

# DC/DC Converters

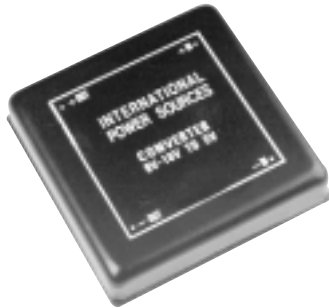
**XPiQ inc.**

Intelligent Design Quality Product



**25/30 Watts**

**WF Series**



- 2:1 Input Range
- Efficiency to 85%
- 300kHz Switching Frequency
- Overvoltage Protection
- Remote Disable
- Six-sided Shield
- External Output Trim

## Specification

All specifications are typical at 25°C, nominal line & 75% load

### Input

- *Input Voltage Range* • See Table
- *Input Filter* •  $\pi$  Type

### Output

- *Voltage Accuracy*
  - Single output,  $\pm 2\%$  max.
  - Dual + output,  $\pm 2\%$  max.
  - Dual - output,  $\pm 3\%$  max.
  - Triple 5V,  $\pm 2\%$  max.
  - 12V/15V,  $\pm 5\%$  max.

### Voltage Balance

- *Dual Output at full load* •  $\pm 1\%$  max.

### Transient Response

- *Single, 25% Step Load Change* •  $< 500\mu$  sec
- *Dual, FL=1/2L $\pm$ 1% Error Band* •  $< 500\mu$  sec

### External Trim

- *Adj. Range* •  $\pm 10\%$
- *Ripple & Noise (20MHz BW)* • 10mV RMS, max  
75m V p-p max.
- *Temperature Coefficient* •  $\pm 0.02\%/^{\circ}\text{C}$  max.
- *Short Circuit Protection* • Indefinite

### Line Regulation

- *Single/Dual Output* •  $\pm 0.5\%$  max.
- *Triple Output* •  $\pm 1.0\%$  max.
- *Load Regulation*
- *Single/Dual Output* •  $\pm 1.0\%$  max.
- *Triple Output* •  $\pm 5.0\%$  max.

### General

- *Efficiency* • See Table
- *Isolation Voltage* • 500 VDC min
- *Isolation Resistance* •  $10^9$  ohms min.
- *Switching Frequency* • 300 kHz
- *Case Grounding* • Capacity Coupled to Input
- *Operating Temperature Range* •  $-25^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$
- *Storage Temperature Range* •  $-55^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$

### Environmental

- *EMI/RFI* • Six-sided Continuous Shield
- *Case Temperature* •  $100^{\circ}\text{C}$  max
- *Case Material* • Black Coated Copper with Non-Conductive Base
- *Dimensions* • 2 x 2 x 0.40 inches  
(50.8 x 50.8 x 10.2 mm)
- *Safety Approvals* • UL1950 for U versions only



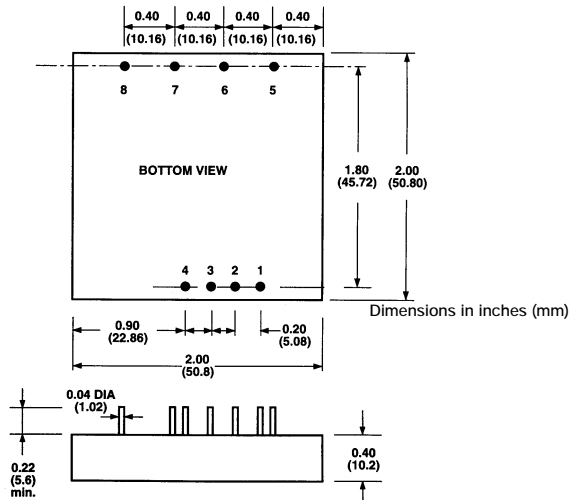
# OUTPUT VOLTAGE & CURRENT RATINGS

WF

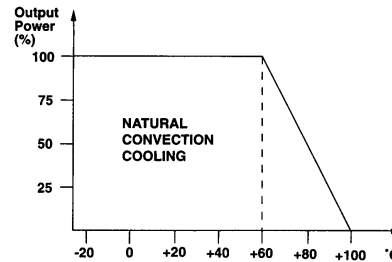
Model	Input Voltage	Output Voltage	Output Current	Input Current		% Efficiency
				No Load	Full Load	
WF100	9-18 VDC	3.3 VDC	5000 mA	30 mA	1860 mA	74
WF101	9-18 VDC	5.0 VDC	5000 mA	30 mA	2675 mA	78
WF102	9-18 VDC	12.0 VDC	2500 mA	30 mA	3050 mA	82
WF103	9-18 VDC	15.0 VDC	2000 mA	30 mA	3050 mA	82
WF104	9-18 VDC	±5.0 VDC	±2500 mA	35 mA	2675 mA	78
WF105	9-18 VDC	±12.0 VDC	±1250 mA	35 mA	3050 mA	82
WF106	9-18 VDC	±15.0 VDC	±1000 mA	35 mA	3050 mA	82
WF107	9-18 VDC	5.0/±12.0 VDC	3500/±310 mA	35 mA	2640 mA	79
WF108	9-18 VDC	5.0/±15.0 VDC	3500/±250 mA	35 mA	2640 mA	79
WF200	18-36 VDC	3.3 VDC	5000 mA	30 mA	920 mA	75
WF201	18-36 VDC	5.0 VDC	5000 mA	30 mA	1336 mA	79
WF202	18-36 VDC	12.0 VDC	2500 mA	30 mA	1525 mA	82
WF203	18-36 VDC	15.0 VDC	2000 mA	30 mA	1525 mA	82
WF204	18-36 VDC	±5.0 VDC	±2500 mA	30 mA	1336 mA	79
WF205	18-36 VDC	±12.0 VDC	±1250 mA	30 mA	1470 mA	85
WF206	18-36 VDC	±15.0 VDC	±1000 mA	30 mA	1470 mA	85
WF207	18-36 VDC	5.0/±12.0 VDC	3500/±310 mA	30 mA	1320 mA	80
WF208	18-36 VDC	5.0/±15.0 VDC	3500/±250 mA	30 mA	1320 mA	80
WF300	36-72 VDC	3.3 VDC	5000 mA	20 mA	460 mA	75
WF301	36-72 VDC	5.0 VDC	5000 mA	20 mA	660 mA	79
WF302	36-72 VDC	12.0 VDC	2500 mA	20 mA	765 mA	82
WF303	36-72 VDC	15.0 VDC	2000 mA	20 mA	765 mA	82
WF304	36-72 VDC	±5.0 VDC	±2500 mA	25 mA	660 mA	79
WF305	36-72 VDC	±12.0 VDC	±1250 mA	25 mA	735 mA	85
WF306	36-72 VDC	±15.0 VDC	±1000 mA	25 mA	735 mA	85
WF307	36-72 VDC	5.0/±12.0 VDC	3500/±310 mA	25 mA	655 mA	80
WF308	36-72 VDC	5.0/±15.0 VDC	3500/±250 mA	25 mA	655 mA	80

For optional UL1950 approved product, add suffix "U" to part number.

## Mechanical Details



OPERATING LIMITS AND OUTPUT POWER RANGE



Output (Pin No.)	Voltage	Amperes	
		Min. <sup>(2)</sup>	Nom.
7	+5	0.50	3.50
8 & 5	+12 or -12	0.10	0.31
8 & 5	+15 or -15	0.10	0.25

Notes:

- Maximum total power from all outputs is limited to 25 watts but no output should be allowed to exceed its maximum current.
- Minimum current on each output is required to maintain specified regulation.

Pin	Single Output	Dual Output	Triple Output
1	REMOTE ON/OFF	REMOTE ON/OFF	REMOTE ON/OFF
2	NO PIN	NO PIN	NO PIN
3	-VIN	-VIN	-VIN
4	+VIN	+VIN	+VIN
5	OUTPUT TRIM	OUTPUT TRIM	-OUTPUT
6	-OUTPUT	-OUTPUT	COMMON
7	+OUTPUT	COMMON	+5V OUTPUT
8	NO PIN	+OUTPUT	+OUTPUT

### EXTERNAL OUTPUT TRIMMING

Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown.

