

Industrial DC-DC Converters

10-15 Watts WD Series



THE **XP**ERTS IN POWER

- 2:1 Input Range
- Isolated Outputs
- Efficiency to 82%
- 200 kHz Switching Frequency
- Input π Filter
- Fully Regulated Outputs
- Six-sided Shield

Specification

Input

- Input Voltage Range**
 - 5 V (4.7-9.0 VDC)
 - 12 V (9-18 VDC)
 - 24 V (18-36 VDC)
 - 48 V (36-72 VDC)
- Input Filter**
 - π Network

Output

- Output Power**
 - 8 Watts for 5 V input version
 - 10 Watts for 12 V input version
 - 15 Watts for 24 & 48 V input versions (optional 10 Watts)
- Voltage Accuracy**
 - $\pm 1\%$ max
- Line Regulation**
 - $\pm 0.2\%$ max
- Load Regulation**
 - $\pm 1\%$ max for a 75% load change
- Ripple & Noise**
 - 100 mV pK-pK max (20 MHz bandwidth)
- Temperature Coefficient**
 - $\pm 0.02\%/^{\circ}\text{C}$ max
- Short Circuit Protection**
 - Continuous

General

- Switching Frequency**
 - 200 kHz typical
- Efficiency**
 - See Table
- Isolation**
 - 500 V DC input to output (1000 M Ω /80 pF)
- Dimensions**
 - 2.0" x 1.0" x 0.4"
- Weight**
 - 35 g
- MTBF**
 - 950,000 hours to MIL-STD-217F

Environmental

- Operating Temperature**
 - 25 $^{\circ}\text{C}$ to +71 $^{\circ}\text{C}$
- Storage Temperature**
 - 40 $^{\circ}\text{C}$ to +100 $^{\circ}\text{C}$

Safety

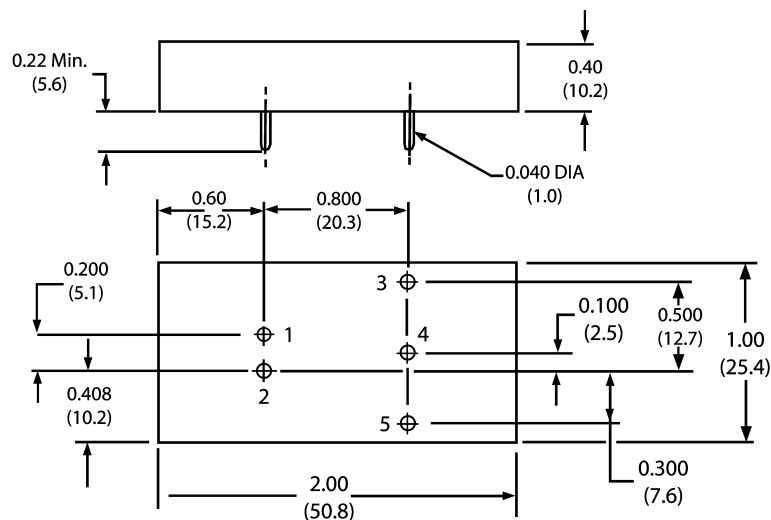
- Safety Approvals**
 - UL1950 for LU versions only

OUTPUT VOLTAGE & CURRENT RATINGS						WD
Input Voltage ⁽¹⁾	Output Voltage	Output Current	Input Current ⁽⁴⁾		Efficiency	Model Number ^(2,3)
			No Load	Full Load		
4.7-9.0 VDC	5.0 VDC	1600 mA	15 mA	2130 mA	75%	WD501
	12.0 VDC	666 mA	15 mA	2100 mA	76%	WD502
	15.0 VDC	533 mA	15 mA	2100 mA	76%	WD503
	±12.0 VDC	±333 mA	15 mA	2100 mA	76%	WD504
	±15.0 VDC	±266 mA	15 mA	2100 mA	76%	WD505
	±5.0 VDC	±800 mA	15 mA	2100 mA	76%	WD506
9-18 VDC	3.3 VDC	3000 mA	20 mA	1056 mA	76%	WD100
	5.0 VDC	2000 mA	30 mA	1100 mA	76%	WD101
	12.0 VDC	830 mA	30 mA	1065 mA	78%	WD102
	15.0 VDC	666 mA	30 mA	1065 mA	78%	WD103
	±12.0 VDC	±415 mA	40 mA	1065 mA	78%	WD104
	±15.0 VDC	±333 mA	40 mA	1065 mA	78%	WD105
	±5.0 VDC	±1000 mA	40 mA	1065 mA	78%	WD106
18-36 VDC	3.3 VDC	3000 mA	20 mA	543 mA	76%	WD200
	5.0 VDC	3000 mA	20 mA	800 mA	78%	WD201
	12.0 VDC	1250 mA	20 mA	780 mA	80%	WD202
	15.0 VDC	1000 mA	20 mA	780 mA	80%	WD203
	±12.0 VDC	±625 mA	30 mA	780 mA	80%	WD204
	±15.0 VDC	±500 mA	30 mA	780 mA	80%	WD205
	±5.0 VDC	±1500 mA	30 mA	780 mA	80%	WD206
36-72 VDC	3.3 VDC	3000 mA	15 mA	272 mA	76%	WD300
	5.0 VDC	3000 mA	10 mA	390 mA	80%	WD301
	12.0 VDC	1250 mA	10 mA	380 mA	82%	WD302
	15.0 VDC	1000 mA	10 mA	380 mA	82%	WD303
	±12.0 VDC	±625 mA	15 mA	380 mA	82%	WD304
	±15.0 VDC	±500 mA	15 mA	380 mA	82%	WD305
	±5.0 VDC	±1500 mA	15 mA	380 mA	82%	WD306

Notes

1. Nominal input voltage 5, 12, 24 or 48 VDC.
2. For optional 10 W version: Add Suffix 'L' to WD2xx and WD3xx, except models WD200 and WD300.
3. UL1950 approvals available on 10 W models only. Add suffix 'LU' to models WD1xx, WD2xx or WD3xx, not available on WD5xx series.
4. Input current is at nominal input voltage.

Mechanical Details



Dimensions in inches (mm)

PIN CONNECTIONS		
Pin	Single Output	Dual Output
1	+ Input	+ Input
2	- Input	-Input
3	+Output	+Output
4	No Pin	Common
5	-Output	-Output