## 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.

**PU1100 SERIES**

CE (LVD)

**RoHS**

## 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

## SAFETY STANDARD APPROVALS

UL 62368-1, CSA C22.2 No. 62368-1
(to be applied for soon )

TÜV EN 62368-1 (to be applied for soon )

## INPUT SPECIFICATIONS

| | |
|---|---|
| Input voltage: | 90-264 VAC |
| Input frequency: | 47-63 Hz |
| Input current: | 16 A (rms) @100 VAC, 60 Hz<br>8 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 |
| Overcurrent protection: | Set at 120-140% of maximum output current |
| Thermal shutdown: | Protected to overtemperature conditions |
| Temperature coefficient: | All outputs ±0.04% /℃ maximum |
| Transient response: | Maximum excursion of 4%, recovering to 1% of final value within 500 us 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: | 0℃ to +70℃ |
| Storage temperature: | -40℃ to +85℃ |
| Relative humidity: | 5% to 95% non-condensing |
| Temperature derating: | Derate from 100% at +50℃ linearly to 50% at +70℃, applicable to convection and forced-air cooling conditions |

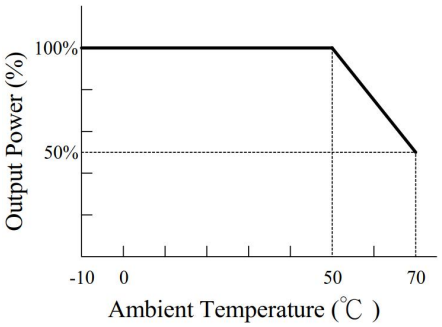
## GENERAL SPECIFICATIONS

| | |
|---|---|
| Switching frequency: | 40 KHz to 200 KHz |
| Efficiency: | See rating chart |
| Hold-up time: | 10 ms minimum at 110 VAC |
| Line regulation: | ±0.5% maximum at full load |
| Inrush current: | 50 A @ 115 VAC, or 100 A @ 230 VAC, at 25℃ cold start |
| Withstand voltage: | 4242 VDC from input to output,<br>2500 VDC from input to ground,<br>707 VDC from output to ground |
| MTBF: | 100,000 hours at full load at 25℃ ambient, calculated per MIL-HDBK-217F |
| EMC Performance | |
| EN55032: | Class B conducted, class B radiated |
| FCC: | Class B conducted, class B radiated |
| VCCI: | Class B conducted, class B radiated |
| EN61000-3-2: | Harmonic distortion, class A and D |
| EN61000-3-3: | Line flicker |
| EN55024 | |
| 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 >95%
PS OFF: TTL high to turn off output

## OUTPUT POWER DERATING CURVE

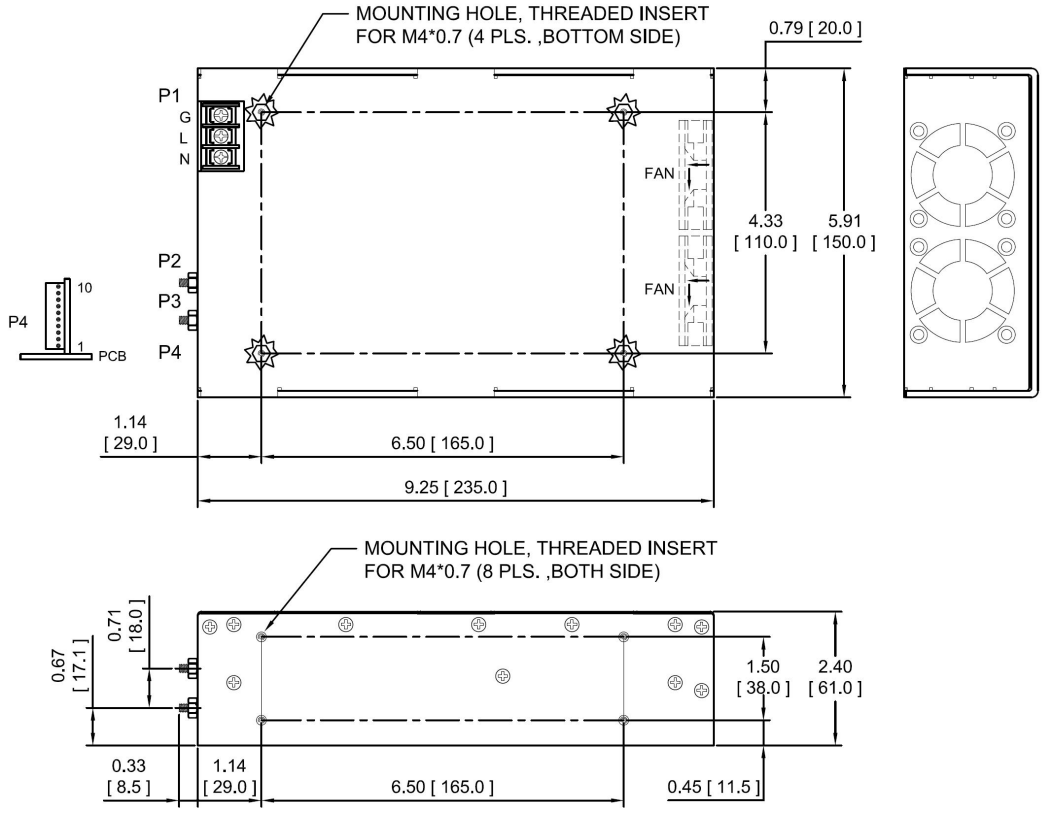



## OUTPUT VOLTAGE/CURRENT RATING CHART

| | Output | | | | | | | Efficiency (typical) |
|---|---|---|---|---|---|---|---|---|
| Model | 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 µF tantalum capacitor in parallel with a 0.1 µF ceramic capacitor across the output.

## MECHANICAL SPECIFICATIONS




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