

(877) 634-0982 www.digipwr.com

Product Specification

DC/DC Converters

Key Product Features

- Fully isolated input
- Up to 4 outputs
- 75% efficiency
- Input EMI filter
- 5" x 3.3" x 1.5" size
- UL, cUL and CE approved
- Optional cover
- Available with 90-264VAC universal input



Description

The DP100 series are open frame DC/DC converters ideal for systems powered from a 24VDC or 48VDC source. These converters deliver up to 100W of continuous or 120W peak power from one to four outputs.

The DP100 is one of the *flexibility* series. In addition to the popular models listed on this sheet, thousands of potential other modified standard models are available that include full safety agency approval and do not require any non-recurring engineering (NRE) charge. Prototype delivery is typically just a few weeks.

Flexibility options include a cover. Output voltage options are given in the table below. Fully custom models are also available. Please contact the factory for details.

All DP100 models are also available with 90-264VAC universl input. Please see the US100 data sheet for details.

				Output Current Ratings		
Model Number ¹	Output	Output Voltage	Min ²	Max ³	Max ⁴	Peak⁵
DP100-105	V1	+5V	0A	10.0A	15.0A	20.0A
DP100-112	V1	+12V	0A	6.5A	8.0A	10.0A
DP100-124	V1	+24V	0A	3.0A	4.0A	4.5A
DP100-201	V1	+5V	0.5A	8.0A	10.0A	16.0A
	V2	+12V	0A	4.0A	6.0A	7.0A
DP100-301	V1	+5V	0.5A	8.0A	10.0A	12.0A
	V2	+12V	0A	4.0A	6.0A	7.0A
	V3	-12V	0A	1.0A	2.0A	2.5A
DP100-303	V1	+5V	0.5A	8.0A	10.0A	12.0A
	V2	+15V	0A	4.0A	6.0A	7.0A
	V3	-15V	0A	1.0A	1.0A	2.5A
DP100-401	V1	+5V	0.5A	8.0A	10.0A	12.0A
	V2	+12V	0A	4.0A	6.0A	7.0A
	V3	-12V	0A	1.0A	2.0A	2.5A
	V4	-5V	0A	1.0A	2.0A	2.5A
Modified standard	V1	±3.3V to ±48V ⁷	0.5A		15.0A	
flexibility output options ⁶	V2	±2.0V to ±48V ⁸	0A		6.0A	
	V3	±2.0V to ±48V ⁸	0A		2.0A	
	V4	±2.0V to ±48V ⁸	0A		1.0A	

- 1- DP100-XXX = 48VDC input. DM100-XXX = 24VDC input.
- 2- At least 20% of max output current is required to maintain stated regulation
- 3- Convection cooling. DM ratings slightly lower. Contact the factory 4- Forced air cooling. DM ratings slightly lower. Contact the factory

- 6- The DP100 series allows very fast flexible modified standard designs within these parameters without non-recurring engineering charge and while retaining safety agency approval. Please contact the factory for details 7- Can be specified in 0.1V increments



Note: Specifications are typical at 25°C unless otherwise stated

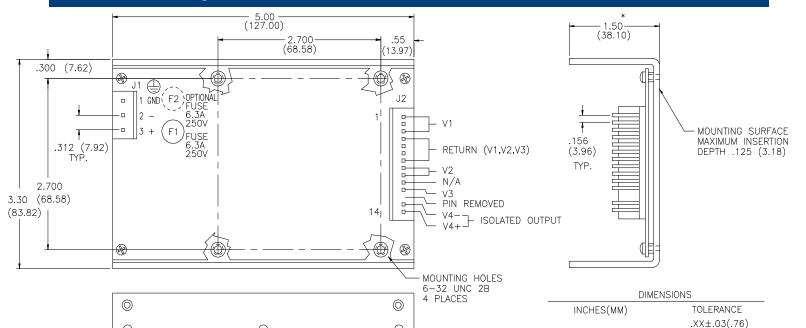
Specifications					
Input					
Input Voltage Range	20-36VDC (24V nominal - DM series) ; 36-72VDC (48V nominal - DP series)				
Input Surge Current	25A max, cold start				
Efficiency	75% typ at nominal line, full power				
Output					
Output Power	100W, 28CFM forced air ; 120W peak				
Line Regulation	$\pm 0.2\%$, V_{in} (min) to V_{in} (max)				
Load Regulation	$\pm 3\%$ (V1, 20% to 100% $I_0)$; $\pm 5\%$ (V2-V4, 20% to 100% $I_0)$				
Cross Regulation	$\pm 0.5\%$ (V1, 20% to 100% I_0 on V2-V4) ; $\pm 5\%$ (V2-V4, 50% to 100% I_0 on V1)				
Noise and Ripple	25mV max RMS, 100mV max P-P on V1 with full load. 95-264VAC; 0.5% max RMS, 1% max P-P on V2-V4 with full load. 95-264VAC				
Overshoot	5% max, all outputs				
Transient Response	for 25% to 75% I_0 change, 5% max deviation, with recovery to 1% within 500 μS				
Hold-Up Time	6mS, 115VAC input, full output power				
Overvoltage Protection Threshold	30% V ₀ , all outputs				
Power Foldback Point	120% of max rated power				

Environment					
Operating Temperature Range (full power)	0°C to 50°C				
Operating Temperature Range (extended range)	0°C to 70°C Derate linearly from full power at 50°C to half power at 70°C				
Storage Temperature Range	-25°C to +85°C				
Relative Humidity	5% to 95%, non-condensing				
Vibration	0.75G peak, 5Hz to 500 Hz. Test three orthogonal axes at 1 octave/min, 5 min dwell at four major resonances				



4

Mechanical Drawing



SLOTS, BOTH SIDES

(H)

J1 CONNECTOR=MOLEX INC., 41671 SERIES, P/N: 26-48-1055.

(MATING CONNECTOR=MOLEX INC., 6442 SERIES (OR 41695 SERIES), P/N: 26-03-4050 (OR 09-50-8051))

.XXX±.015(.38)

J2 CONNECTOR=MOLEX INC., 41671 SERIES, P/N: 26-48-1145.

(MATING CONNECTOR=MOLEX INC., 6442 SERIES (OR 41695 SERIES), P/N: 26-03-4141 (OR 09-50-8141))

(MATING CRIMP TERMINALS=MOLEX INC., 6838 SERIES, P/N: 08-52-0113 OR 08-52-0112)

* OPTIONAL COVER ADDS 0.035 (.89) TO HEIGHT.



T: (877) 634-0982 | F: (510) 657-6634 sales@digipwr.com

Digital Power Corporation | USA

48430 Lakeview Blvd., Fremont, CA 94538, USA www.digipwr.com | (877) 634-0982

Gresham Power Electronics | UK/Europe Telford Rd, Salisbury, Wiltshire SP2 7PH, UK www.greshampower.com | +44 (0)1722 413 060

Digital Power Corporation designs and manufactures flexible power supply solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets. With headquarters in Fremont, California, Digital Power is publically traded on the NYSE (symbol: DPW). The company was founded in 1969 incorporated in California.