

# MPE-150S Series

## Single Output, 150W Compact, Enclosed AC/DC Power Supplies



### Key Features:

- 150W Output Power
- Selectable 88-264 AC Input
- EN 60950 Compliant
- Eight Single Output Models
- Meets EN55022
- >285 kHour MTBF
- Compact Metal Enclosure



RoHS Compliant



### MicroPower Direct

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### Electrical Specifications

Specifications typical @ +25°C, nominal input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

#### Input

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range	Switch Selectable	88	115	132	VAC
		176	220	264	VDC
		248		370	Hz
Input Frequency		47		63	Hz
Input Current	See Model Selection Guide				
Inrush Current	Cold Start, 115 VAC		17.0		A Pk
	Cold Start, 230 VAC		35.0		
Safety Ground Leakage Current	115 VAC			1.5	mA
	230 VAC			3.5	

#### Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage	See Model Selection Guide				
Output Current	See Model Selection Guide				
Output Voltage Adjustment	See Model Selection Guide				
Output Voltage Tolerance, See Note 1	See Model Selection Guide				
Ripple & Noise (20 MHz), See Note 2	See Model Selection Guide				
Hold-Up Time	115 VAC		20		mSec
	230 VAC		28		
Set-Up Time	230 VAC		100		mSec
Rise Time	230 VAC		50		mSec
Temperature Coefficient			±0.02		%/°C
Short Circuit Protection	Continuous (Autorecovery)				
Over Voltage Protection	See Note 3	115		135	
Overload Protection	See Note 4	110		160	

#### General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input to Output	3,000			VAC
	Input to Ground	1,500			
	Output to Ground	500			
Isolation resistance	500 VDC		100		MΩ
EMC Compliance	EMI/RFI	Conducted EN 55022; EN 61000-3-2, -3			
		Electrostatic Discharge (ESD) IEC/EN 61000-4-2, -6, -8, -11			
		RF Field Susceptibility IEC/EN 61000-4-3			
		Electrical Fast Transients/Bursts On Mains IEC/EN 61000-4-4			
Switching Frequency	Surge		25		kHz

#### Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-10	+25	+60	°C
Storage Temperature Range		-20		+85	°C
Cooling	Free Air Convection (See Derating Curve)				
Humidity	RH, Non-condensing			95	%

#### Physical

Case Size	7.83 x 4.33 x 1.97 Inches (199.0 x 110.0 x 50.0 mm)				
Case Material	Vented Metal Enclosure				
Weight	28.3 Oz (0.8 kg)				

#### Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	285			kHours
Safety Standards	IEN 60950, IEC 60950				
Vibration	10-500 Hz, 2G 10 min/1 Cycle. Period of 60 min each along X, Y & Z Axis				

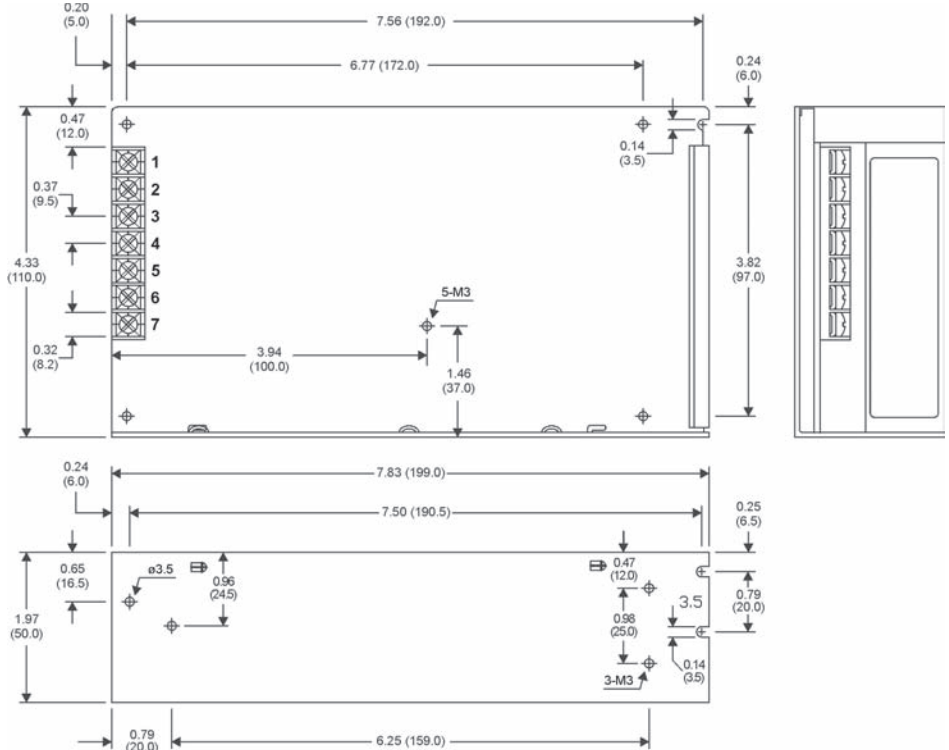
## Model Selection Guide

Model Number	Input		Output				Output Tolerance (%)	Ripple & Noise (mV p-p)	Efficiency (% Typ)
	Current (A)		Voltage (VDC)		Current (A)				
	115 VAC	230 VAC	Rated	Adjust	Rated	Range			
MPE-150S-05	3.2	1.6	5.0	4.5 - 5.5	30.0	0 to 30.0	±2.0	150	78
MPE-150S-09	3.2	1.6	9.0	8.0 - 10.4	16.7	0 to 16.7	±1.0	180	80
MPE-150S-12	3.2	1.6	12.0	10.6 - 13.2	12.5	0 to 12.5	±1.0	180	82
MPE-150S-13.5	3.2	1.6	13.5	12.0 - 15.0	11.2	0 to 11.2	±1.0	180	83
MPE-150S-15	3.2	1.6	15.0	13.5 - 16.5	10.0	0 to 10.0	±1.0	180	84
MPE-150S-24	3.2	1.6	24.0	21.0 - 28.0	6.5	0 to 6.5	±1.0	240	85
MPE-150S-27	3.2	1.6	27.0	24.0 - 30.0	5.6	0 to 5.6	±1.0	240	86
MPE-150S-48	3.2	1.6	48.0	43.0 - 53.0	3.2	0 to 3.2	±1.0	240	87

### Notes:

- Output voltage tolerance includes the effects of set point accuracy, line regulation and load regulation.
- Ripple and noise is measured at 20 MHz bandwidth using a 12 inch twisted pair wire to connect to the power supply terminals. A 0.1  $\mu$ F and a 47  $\mu$ F capacitor are connected in parallel as close to the power supply terminals as possible.
- The overvoltage protection circuit shuts down the output. The unit must be repowered to recover once the fault condition is removed.
- The overload protection circuit shuts down the output. The unit must be repowered to recover once the fault condition is removed.
- Efficiency is measured with a 115 VAC input.
- It is recommended that a fuse be used on the input of a power supply for protection. For the MPE-150S series, a 7.5A/250 VAC slow blow should be used.

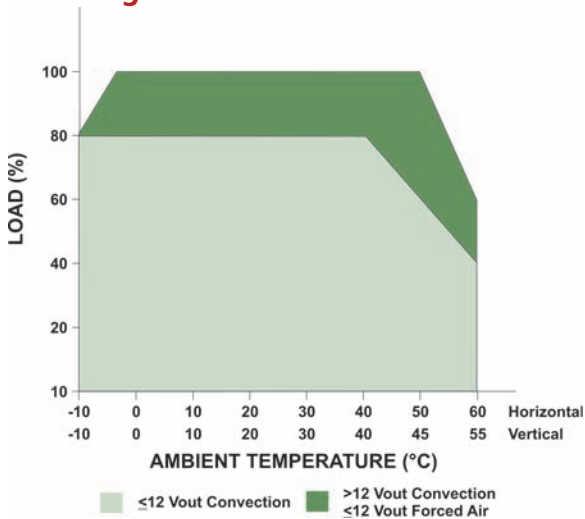
## Mechanical Dimensions



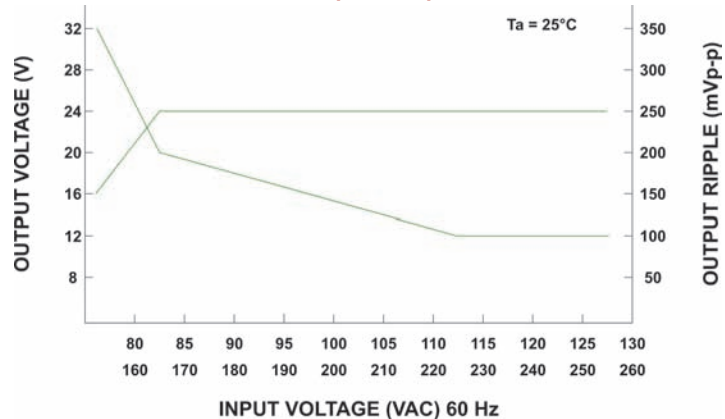
## Pin Connections

Pin	Function
1	AC-Line
2	AC-Neutral
3	AC-Ground
4	-Vout
5	-Vout
6	+Vout
7	+Vout

## Derating Curve



## Static Characteristics (24 Vout)



### Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.01 (±0.25)



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