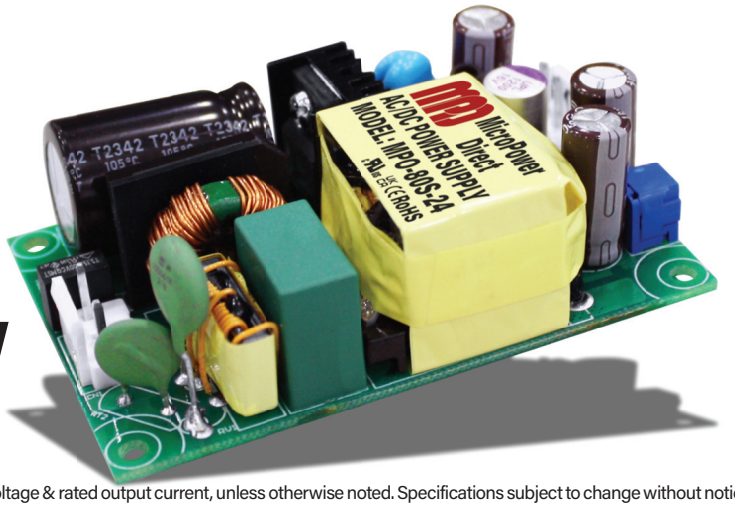
MPO-80S

Very Compact, 3" x 2" High Performance, 80W AC/DC Power Supplies



Key Features:

- 80W Output Power
- Universal 90-264 VAC Input
- Small 3.03 x 2.0 x 0.925 Size
- EN 62368 Approved (UL)
- Efficiency To 90%
- -40°C to +80°C Temp Range
- Meets 60068 Shock & Vibe
- Meets EN 55032 B
- >300 kHour MTBF
- <0.1W No Load Power
- 3,000 VAC Isolation
- Tight Line/Load Regulation

Electrical Specifications

Specifications typical @ +25°C, 230 VAC input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

Input

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range, See Note 1		90		264	VAC
		120		370	VDC
Input Frequency		47		63	Hz
Input Current	See Model Selection Guide				
Inrush Current, <2ms, Cold Start	115 VAC			50	A
	230 VAC			100	
Leakage Current	100 - 240 VAC			0.25	mA

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Accuracy			±2.0		%
Line Regulation	VIN = Min to Max		±1.0		%
Load Regulation	0 to 100%		±1.0		%
Ripple/Noise, See Note 1	12V Output		120		mV
	24V Output		240		
Hold-Up Time	230 VAC		30		mS
Over Voltage Protection	Zener Diode Clamp				
Over Power Protection	Autorecovery				
Short Circuit Protection, See Note 2	Hiccup Mode (Autorecovery)				

General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input to Output		3,000		VAC
			4,242		VDC
EMC	EMI (Conducted/Radiated Emmisions)				EN 55032 Class B
	EMS (Noise Immunity)				EN55035

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	With Derating	-40		+80	°C
Storage Temperature Range		-40		+85	°C
Temperature Coefficient			±0.05		%°C
Cooling	Free Air Convection (See Derating Curve)				
Humidity	RH, Non-condensing		60%		RH
Altitude During Operation			2,000		m

Physical

Size & Weight					See Page 2

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	300			kHours
Safety Standards	UL/cUL 62368-1 Recognition (UL certificate)				
Vibration	IEC 60068-2-6, 10-500 Hz, 2G 10 min/1 cycle, 60 min each along X, Y, Z axis				
Shock	IEC 60068-2-27				

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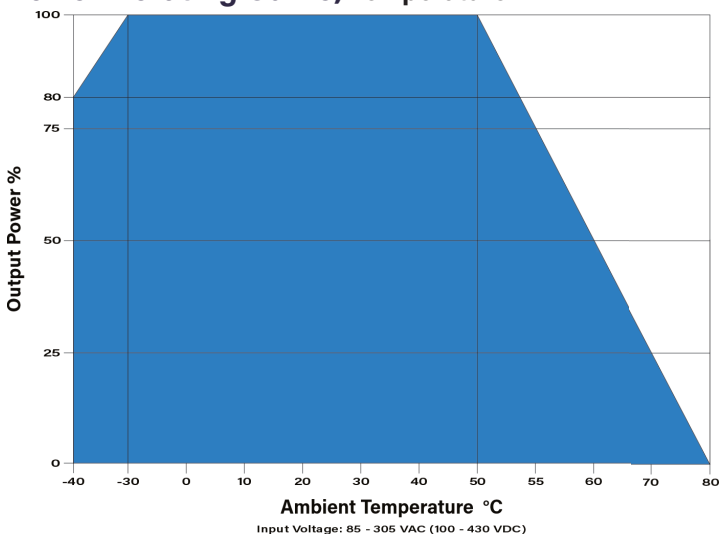
Model Selection Guide

Model Number	Input		Output				Capacitive Load (μF, Max)	Efficiency (230 VAC, %, Typ)
	Current (mA Max)		Voltage (VDC)	Voltage Adjust Range	Current (mA Max)	Power (W)		
	115 VAC	230 VAC						
MPO-80S-12	1,800	1,000	12	±10%	6,666	65	6,000	89.5
MPO-80S-24	1,800	1,000	24	±10%	3,333	65	1,200	90

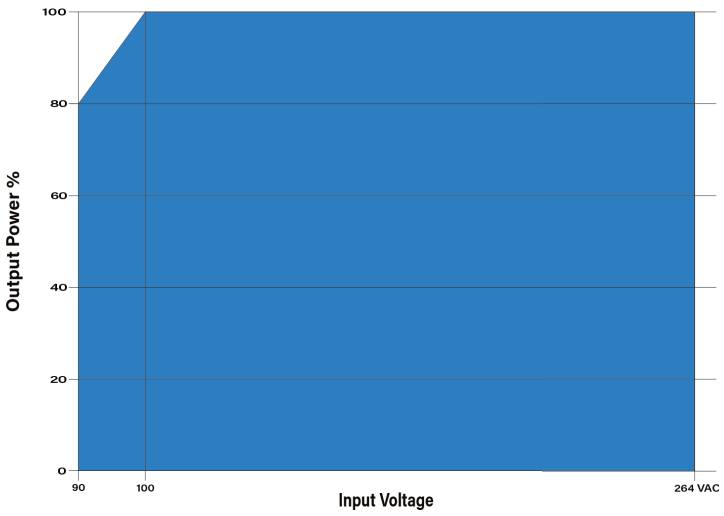
Notes:

1. Ripple and noise are measured at 20 Mhz bandwidth with a 0.1μF and a 47 μF capacitor connected in parallel as close to the unit output terminals as possible.
2. Output short circuit protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
3. Peak current is specified for a maximum duty cycle of 33% for every 30s. Average output power should not exceed the rated power.

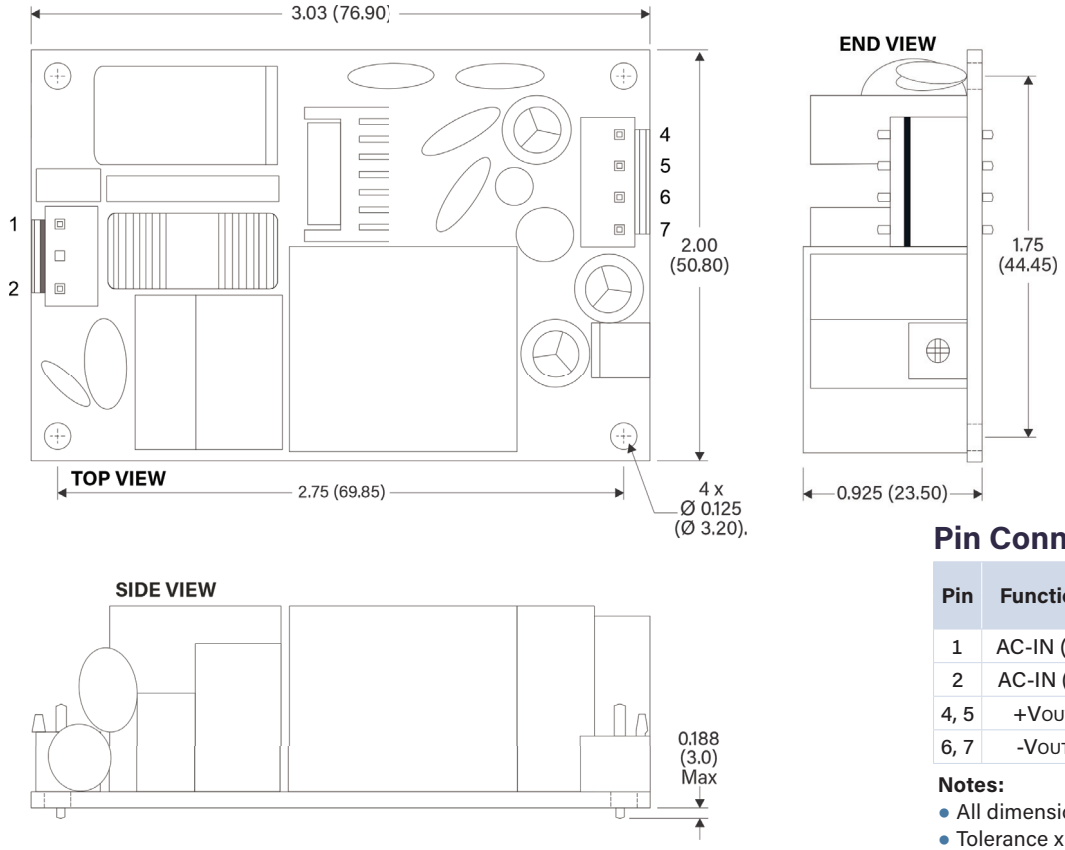
Power Derating Curve, Temperature



Power Derating Curve, Input Voltage



Mechanical Dimensions



Pin Connections

Pin	Function	JST Mating Housing	JST Terminal
1	AC-IN (N)	VHR-3N	SVH-41T-P1.1
2	AC-IN (L)		
4, 5	+Vout	VHR-4N	SVH-41T-P1.1
6, 7	-Vout		

Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.02 (±0.50)
- Power supply weight is: 3.88 Oz (110g)
- The middle pin is removed on the input connector

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