

**Electrical
Specification for:**

eFO400-112

Wide range AC/DC Single 12V Output 400W Power
Supply

**TelkooR Part
Number:**

900-4136-0000

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	4136-DOC1-10	REV	A1
GENERAL	SCALE	RELEASE DATE	PRELIMINARY	SHEET	1	OF	5

REVISION HISTORY					
Rev Level	Rev Date	Change Made	Reason for Change	Effective	Approved By
A	19/12/2007	Initial Release		19/12/2007	S.Sadot
A1	12/10/2009	V1 Set point changes to 12.0v. (Was 24.0v)	Typing error	12/10/2009	S.Sadot

Approvals		
	Name	Date
Written by:	S. Sadot	19/12/2007
Engineering:	M. Heller	19/12/2007
Sales & Marketing:	H. Liber	19/12/2007
Management:	Y. Ben-Ami	19/12/2007

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	4136-DOC1-10	REV	A1
GENERAL	SCALE	RELEASE DATE	PRELIMINARY	SHEET	2	OF	5

Input:

Input Voltage: 85-264Vac
 Frequency: 47-63Hz
 Inrush Current: 60A maximum, cold start at 25°C, 220VAC
 Efficiency: 87% typical at 230Vac, full load
 83% 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 6.3A 250VAC SLO BLOW
 Brown – Out: 75 to 300Vac

Output Voltages & Currents:

Output	Output Voltage	Min. Load	Max. Load	Peak Load
V1	+12V	0	33 A	35A

Output Power: Maximum output power is 400 watts.
 Line Regulation: $\pm 0.4\%$ for V_{in} (Min) to V_{in} (Max).
 Load Regulation:
 V1 Less than $\pm 0.5\%$ for load changes from zero to full load

 Ripple & Noise
 V1 150mVp-p Max

 Initial Set Point Tolerance:
 V1 12.0V $\pm$ 0.1V

 Overshoot & Undershoot: Less than 1% at turn ON and OFF
 Transient Load Response: $\pm 5\%$ Max. Deviation for load change of 25% to 75%, at slew rate of 1A/ μ sec, recovery time less than 500Msec
 Turn On Delay: 2 sec. Maximum
 Hold-up Time: 16mSec minimum at 110VAC and 300 Watt
 Turn-On Rise Time: 30mSec Typical
 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 turn OFF to re-start.
 Temperature Protection: Shutdown due to excessive internal temperature 95 $\pm$ 5°C automatic recovery.
 Current Share: YES, built in "O-ring" Diode
 Hot Swap: YES
 Remote Sense V1 – compensates for voltage drop of up to 0.5V between the unit and the load. Outputs are internally sensed at the output connector if remote sense lines are opened.

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	4136-DOC1-10	REV	A1
GENERAL	SCALE	RELEASE DATE	PRELIMINARY	SHEET	3	OF	5

Signals & Commands

Inhibit: Active low, all output shut down.
 Power OK (DC Fail): Open collector active low when any of the outputs drop below 15% of its nominal value.

Environmental Specifications:

Temperature: Operating: -5°C to +50°C (de-rating linearly to 70 °C with 50% de-rating).
 Storage: -25°C to +85°C.
 Temperature Coefficient: 0 to 50°C ± 0.02%/°C
 Cooling: 150W free convection cooling (base plate cooling). 400W 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.

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:

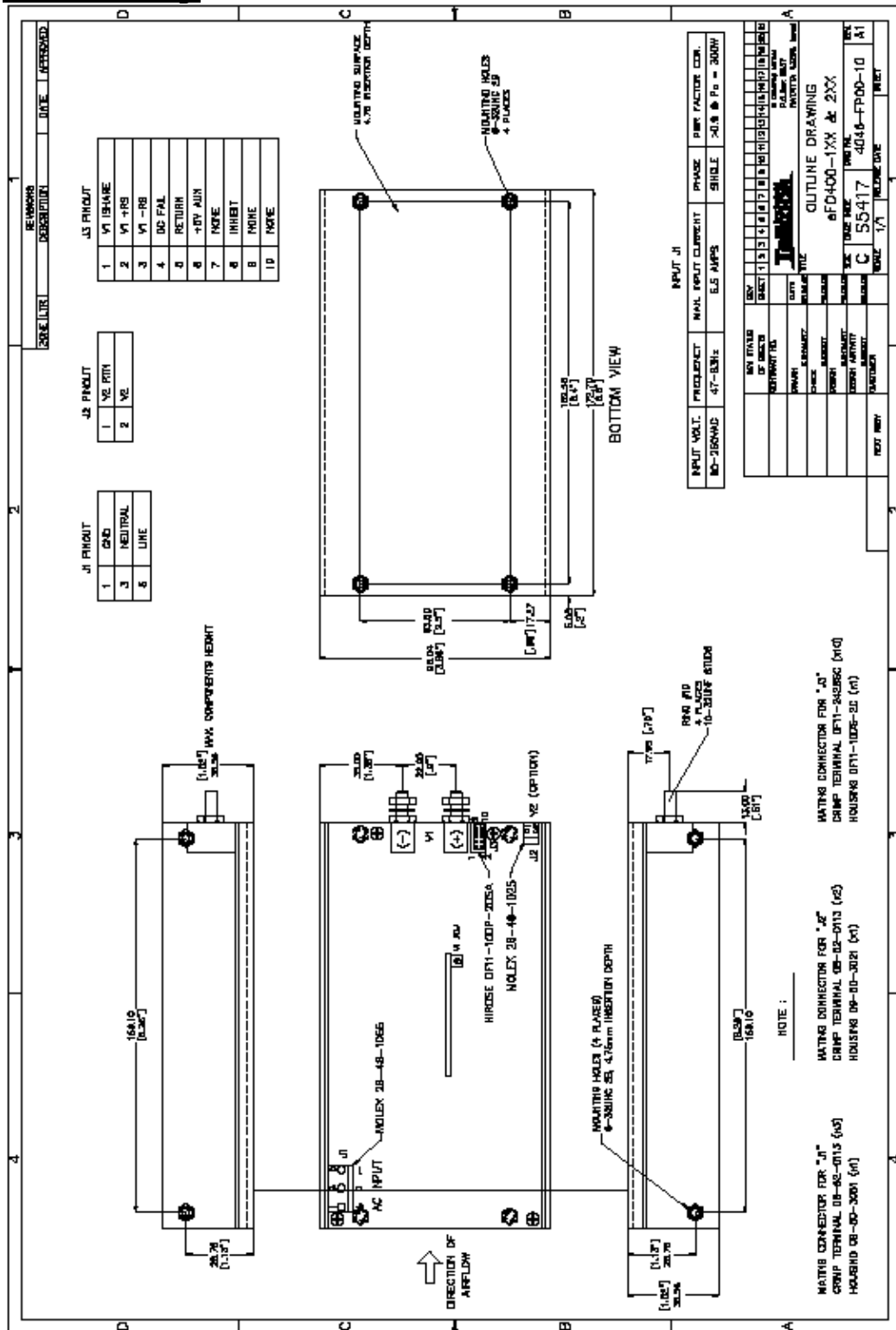
Input to Case: 1500VAC
 Input to Output: 3000VAC
 Output to Case: 1500VDC
 Safety Agency Compliance: UL 60950,CSA C22.2 -234, LEVEL 3.EN-60950, CLASS 1, SELV CE - MARK
 Leakage Current: 1mA @50/60 Hz, 264Vac input
 MTBF: 300,000 hours minimum per BELCOR 332,issue 6 specification @30 degrees C.

Mechanical Dimensions:

Size: 173 x 98 x 38.5(mm) (6.8" x 3.85" x 1.52")
 Weight: 720 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: HIROSE 10 Pin P/N DF11-10DP-2DSA
 Mating connector: Housing DF11-10DS-2C (x1)
 Crimp terminal DF11-2428SC (x10)
 Main output V1: #10 Power ring – two lugs

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	4136-DOC1-10	REV	A1
GENERAL	SCALE	RELEASE DATE	PRELIMINARY	SHEET	4	OF	5

Outline Drawing:



CUSTOMER	SIZE		CAGE CODE	S5417	DWG. NO.	4136-DOC1-10		REV	A1
GENERAL	SCALE		RELEASE DATE		PRELIMINARY	SHEET	5	OF	5