

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 ±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.

Electrical Specifications

Input Specifications:

Input Voltage Range $\pm 10\%$
Input Filter LC Filter
Reflected Ripple Current See Model Selection Guide

Output Specifications:

Output Voltage Accuracy $\pm 4\%$, Max.
Voltage Balance (Dual Outputs) $\pm 3\%$, Max.
Ripple & Noise (10 MHz BW) 40 mV Pk-Pk
Line Regulation $\pm 1.5\%$ Change / % Change in V_{in}
Load Regulation See Performance Curves
Minimum Load 10% of Full Load
Temperature Coefficient @ FL $\pm 0.03\%/^{\circ}C$
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⁾ $10^9 \Omega$
Leakage Current 2 μA RMS, Max.
Switching Frequency > 50 kHz

Environmental Specifications:

Operating Temperature Range $-40^{\circ}C$ to $+85^{\circ}C$
Storage Temperature Range $-55^{\circ}C$ to $+110^{\circ}C$
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

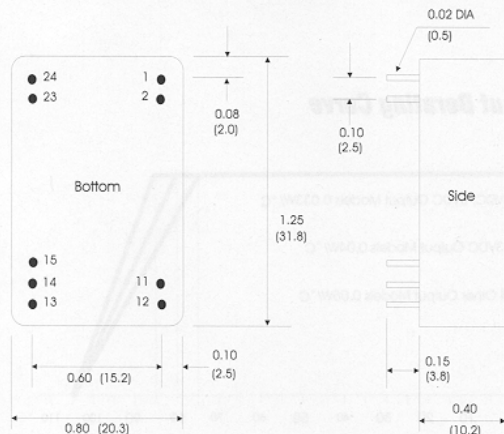
Specifications typical @ $+25^{\circ}C$ with nominal input voltage and under full output load conditions, unless otherwise noted. Specifications subject to change without notice.

Pin Out

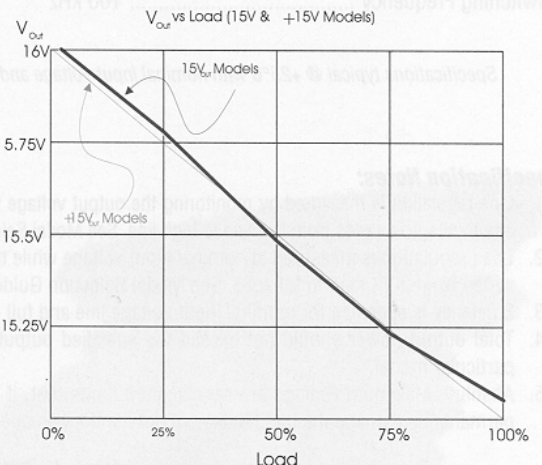
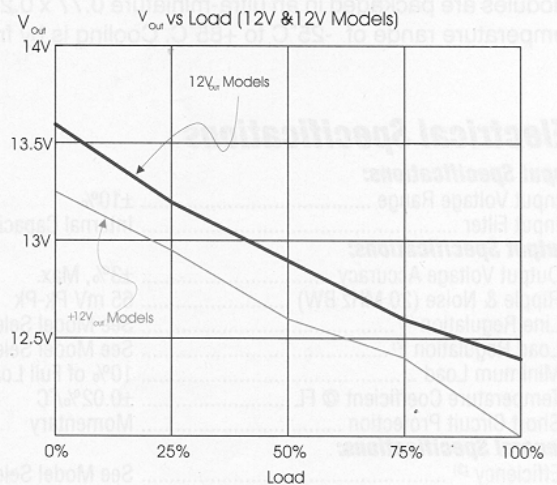
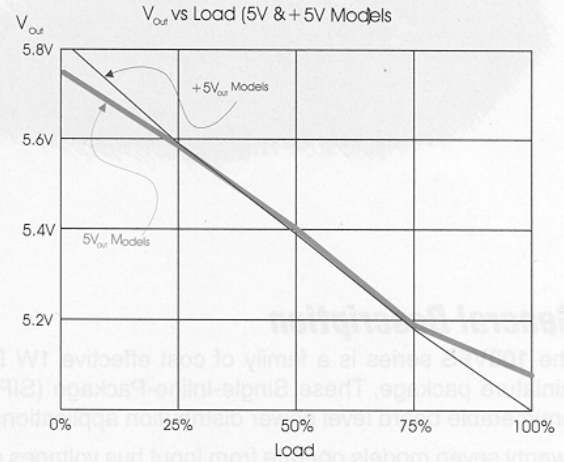
Pin	Single Output	Dual Output
1,2	+V Input	+V Input
23,24	-V Input	-V Input
11,12	+V Output	+V Input
15	N/P	-V Output
13,14	-V Output	Common

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

