



## eF175-248 – 200W Open Frame Dual Output AC/DC Switching Power Supply



### Product Description

Industry's smallest open frame dual output AC/DC switcher delivering 200W continuous Power with an option for built-in "O-Ring" diodes. The unit is built in a 1U 3" X 5" footprint

**Telkoor Part Number:  
900-0248-0000**

### Product Specifications:

#### Input

<b>AC Input Voltage</b>	90-264 VAC
<b>Input Inrush Current</b>	60A maximum, cold start at 25°C, 250VAC
<b>Active Power Factor Correction</b>	0.96 typical at 230VAC, full load 0.98 typical at 115VAC, full load
<b>Efficiency @ 230VAC Full Load</b>	80% typical at 230VAC, full load
<b>Efficiency @ 115VAC Full Load</b>	75% typical at 115VAC, full load
<b>Input Line Protection</b>	Internal Line Fuse IEC type 5A 250Vac Normal BLO
<b>Hold-up Time</b>	16msec minimum at any input voltage in range and full load

#### Output

<b>V1 / Current</b>	+48V / 2.9A
<b>V2 / Current</b>	+12V / 5A
<b>Total Output Power</b>	175Watt
<b>Line Regulation</b>	± 0.5% for Vin (Min) to Vin (Max)
<b>O-Ring option</b>	Optional internal O-Ring diode in eFS175-248 model
<b>Hot-Swap option</b>	Optional internal O-Ring diode in eFS175-248 model
<b>Remote Sense (open sense lines protected)</b>	Available on V1
<b>Transient Response</b>	±5% Max. Deviation for load change

	of 25% to 75% , at slew rate of 1A/usec, recovery time less then 500Msec
<b>Over-Voltage Protection</b>	Outputs shut down at 125% Max. of nominal, AC input must Recycled to reset
<b>Short Circuit Protection</b>	Yes
<b>Temperature Protection</b>	Shutdown due to excessive internal temperature 90 to 97°C (base plate), automatic recovery
<b>Load Regulation</b>	
<b>V1</b>	± 2% for load change from zero to full load
<b>V2</b>	± 4% for load change from 10% to 100% load
<b>Overshoot / Undershoot at Turn-on</b>	Less than 1% at turn ON-OFF
<b>Turn-on Delay</b>	2 sec. Maximum
<b>Initial Setting Accuracy</b>	V2 Factory pre-set at ±1%
<b>Voltage Set Point (Internal trim-pot)</b>	V1 ± 5%
<b>Ripple @ Noise with 20MHz Bandwidth measured across 47µF Load Capacitor Paralleled with 1µF Ceramic Cap.</b>	
<b>V1</b>	75mV P-P
<b>V2</b>	120mV
<b>Overload Protection</b>	
<b>V1 &amp; V2</b>	V1 105 to 130% of Im, constant current limit, automatic recovery (V2 SD) V2 110 to 150% of Im constant current limit, automatic recovery

## Environmental

<b>Temperature</b>	
<b>Operation</b>	-5°C to +50°C (de-rating linearly to 70 °C with 50% de-rating)
<b>Storage</b>	-25°C to +85°C.
<b>Cooling</b>	100W free convection cooling (base plate cooling). 175W continuous forced air cooling (250lfm, or 15CFM min.)
<b>Humidity</b>	Maximum 5% to 95% RH non-condensation
<b>Altitude</b>	Operating 3,000 ft. Non- operating 40,000 ft
<b>Vibration</b>	Three orthogonal axes at 1 octave/min, 5 min dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
<b>Conducted &amp; Radiated Emission</b>	MEETS FCC CLASS B, CISPR 22 CLASS B, EN55022 CLASS B – With an external input line filter
<b>Surge</b>	EN61000-4-5 - 2KV common mode and 1KV differential mode

<b>MTBF</b>	300,000 hours minimum per BELCOR 332, issue 6 specification @30 degrees C (Max. junction temperature 110°C , Capacitors 105°C)
<b>Dielectric Isolation</b>	
<b>Input to Case</b>	1500VAC.
<b>Input to Output</b>	3000VAC
<b>Output to Case</b>	100VDC

## Safety, Regulations and EMI Specifications

<b>Safety Approvals</b>	UL 60950 , CSA C22.2 -234, LEVEL 3, EN-60950 , CE - MARK
<b>ESD Susceptibility</b>	EN61000-4-2 level 4 8KV air +4KV CONTACT DISCHARGE, performance criteria B
<b>Radiated Susceptibility</b>	EN61000-4-3 80-1000Mhz 3V/m, AM 80% (1KHz), criteria A
<b>EFT / Burst</b>	EN61000-4-4
<b>Input Surge</b>	EN61000-4-5 2KV common mode and 1KV differential mode
<b>Conducted Disturbance</b>	EN61000-4-6 3VRMS, 80% A.M. BY 1kHz
<b>Power frequency magnetic field</b>	EN61000-4-8 3A /m at 50Hz, performance criteria A
<b>Immunity to voltage Dips</b>	30% reduction for 10mSec –Criteria B, 60% For 100mSec. Criteria C, 95% reduction for 5000mSec Criteria C

## Monitoring Command & Control

<b>Inhibit</b>	Active low, all output shut down
<b>Power OK</b>	Open collector, active low when any of V1, V2 outputs drop 10% below rated output
<b>Input AC Connector</b>	(J1) 3 Pin Molex 26-48-1055
<b>Current Share</b>	Yes on V1- N+1 single wire. V2- Natural current sharing
<b>Output Connectors</b>	V1 (J2) 6 Pin Molex Type 26-48-10xx V2 (J3) 2 Pin Molex Type 26-48-1025

## Mechanical Dimensions

<b>Size</b>	127mm x 84mm x 38.0mm
<b>Weight</b>	650 Gr.

## Outline Drawing

All characteristics are subject to change without prior notice.

