

eFO1000-124 Series

**Electrical
Specification for:**

Wide range AC/DC Single Output 1000W

Rugged Power Supply

**Telkoor Part
Number:**

900-1124-1000

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	1124-DOC1-10R	REV	A
GENERAL	SCALE	RELEASE DATE	05/08/2012	SHEET	1	OF	6

REVISION HISTORY					
Rev Level	Rev Date	Change Made	Reason for Change	Approved By	Effective
A	05/08/2012	RELEASE		S. Sadot	05/08/2012

Approvals		
	Name	Date
Written by:	S. Sadot	05/08/2012
Engineering:	S. Sadot	05/08/2012
Sales & Marketing:	H. Liber	05/08/2012

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Input:

Input Voltage: 85 - 264Vac
 Frequency: 47 - 63Hz
 Inrush Current: 80A maximum, cold start at 25°C
 Efficiency: 89% typical at 230Vac, full load
 84% typical at 115Vac, full load
 Power Factor: 0.96 typical at 230Vac, full load
 0.99 typical at 115Vac, full load
 Input Protection: Internal Line Fuse: IEC type 15A 250VAC SLO BLOW
 Brown – Out: 75 to 300Vac
 Leakage Current < 0.5mA @ 50/60Hz, 264Vac

Output Voltages & Currents:

Output	Output Voltage	Maximum Amps With 24CFM Forced Air	Peak Load
V1	+24V	42A	44A
V2 option	5V or 12V 5A Max	Up to 5A , 50W MAX	
V3 - Option	5V STANDBY	0.5A	1A

Output:

Maximum Power 500W for free convection base plate cooling, 1000W with forced air-cooling (24CFM min.)
 Adjustment range ±5%
 Auxiliary standby output -Option 5 V @ 0.5A regulated, ± 4%
 V2 Output Option . ± 5%
 Line Regulation: ±0.1%
 Load Regulation: Less than ±0.5% for load changes from zero to full load
 Ripple & Noise 1% pk-pk Max, 20Mhz BW Measured on 10uF tantalum in parallel with a 0.1uF ceramic capacitor on output connector.
 Initial Set Point Tolerance: Vout ± 0.5%
 Minimum Load Not required.
 Overshoot & Undershoot: Less than 0.5% at turn ON and OFF
 Transient Load Response: ±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/µsec, recovery time less then 500uSec
 Turn On Delay: 1 sec. Maximum
 Hold-up Time: 12mSec minimum.
 Turn-On Rise Time: 50mSec Typical
 Over-current Protection: 110 to 135% of I Max, constant current limit, automatic recovery.
 Over-voltage Protection: 120 to 135% above nominal (Latched Shut-Down) AC input must recycle to re-start.
 Temperature Protection: Shutdown due to excessive internal temperature 95± 5°C automatic recovery.
 Current Share: YES, Built In O-ring diode/FET
 Remote Sense N/A.

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Signals & Commands

Inhibit (on/off): Active low, output shut down.
 DC Fail: TTL level Open collector active low when there is loss of regulation.
 AC Fail (Option): Open collector active low.
 I²C bus (Option): I²C Passive data: s/n, model no., revision, and/or user defined data

Environmental Specifications:

Temperature: Operating: -40°C to +70°C (Linear de-rating of 2% output power from 50°C to 70°C
 Storage: -55°C to +85°C.
 Temperature Coefficient: 0 to 70°C ± 0.02%/°C
 Cooling: 500W free convection cooling (base plate cooling). 1000W forced air cooling (24CFM min.)
 Humidity: Maximum 95% RH non-condensing , Conformal coating
 Altitude: Operating 6,000 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.

Safety Regulatory & EMC Specifications:

Meets FCC CLASS B, CISPR 22 CLASS B, EN55022 CLASS B with external line filter

EN61000-3-2 Harmonics
 EN61000-3-3 Voltage fluctuations
 EN6000-4-2 ESD +8KV AIR +4KV contact discharge, performance criteria B
 EN61000-4-3 Radiated Immunity: 80-1000Mhz 3V/m, AM 80% (1KHz),criteria A
 EN61000-4-4 Fast transient: 1KV for AC power port, 0.5KV for DC power I/O and signals Port, performance criteria B
 EN61000-4-5 Surge: 2KV common mode and 1KV differential mode
 EN61000-4-6 3VRMS, 80% A.M. BY 1kHz
 EN61000-4-8 3A /m at 50Hz, performance criteria A.
 EN61000-4-11 Voltage dips and interruption: 30% reduction for 10mSec –Criteria B, 60% For 100mSec. Criteria C, 95% reduction for 5000mSec Criteria C.

Dielectric Withstand:
 Input to Case: 1500VAC
 Input to Output: 3000VAC
 Output to Case: 1500VDC

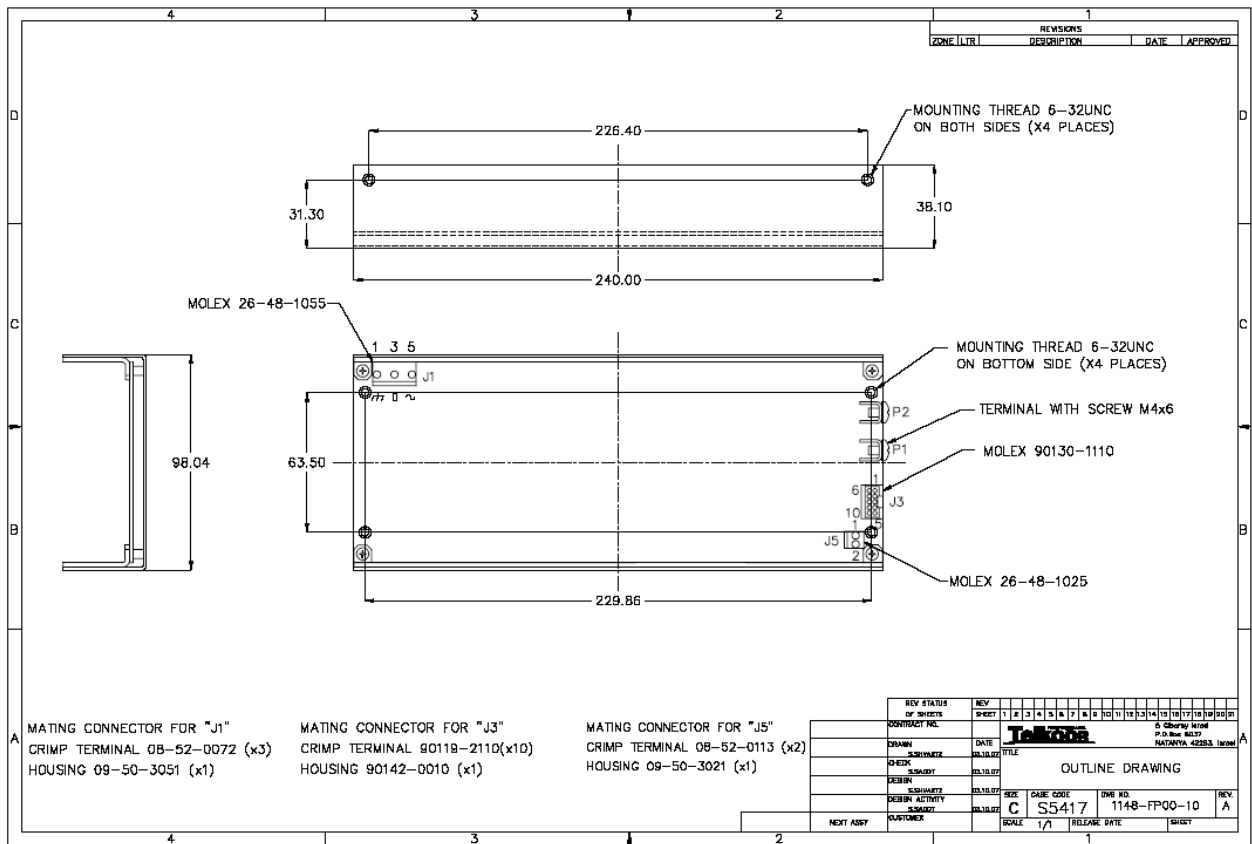
Safety Agency Compliance: Designed to meet UL 60950-2 , CB Certificate & Report , CE MARK (LVD).
 MTBF: 300,000 hours minimum per BELCOR 332,issue 6 specification @30 degrees C.
 RoHS: Category 6

Mechanical Dimensions:

Size: 240 x 98 x 38.5(mm) (6.8" x 3.85" x 1.52")
 Weight: 1150 gr. Max. (27 oz)
 Input Connector J1: 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: Molex 16 Pin P/N 90130-1116
 Mating connector: Housing 90142-0016
 Crimp terminal 90119-2110 (x16)
 V2 Connector J5: Molex 2 Pin P/N 26-48-1025
 Mating connector: Housing – Molex 09-50-3021 (x1)
 Crimp terminal – 08-52-0113 (x2)
 Main output 48V Terminal : Screw M4 X6

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Open Frame Outline Drawing:



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J1 - INPUT CONNECTOR PIN ASSIGNMENT

Pin	Signal Name.	Description
1	AC SAFETY GND	GROUND
3	AC NEUTRAL	NEUTRAL
5	AC LINE	LINE

J3 - OUTPUT CONNECTOR PIN ASSIGNMENT

Pin	Signal Name.	Description
1	GA-0	I2C GEOGRAPHIC ADD.
2	GA-1	I2C GEOGRAPHIC ADD.
3	GA-2	I2C GEOGRAPHIC ADD.
4	CURRENT SHARE	Current Share Signal
5	DC FAIL HIGH	TTL Level - Active High
6	DC FAIL LOW	TTL Level - Active Low
7	P- SENSE	+ Remote Sense
8	N - SENSE	- Remote Sense
9	IPMB - SDA	Serial Data I2C
10	IPMB - SCL	Serial Clock I2C
11	External 5V	External 5V for I2C
12	INHIBIT	Active Low
13	AC_FAIL	Open Collector – Active Low Option
14	RTN SIGNAL	5V Standby RTN
15	5V_OUT	5V Out Option
16	5V_OUT RTN	5V Out RTN Option

J5 - OUTPUT CONNECTOR PIN ASSIGNMENT

Pin	Signal Name.	Description
2	V2 Out	5VV/5A
1	V2 Out RTN	5V/5A RTN

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