



eFO306-124 – 350W Open Frame Single Output AC/DC Switching Power Supply



Product Description

Industry’s smallest open frame single output AC/DC switcher delivering 350W continuous power with built-in “O-Ring” diodes and active PFC. The unit is built in a 1U configuration

**Telkoor Part Number:
900-3056-0000**

Product Specifications:

Input

| | |
|---------------------------------------|------------------------------------------------------------------------|
| AC Input Voltage | 85-264 VAC |
| Input Inrush Current | 60A maximum, cold start at 25°C, 220VAC |
| Active Power Factor Correction | 0.96 typical at 230VAC, full load 0.99 typical at 115VAC, full load |
| Efficiency @ 230VAC Full Load | 87% typical at 230VAC, full load |
| Efficiency @ 115VAC Full Load | 83% typical at 115VAC, full load |
| Input Line Protection | Internal Line Fuse: IEC type 6.3A 250VAC Quick Act |
| Hold-up Time | 12 mSec minimum at 110VAC and full load |

Output

| | |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------|
| V1 / Current | +24VDC / 14.5A |
| Aux V / Current | +5VDC / 5mA |
| Total Output Power | 350Watt |
| Line Regulation | ±0.1% for Vin (Min) to Vin (Max) |
| O-Ring | Yes |
| Hot-Swap option | Yes |
| Current Share | YES, built in Oring |
| Remote Sense (open sense lines protected) | V1 – compensates for voltage drop of up to 0.5V between the unit and the load. Output can internally |

| | |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| | the load. Outputs are internally sensed at the output connector if remote sense lines are opened |
| Transient Response | ±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/μsec, recovery time less then 2mSec |
| Over-current Protection: | For V1 - 110 to 130% of I Max, constant current limit, automatic recovery |
| Over-Voltage Protection | Output shut down at 125% of nominal (Latched Shut-Down) AC input must recycle to re-start |
| Short Circuit Protection | Yes |
| Temperature Protection | Shutdown due to excessive internal temperature 95 ± 5°C automatic recovery. |
| Load Regulation | |
| V1 | Less than ±1% for load changes from zero to full load |
| Min. Load Requirement | No |
| Overshoot / Undershoot at Turn-on | Less than 1% at turn ON and OFF |
| Turn-on Delay | 2 sec. Maximum |
| Initial Setting Accuracy | 24.0V ± 0.1V |
| Voltage Set Point (Internal trim-pot) V1 | +/- 0.1V |
| Ripple @ Noise with 20MHz Bandwidth measured across 47μF Load Capacitor Paralleled with 1μF Ceramic Cap. | |
| V1 | 150mVp-p Max |
| V2 | 100mVp-p Max |
| Overload Protection | |
| V1 | 130% I Max. |

Environmental

| | |
|------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Temperature | |
| Operation | -5°C to +50°C (de-rating linearly to 70 °C with 50% de-rating) |
| Storage | -25°C to +85°C. |
| Cooling | 150W free convection cooling (base plate cooling). 350W forced air cooling (250 LFM min.) |
| Humidity | Maximum 5% to 95% RH non-condensing |
| Altitude | Operating 10,000 ft. Non- operating 40,000 ft. |
| Vibration | Three orthogonal axes at 1 octave/min, 5 min dwell at four major resonances at 0.75G peak, 5Hz to 500Hz. |
| Conducted & Radiated Emission | FCC CLASS B, CISPR 22 CLASS B, EN55022 CLASS B – With an external input line filter |
| Surge | EN61000-4-5 |

| | |
|-----------------------------|----------------------------------------------------------------------------|
| MTBF | 300,000 hours minimum per BELCOR 332, issue 6 specification @30 degrees C. |
| Dielectric Isolation | |
| Input to Case | 1500VAC |
| Input to Output | 3000VAC |
| Output to Case | 1500VDC |

Safety, Regulations and EMI Specifications

| | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Safety Approvals | UL 60950-1, CSA C22.2 -234, LEVEL 3. EN-60950-1, CLASS 1, SELV CE - MARK |
| ESD Susceptibility | EN61000-4-2 +8KV AIR +4KV contact discharge, performance criteria B |
| Input Reflected Ripple | FCC CLASS B, CISPR 22 CLASS B, EN55022 CLASS B with external line filter |
| Radiated Susceptibility | EN61000-4-3 80-1000Mhz 3V/m, AM 80% (1KHz), criteria A |
| EFT / Burst | EN61000-4-4 level B |
| Input Surge | EN61000-4-5 2KV common mode and 1KV differential mode |
| Conducted Disturbance | EN61000-4-6 3VRMS, 80% A.M. BY 1kHz |
| Power frequency magnetic field | EN61000-4-8 3A /m at 50Hz, performance criteria A |
| Immunity to voltage Dips | Voltage dips and interruption: 30% reduction for 10mSec –Criteria B, 60% For 100mSec. Criteria C, 95% reduction for 5000mSec Criteria C. |

Monitoring Command & Control

| | |
|------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Inhibit | Active low, all output shut down |
| Power OK | Open collector active low when any of the outputs drop below 10% of its nominal value. |
| Input AC Connector | Molex 3 Pin P/N 26-48-1055 Mating connector: Housing – Molex 09-50-3051 (x1) Crimp terminal – 08-52-0113 (x3) |
| M&C Connector J3: | HIROSE 10 Pin P/N DF11-10DP-2DSA Mating connector: Housing DF11-10DS-2C (x1) Crimp terminal DF11-2428SC (x10) |
| Output Connectors | #10 Power ring – two lugs |

Mechanical Dimensions

| | |
|---------------|--------------------------------------------|
| Size | 173 x 98 x 38.5(mm) (6.8" x 3.85" x 1.52") |
| Weight | 720 gr. Max. (27 oz) |

Outline Drawing

All characteristics are subject to change without prior notice.

