



eFO600-232 / 900-5132-0000

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Specification

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Project Name/ Part Number	Customer Part Number	Document Name
5132-DOC1-10	22/06/2015	D

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Document Number	Written by	Approved by	Issue Date	Revision
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**Electrical  
Specification for:**

## **eFO600-232 Series**

**Wide range AC/DC Single Output 600W Power  
Supply**

**Advice Part  
Number:**

**900-5132-0000**



<b>5132-DOC1-10</b>	<b>S. Sadot</b>	<b>G. Sela</b>	<b>22/06/2015</b>	<b>D</b>
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<b>REVISION HISTORY</b>					
<b>Rev Level</b>	<b>Rev Date</b>	<b>Change Made</b>	<b>Reason for Change</b>	<b>Approved By</b>	<b>Effective</b>
A	22/06/2015	RELEASE		S. Sadot	22/06/2015
B	08/11/2015	Update operating temp. and storage temp.	To withstand with customer requirements	S. Sadot	08/11/2015
C	16/11/2015	Update Outline Drawing	Adding Top Cover	S. Sadot	16/11/2015
D	11/07/2016	Adding input filter	Document update	S. Sadot	11/07/2016

<b>Approvals</b>		
	<b>Name</b>	<b>Date</b>
<b>Written by:</b>	<b>S. Sadot</b>	22/06/2015
<b>Engineering:</b>	<b>S. Sadot</b>	22/06/2015
<b>Sales &amp; Marketing:</b>	<b>H. Liber</b>	22/06/2015



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**Input:**

Input Voltage: 85 - 264Vac  
Frequency: 47 - 63Hz  
Inrush Current: 50A maximum, cold start at 25°C  
Efficiency: 90% typical at 230Vac, full load  
85% 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	+32V	18.75A	20A

**Output:**

Maximum Power 500W for free convection base plate cooling , base plate Temp +75°C ,  
Ambient Temp +85°C, 600W with forced air-cooling (24CFM min.)  
Adjustment range ±5%  
Auxiliary standby output - Option N/A  
Line Regulation: ±1%  
Load Regulation: Less than ±0.5% for load changes from zero to full load.  
Ripple & Noise 0.5% Pk-Pk Max, 20Mhz BW Measured on 120uF tantalum in parallel with a 0.1uF  
ceramic capacitor on output connector.  
Initial Set Point Tolerance: Vout ± 0.5%  
Minimum Load 1 Amp.  
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 min. Will operate without remote sense connected.



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5132-DOC1-10	G. Sela	D
Document Number	Written by	Revision

**Signals & Commands**

Inhibit (On / Off) : Active LOW - output shut down.  
 DC Fail: TTL level Open collector active low. (Note: 30Sec. Min delay time from "0" to "1" due to Turn-On).  
 AC Fail (Option): Open collector active high.  
 I<sup>2</sup>C bus (Option) N/A

**Environmental Specifications:**

Temperature: Operating: -40°C to +75°C, 500W for free convection base plate cooling, base plate Temp +75°C, Ambient Temp +85°C, Storage: -40°C to +85°C.  
 Cooling: 500W free convection cooling (base plate +75°C). 600W 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:**

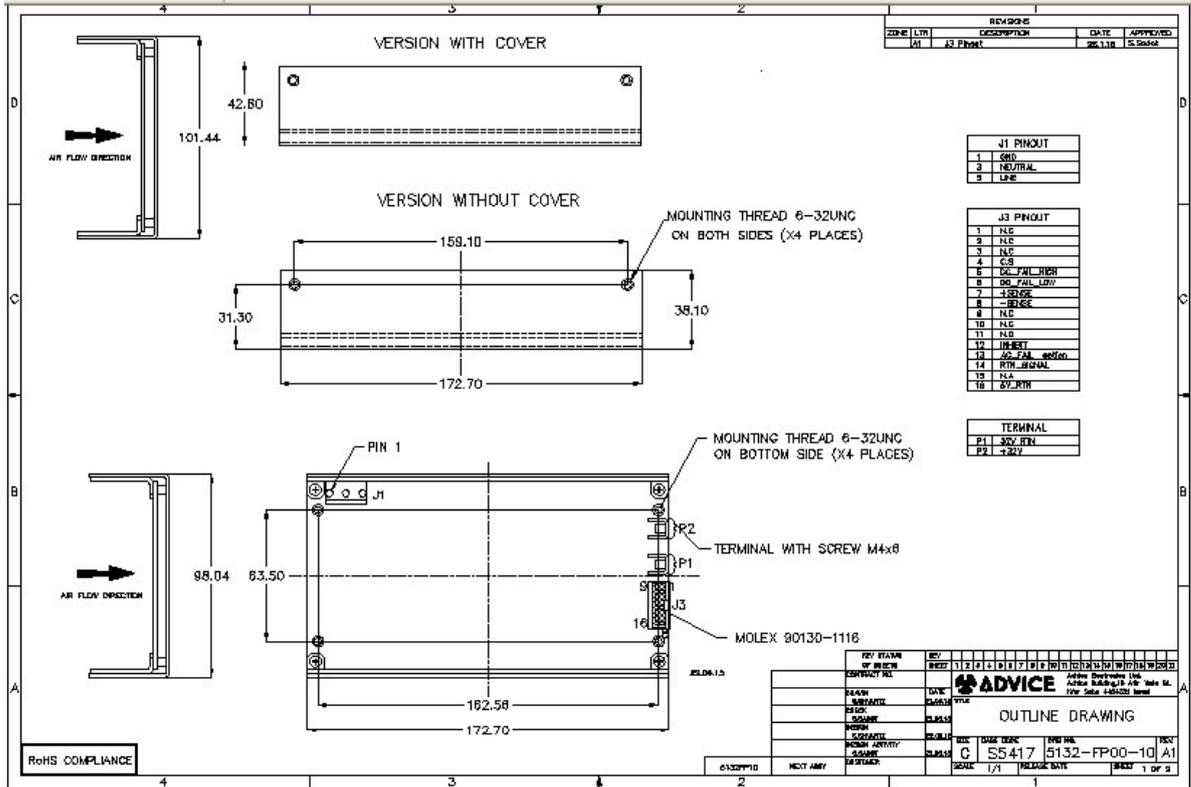
Meets FCC CLASS B, CISPR 22 CLASS B, EN55022 CLASS B with external line filter  
 EN61000-3-2 Harmonics  
 EN61000-3-3 Voltage fluctuations  
 EN6000-4-2 ESD +8KV AIR +4KV contact discharge, performance criteria B  
 EN61000-4-3 Radiated Immunity: 80-1000Mhz 3V/m, AM 80% (1KHz),criteria A  
 EN61000-4-4 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: 2200Vdc  
 Input to Output: 4200Vdc  
 Output to Case: 500VDC  
 Safety Agency Compliance: UL 60950-2, CB Certificate & Report, CE MARK (LVD).  
 MTBF: 300,000 hours minimum per BELCOR 332,issue 6 specification @50 degrees C.  
 RoHS: Category 6

**Mechanical Dimensions:**

Size: 173 x 98 x 38.5(mm) (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)  
 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 32V Terminal : Screw M4 X6

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**Open Frame Outline Drawing:**





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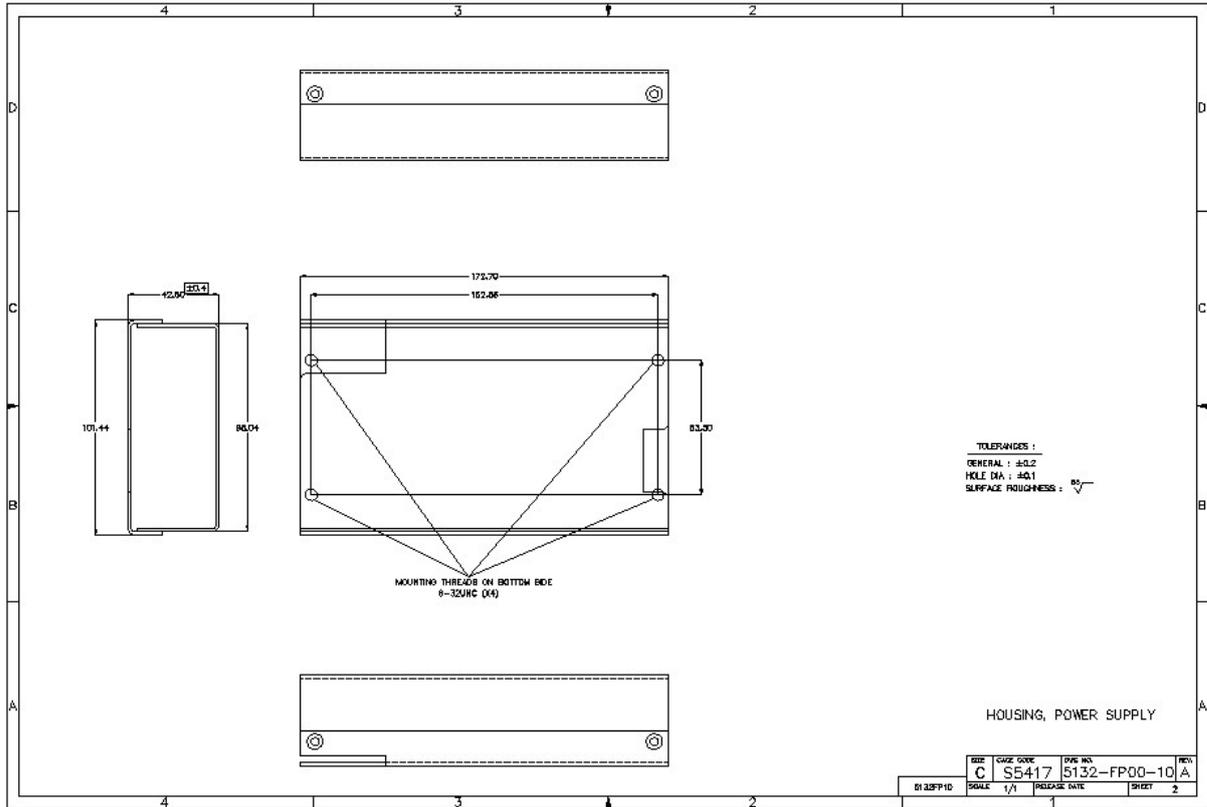
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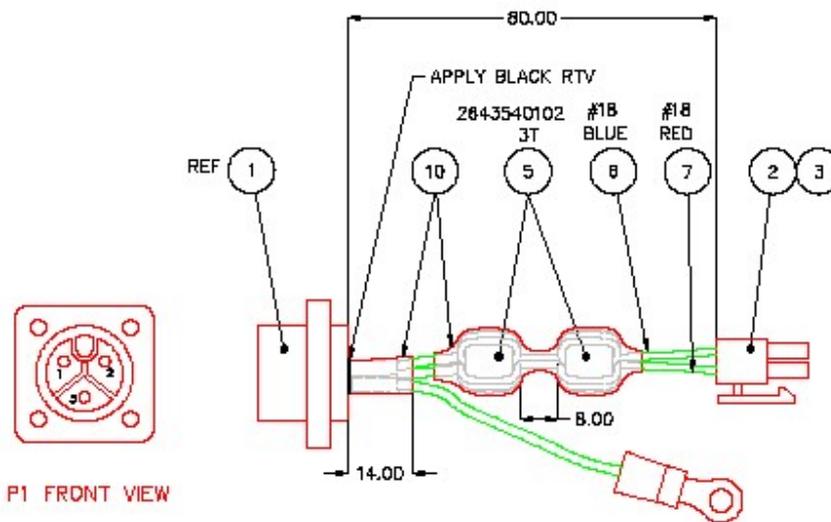


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### Additional Input Filter

The power supply has additional filter in the input that includes 3 parts as follow:

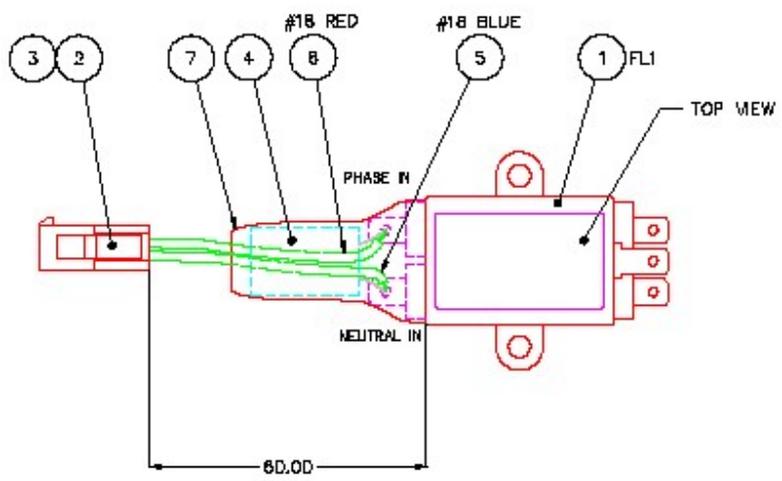
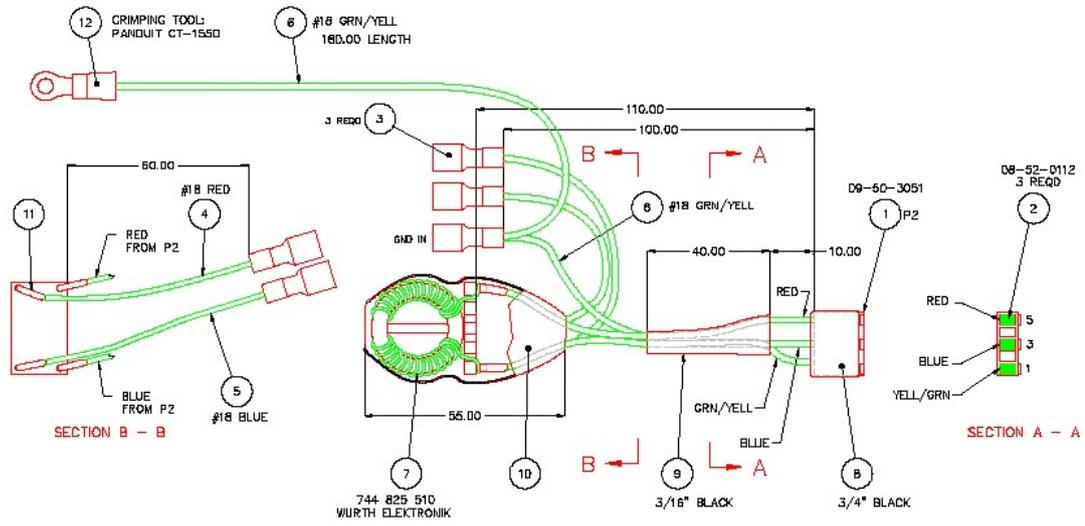
1. Input cable with input connector p/n: 23003536-01 Choggri and 2 Fair Rite beads P/N: 2643540102
2. Common Mode choke P/N: 744825510 Wurth Elektronik.
3. AC Filter P/N: 5500.2030 Schurter.



P1 WIRING DIAGRAM

FROM FILTER FUNCTION	WIRE COLOR	TO
P GND IN	GRN/YELL	P1 #3
NEUTRAL IN	BLUE	P1 #2
PHASE IN	RED	P1 #1

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J1 - INPUT CONNECTOR PIN ASSIGNMENT

Pin	Description
1	GROUND
3	NEUTRAL
5	LINE

J8 - OUTPUT 32Vdc Terminal Block

Pin	Signal Name.
1	32V OUTPUT RTN
2	32V OUTPUT RTN
3	32V
4	32V

J3 - OUTPUT CONNECTOR PIN ASSIGNMENT

Pin	Signal Name.	Description
1	GA-0	N/A, I2C GEOGRAPHIC ADD.
2	GA-1	N/A, I2C GEOGRAPHIC ADD.
3	GA-2	N/A, I2C GEOGRAPHIC ADD.
4	CURRENT SHARE	Current Share Signal
5	DC FAIL HIGH	Option
6	DC FAIL LOW	TTL Level - Active Low
7	P- SENSE	+ Remote Sense ( option )
8	N - SENSE	- Remote Sense ( option )
9	IPMI - SDA	N/A ,Serial Data I2C
10	IPMI - SCL	N/A , Serial Clock I2C
11	External 5V	N/A , External 5V for I2C
12	INHIBIT	Active LOW
13	AC_FAIL	Option
14	RTN SIGNAL	N/A
15	5V_AUX	N/A
16	5V-AUX RTN	N/A