

Features

- ◆ Operating temperature: -40 to +85℃
- ◆ 9-18/18-36/36-75Vdc input
- ◆ 5V/9V/12V/15V/24V/±5V/±9V/±12V/±15V output
- ◆ Efficiency up to 86%
- ◆ Ultra-low noise & ripple
- ◆ Bare module meet CISPR22/EN55022 Class B
- ◆ 100% burn-In
- ◆ No external heat sink
- ◆ Continuous short circuit protection
- ◆ RoHS/CE multiple compliance
- ◆ With 3 years warranty
- ◆ Case size 31.8×20.3×11.5mm

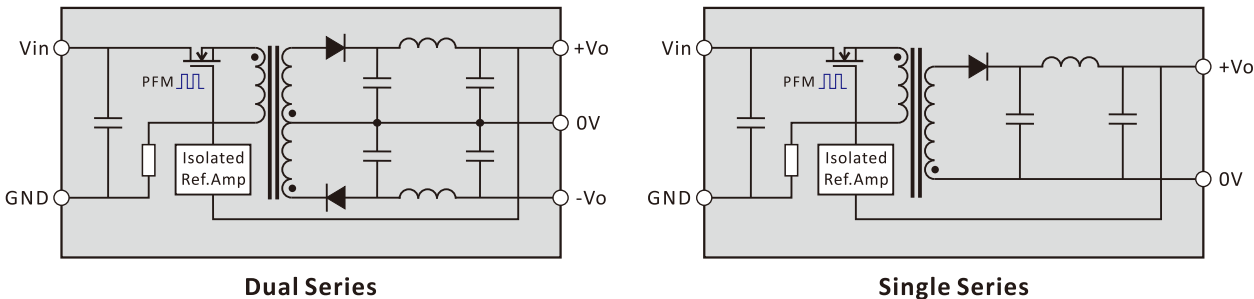
General Description

W(V)-8W series power converter compact, high power density, can save valuable board space to reduce product volume. It has the characteristics of wide input voltage range, low starting current, good load characteristics and minimum noise characteristics.

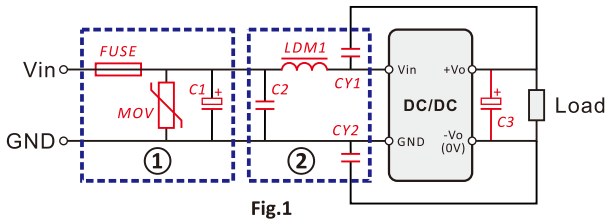
The chip ceramic capacitors and SMT are used in all series. These converters have characteristics of long life, excellent performance, stability and reliability.



Functional Diagram



EMC Solution-Recommended Circuit



Notes:
 Part ① in the Fig.1 is used for EMS test and part ② for EMI filtering; selected based on needs.

Parameter Description			
Model	Vin:12V	Vin:24V	Vin:48V
FUSE	Choose according to actual input current		
MOV	S14K17	S14K35	S14K60
C1	680uF/25V	330uF/50V	330uF/100V
C2	1uF/25V	1uF/50V	1uF/100V
LDM1	4.7uH		
CY1/CY2	1nF/2kV or 4.5kV		
C3	Refer to the Cout in Fig.3		

W-8W & V-8W Series

8w, wide input, isolated & regulated dual & single output dc-dc converter



Input Specifications

Item		Min	Typ	Max	Units
Input Impulse Voltage (1 sec max)	12V input models	-0.7		20	Vdc
	24V input models	-0.7		40	
	48V input models	-0.7		80	
Startup Voltage	12V input models			9	
	24V input models			18	
	48V input models			36	
Startup Current @ 100% load, nominal input		<1.6 lin-max.			
Input Filter		“LC” filter			
Input Polarity Protection		Unavailable			

Output Specifications

Item	Test Conditions	Min	Typ	Max	Units
Output Power	Ta=-40~+65°C			8	W
Line Regulation	100% load, input low to high		±0.1	±0.3	%
Load Regulation	10-100% load, nominal input		±0.3	±0.5	
Output Voltage Accuracy	Master Slave		±1 ±3	±3 ±5	
Balance of Vout	Dual output, balance load		±1	±3	
Ripple & Noise	DC-20MHz bandwidth		30	80	mVp-p
Temperature Drift	100% load, nominal input			±0.03	%/°C
Short Circuit Protection		Hiccup, Continuous, Self-Recovery			
Output Filter		"Π" filter			

Isolation Specifications

Item	Test Conditions	Min	Typ	Max	Units
Isolation Voltage	Tested for 60S and 1mA max	1500			Vdc
Insulation Resistance	Test at 500Vdc	1000			MΩ
Isolation Capacitance	IN-OUT, 100kHz @ 0.1Vdc		1000		pF

Common Specification

Item	Test Conditions	Min	Typ	Max	Units
Switching Frequency	PFM PWM	180	330	550	kHz
	100% load, input low to high				
Operating Temperature	Ta>65°C derating	-45		+85	°C
Case Temp Rise	100% load, nominal input		50		
Lead Temperature	1.5mm from case for 10 seconds			+300	
Storage Temperature		-50		+130	
Storage Humidity				95	%
MTBF	Using MIL-HDBK 217 @ 25°C	1000			k hours
Hot Plug		Unavailable			
Case Material		Aluminium Alloy			
Weight		12g			

EMC Specification

EMI	CE	EN55022:2010	Class B (Bare component)
	RE	EN55022:2010	Class B (Bare component)
EMS	ESD	EN55024:2010/EN61000-4-2	perf. Criterion B
	RS	EN55024:2010/EN61000-4-3	perf. Criterion A

Application Note

1. The power requirements

When it is used in unregulated power supply, be sure that the fluctuating range of the power supply and the rippled voltage do not exceed the module standard. Input current of power supply should afford the startup current of this kind of DC/DC module (see Fig.2).

General: $I_p < 1.6 \text{ lin-max.}$

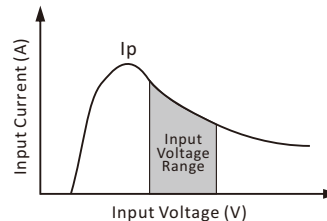


Fig.2

2. Typical application

All DC/DC converters of this series are tested according to the recommended circuit before delivery (see Fig.3, but without external capacitor Cin & Cout).

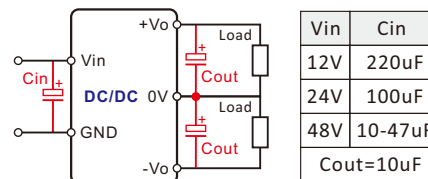


Fig.3

General applications, the **output** does not require any external filter components. If the required to further reduce input and output ripple, properly increase the input and output of additional capacitors Cin and Cout or select capacitors of low equivalent impedance provided that the capacitance is not larger than the max capacitive load of the product, **avoid affect the product startup performance.**

3. EMC solution-recommended circuit

The WA, WB and VB series products have a very good ripple and noise performance so that bare module meet the EN55022 Class B.

4. On derating

When the environmental temperature exceeds 65°C the module must be derating used, please refer to derating curve (see Fig.4).

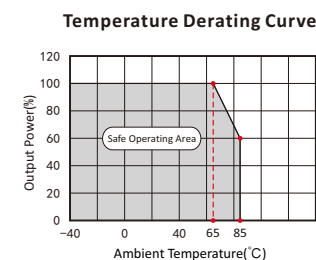


Fig.4

WA_P-8W & WB_P-8W & VB_P-8W Series

8w, wide input, isolated & regulated dual & single output dc-dc converter



Product Program						
Certificate	Model	Eff (%)	Input		Output	
			Voltage(Vdc)		Vdc	mA
			Nominal	Range	Nominal	Max
	WA1205P-8W*		12	9-18	±5	±800
	WA1209P-8W*				±9	±444
	WA1212P-8W*				±12	±333
	WA1215P-8W*				±15	±267
	WA1224P-8W*				±24	±167
CE/RoHS	WA2405P-8W	80	24	18-36	±5	±800
	WA2409P-8W	81			±9	±444
	WA2412P-8W*				±12	±333
	WA2415P-8W	83			±15	±267
	WA2424P-8W*				±24	±167
	WA4805P-8W*		48	36-75	±5	±800
	WA4809P-8W*				±9	±444
	WA4812P-8W*				±12	±333
	WA4815P-8W*				±15	±267
	WA4824P-8W*				±24	±167
CE/RoHS	WB1205P-8W	80	12	9-18	5	1600
	WB1209P-8W*				9	889
	WB1212P-8W*				12	667
	WB1215P-8W*				15	533
	WB1224P-8W	81			24	333
RoHS	VB1205P-8W	80	24	18-36	5	1600
CE/RoHS	WB2405P-8W	81			5	1600
	WB2409P-8W	85			9	889
	WB2412P-8W	86			12	667
	WB2415P-8W*				15	533
	WB2424P-8W*				24	333
RoHS	VB2405P-8W	83	48	36-75	5	1600
	VB2409P-8W	86			9	889
CE/RoHS	WB4805P-8W	81			5	1600
	WB4809P-8W*				9	889
	WB4812P-8W	86			12	667
	WB4815P-8W	86			15	533
	WB4824P-8W*				24	333

Note: * mean no producing

Dimensions
First Angle Proj

Bottom View

Side View

Pin	Single	Dual
2,3	GND	GND
22,23	Vin	Vin
9	NC	0V
11	NC	-Vo
14	+Vo	+Vo
16	0V	0V

Note:
All size units **mm**,
Diameter of all terminal 0.5mm;
Distance between all adjacent terminal 2.54mm;
Isolation: 1500Vdc
Weight: 12g

File Release Notes

DBN-402 Technical Data Sheet Version



No.	Version	Data	Description
1	V0	2011/11/01	First release
2	V1	2013/08/24	The third page error correction "-Vo(11) to-Vo(16)"
3	A/0	2016/07/01	Fixed an issue
4			
5			

1. All data in addition to particular things, are Ta = 25°C, humidity<75%, nominal input voltage and output measured at rated load;
2. Non-standard models with some of the following indicators may be different from the specific circumstances of the Secretary to direct contact with me;
3. In the use of this manual, if some of them do not quite understand terms please refer to our <<DC/DC Converter Application Guide>>;
4. The Company focused on technological improvements, product specifications and parameter updates without notice, to pay attention to the latest information on website.

All Delus Corporation's products are manufactured, assembled and tested utilizing ISO9001 quality systems.
For information regarding Delus Corporation and its products please see website: www.delus-power.com

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