



MU SERIES

FEATURES

- Design comply with IEC 60601-1 and IEC 60950-1
- 80PLUS efficiency

SAFETY STANDARD APPROVAL



DESCRIPTION

This series medical AC-DC power supply offering 300W and 350W power with ATX outputs, 1U standard size 190 x 100 x 40.5 mm could be widely fitted in different chassis. High efficiency design with 80PLUS certificate.

INPUT SPECIFICATIONS

| | |
|------------------------|---|
| Input voltage: | 90-264 VAC |
| Input frequency: | 47-63 Hz |
| Input current: | |
| FSP300-70MU: | 5 A (rms) @115Vac 3 A (rms) @ 230Vac |
| FSP350-70MU: | 6 A (rms) @115Vac 3 A (rms) @ 230Vac |
| 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: | See rating chart |
| Protection | |
| OVP: | +3.3V, +5V & +12V, Latch off |
| OCP, Shorted: | +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

| | |
|--------------------------------|--|
| Power factor: | 0.9 minimum |
| Efficiency: | 80PLUS |
| Hold-up time: | 12 mS minimum at 115VAC 17 mS minimum at 230 VAC |
| 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) |
| MTBF: | 100,000 hours at full load & 25°C ambient, calculated per MIL-HDBK- 217 |
| EMC Performance (IEC60601-1-2) | |
| EN55011:/ EN55022 | Class B conducted, Class B radiated |
| FCC / VCCI: | Class B conducted, Class B radiated |
| EN61000-3-2: | Harmonic distortion, Class D |
| EN61000-3-3: | Line flicker |
| EN61000-4-2: | ESD, ±8 KV air and ±6 KV contact |
| EN61000-4-3: | Radiated immunity, 10 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, 10 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 |

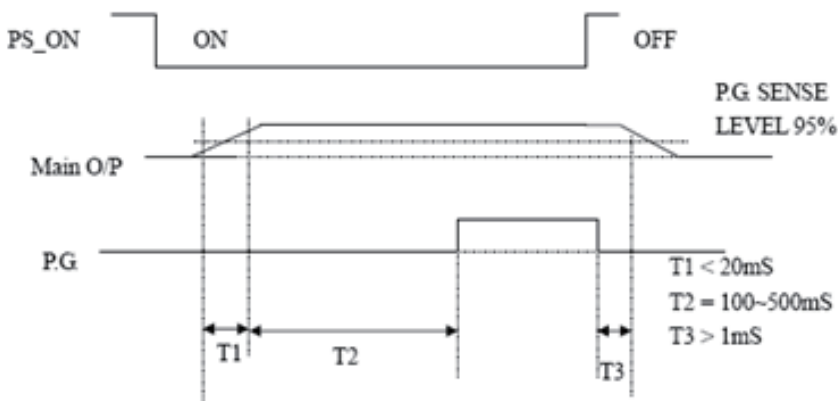
OUTPUT VOLTAGE/CURRENT RATING CHART

| Rating Outputs | FSP300-70MU | | FSP350-70MU | | Load Regulation | Ripple & Noise |
|------------------------------------|-------------|------------|-------------|------------|-----------------|----------------|
| | Mini. Load | Mini. Load | Mini. Load | Mini. Load | | |
| +3.3 V | 0.5 A | 16 A | 0.5 A | 16 A | ±5% | 50 mV P-P |
| +5 V | 0.5 A | 18 A | 0.5 A | 18 A | ±5% | 50 mV P-P |
| +12 V1 | 1.0 A | 16 A | 1.0 A | 16 A | ±5% | 120 mV P-P |
| +12 V2 | 1.0 A | 16 A | 1.0 A | 16 A | ±5% | 120 mV P-P |
| -5 V *1 | 0 A | 0.5 A | 0 A | 0.5 A | ±10% | 120 mV P-P |
| -12 V *1 | 0 A | 0.2 A | 0 A | 0.2 A | ±10% | 150 mV P-P |
| +5 Vsb | 0.1 A | 2.5 A | 0.1 A | 2.5 A | ±5% | 50 mV P-P |
| +3.3 V & +5 V Combine Output Power | 120W Maxi. | | 130W Maxi. | | | |
| +12V Total Output Power | 20A Maxi. | | 24A Maxi. | | | |
| Total Output Power | 300W | | 350W | | | |

NOTES:

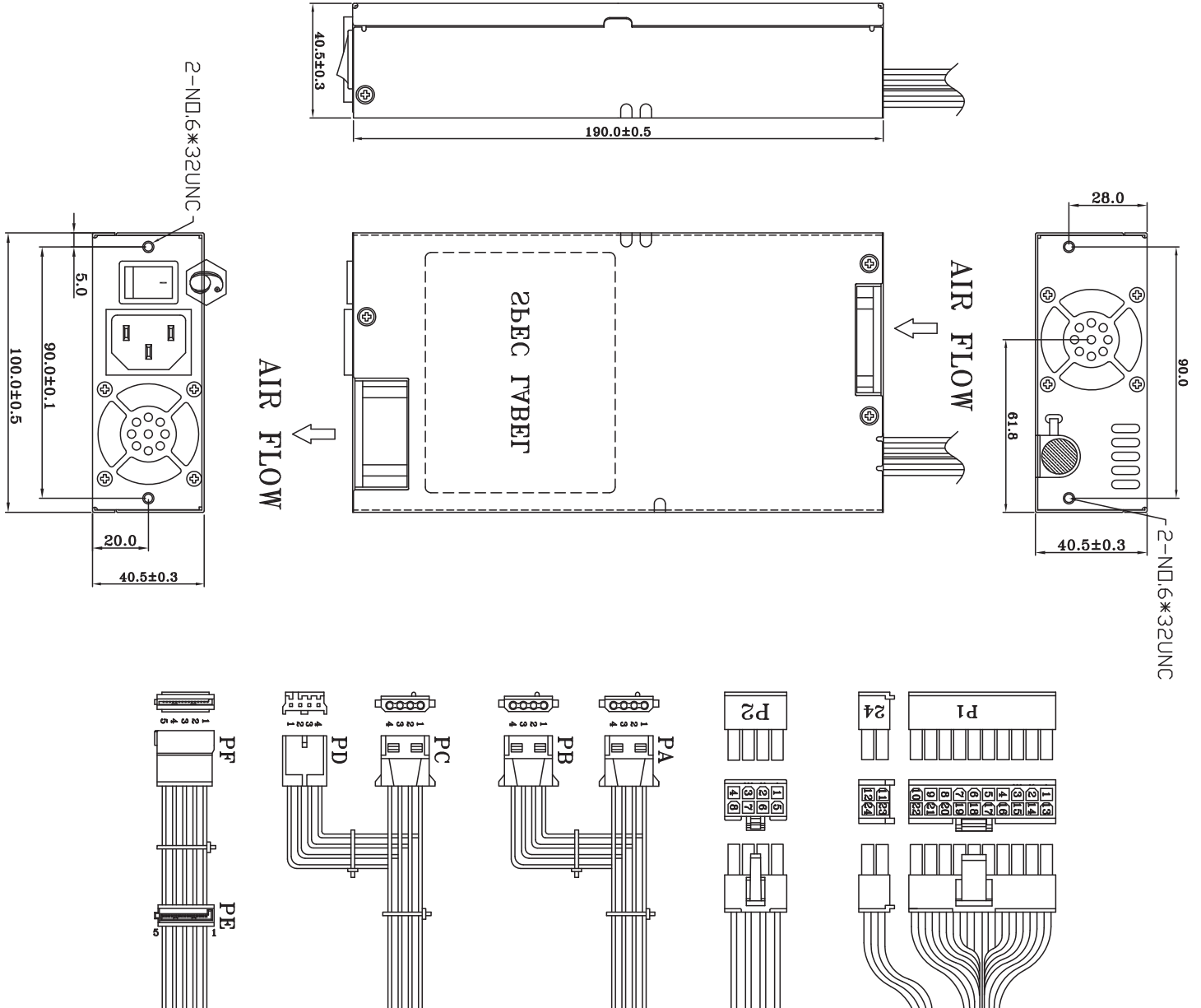
1. Voltage regulation will over 10% at +3.3V, +5V, +12V if load less than minimum load mentioned on table.

INTERFACE SIGNALS



1. T_1 : RISE TIME < 20 mS
2. T_2 : POWER GOOD DELAY TIME 100 ~ 500 mS
3. T_3 : POWER FAIL DELAY TIME > 1 mS

MECHANICAL SPECIFICATIONS



| No. | Output connectors | Cable Length | Connector No. | Output connectors (equivalent) |
|--------|-----------------------|--------------|---------------|------------------------------------|
| P1 | Mother board 20+4 pin | 350 mm | 1 | MOLEX 39-01-2240 |
| P2 | CPU 8 pin | 200 mm | 1 | MOLEX 39-01-2080 |
| PE,PF | SATA | 200+200 mm | 1 + 1 | MOLEX SD-67926-0011 + SD-67582-001 |
| PA, PB | PATA | 200+ 200 mm | 1 + 1 | AMP 1-480424-0 + AMP 171822-4 |
| PC, PD | PATA + Floppy con. | 200+ 200 mm | 1 + 1 | AMP 1-480424-0 + AMP 171822-4 |

Weight: 1.25 Kg