

(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 3.2" x 1.5" size UL, cUL recognized and CE approved
- Optional cover
- Available with 90-264VAC universal input



DP70 Series

65 Watt

Description

The DP70 series are open frame DC/DC converters ideal for systems powered from a 24VDC or 48VDC source. These converters deliver up to 65W of continuous or 70W peak power from one to four outputs. (24V input units deliver slightly lower power.)

The DP70 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 cover, power good signal, and an isolated V4 output. Output voltage options are given in the table below. Fully custom models are also available. Please contact the factory for details.

All DP70 models are also available with 90-264VAC universal input. Please see the US70 data sheet for details.

A cXY`CdHcbg					
Ci hdi h	CihdihJc`hU[Y	A]b²	Cihdih7 A Ul ³	i ffybhfuh]b[g A Ul 4	DYU_⁵
V1	+5V	0.1A	8.0A	10.0A	10.0A
V1	+12V	0.1A	4.0A	5.0A	6.0A
V1	+24V	0.1A	2.0A	2.7A	2.9A
V1	+5V	0.1A	5.0A	7.0A	10.0A
V2	+12V	0A	3.0A	4.0A	5.0A
V1	+5V	0.1A	5.0A	8.0A	10.0A
V2	+12V	0A	3.0A	4.0A	5.0A
V3	-12V	0A	1.0A	2.0A	2.0A
V1	+5V	0.1A	5.0A	7.0A	10.0A
V2	+15V	0A	2.5A	4.0A	5.0A
V3	-15V	0A	1.0A	1.0A	2.0A
V1	+5V	0.1A	5.0A	7.0A	7.0A
V2	+12V	0A	3.0A	4.0A	5.0A
V3	-12V	0A	1.0A	2.0A	2.0A
V4	-5V	0A	1.0A	2.0A	2.0A
V1	±3.3V to ±48V ⁷	0.1A		10.0A	
V2	±2.0V to ±48V8	0A		4.0A	
V3	±2.0V to ±48V8	0A		2.0A	
V4	±2.0V to ±48V ⁸	0A		1.0A	
	Ci hdi h V1 V1 V1 V1 V2 V1 V2 V3 V1 V2 V3	Ci Itali h Ci Itali hJ c Itali Y V1 +5V V1 +12V V1 +24V V1 +5V V2 +12V V1 +5V V2 +12V V3 -12V V1 +5V V2 +15V V3 -15V V1 +5V V2 +12V V3 -12V V4 -5V V1 ±3.3V to ±48V ⁷ V2 ±2.0V to ±48V ⁸ V3 ±2.0V to ±48V ⁸	Ci Idi In Ci Idi Idi Idi Idi Idi Idi Idi Idi Idi Id	Ci Idi h A jo² A jo² A lul ³ V1 +5V 0.1A 4.0A 4.0A V1 +24V 0.1A 2.0A V1 +5V 0.1A 5.0A V2 +12V 0A 3.0A V3 -12V 0A 1.0A V1 +5V 0.1A 5.0A V2 +15V 0A 1.0A V2 +15V 0A 1.0A V3 -15V 0A 1.0A V1 +5V 0.1A 5.0A V2 +12V 0A 3.0A V3 -12V 0A 1.0A V4 -5V 0A 1.0A V1 ±3.3V to ±48V² 0A 1.0A V3 ±2.0V to ±48V8 0A 0A	Ci hdi h Ci hdi hJ c'hU[Y A jb² Ci hdi h7 i ffYbhFUfb[g A UI ³ V1 +5V 0.1A 8.0A 10.0A V1 +12V 0.1A 4.0A 5.0A V1 +24V 0.1A 2.0A 2.7A V1 +5V 0.1A 5.0A 7.0A V2 +12V 0A 3.0A 4.0A V1 +5V 0.1A 5.0A 8.0A V2 +12V 0A 3.0A 4.0A V3 -12V 0A 1.0A 2.0A V1 +5V 0.1A 5.0A 7.0A V2 +15V 0A 2.5A 4.0A V3 -15V 0A 1.0A 1.0A V1 +5V 0.1A 5.0A 7.0A V2 +12V 0A 3.0A 4.0A V3 -12V 0A 1.0A 2.0A V4 -5V 0A 1.0A 2.0A

- 1- DP70-XXX = 48VDC input. DM70-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

- 5- Peak output, 30 sec max
 6- The DP70 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



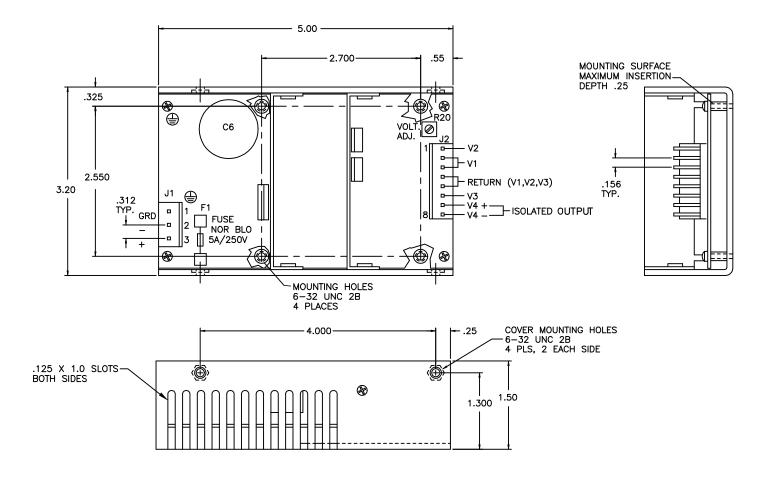
Note: Specifications are typical at 25°C unless otherwise stated

Specifications				
Input				
Input Voltage Range	20-36VDC (24V nominal - DM series) ; 36-72VDC (48V nominal - DP series)			
Input Surge Current	8A, max			
Efficiency	75% typ at nominal input, full power			
Output				
Output Power	28CFM forced air cooling: 40W (24V input), 65W (48V input)			
	Peak: 40W (24V input), 70W (48V input)			
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, 50mV max P-P on V1 with full load ; 0.5% max RMS, 1% max P-P on V2-V4 with full load			
Overshoot	5% max, all outputs			
Transient Response	for 25% to 75% I_0 change, 5% max deviation, with recovery to 1% within 250 μS			
Hold-Up Time	10mS, nominal input, full output power			
Overvoltage Protection Threshold	130% 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			



Mechanical Drawing



J1 CONNECTOR=MOLEX INC.41671 SERIES
P/N:26-48-1055
(MATING CONNECTOR=MOLEX INC.6442 SERIES (OR 41695 SERIES)

J2 CONNECTOR=MOLEX INC. 41671 SERIES P/N:26-48-1085

(MATING CONNECTOR=MOLEX INC.6442 SERIES (OR 41695 SERIES) P/N:26-03-4081 (OR 09-50-8081)

(MATING CRIMP TERMINALS=MOLEX INC.6838 SERIES,

P/N:08-52-0113 OR 08-52-0112)

MATING CONNECTORS DIGITAL POWER #



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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.

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