eFO600-1xx Series

PS-51xx

Wide range single output AC-DC 600W Power Supply

Electrical Specification

Input:

Input Voltage:	85 - 264Vac
Frequency:	47 - 63Hz
Inrush Current:	50A 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 10A 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	25A	27A
V1	+48V	12.5A	14A
V2 - Option	12V FAN	1A	1.5A
V3 - Option	5V STANDBY	0.5A	1A

Output:

Maximum Power	250W for free convection base plate cooling, 500W with forced cooling air.
Adjustment range	±5%
Auxiliary standby output -Option	5 V @ 0.5A regulated , ± 4%
Fan Output - Option	12V @ 1.5A ± 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:	V-out ± 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:	16mSec 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	Compensates for 0.5V lead drop minimum will operate without remote sense connected.

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 number, revision, and/or user defined data

Environmental Specifications:

Temperature:	Operating: -20°C to +50°C (Linear de-rating to 50% output power at 70°C Storage: -25°C to +85°C
Temperature Coefficient:	0 to 70°C ± 0.02%/°C
Cooling:	250W free convection cooling (base plate cooling). 500W forced air cooling (24CFM min.)
Humidity:	Maximum 95% RH non-condensing
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:

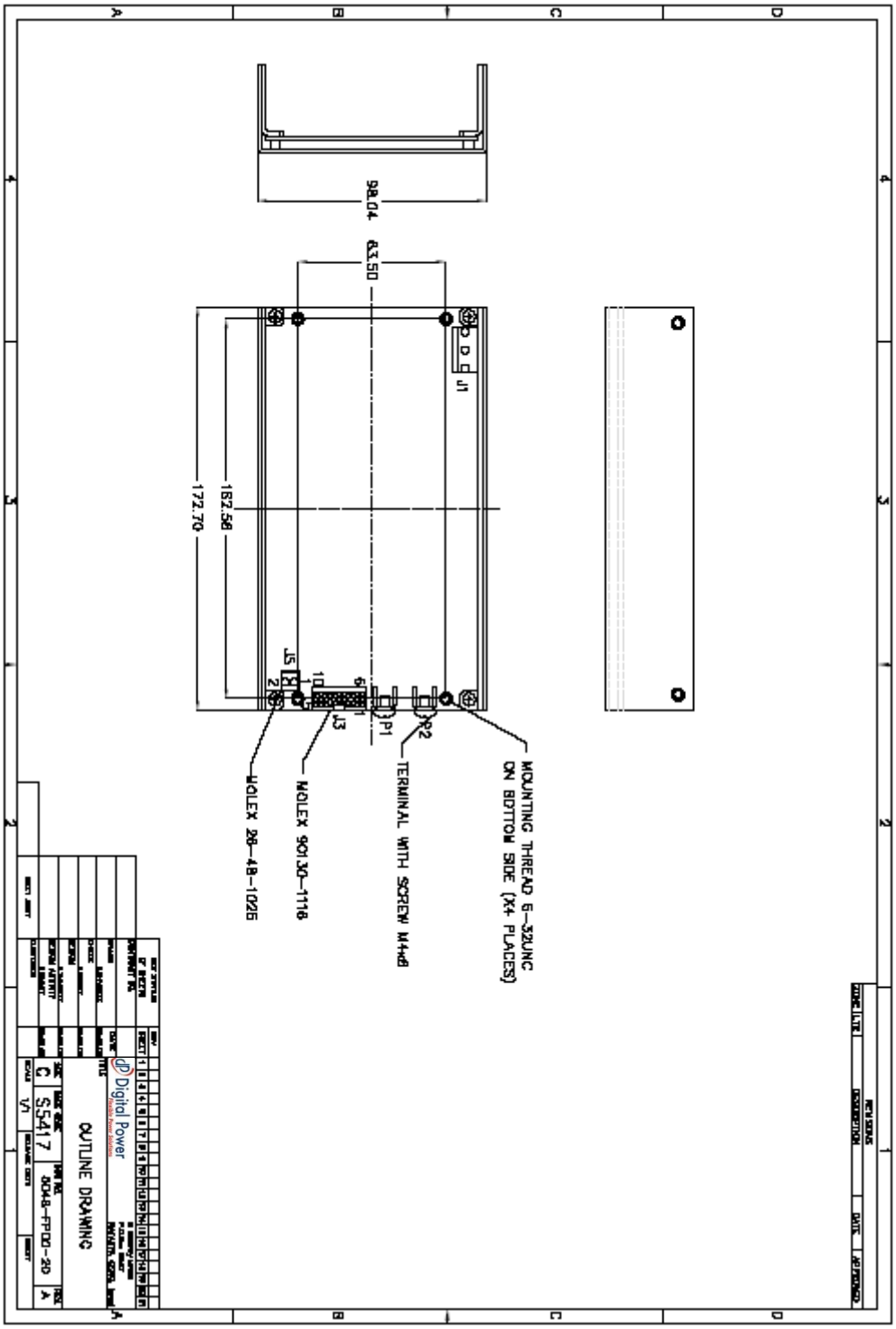
Meets FCC CLASS B, CISPR 22 CLASS B, EN55022 CLASS B with external line filter

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:	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

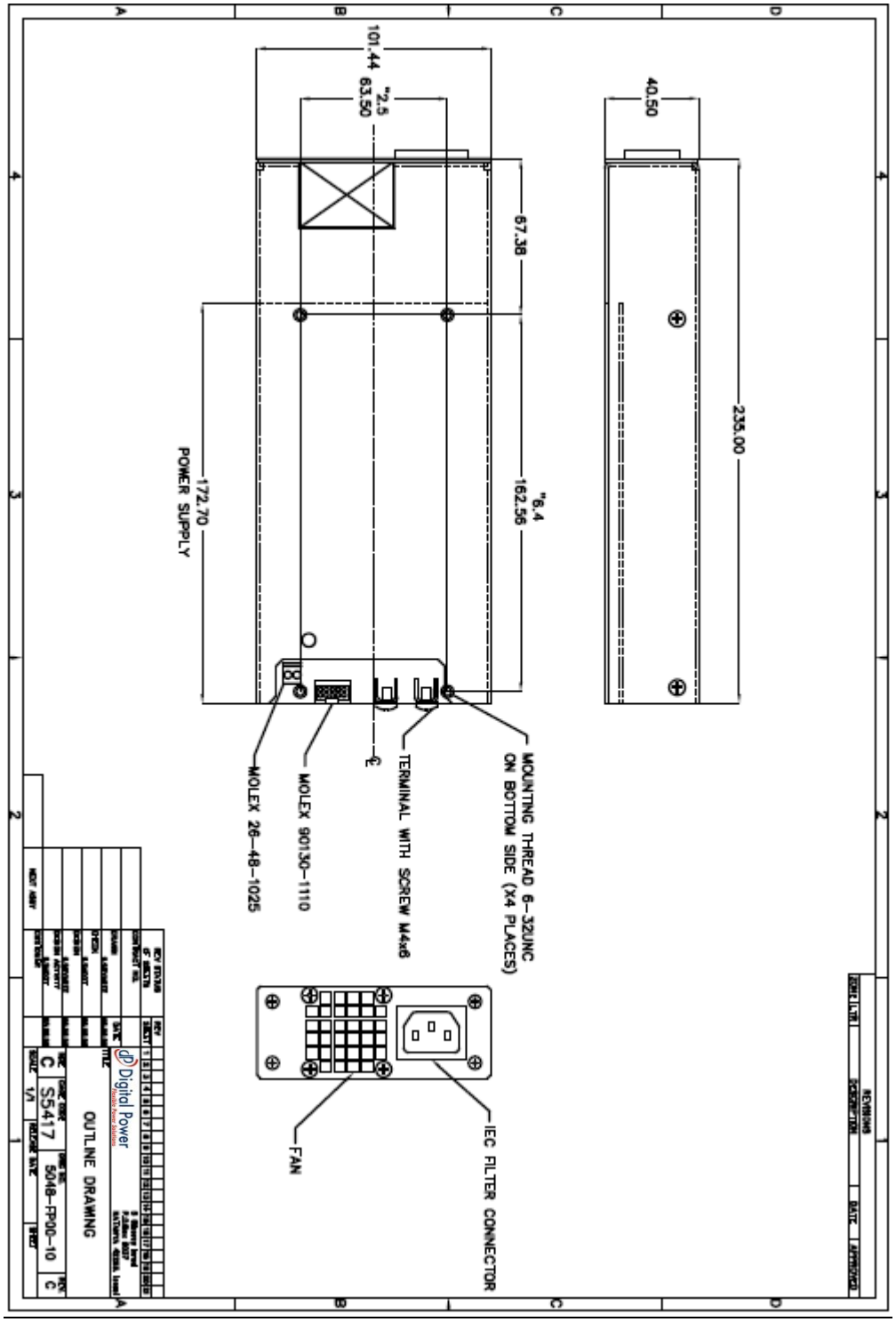
Mechanical Dimensions:

Size:	173mm x 98mm x 38.5mm (6.8" x 3.85" x 1.52")
Weight:	850 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)
12V 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 24V :	Screw M4 X6

Open Frame Outline Drawing:



COVER PLUS FAN AND FILTER OUTLINE DRAWING - OPTION



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 Option
10	IPMB - SCL	Serial Clock I2C Option
11	External 3.3V	External 3.3V 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	12V Out	12V/1.5A Option
1	2V Out RTN	12V/1.5A RTN