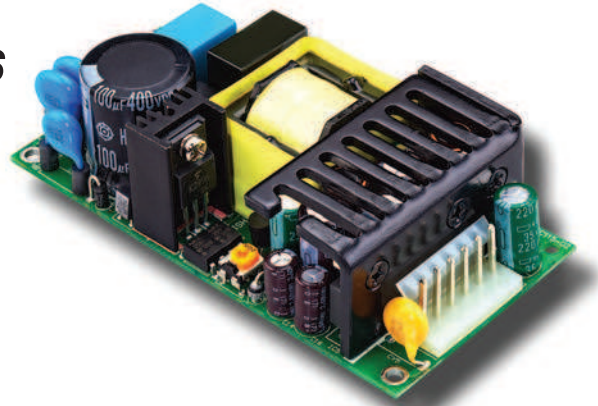


# MPO-40D Series

## Dual Output, 40W Compact, Open Frame AC/DC Power Supplies



### Key Features:

- 40W Output Power
- Dual Outputs
- Universal 90-264 AC Input
- EN 60950 Approved (UL)
- Compact 2 x 4 In Package
- Wide Operating Temp Range
- Meets EN 55022 B
- >200 kHour MTBF



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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	Universal	90		264	VAC
			127	373	VDC
Input Frequency		47		63	Hz
Input Filter	Meets EN 55022 Class B; FCC Class B				
Input Current	See Model Selection Guide				
Inrush Current	Cold Start, 115 VAC			29.0	A Pk
				50.0	
Safety Ground Leakage Current	264 VAC			3.5	mA

#### Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage/Current	See Model Selection Guide				
Output Voltage Tolerance, See Note 1	Output 1		±3.0		%
	Output 2		±5.0		
Line Regulation, See Note 2	Output 1		±1.0		%
	Output 2		±2.0		
Load Regulation, See Note 3	Output 1		±3.0		%
	Output 2		±4.0		
Ripple & Noise (20 MHz), See Note 4	See Model Selection Guide				
Hold-Up Time	115 VAC		8		mSec
	230 VAC		20		
Temperature Coefficient			±0.05		%/°C
Short Circuit Protection	Continuous (Autorecovery)				
Over Voltage Protection			130		%
Overload Protection	See Note 3		150		%

#### General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input to Output	3,000			VAC
Isolation Resistance	500 VDC		1,000		MΩ
Isolation Capacitance			2,200		pF
EMC Compliance	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				IEC/EN 61000-4-5
	Fixed		66		kHz

#### Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	0	+25	+45	°C
Storage Temperature Range		-20		+85	°C
Cooling	Free Air Convection (See Derating Curve)				
Humidity	RH, Non-condensing			93	%

#### Physical

Size	4.00 x 2.00 x 1.20 Inches (101.60 x 50.08 x 30.48 mm)				
Weight	5.99 Oz (0.170 kg)				

#### Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	200			kHours
Safety Standards	UL 60950, EN 60950				
Vibration	Sinusoidal 50~500 Hz, 3.0 Grms, Period of 30 min each along X, Y & Z Axis				

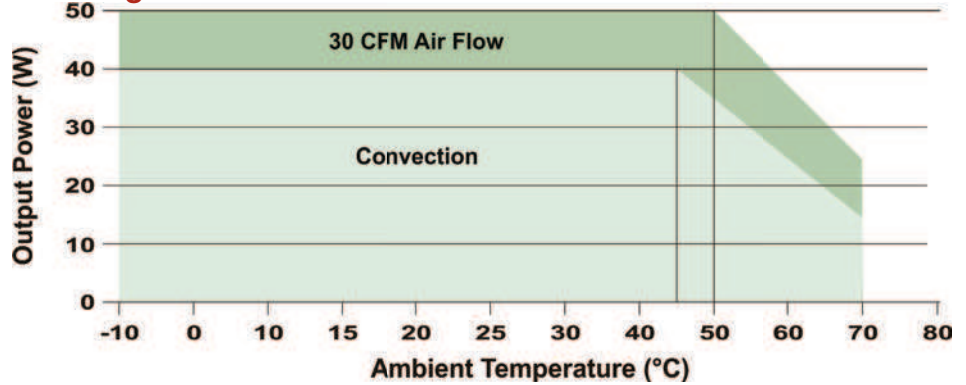
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Model Number	Input		No.	Voltage (VDC)	Output			Max Output Power (W)	Output Ripple & Noise (mV P-P)	Max Output Cap. (µF)	Efficiency (% Typ)
	Current (A)				Current (A)						
	115 VAC	230 VAC			Rated	Min.	Max.				
MPO-40D-0512	0.75	0.46	1	+5.0	3.2	0.4	5.0	40	±1%	1,400	77
			2	+12.0	2.0	0.2	2.5				
MPO-40D-0524	0.75	0.46	1	+5.0	3.2	0.4	5.0	40	±1%	1,400	78
			2	+24.0	1.0	0.2	1.5				

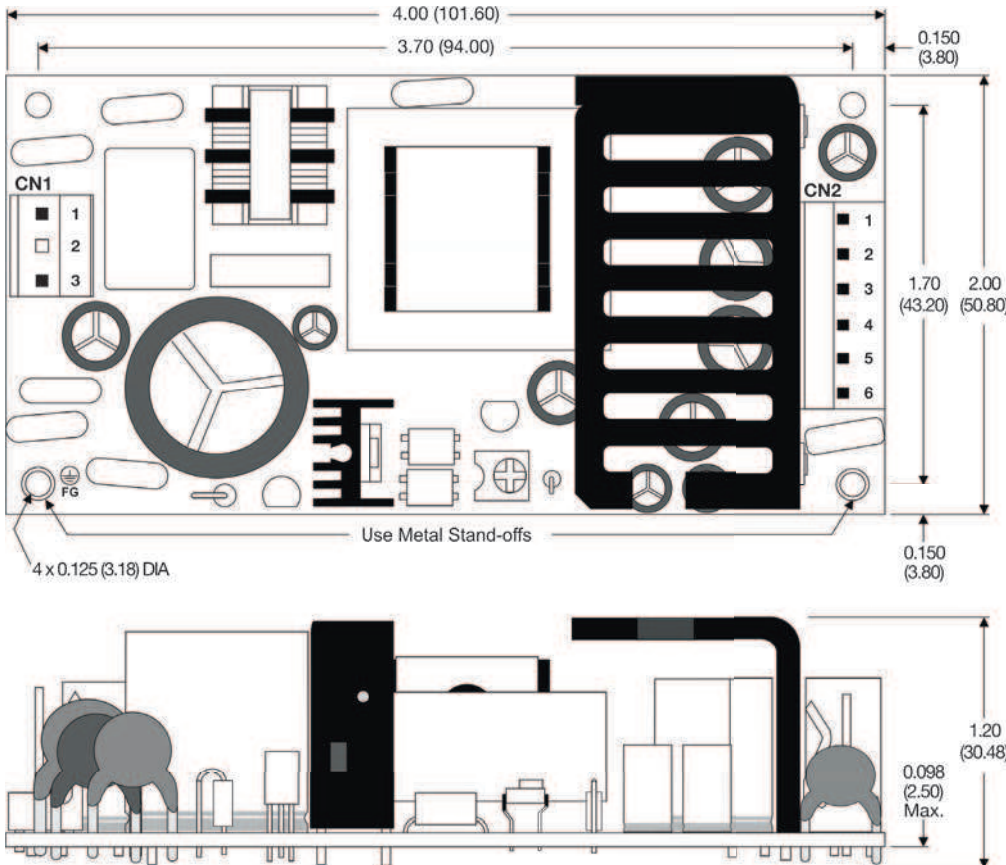
**Notes:**

- Output voltage tolerance is measured at nominal input and 60% load.
- Line regulation is measured at nominal load over a range of 100 to 240 VAC.
- Load regulation is specified for a load change of 60% ±40% (of full load).
- Output ripple is measured at 20 MHz bandwidth using 0.1 µF and 10 µF capacitors connected in parallel as close to the power supply terminals as possible.
- The maximum output current is given for each individual output. The maximum output power rating for the unit should not be exceeded. By adding 30 CFM of airflow (see derating curves) all models may be used at higher power levels. Contact the factory for more information.
- Each unit includes an input fuse (250V/2A). Since this fuse is not field replaceable, it is recommended that an external fuse of the same size be used on the input of the power supply for protection.

**Derating Curve**



**Mechanical Dimensions**



**Connections**

**Input Connector (CN1):**

- Molex 5273-03A or equivalent (one pin removed)
- Mating Housing: Molex 5195-03 or equivalent
- Mating Terminal: Molex 5293 or equivalent

Pin	Function
1	AC-Neutral
2	Removed
3	AC-Line

**Safety Ground:**

The mounting holes marked "Use metal standoffs" should be connected to the system earth ground via metal spacers or a cable. The input side mounting hole marked "FG" provides the safety earth ground for the unit. This connection should be locked to prevent possible loosening. Connecting the output side mounting hole improves EMI.

**Output Connector (CN2):**

- Molex 5273-06A or equivalent
- Mating Housing: Molex 5195-06 or equivalent
- Mating Terminal: Molex 5293 or equivalent

Pin	Function
1	V <sub>OUT 2</sub>
2	V <sub>OUT 1</sub>
3	V <sub>OUT 1</sub>
4	Common
5	Common
6	No Connection

**Notes:**

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.02 (±0.50)



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