SPECIFICATION

1U 400W
ATX PFC
Ultra Small Footprint (80x205 mm)
Industrial Grade
Power Supply

Model: P6400P 1FN

Specification subject to change without prior notice.

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This specification describes 1U 400W ultra small footprint industrial grade switching power supply with active power factor correction.

1. Input Characteristics:

1.1 Input Voltage Range -- 90~264Vac, full range with active power factor 90% min
1.2 Input Frequency Range -- 47Hz to 63Hz.
1.3 Input AC Current (Max) -- 8.0A max, full load.
1.4 Inrush Current -- At 132Vac / 264Vac, full load condition, no damage occur, input fuse shall not blow.
1.5 Efficiency -- 63% min, at nominal line input full load.
1.6 Input Leakage Current -- Leakage current from line to ground will be less 3.5mA rms, measurement will be made at 240Vac/60Hz.

2. Output Characteristics:

2.1 Static Output Characteristics.

Output Voltage	Load Range Min.	Max.	Regulation Min.	Max.	Ripple Max mV P-P	Ripple & Noise Max. mV P-P
1. +3.3V	0.3 A	28.0 A	- 5 %	+ 5 %	50 mV	100 mV
2. +5.0V	2.0 A	35.0 A	- 5 %	+ 5 %	50 mV	100 mV
3. +12.0V	0.5 A	27.0 A	- 5 %	+ 5 %	100 mV	150 mV
4. -12.0V	0.0 A	1.0 A	- 10 %	+ 10 %	150 mV	200 mV
5. +5Vsb	0.0 A	2.0 A	- 5 %	+ 5 %	100 mV	100 mV

Note:

1. Noise Test -- Noise bandwidth is from Dc to 20MHz.
2. Ripple frequencies greater than 1 MHz shall be attenuated by the measurement system.
3. Add 0.1uF / 10uF capacitor at output connector terminals for ripple & noise measurements.
4. Combined total current from +3.3V and +5V rails shall not exceed 38A.
5. The total output power shall not exceed 400W.

2.2 Dynamic Output Characteristics:

2.2.1 Initial Delay Time -- none.
2.2.2 Rise Time -- 50 mS max, at nominal line full load.
2.2.3 Turn-on Delay Time -- 600mS max, at nominal line full load.
2.2.4 Hold-up Time -- 16mS min. for + 5V output at nominal line full load.
2.2.5 Transient Overshoot -- 10% max. of delay state after load change of 25% within the range of 50% to 100% of full load.
2.2.6 Temperature Coefficient ----- 0.03% per °C max.

3. Protections:

3.1 Over Voltage Protection --- Standard on
+3.3V output set at 3.7Vdc – 4.5Vdc.
+5.0V output set at 5.7Vdc – 6.5Vdc.
+12.0V output set at 13.5Vdc – 14.5Vdc.

3.2 Short Circuit Protection --- A short circuit placed between DC return and output shall cause no damage and the power supply shall shutdown.

3.3 Over Power Protection --- The power supply can use electronic circuit to limit the output. Power against excessing +120% - 170% of full load, or protected against excessive power delivery due to short circuit of any output or over total power.

3.4 No-Load Operation --------- No parts damaged on power supply.

4. Dielectric Withstand Voltage:

4.1 Primary to Secondary -------- 1500Vac for 1 minute. Or 2200Vdc for 3 sec.
4.2 Primary to Safety Ground --- 1500Vac for 1 minute. Or 2200Vdc for 3 sec.
4.3 Insulation Resistance --------- Primary fo safety ground - 500Vdc, 100M ohms min.

5. Conducted EMI: Internal Filter Can Meet.

5.1 FCC Requirement ---------Part15, SUB-Part J, Computing Devices " Class A " Limits.
5.2 VDE Requirement --------Class " A " (General Operating Permit) Requirements Of VFG 234/1991.
5.3 CISPR Requirement ------Class " A " Requirements Of CLSPR 22.
5.4 Harmonic Requirement---IEC10000-3-2 & IEC10000-3-3 Class " D ".

6. Product Safety:

This Power Supply Designed Can Meet The Following Specification

6.1 UL/CUL ---------- UL60950
6.2 TUV ---------- EN 60950

7. Environment:

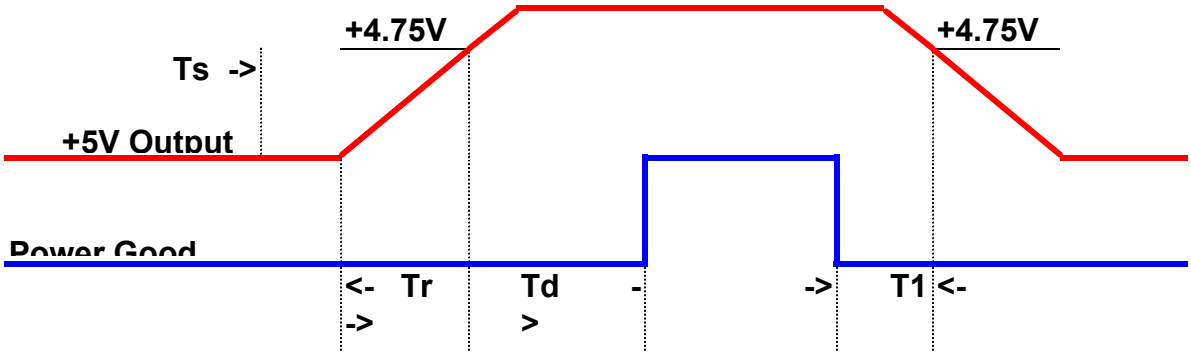
7.1 Operation Temperature ---------- Air temperature 0 °C to 50 °C.
7.2 Operation Relative Humidity -------- 20% to 90%.
7.3 Storage Temperature ---------- Air temperature -20 °C to 60 °C.
7.4 Storage Relative Humidity ---------- 5% to 95%.
7.5 Altitude ---------- Operate properly at any altitude between 0 To 100,000 feet, storage 40,000 feet.
7.6 Vibration ----------0.38mm. 5-55-5Hz, 1 minutes per cycle; 30 minutes for each axis (X,Y,Z).

8. Burn-In

8.1 Burn-In ---------- At 40 °C, max. load, 4 hours.

9. Mean Time Between Failure ----- 100 KHrs minimum at 75% load for 25 °C ambient temperature.

10. Power-Good Signal:



Note: Tr ≤ 100 ms, T1 ≥ 1 ms, Td = 100 – 500 ms.

11. Dimension

11.1 W x H x D ---------- 80.0 x 40.0 x 205.0 (mm)