

## FSP200-2H35-A54H

## FEATURES

- Class-I design
- Meet EN 55032 and FCC Class B
- Isolated between +12 V \& +54 V outputs
- Isolated between PE and RETURN
- High altitude 5000 meters operation


## SAFETY STANDARD APPROVAL

## DESCRIPTION

This AC-DC switching power supplies in a package of $127 \times 76.2 \times 32 \mathrm{~mm}$ (above PCB) is an isolated dual outputs 54 V \& 12 V PSU that suitable for PoE Switch \& Network application. This PSU is capable of delivering 200 watts continuous power with 7 CFM forced air cooling conditions.

INPUT SPECIFICATIONS
Input voltage:
Input frequency:
Input current:

Earth leakage current:

90-264 VAC
$47-63 \mathrm{~Hz}$
2.2 A (rms) for 115 VAC
1.2 A (rms) for 230 VAC
1.5 mA max. @ $264 \mathrm{VAC}, 63 \mathrm{~Hz}$

## OUTPUT SPECIFICATIONS

Output voltage/current:
Total output power:
Protection:
Over voltage:

Short circuit \&
Over current:
Over temperature:
Temperature coefficient:
Transient response:
See rating chart. 200W

Set at 110~135\% of nominal output voltage and auto-recovery
Output protected to short circuit condition and auto-recovery
Detected by thermistor and auto-recovery All outputs $\pm 0.04 \% /{ }^{\circ} \mathrm{C}$ maximum 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:
Storage temperature: Relative humidity: Derating:
$-20^{\circ} \mathrm{C} \sim+70^{\circ} \mathrm{C}$
$-40^{\circ} \mathrm{C} \sim+85^{\circ} \mathrm{C}$
$5 \%$ to $95 \%$ non-condensing Derate from $100 \%$ at $+50^{\circ} \mathrm{C}$ linearly to $50 \%$ at $+70^{\circ} \mathrm{C}$, applicable to both convection and forced-air cooling conditions

## GENERAL SPECIFICATIONS

Power factor:
0.98 min at $100 \%$ load and 115 VAC 0.95 min . at $100 \%$ load and 230VAC

Efficiency:
Hold-up time:
Power on time:
Line regulation:
Inrush current:
Withstand voltage:

MTBF:

EMC Performance
EN55032
FCC:
VCCI:
EN61000-3-2:
EN61000-3-3:
EN61000-4-2:
EN61000-4-3:
EN61000-4-4:
EN61000-4-5:
EN61000-4-6:
EN61000-4-8:
EN61000-4-11:

86\% minimum
10 ms minimum at 115 VAC
2 Sec maximum
$\pm 1 \%$ maximum at full load
Under component stress and no damage to PSU
3000 VAC from input to output,
1500 VAC from input to ground,
1500 VAC from output to ground
250,000 hours minimum at full load at $25^{\circ} \mathrm{C}$ ambient,
calculated per TELCORDIA SR-332
Class $B$ conducted, class $B$ radiated
Class $B$ conducted, class $B$ radiated
Class B conducted, class B radiated Harmonic distortion, class D
Line flicker
ESD, $\pm 8 \mathrm{KV}$ air and $\pm 4 \mathrm{KV}$ contact
Radiated immunity, $3 \mathrm{~V} / \mathrm{m}$
Fast transient/burst, $\pm 1 \mathrm{KV}$
Surge, $\pm 2 \mathrm{KV}$ diff, $\pm 4 \mathrm{KV}$ com
Conducted immunity, 3 Vrms
Magnetic field immunity, $3 \mathrm{~A} / \mathrm{m}$
Voltage dip immunity,
$30 \%$ reduction for 500 ms
$>95 \%$ reduction for 10 ms
$>95 \%$ reduction for 5000 mS

## OUTPUT POWER DERATING CURVE




OUTPUT VOLTAGE/CURRENT RATING CHART

| Model | Output <br> Voltage | Min. Load | Max. Load <br> (7 CFM) | Output Power | Ripple \& Noise | Load Regulation | Efficiency 115 / 230 Vac |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FSP200-2H35-A54H | 54 V | 0 A | 3.0 A | 200W | 400 mV | $\pm 3 \%$ | 89 / 91\% |
|  | 12V | 0 A | 5.0 A |  | 250 mV | $\pm 3 \%$ |  |

## NOTES:

1. Output voltage tolerance is measured at connector terminal
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 $10 \mu \mathrm{~F}$ tantalum capacitor in parallel with a $0.1 \mu \mathrm{~F}$ ceramic capacitor across the output.

## MECHANICAL SPECIFICATIONS



Pin assignment:
Input connector (CN1):

| Pin No. | Function | Wafer |
| :---: | :---: | :---: |
| 1 | Neutral | JWT <br> A3963WV2-3P <br> or EQU |
| 2 | NC |  |
| 3 |  |  |

Pin assignment of (CNS1):

| Pin No. | Function | Wafer |
| :---: | :---: | :---: |
| 1 | +54 V | JWT <br>  |
| 2 | +54 V |  |
| 3 | +54 V _RTN |  |
| 4 | +54 V _RTN |  |

Output connector CNS3:

| Pin No. | Function | Wafer |
| :---: | :---: | :---: |
| 1 | +12V_RTN | JWT A3963WV2-2P or EQU |
| 2 | +12V |  |

NOTES:

1. Dimension (L*W*H): $127 \times 76.2 \times 32 \mathrm{~mm}$
2. To ensure compliance with level B emissions, connect the four PCB mounting holes with metallic standoffs to the chassis.
3. Weight: 410 grams / 0.90 lbs. approx.
