

100VFI Series

Distributed By:
B. J. Wolfe Enterprises
 (800) 554-1224
 Fax (818) 889-8417



- 8000 Vpk Input/Output Isolation
- 4000 VDC Input/Output Isolation
- Wide -40°C to +85°C Operating Temp. Range
- Low Leakage Current
- Single and Dual Outputs
- 24 Pin DIP Compatible Package
- Low Cost

General Description

The 100VFI series is a family of ultra-high isolation, 1.5W DC/DC converters. These converters are specifically designed to meet the demanding isolation, reliability and low cost requirements of applications including railway equipment, industrial control systems, low-level signal conditioning systems and medical equipment. All models have a minimum input/output isolation voltage of 8000 Vpk (4000 VDC), high efficiency and high reliability.

Eighteen models operate from input voltages of 5 VDC, 12 VDC and 15 VDC; producing output voltage levels of 5 VDC, 12 VDC, 15 VDC, ± 12 VDC or ± 15 VDC. Standard features include high efficiency operation, output voltage accuracy of $\pm 4\%$ and an input filter to reduce reflected ripple current.

All models are packaged in a compact, low profile, 0.80 x 1.25 x 0.40 inch, 24 pin DIP compatible case. Operation is specified over the full operating temperature range of -40°C to +85°C with no derating required. Cooling is by free air convection.

Model Selection Guide

Model Number	Input				Reflected Ripple (mA P-P)	Output		Efficiency @FL (%)
	Voltage (VDC)		Current (mA)			Voltage (VDC)	Current (mA)	
	Nominal	Range	No-Load	Full-Load				
105S5VFI	5	4.5 - 5.5	50	400	30	5	300	75
112S5VFI	5	4.5 - 5.5	50	400	30	12	125	75
115S5VFI	5	4.5 - 5.5	50	400	30	15	100	75
105D5VFI	5	4.5 - 5.5	50	400	30	± 5	± 150	75
112D5VFI	5	4.5 - 5.5	50	400	30	± 12	± 63	75
115D5VFI	5	4.5 - 5.5	50	400	30	± 15	± 50	75
105S12VFI	12	10.8 - 13.2	30	167	25	5	300	75
112S12VFI	12	10.8 - 13.2	30	167	25	12	125	75
115S12VFI	12	10.8 - 13.2	30	167	25	15	100	75
105D12VFI	12	10.8 - 13.2	30	167	25	± 5	± 150	75
112D12VFI	12	10.8 - 13.2	30	167	25	± 12	± 63	75
115D12VFI	12	10.8 - 13.2	30	167	25	± 15	± 50	75
105S15VFI	15	13.5 - 16.5	30	133	20	5	300	75
112S15VFI	15	13.5 - 16.5	30	133	20	12	125	75
115S15VFI	15	13.5 - 16.5	30	133	20	15	100	75
105D15VFI	15	13.5 - 16.5	30	133	20	± 5	± 150	75
112D15VFI	15	13.5 - 16.5	30	133	20	± 12	± 63	75
115D15VFI	15	13.5 - 16.5	30	133	20	± 15	± 50	75

Specification Notes:

1. Measured with an isolation voltage of 240 VAC, 60 Hz.
2. Free-air convection cooling requires that the application be properly ventilated. Using a converter in a sealed application or one in which air flow is severely restricted, could cause thermal runaway.
3. Total output power should not exceed specified output ratings for any module.

**8000Vpk INPUT/OUTPUT ISOLATION
1.5W SINGLE and DUAL OUTPUT
LOW COST DC/DC CONVERTERS**

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Electrical Specifications

Input Specifications:

- Input Voltage Range ±10%
- Input Filter LC Filter
- Reflected Ripple Current See Model Selection Guide

Output Specifications:

- Output Voltage Accuracy ±4%, Max.
- Voltage Balance (Dual Outputs) ±3%, Max.
- Ripple & Noise (10 MHz BW) 40 mV Pk-Pk
- Line Regulation ±1.5% Change / % Change in V_{in}
- Load Regulation See Performance Curves
- Minimum Load 10% of Full Load
- Temperature Coefficient @ FL ±0.03%/°C
- Short Circuit Protection Momentary

General Specifications:

- Efficiency See Model Selection Guide
- Isolation Voltage 4000 VDC Min.
8000 VPK-PK Min.
- Isolation Capacitance 10 pF
- Isolation Resistance (1) 10⁹Ω
- Leakage Current 2 μA RMS, Max.
- Switching Frequency >50 kHz

Environmental Specifications:

- Operating Temperature Range -40°C to +85°C
- Storage Temperature Range -55°C to +110°C
- Derating None Required
- Humidity Up to 95%, Non-Condensing
- Cooling (2) Free Air Convection

Physical Characteristics:

- Case Size 1.25 x 0.80 x 0.40 inches
(31.8 x 20.32 x 10.16 mm)
- Weight 0.5 Oz (14g)
- Case Material Non-Conductive Black Plastic

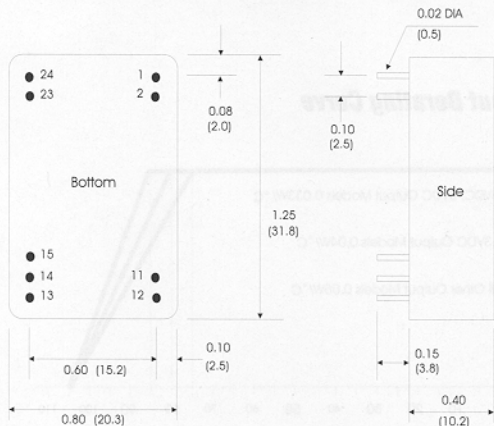
Specifications typical @ +25°C with nominal input voltage and under full output load conditions, unless otherwise noted. Specifications subject to change without notice.

Pin Out

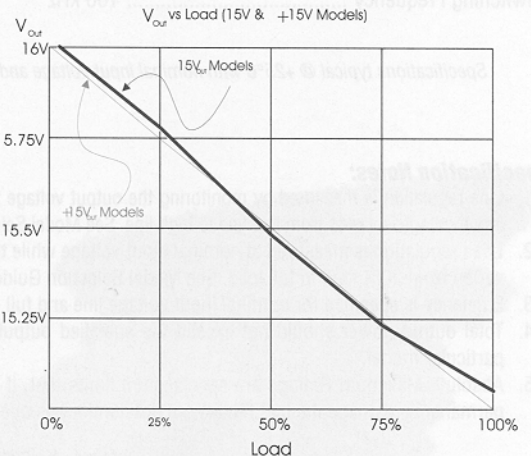
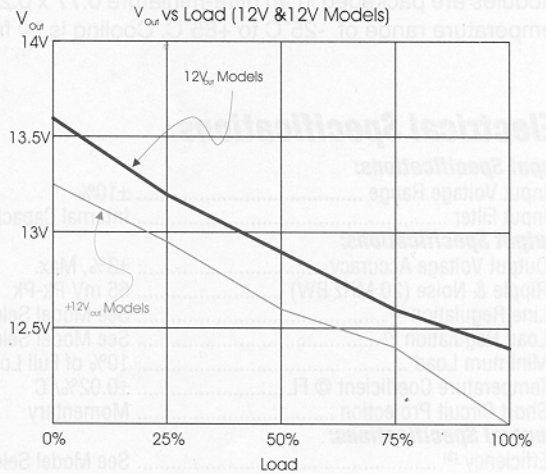
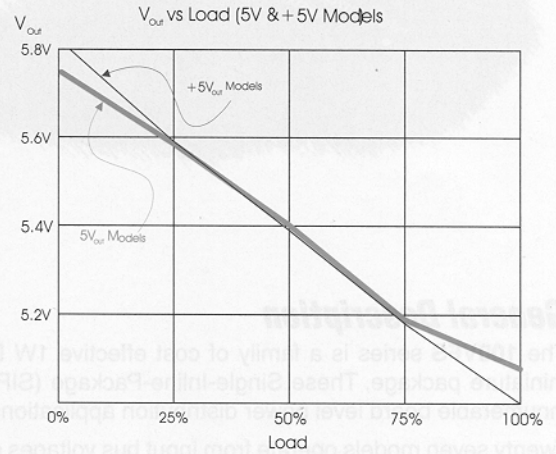
Pin	Single Output	Dual Output
1,2	+V Input	+V Input
23,24	-V Input	-V Input
11,12	+V Output	+V Input
15	N/P	-V Output
13,14	-V Output	Common

Note: All dimensions are typical in inches (mm).
Tolerance: X.XX = ± 0.01 (± 0.25)
X.XXX = ± 0.002, (± 0.05)
N/P = No Pin
Common pin not present on single output models

Mechanical Configurations



Performance Curves



For Easy Ordering Use

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