

DESCRIPTION

The PU1100 series of AC-DC switching power supplies in a package of 5.91 x 9.25 x 2.4 inches are capable of delivering 1100 watts of continuous power. The units are constructed on a printed circuit board with an enclosure for mechanical support and heat sinking. They are designed for ITE, telecommunication, audio/video and industrial applications.

FEATURES

- Active PFC, power factor 0.98 typical
- EN61000-3-2 class A and D compliant
- Operation up to 5000 meters
- Compact size 5.91" x 9.25" x 2.4"
- EN55032 Class B emissions
- Inhibit - TTL low to disable output
- Standard PS Off and DC OK signals
- High Efficiency 89% typical
- Compliant with RoHS requirements
- Standby output 5 VDC at 200 mA
- Variable speed internal fan
- Overvoltage protection
- Overcurrent protection
- Thermal protection

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	12.5 A (rms) @ 100 VAC, 60 Hz 5.2 A (rms) @ 240 VAC, 50 Hz
Earth leakage current:	300 µA max. @ 264 VAC, 63 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Maximum output power:	See rating chart.
Ripple and noise:	1% peak to peak maximum
Remote sense:	Compensation for cable losses up to 0.5 V
Overvoltage protection:	Set at 112-140% of nominal output voltage, latching by recycle input to reset
Overcurrent protection:	Set at 120-140% of maximum output current
Short circuit protection:	Latching by recycle input to reset
Over temperature protection:	Latching by recycle input to reset
Temperature coefficient:	All outputs $\pm 0.04\%$ / $^{\circ}\text{C}$ maximum
Transient response:	Maximum excursion of 4%, recovering to 1% of final value within 500 µs after a 25% step load change
Standby power:	5 V at 200 mA maximum
Fan power:	12 V at 1.0 A maximum

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-10 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$
Storage temperature:	-40 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
Relative humidity:	5% to 95% non-condensing
Temperature derating:	Derate from 100% at +50 $^{\circ}\text{C}$ linearly to 50% at +70 $^{\circ}\text{C}$, applicable to convection and forced-air cooling conditions

PU1100 SERIES



CE (LVD)
RoHS

SAFETY STANDARD APPROVALS



UL 62368-1, CSA C22.2 No. 62368-1

TÜV EN 62368-1

GENERAL SPECIFICATIONS

Switching frequency:	40 KHz to 200 KHz
Efficiency:	See rating chart
Hold-up time:	10 ms minimum at 110 VAC
Line regulation:	$\pm 0.5\%$ maximum at full load
Inrush current:	50 A @ 115 VAC, or 100 A @ 230 VAC, at 25 $^{\circ}\text{C}$ cold start
Withstand voltage:	4242 VDC from input to output, 2500 VDC from input to ground, 707 VDC from output to ground
MTBF:	100,000 hours at full load at 25 $^{\circ}\text{C}$ ambient, calculated per MIL-HDBK-217F
EMC Performance	
EN55032:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class A and D
EN61000-3-3:	Line flicker
EN55035	
EN61000-4-2:	ESD, ± 8 KV air and ± 4 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient/burst, ± 1 KV
EN61000-4-5:	Surge, ± 1 KV diff., ± 2 KV com
EN61000-4-6:	Conducted immunity, 3 Vrms
EN61000-4-8:	Magnetic field immunity, 1 A/m
EN61000-4-11:	Voltage dip immunity, 30% reduction for 500 ms and >95% reduction for 10 ms

INTERFACE SIGNALS

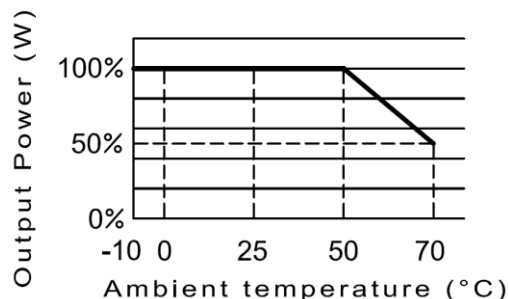
PFD: TTL high for normal operation,
low upon loss of input power,
turn-on delay time 100-2500 ms,
turn-off delay time 1 ms minimum

Inhibit: TTL low to turn off output

DC OK: TTL high when output voltage >90%

PS OFF: TTL high to turn off output

OUTPUT POWER DERATING CURVE



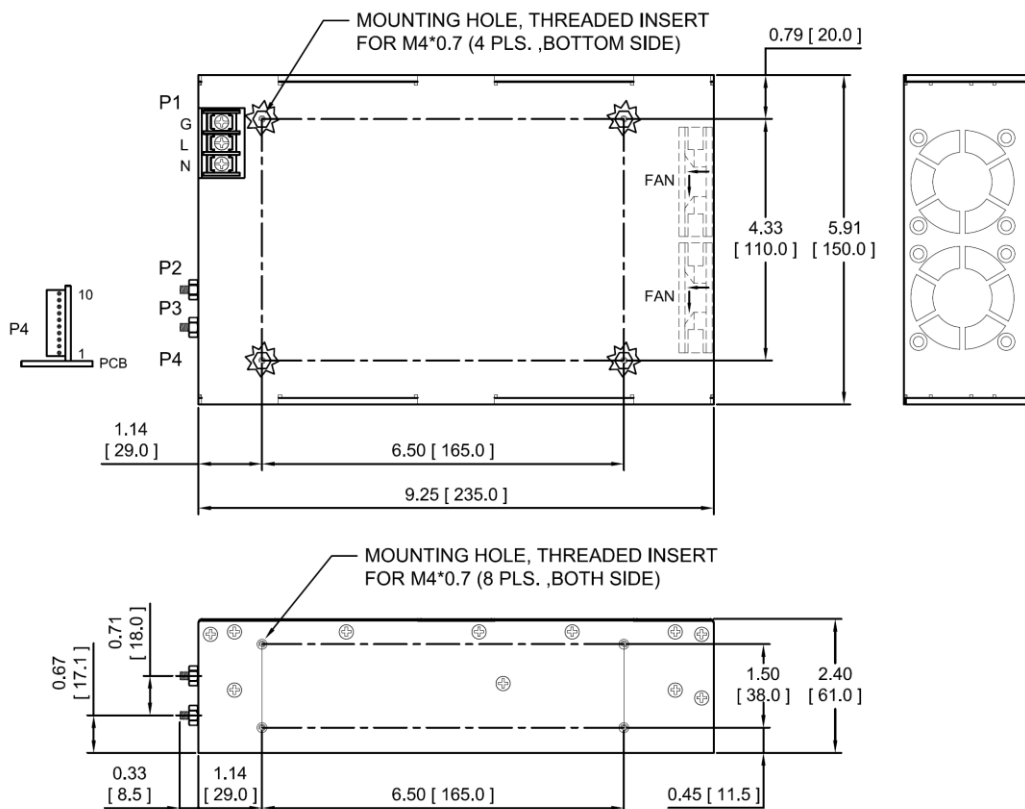
OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output							Efficiency (typical)
	V1	Min. Current	Max. Current	Peak Current ⁽¹⁾	Tol.	Ripple & Noise ⁽²⁾	Max. /peak Output Power ⁽¹⁾	@ 1100 W 115/230 Vac
PU1100-14C	24 V	0 A	45.84 A	52.10 A	±2%	240 mV	1100 W /1250 W	87 /88%
PU1100-15C	28 V	0 A	39.29 A	44.65 A	±2%	280 mV	1100 W /1250 W	87 /88%
PU1100-16C	32 V	0 A	34.38 A	39.07 A	±2%	320 mV	1100 W /1250 W	87 /88%
PU1100-17-1C	34 V	0 A	32.35 A	36.77 A	±2%	340 mV	1100 W /1250 W	87 /89%
PU1100-17C	36 V	0 A	30.56 A	34.73 A	±2%	360 mV	1100 W /1250 W	87 /89%
PU1100-18-1C	42 V	0 A	26.20 A	29.77 A	±2%	420 mV	1100 W /1250 W	87 /89%
PU1100-18C	48 V	0 A	22.92 A	26.10 A	±2%	480 mV	1100 W /1250 W	87 /89%

NOTES:

1. Peak current and power possible at 170-260 VAC input, 10 seconds, 35% duty cycle.
2. Ripple and noise is maximum peak-to-peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 10 μ F tantalum capacitor in parallel with a 0.1 μ F ceramic capacitor across the output.

MECHANICAL SPECIFICATIONS



NOTES:

1. Dimensions shown in inches [mm]
2. Tolerance 0.02 [0.5] maximum
3. Input connector P1 is Dinkle terminal P/N DT-4C-B01W-03, with nickel plated M3.5 screws or equivalent.
4. Output connectors P2 and P3 are for M5*0.8 screw connections.
5. Output connector P4 is Molex header 22-05-7105 or equivalent, mating with Molex housing 50-37-5103 or equivalent.
6. Weight: 2.884 Kgs (6.35 lbs.) approx. for enclosed form.
7. Maximum penetration depth of fixing screws is 4 mm from the outer surface of chassis.

PIN CHART

Connector	P1 (AC)			P2		P3	
PIN NO.	1	2	3	1	2	1	2
Polarity	Neutral	Live	Ground	+V1		V1 Return	

Connector	P4									
PIN NO.	1	2	3	4	5	6	7	8	9	10
Polarity	FAN Return	+12V FAN	PS OFF	DC OK	+5V Standby	Inhibit	PFD	-V1 Sense	+V1 Sense	common Return