

FSP250-2F47-A54H

FEATURES

- Class-I design
- Low inrush current
- Meet EN 55032 and FCC Class B
- Isolated between +12V & +54V outputs
- Isolated between PE and RETURN
- Surge protection ± 3 KV diff, ± 6 KV com
- High altitude 5000 meters operation
- OTP, Brown-out protection

SAFETY STANDARD APPROVAL



DESCRIPTION

This AC-DC switching power supplies in a package of 4 x 7.5 inches is an isolated dual outputs 54V & 12V PSU that suitable for PoE Switch, Network & Telecomm application. This PSU is capable of delivering 250 watts continuous power with 7 CFM forced air condition or 190 watts at convection cooling.

INPUT SPECIFICATIONS

| | |
|------------------------|--|
| Input voltage: | 90-264 VAC |
| Input frequency: | 47-63 Hz |
| Input current: | 2.6 A (rms) for 115 VAC 1.3 A (rms) for 230 VAC |
| Earth leakage current: | 1.5 mA max. @ 264 VAC, 63 Hz |
| Touch current: | 250 uA max. @ 264 VAC, 63 Hz |

OUTPUT SPECIFICATIONS

| | |
|-------------------------------|---|
| Output voltage/current: | See rating chart. |
| Fan driver: | See rating chart. |
| Total output power: | See rating chart. |
| Protection: | |
| Over voltage: | Set at 110~135% of nominal output voltage and auto recovery |
| Short circuit & Over current: | Output protected to short circuit condition and auto recovery |
| Over temperature: | Detected by thermistor and auto recovery |
| Temperature coefficient: | All outputs $\pm 0.04\%$ / $^{\circ}$ C maximum |
| Transient response: | Maximum excursion of 5% or better on all models, recovering to 1% of final value within 500 us after a 25% step load change |

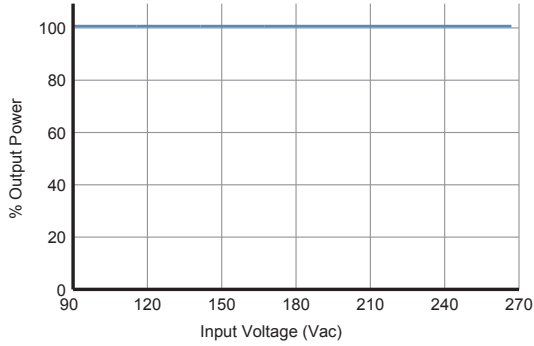
ENVIRONMENTAL SPECIFICATIONS

| | |
|------------------------|---|
| Operating temperature: | -20 $^{\circ}$ C~+70 $^{\circ}$ C |
| Storage temperature: | -40 $^{\circ}$ C~+85 $^{\circ}$ C |
| Relative humidity: | 5% to 95% non-condensing |
| Derating: | Derate from 100% at +50 $^{\circ}$ C linearly to 50% at +70 $^{\circ}$ C, applicable to both convection and forced-air cooling conditions |

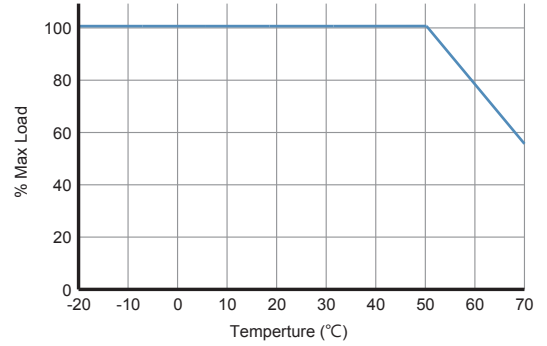
GENERAL SPECIFICATIONS

| | |
|--------------------|--|
| Power factor: | 0.98 min at 100% load and 115VAC 0.9 min. at 100% load and 230VAC |
| Efficiency: | 89% minimum |
| Hold-up time: | 12 ms minimum at 115 VAC |
| Power on time: | 1.5 Sec maximum |
| Line regulation: | $\pm 0.5\%$ maximum at full load |
| Inrush current: | 70A @ 230 VAC, at 25 $^{\circ}$ C cold start |
| Withstand voltage: | 3000 VAC from input to output, 1500 VAC from input to ground, 500 VAC from output to ground |
| MTBF: | 100,000 hours minimum at full load at 25 $^{\circ}$ C 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 D |
| EN61000-3-3: | Line flicker |
| EN61000-4-2: | ESD, ± 15 KV air and ± 8 KV contact |
| EN61000-4-3: | Radiated immunity, 3 V/m |
| EN61000-4-4: | Fast transient/burst, ± 2 KV |
| EN61000-4-5: | Surge, ± 3 KV diff, ± 6 KV com |
| EN61000-4-6: | Conducted immunity, 3 Vrms |
| EN61000-4-8: | Magnetic field immunity, 3 A/m |
| EN61000-4-11: | Voltage dip immunity, 30% reduction for 500 ms, criteria A] >95% reduction for 10 ms, criteria A >95% reduction for 5000 mS, criteria B |

INPUT VOLTAGE DERATING CURVE



OUTPUT POWER DERATING CURVE



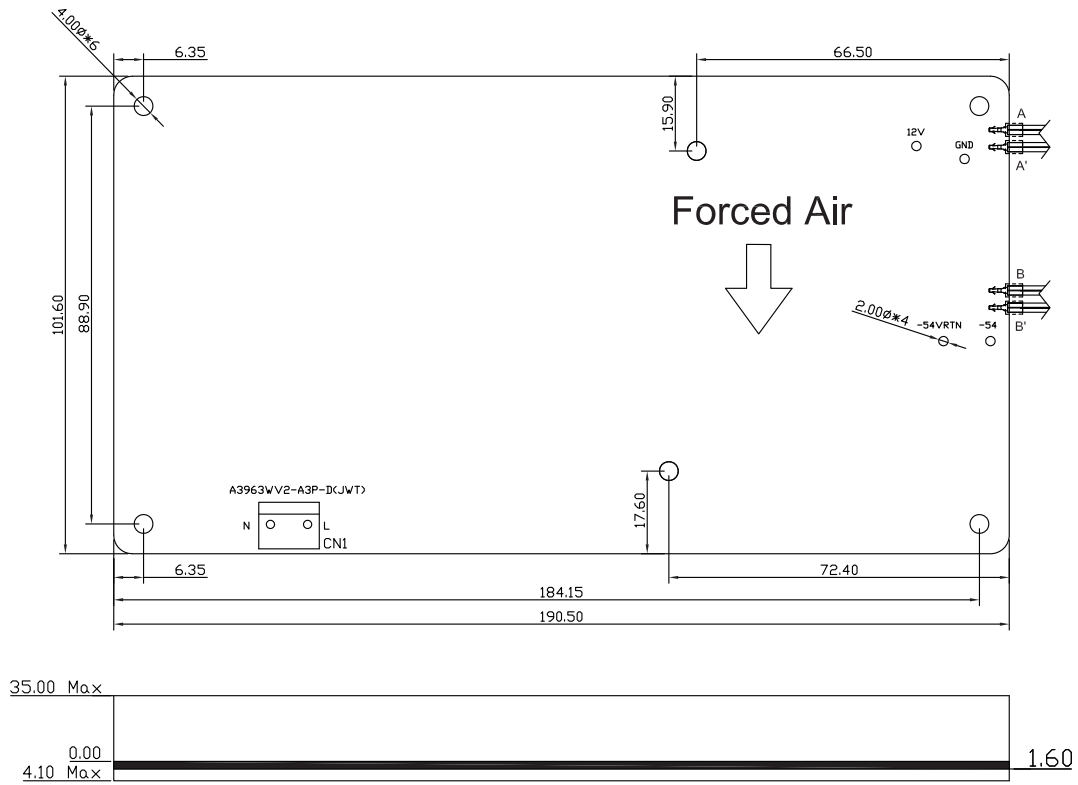
OUTPUT VOLTAGE/CURRENT RATING CHART

| Model | Output Voltage | Min. Load | Max. Load (7 CFM) | Output Power | Ripple & Noise | Load Regulation | Efficiency 115 / 230 Vac |
|------------------|----------------|-----------|-------------------|--------------|----------------|-----------------|--------------------------|
| FSP250-2F47-A54H | 54 V | 0 A | 3.7 A | 250W | 400 mV | ±3% | 89 / 92% |
| | 12V | 0 A | 4.2 A | | 250 mV | ±5% | |

NOTES:

1. Maximum output watts is 190W without moving air or 250W with 7 CFM forced air provided by user.
2. Output voltage tolerance is measured at connector terminal
3. 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



Pin assignment:
 Input connector (IN1):

| Pin No. | Function | Wafer |
|---------|----------|--------------------------------|
| 1 | Neutral | JWT A3961WV2-3P-D or EQU |
| 2 | NC | |
| 3 | Line | |

Output connector (CNS1):

| Pin No. | Function | Wafer |
|---------|----------|-------------------------------------|
| 1, 2 | +12 RTN | JWT A3963H02-4P or equivalent |
| 3, 4 | +12V | |

Pin assignment of CNS2:

| Pin No. | Function | Wafer |
|---------|----------|-------------------------------------|
| 1, 2 | NC | JWT A3963H02-8P or equivalent |
| 3, 4 | +54V | |
| 5, 6 | +54V RTN | |
| 7, 8 | NC | |

NOTES:

- Dimension (L*W*H):
 190.5 * 101.6 * 35 mm / 7.5" * 4" * 1.38"
- Weight: 410 grams / 0.90 lbs. approx.