

Wall Industries, Inc.

DCHF50W SERIES

2:1 Input Voltage Ranges
Single, Dual, and Triple Outputs
50~67.5 Watts Output Power
DC/DC Chassis Mount Power Converters



FEATURES

- Single, Dual, and Triple Outputs
 - RoHS Compliant
 - Output Voltage Adjustability
 - Free Air Convection
 - 2:1 Input Voltage Ranges
 - High Reliability
 - Built-in EMI Filter
 - 50~67.5W Output Power
 - Dimensions: 6.30 x 3.86 x 1.54 Inches
 - Short Circuit and Over Load Protected
-

DESCRIPTION

The DCHF50W series of DC/DC power converters offers from 50W to 67.5W of output power in a 6.30" x 3.86" x 1.54" enclosed case. This series has 2:1 input voltage ranges of 10-18VDC, 18-36VDC, 36-72VDC, and 72-144VDC. This series also has single, dual, and triple output models available. Some features include output adjustability, a built-in EMI filter, and short circuit and over load protection. All models in this series are RoHS compliant.

SPECIFICATIONS: DCHF50W SERIES					
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.					
SPECIFICATION	TEST CONDITIONS	Min	Nom	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage Range	12VDC nominal input models	10	12	18	VDC
	24VDC nominal input models	18	24	36	
	48VDC nominal input models	36	48	72	
	110VDC nominal input models	72	110	144	
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Output Voltage Adjustment Range	Single Output Models	-10		+10	%
	Multi-Output Models: V ₁	-5		+5	
Line Regulation	Full load	-0.5		+0.5	%
Load Regulation	V ₁	-0.5		+0.5	%
	V _{2,3} (with regulators)	-3		+3	
	V _{2,3} (without regulators)	-6		+6	
Output Current		See Table			
Output Power		See Table			
Ripple & Noise		See Table			
PROTECTION					
Over Load Protection		110		150	%
Short Circuit Protection		Yes			
GENERAL SPECIFICATIONS					
Efficiency		See Table			
Withstand Voltage	Input to Output	All for 1 minute	1000		VDC
	Input to FG		1000		
	Output to FG		500		
Isolation Resistance	At 500VDC	100			MΩ
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature		-10		+50	°C
Operating Humidity (non-condensing)		20		90	% RH
Storage Temperature		-20		+85	°C
Storage Humidity (non-condensing)		20		95	% RH
Cooling Method		Free air convection			
PHYSICAL SPECIFICATIONS					
Dimensions (L x W x H)		6.30 x 3.86 x 1.54 inches (160 x 98 x 39 mm)			
Weight		15.5oz (440g)			
SAFETY & EMC CHARACTERISTICS					
Safety Standards		Design refer to LVD			
EMC Standards		Design refer to EN55022, EN61000-4			

MODEL SELECTION TABLES
SINGLE OUTPUT MODELS

Model	Input Voltage	Output Voltage	Output Current	Ripple & Noise	Output Power	Efficiency
DCHF50W-SD12-5	12 VDC (10 – 18 VDC)	5 VDC	10.0 A	100mVp-p	50W	71%
DCHF50W-SD12-12		12 VDC	4.2 A	120mVp-p	50.4W	72%
DCHF50W-SD12-24		24 VDC	2.1 A	150mVp-p	50.4W	74%
DCHF50W-SD24-5	24 VDC (18 – 36 VDC)	5 VDC	10.0 A	100mVp-p	50W	71%
DCHF50W-SD24-12		12 VDC	4.2 A	120mVp-p	50.4W	72%
DCHF50W-SD24-24		24 VDC	2.1 A	150mVp-p	50.4W	74%
DCHF50W-SD48-5	48 VDC (36 – 72 VDC)	5 VDC	10.0 A	100mVp-p	50W	71%
DCHF50W-SD48-12		12 VDC	4.2 A	120mVp-p	50.4W	72%
DCHF50W-SD48-24		24 VDC	2.1 A	150mVp-p	50.4W	74%
DCHF50W-SD110-5	110 VDC (72 – 144 VDC)	5 VDC	10.0 A	100mVp-p	50W	71%
DCHF50W-SD110-12		12 VDC	4.2 A	120mVp-p	50.4W	72%
DCHF50W-SD110-24		24 VDC	2.1 A	150mVp-p	50.4W	74%

DUAL OUTPUT MODELS

Model	Input Voltage	Output Voltage	Output Current	Ripple & Noise	Output Power	Efficiency			
DCHF50W-DD12-A	12 VDC (10 – 18 VDC)	V1	5 VDC	0.5 ~ 6.0 A	80mVp-p	60W	70%		
		V2	12 VDC	0.2 ~ 2.5 A	120mVp-p				
DCHF50W-DD12-B		V1	15 VDC	0.2 ~ 2.5 A	100mVp-p	67.5W			
		V2	-15 VDC	0.2 ~ 2.0 A	120mVp-p				
DCHF50W-DD24-A		24 VDC (18 – 36 VDC)	V1	5 VDC	0.5 ~ 6.0 A	80mVp-p		60W	70%
			V2	12 VDC	0.2 ~ 2.5 A	120mVp-p			
DCHF50W-DD24-B	V1		15 VDC	0.2 ~ 2.5 A	100mVp-p	67.5W			
	V2		-15 VDC	0.2 ~ 2.0 A	120mVp-p				
DCHF50W-DD48-A	48 VDC (36 – 72 VDC)		V1	5 VDC	0.5 ~ 6.0 A	80mVp-p	60W	70%	
			V2	12 VDC	0.2 ~ 2.5 A	120mVp-p			
DCHF50W-DD48-B		V1	15 VDC	0.2 ~ 2.5 A	100mVp-p	67.5W			
		V2	-15 VDC	0.2 ~ 2.0 A	120mVp-p				
DCHF50W-DD110-A		110 VDC (72 – 144 VDC)	V1	5 VDC	0.5 ~ 6.0 A	80mVp-p	60W		70%
			V2	12 VDC	0.2 ~ 2.5 A	120mVp-p			
DCHF50W-DD110-B	V1		15 VDC	0.2 ~ 2.5 A	100mVp-p	67.5W			
	V2		-15 VDC	0.2 ~ 2.0 A	120mVp-p				

TRIPLE OUTPUT MODELS

Model	Input Voltage	Output Voltage	Output Current	Ripple & Noise	Output Power	Efficiency			
DCHF50W-TD12-A	12 VDC (10 – 18 VDC)	V1	5 VDC	0.5 ~ 5.0 A	80mVp-p	67W	70%		
		V2	12 VDC	0.2 ~ 2.0 A	120mVp-p				
		V3	-12 VDC	0.2 ~ 1.5 A	120mVp-p				
DCHF50W-TD24-A		24 VDC (18 – 36 VDC)	V1	5 VDC	0.5 ~ 5.0 A	80mVp-p		67W	
			V2	12 VDC	0.2 ~ 2.0 A	120mVp-p			
			V3	-12 VDC	0.2 ~ 1.5 A	120mVp-p			
DCHF50W-TD48-A	48 VDC (36 – 72 VDC)		V1	5 VDC	0.5 ~ 5.0 A	80mVp-p	67W	70%	
			V2	12 VDC	0.2 ~ 2.0 A	120mVp-p			
			V3	-12 VDC	0.2 ~ 1.5 A	120mVp-p			
DCHF50W-TD110-A		110 VDC (72 – 144 VDC)	V1	5 VDC	0.5 ~ 5.0 A	80mVp-p	67W		70%
			V2	12 VDC	0.2 ~ 2.0 A	120mVp-p			
			V3	-12 VDC	0.2 ~ 1.5 A	120mVp-p			

Due to advances in technology, specifications subject to change without notice.



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

Phone: ☎(603)778-2300
Toll Free: ☎(888)597-9255
Fax: ☎(603)778-9797
E-mail: sales@wallindustries.com
Web: www.wallindustries.com
Address: 37 Industrial Drive
Exeter, NH 03833

©2019 Wall Industries, Inc. Specifications subject to change without notice. Wall Industries is not responsible for typographical errors. The information contained herein is for informational purposes only. This information is provided by Wall Industries and we make no representations or warranties of any kind, express or implied, about the completeness, accuracy, reliability, suitability or availability with respect to the information contained in this document for any purpose. All product and manufacturer names are trademarks or registered trademarks of their respective companies.