

MPG-120S Series

Single Output, 120W Green, Open Frame AC/DC Power Supplies



Key Features:

- 120W Output Power
- 150W With Only 11.7 CFM
- Universal 85-264 AC Input
- EN 60950 Approved (UL)
- Meets ErP Directive
- Compact 3 x 5 Inch Size
- PFC Meets EN 61000-3
- Optional +5V SB Output
- >400 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.

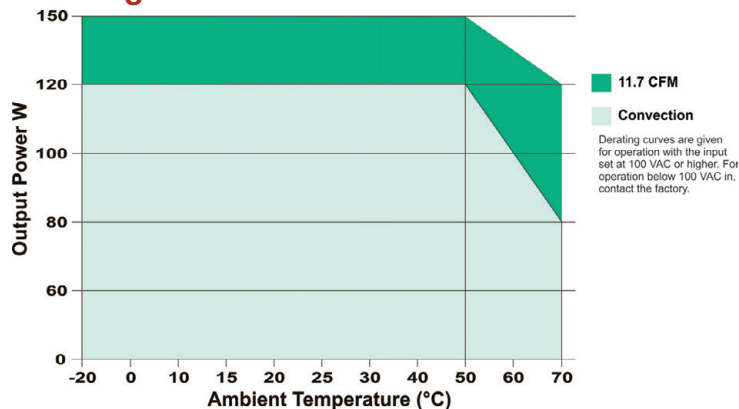
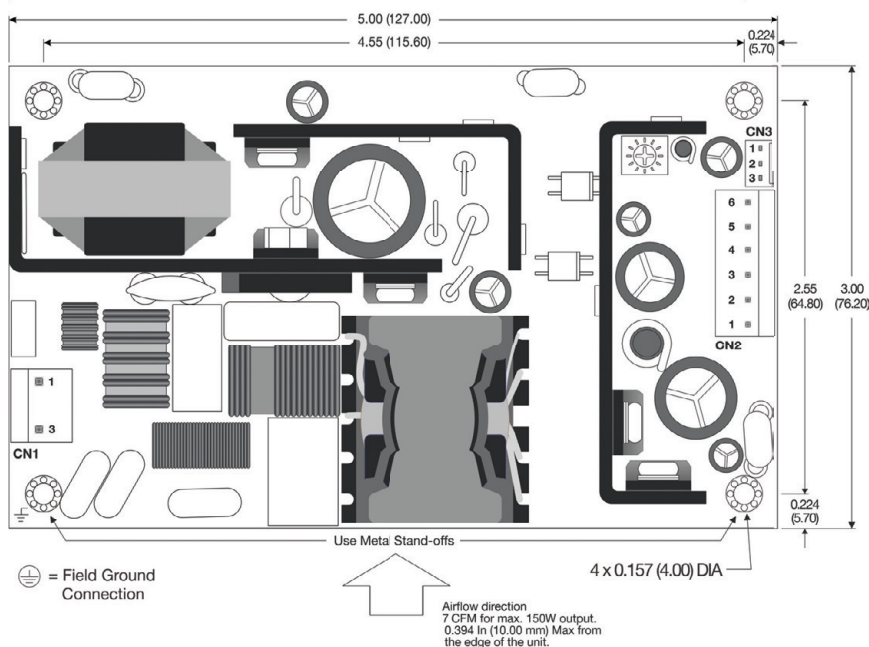
Input						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Input Voltage Range	Universal	85		264	VAC	
		130		373	VDC	
Input Frequency		47		63	Hz	
Input Filter	Meets EN 55022 Class B; FCC Class B					
Input Current	See Model Selection Guide					
Inrush Current	Cold Start, 115 VAC			30.0	A Pk	
	Cold Start, 230 VAC			60.0		
Power Factor Correction	Meets EN 61000-3-2/3 Class A					
Leakage Current				0.25	mA	
No Load Power Consumption				0.5	W	
Output						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Output Voltage/Current	See Model Selection Guide					
Output Voltage Tolerance	See Note 1		±1.0		%	
Line Regulation	See Note 2		±1.0		%	
Load Regulation	See Note 3		±1.0		%	
Ripple & Noise (20 MHz)	See Note 4		±1.0		%	
Hold-Up Time	115 VAC		20		mSec	
	230 VAC		40			
Temperature Coefficient			±0.05		%/°C	
Over Voltage Protection			140		%	
Short Circuit Protection	Continuous (Autorecovery)					
General						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Isolation Voltage	Input to Output	3,000			VAC	
Isolation Resistance	500 VDC		100		MΩ	
Isolation Capacitance			2,200		pF	
EMI Characteristics						
Parameter	Standard	Min.	Typ.	Max.	Units	
Radiated Emissions, See Note 5	EN 55022			Class B		
Conducted Emissions , See Note 5	EN 55022			Class B		
ESD	EN 61000-4-2	Criteria A; ±8 kV Air/±6 kV Contact				
RS	EN 61000-4-3	Criteria A; 10V/m				
EFT	EN 61000-4-4	Criteria A; ±2 kV Line & PE				
Surge	EN 61000-4-5	Criteria A; L-N: ±1kV, L/N-PE: ±2kV				
CS	EN 61000-4-6	Criteria A; 10 Vrms				
PFMF	EN 61000-4-8	Criteria A; 10A/m				
Voltage Dips, See Note 6	EN 61000-4-11	Criteria A; Volt. Dips >95%, 0.5 Cycle				
		Criteria A; Volt. Dips 30%, 25 Cycles				
		Criteria A/B; Volt. Dips 60%, 5 Cycles				
		Criteria C; Volt. Inter. >95%, 250 Cycles				
Switching Frequency	Fixed		65		kHz	
Environmental						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Operating Temperature Range	Ambient	-20	+25	+70	°C	
Storage Temperature Range		-40		+85	°C	
Cooling	Free Air Convection (See Derating Curve)					
Humidity	RH, Non-condensing			95	%	
Physical						
Size	5.00 x 3.00 x 1.35 Inches (127.00 x 76.20 x 34.2 mm)					
Weight	9.87 Oz (0.280 kg)					
Reliability Specifications						
Parameter	Conditions	Min.	Typ.	Max.	Units	
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	400			kHours	
Safety Standards	UL 60950, EN 60950					

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Model Number	Input		Output					Max Output Power (W)		Efficiency (% Typ)
	Current (A)		No.	Voltage (VDC)	Current (A)			Convection Cooled	With 7CFM Air Flow	
	115 VAC	230 VAC			Rated	Max. (W/7 CFM)	Min.			
MPG-120S-12	2.50	1.25		12.0	10.00	12.50	0.00	120	150	88
MPG-120S-12SB	2.50	1.25	1	12.0	10.00	12.50	0.00	120	150	88
			2	5.0	0.10	0.10	0.00			
MPG-120S-24	2.50	1.25		24.0	5.00	6.25	0.00	120	150	89
MPG-120S-24SB	2.50	1.25	1	24.0	5.00	6.25	0.00	120	150	89
			2	5.0	0.10	0.10	0.00			
MPG-120S-48	2.50	1.25		48.0	2.50	3.13	0.00	120	150	89
MPG-120S-48SB	2.50	1.25	1	48.0	2.50	3.13	0.00	120	150	89
			2	5.0	0.10	0.10	0.00			

Notes:

- Output voltage tolerance is measured at 115 VAC input and 60% load.
- Line regulation is measured at a 115 VAC input with the rated load. The line is varied $\pm 10\%$.
- Load regulation is specified for a load change of $60\% \pm 40\%$ (of full load).
- Output ripple is measured at 20 MHz bandwidth and rated load using $0.1 \mu F$ and $10 \mu F$ capacitors connected in parallel as close to the power supply terminals as possible.
- To meet the EMI limits, the mounting holes must be connected together (by using metal standoffs).
- The unit meets EN 61000-4-11 criteria A for voltage dips of 60% at 100 VAC input. At 240 VAC input, it meets criteria B.
- These units will operate at no load without damage. However, they may not meet all specifications.
- The optional remote on/off function is active low. Contact the factory for details.
- Each unit includes an input fuse (250V/3.15A). 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 09-65-2038 or equivalent (one pin removed)
- Mating Housing: Molex 09-50-1031 or equivalent

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

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 09-65-2048 or equivalent
- Mating Housing: Molex 09-50-1061 or equivalent

Pin	Function
1	+V _{OUT}
2	+V _{OUT}
3	+V _{OUT}
4	-V _{OUT}
5	-V _{OUT}
6	-V _{OUT}

Connector (CN3):

- Molex 5045-03A or equivalent
- Mating Housing: Molex 22-01-1032 or equivalent

Pin	Function
1	+5Vsb
2	Grnd
3	Remote On/Off

Connector CN3 is only installed on "SB" models

Notes:

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



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