OFF	TTL high to turn off output

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