

# AC-DC Converter

**POWER  
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[www.powersolve.com.tw](http://www.powersolve.com.tw)

## PA150 Series 150W Open Frame Single Output

### Features

- Universal AC Input Full Range
- Built-in Active PFC Function >0.90
- No Load Power Consumption <1W
- User Adjustable Output Voltage
- User Adjustable Constant Current Limit
- OVP, OLP, OTP, SCP Protections



### Electrical Specification

Input Voltage	90-264VAC full range, 47-63Hz / 127-370VDC
Power Factor	≥0.90 at 230VAC / ≥0.95 at 115VAC at full load
AC Input Current (typ.)	2A at 115VAC / 1A at 230VAC
Inrush Current	30A at 115VAC / 60A at 230VAC
Leakage Current	<1mA at 240VAC
Output Voltage	See Table
Output Current	See Table
Voltage Adjust Range	±10% typical adjustment by potentiometer (range can be modified - consult sales)
Voltage Tolerance	±1%
Constant Current Adjust	95-120%
Set Up, Rise Time	<2000ms, <30ms at 230VAC, full load
Hold Up Time (typ.)	>32ms at 230VAC / >16ms at 115VAC, full load
Overload Protection	Hiccup mode when rated output power is within 105-150% for more than 3 secs. Constant current limit >150% rated power / short circuit Auto recovery: If output drops to 40% of the rated output voltage, PSU will shut down & auto recover 5 times (if fault condition remains, PSU will shut down & recovery will require re-cycle of mains)
Overvoltage Protection	115-150% rated voltage. Output latches off, recycle AC input to recover
Over Temperature Protection	90°C ±5°C detected on NTC. Shuts down output, re-power on to recover
Operating Temp. Range	-20°C to +70°C. Above 50°C, derate linearly to 50% load at 70°C
Operating Humidity	20-90% RH non-condensing
Storage Temp. Range	-20°C to +85°C
Storage Humidity	10-95% RH non-condensing
Temperature Coefficient	±0.05%/°C (0-50°C)
Vibration	10-500Hz, 2G 10 min. / 1 cycle, period for 60 min. each along X, Y, Z axes
Safety Standards	Certified UL60950-1, EN60950-1
Withstand Voltage	I/P-O/P: 3KVAC (4242VDC), I/P-FG: 1.5KVAC (2121VDC) 1 min.
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: 100MΩ / 500VDC
EMI Conduction & Radiation	Certified EN55022, EN61000-6-3
Harmonic Current	Certified EN61000-3-2, EN61000-3-3
EMS Immunity	Certified EN61204-3, EN55024, EN61000-6-1, EN61000-4-2, 3, 4, 5, 6, 8, 11
Cooling	Natural convection
Dimensions	175(L) x 60.7(W) x 29.6(H) mm
Weight	0.3Kg

#### Notes:

1. All parameters NOT specifically mentioned are measured at 230VAC input, rated load and 25°C ambient temperature
2. Ripple and noise are measured at 20MHz bandwidth by using a 12" twisted pair wire terminated with a 0.1μF ceramic & 47μF electrolytic capacitors across the output
3. Tolerance: includes set up tolerance, line regulation and load regulation
4. Derating is required at low input voltages. Below 100VAC, derate linearly to 80% load at 85VAC
5. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC Directives

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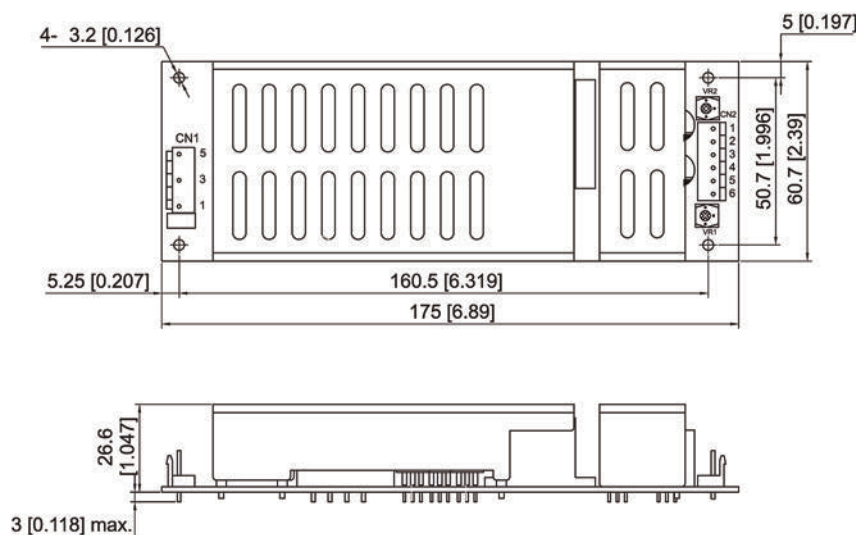
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## Output Voltage and Current Ratings

MODEL	OUTPUT VOLTAGE	MAX OUTPUT CURRENT	RIPPLE & NOISE	LINE REG.	LOAD REG.	POWER Max.	EFF.
PA150-12	12V	11A	150mV p-p	±1.0%	±2.0%	132W	88%
PA150-15	15V	10A	150mV p-p	±1.0%	±2.0%	150W	88%
PA150-20	20V	7.5A	150mV p-p	±1.0%	±2.0%	150W	89%
PA150-24	24V	6.3A	240mV p-p	±1.0%	±2.0%	151.2W	90%
PA150-30	30V	5.0A	240mV p-p	±1.0%	±2.0%	150W	90%
PA150-36	36V	4.2A	240mV p-p	±1.0%	±2.0%	151.2W	90%
PA150-48	48V	3.2A	240mV p-p	±1.0%	±2.0%	153.6W	90%

## Mechanical & Connection Details



### CN1 Connections

Pin	Function
1	Live
3	Neutral
5	Earth

Mating connector:  
JST B5P-VH or equivalent

### CN2 Connections

Pin	Function
1-3	+Vout
4-6	-Vout

Mating connector:  
JST B6P-VH or equivalent

Optional screw terminals  
available for CN1 & CN2  
consult sales

## Derating Curves

