

MPO-40S

Compact, Wide Input High Performance 40W AC/DC Power Supplies

Key Features:

- 40W Output Power
- Universal 90-264 VAC Input
- Compact 3 x 1.5 x 0.87 Size
- EN 62368 Approved (UL)
- Efficiency To 90%
- -40°C to +80°C Temp Range
- Meets 60068 Shock & Vibe
- Meets EN 55032 B
- >330 kHour MTBF
- <0.1W No Load Power
- 3,000 VAC Isolation



MicroPower Direct

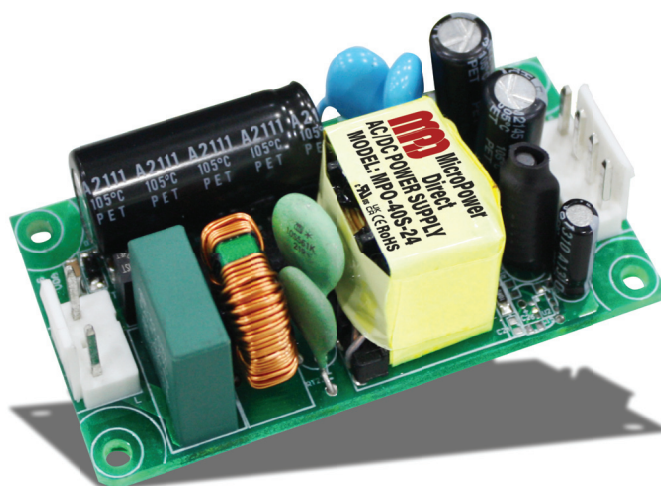
46 Eastman Street
Unit 1
Easton, MA 02375
USA

T: (781) 344-8226

F: (781) 344-8481

E: sales@micropowerdirect.com

W: www.micropowerdirect.com



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	115 VAC			50	A
	230 VAC			100	
Leakage Current	100 - 240 VAC			0.25	mA
No Load Power Consumption	115/230 VAC			<0.1	W

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Accuracy			±2.0		%
Line Regulation	V _{IN} = 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 Emmissions)	EN 55032 Class B			
	EMS (Noise Immunity)	EN 55035			

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		%
Altitude During Operation			2,000		m

Physical

Size & Weight	See Page 2				
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Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	330			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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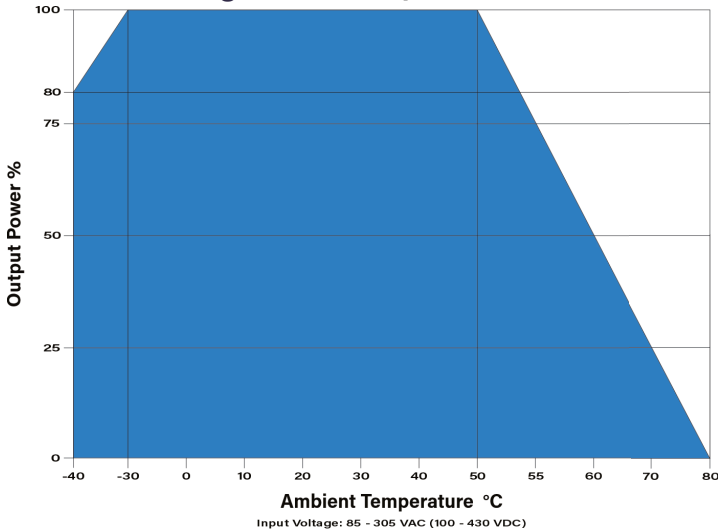
Model Selection Guide

Model Number	Input		Output			Capacitive Load (μF, Max)	Efficiency (230 VAC, %, Typ)
	Current (mA Max)		Voltage (VDC)	Current (mA Max)	Power (W)		
	115 VAC	230 VAC					
MPO-40S-12	1,000	500	12	3,333	40	6,000	90
MPO-40S-24	1,000	500	24	1,666	40	1,200	89

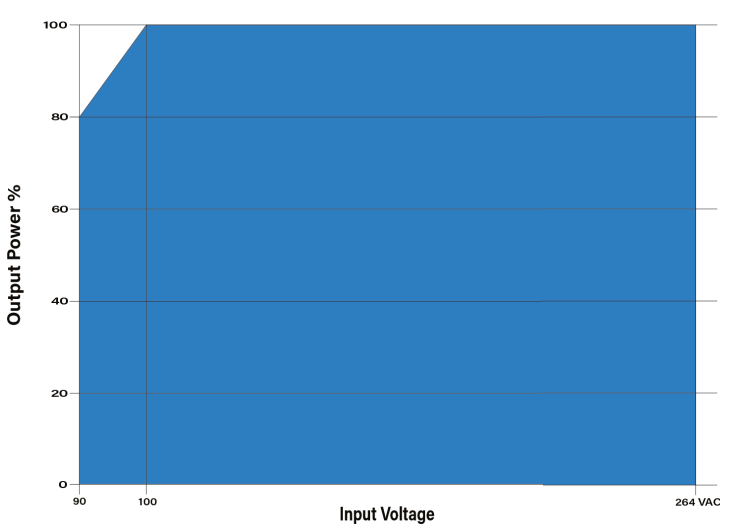
Notes:

1. Ripple and noise are measured at 20 Mhz bandwidth with a 0.1μ F and a 47μ F 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.

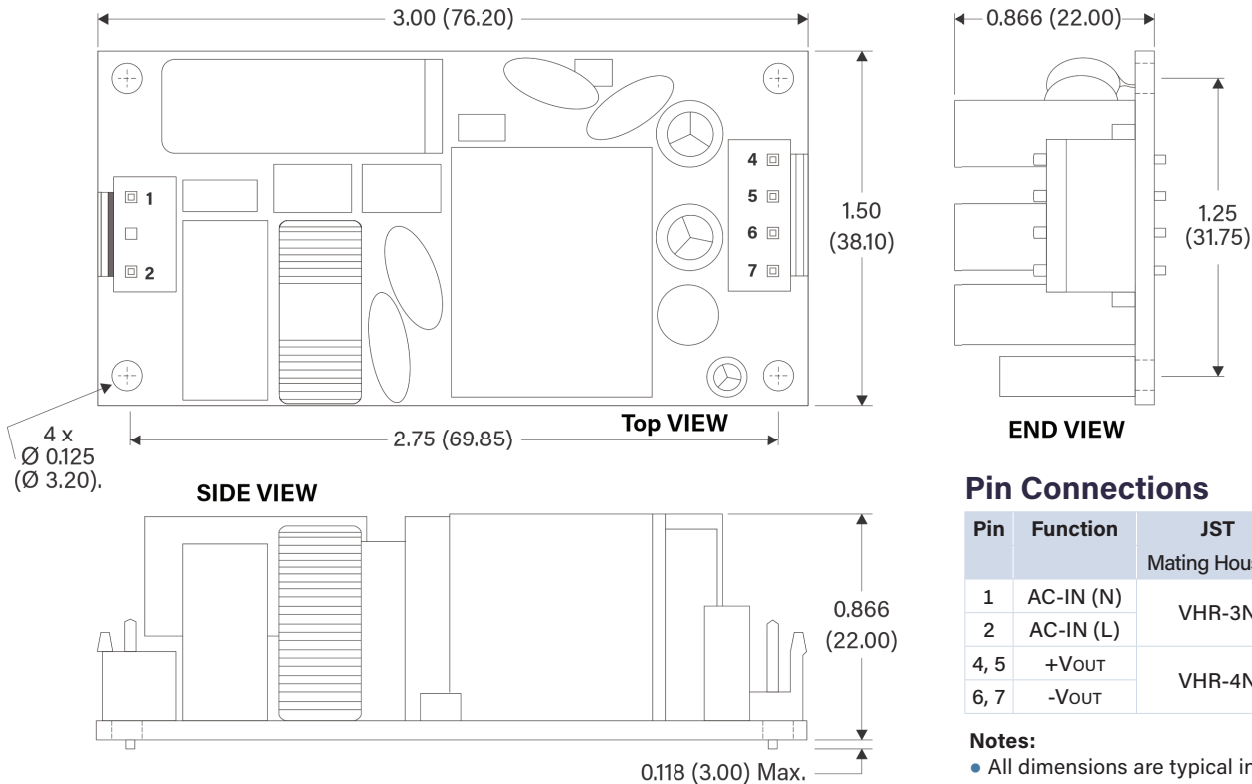
Power Derating Curve, Temperature



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: 2.04 Oz (58g)
- The middle pin is removed on the input connector