

PB SERIES

FEATURES

- Design meet IEC 60601-1 & IEC 62368-1
- Meet intel x86 platform requirement
- Meet 80PLUS GOLD efficiency
- Meet EN 55011 class B emission
- BF class isolation

SAFETY STANDARD APPROVAL



DESCRIPTION

This series of AC/DC switching power supplies in a standard ATX form factor 165 x 150 x 86 mm is capable of delivering 600 or 700 watts of continuous power. PSU build-in DC/DC converter at +3.3V and +5V output rails to enhance load regulation. High-efficiency design complies with 80PLUS GOLD efficiency.

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	
FSP600M-70PB	7 A (rms) @115Vac, 60Hz 3.5 A (rms) @ 230Vac, 50Hz
FSP700M-70PB	8A (rms) @115Vac, 60Hz 4 A (rms) @ 230Vac, 50Hz
Earth leakage current:	300 μ Amax. @ 264 VAC, 63 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Maxi. output power:	See rating chart.
Ripple and noise:	See rating chart.
Protection	
Overvoltage	+3.3V, +5V & +12V, Latch off
Overcurrent	+3.3V, +5V & +12V, Latch off
Overtemperature	+3.3V, +5V & +12V, Latch off +5Vsb, -12V, -5V, Auto-recovery

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0°C to +50°C
Storage temperature:	-20°C to +80°C
Relative humidity:	10% to 95% non-condensing
Derating:	Derate from 100% at +50°C linearly to 50% at +70°C

GENERAL SPECIFICATIONS

Turn-on delay time	2 Sec maxi.
Power factor:	0.9 mini. @ 20% load mini.
Efficiency:	80PLUS GOLD (87%, 90%, 87%)
Hold-up time:	17 mS minimum at 115VAC & 230VAC
Line regulation:	±1% maximum at full load
Inrush current:	50 A @ 115 VAC at 25°C cold start 100 A @ 230 VAC at 25°C cold start
Withstand voltage:	4000 VAC from input to output (2 MOPP) 1500 VAC from input to ground (1 MOPP) 1500 VAC from output to ground
MTBF:	150,000 hours at full load & 25°C ambient, calculated per MIL-HDBK- 217
EMC Performance (IEC60601-1-2)	
EN55011:/ EN55032	Class B conducted, Class B radiated
FCC / VCCI:	Class B conducted, Class B radiated
EN61000-3-2:	Harmonic distortion, Class A
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, ±15 KV air and ±8 KV contact
EN61000-4-3:	Radiated immunity, 9-28 V/m
EN61000-4-4:	Fast transient/burst, ±2 KV
EN61000-4-5:	Surge, ±1 KV diff., ±2 KV com.
EN61000-4-6:	Conducted immunity, 3-6 Vrms
EN61000-4-8:	Magnetic field immunity, 30 A/m
EN61000-4-11:	Voltage dip immunity, 30% reduction for 500 ms, 60% reduction for 100 ms >95% reduction for 10 ms

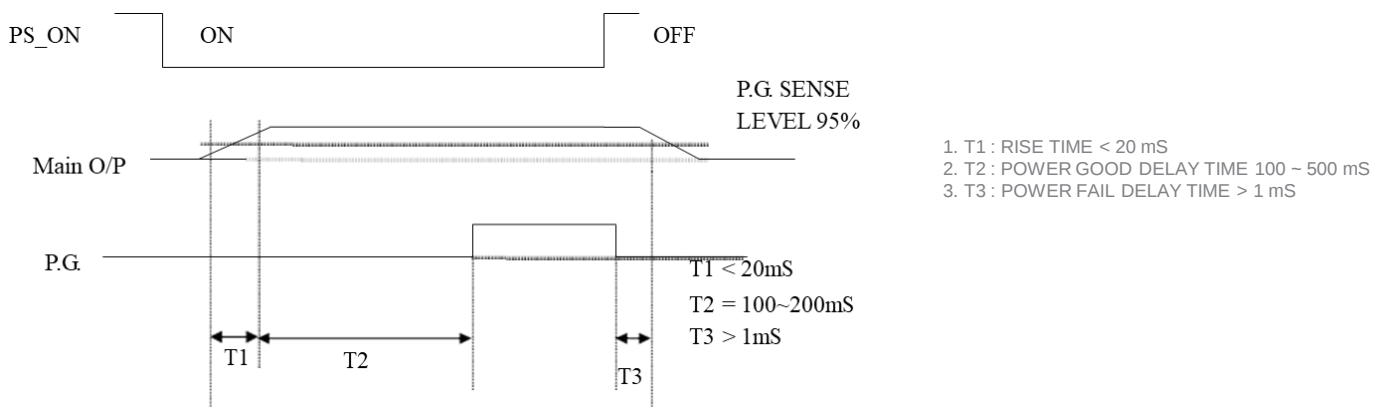
OUTPUT VOLTAGE/CURRENT RATING CHART

Rating Outputs	FSP600M-70PB		FSP700M-70PB		Load Regulation	Ripple & Noise ²
	Mini. Load	Maxi. Load	Mini. Load	Maxi. Load		
+3.3 V	0 A	24 A	0 A	24 A	±5%	50 mV P-P
+ 5 V	0 A	30 A	0 A	30 A	±5%	50 mV P-P
+12 V1	0.1 A	25 A peak 30 A	0.1 A	30 A peak 35 A	±5%	120 mV P-P
+12 V2	0.2 A	25 A peak 30 A	0.2 A	30 A peak 35 A	±5%	120 mV P-P
- 5 V ¹	0 A	0.2 A	0 A	0.2 A	±10%	100 mV P-P
-12 V	0 A	0.5 A	0 A	0.5 A	±10%	120 mV P-P
+5 Vsb	0.05 A	3.0 A	0.05 A	3.0 A	±5%	50 mV P-P
+3.3 V & +5 V Combine Output Power	150W Maxi.		150W Maxi.			
+12V Total Output Power Maxi. / Peak ³	50A Maxi. / 660W peak		58A Maxi. / 780W peak			
Total Output Power	600W		700W			

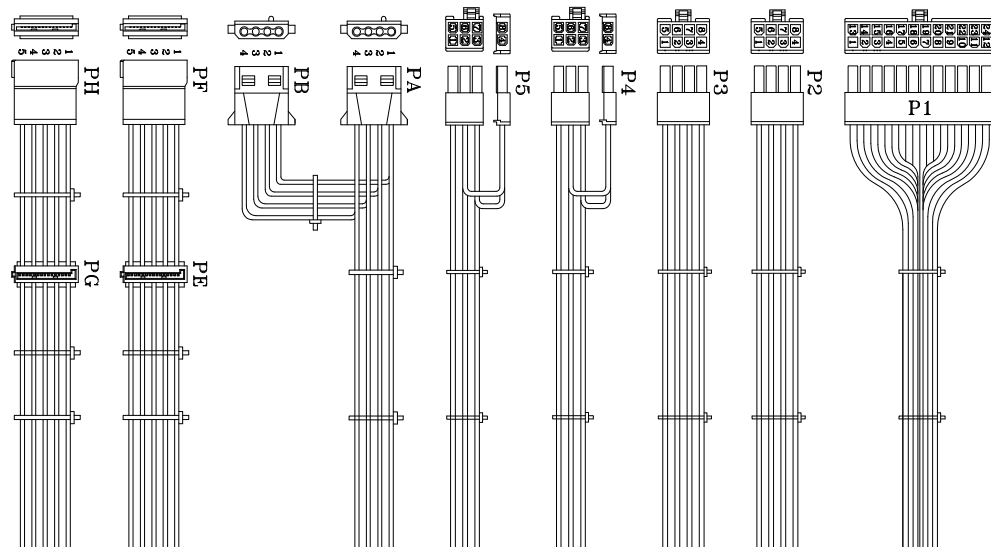
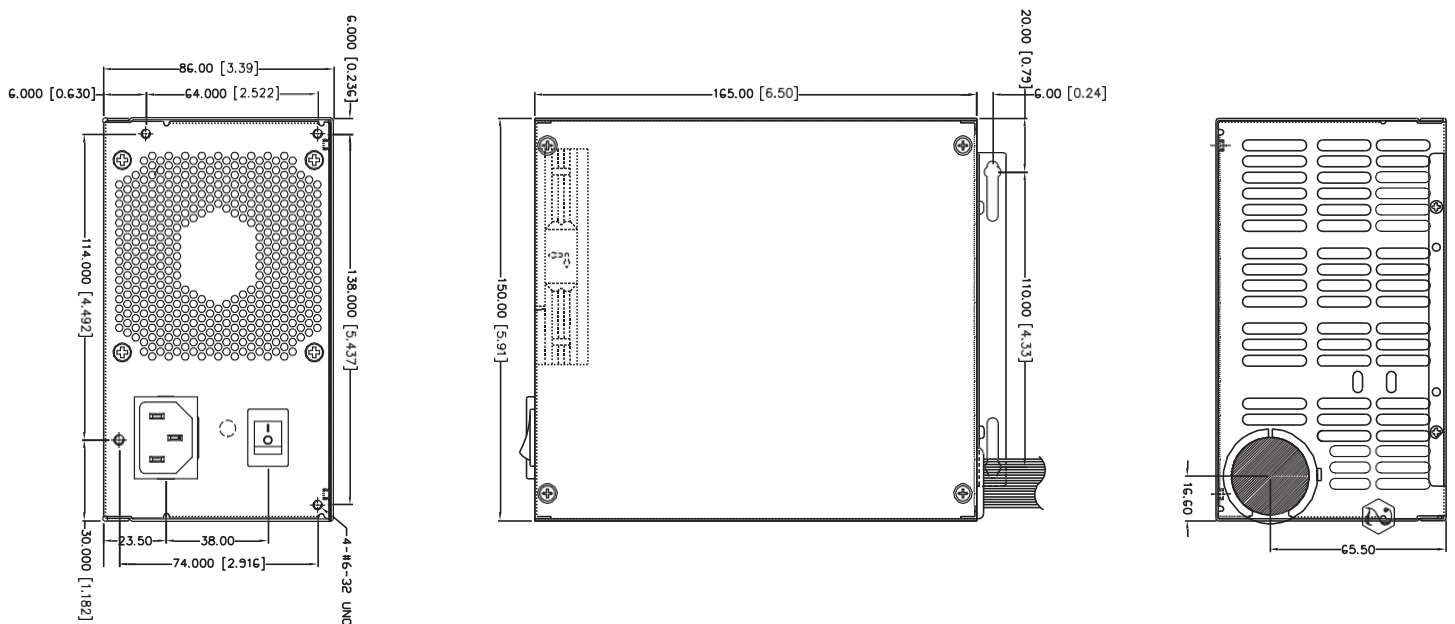
NOTES:

- 5V is not for standard model but upon request.
- Ripple and noise measurements shall be made under all specified load conditions through a single pole low pass filter with 20MHz cutoff frequency. Outputs shall be bypassed at the connector with a 0.1uF ceramic disk capacitor and a 10uF electrolytic capacitor to simulate system loading.
- The duration of peak power is less than 10 mS.

INTERFACE SIGNALS



MECHANICAL SPECIFICATIONS



Output connectors	Cable Length	Connector No.	Output connectors (equivalent)
Mother board 24 pin	500 mm	P1	MOLEX 39-01-2240
CPU 8 pin	500 mm * 2	P2, P3	MOLEX 39-01-2080
PCI-e 6+2 pin	350 mm * 2	P4, P5	WST P8-I42002, K21B-B
SATA	(500+155 mm) * 2	PE+PF, PG+PH	MOLEX SD-67926-0011, MOLEX SD-67582-0011
PATA	500+155 mm	PA+PB	WST P4-A10202

Weight: 2.32 Kg