

ELPAC FSA150 SERIES CLASS I

150 Watt
ITE Open Frame Power Supply



- Safety Approval - EN60950-1 Class I
- High Efficiency: Level V
- Up to 180W with Forced Air
- High Power Density 9.8W/in³
- Lifetime Expectation >5 years
- Hold-up Time >25ms at full load
- Grounded Output
- 5-Year Limited Warranty



INPUT	
Input Voltage	85 – 264VAC (100 – 240VAC Nominal)
Input Frequency	47 – 63Hz (50-60Hz Rated)
Input Current	<2.0A rms
Inrush Current	<37A at 230VAC cold start
Power Factor	>0.97
Zero Load Power	<0.5W
Earth Leakage Current (Typical)	N/A
Touch Leakage Current	<0.25mA@264Vac 60Hz (typical) --- Accessible parts and circuits not connected to PE

OUTPUT	
Output Voltage	See Table
Total Regulation	±5%
Minimum Load	No minimum load required
Start-Up Delay	<1.5s
Hold-Up Time	>25ms at any input voltage of full load
Ripple & Noise	<1% pk-pk **
Over Voltage Protection	110 – 135%
Over Temperature Protection	Active - Recoverable; Passive - Non recoverable
Over Current Protection	120 – 180%
Short Circuit Protection	Shutdown, auto-restart (hiccup mode)

Notes

**Ripple and noise measured with 20MHz bandwidth; 10µF tantalum capacitor in parallel with a 0.1µF ceramic capacitor.

Model Number	Output Voltage	Output Current	Forced Air Current ¹	Total Regulation ²	Typical Efficiency ³
FSA150012A	12.0V	12.5A	15.0A	±5%	89%
FSA150015A	15.0V	10.0A	12.0A	±5%	90%
FSA150018A	18.0V	8.3A	10.0A	±5%	90%
FSA150024A	24.0V	6.3A	7.5A	±5%	91%
FSA150048A	48.0V	3.2A	3.75A	±5%	92%

Notes

1) Maximum peak load (180W) lasting 500ms with a maximum 10% duty cycle, Sustained output current (180W) with minimum 100 LFM..

2) Includes initial setting, line regulation, load regulation, and thermal drift.

3) Typical at 115VAC.

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General

Efficiency	Avg. Efficiency 91.5% @ 115VAC; Avg. Efficiency 93.5% @ 230VAC;
MTBF	min. 200,000 hours, SR-332 issue 3
Size	5.00" (127mm) x 3.00" (76.2mm) x 1.22" (30.9mm)
Weight	0.75 LBS (0.34 Kg)
Power Density	9.8W/in ³

Environmental

Operating Temperature	0–70°C (Full load to 50°C, derate linearly to 50% load at 70°C)
Storage Temperature	-40°C to +85°C
Relative Humidity	5-93%, non-condensing
Cooling	Natural Convection (150W) or Forced Air (180W)
Vibration	Unites meet MIL-STD-810G Figure 514.6C-1 category 4

EMC & Safety

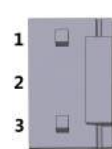
Emissions	FCC class B, EN55022 class B EN61000-3-2, -3
Immunity	EN61000-4-2, -3, -4, -5, -6, -11
Certified by TUV to the following:	cTUVus / CCC
	UL60950-1:2007 R10.14
	CB per IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
	CAN/CSA-C22.2 No.60950-1-07+A1 +A2
	CE marked to LVD and CE EMC

Input & Output Configuration

Standard Input Cable	Not Provided, input mating connector: AMP#6402503 or equivalent
Connection on Power Supply Body	AMP#6404453 or equivalent
Standard Output Cable	Not Provided
Output Cable Cord Size	N/A
Output Cable Connector	AMP#6404458 or equivalent
Output Cable Mating Connector	AMP#6402508 or equivalent

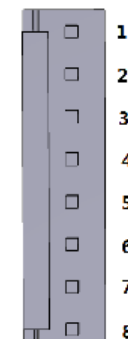
Input Pin Assignments

Pin 1	AC Neutral
Pin 2	not assembled
Pin 3	AC Line

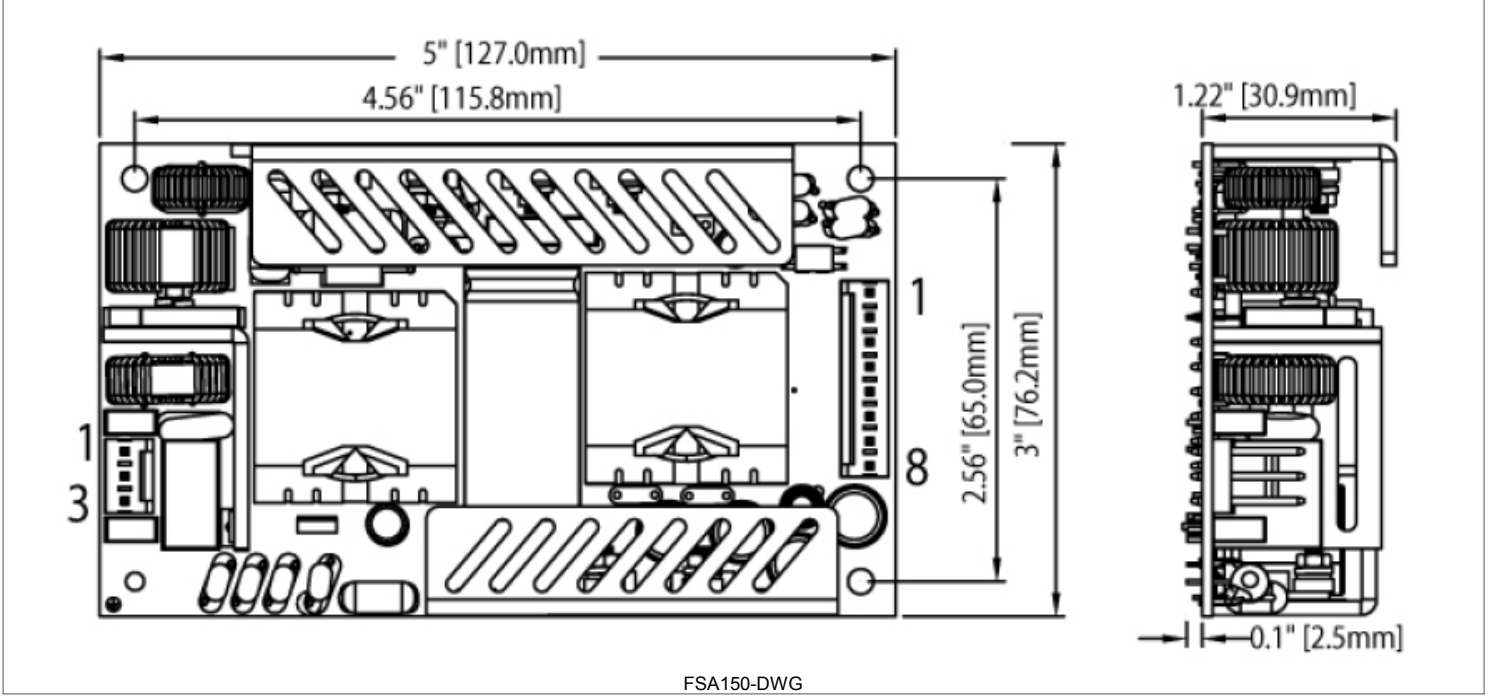


Output Pin Assignments

Pin 1	+V1
Pin 2	+V1
Pin 3	+V1
Pin 4	+V1
Pin 5	Return
Pin 6	Return
Pin 7	Return
Pin 8	Return



Mechanical Drawing



FSA150-DWG