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Industrial DC-DC Converters

10-15 Watts
WD Series

THE XPERTS 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	•	*±1% max*
Line Regulation	•	*±0.2% max*
Load Regulation	•	*±1% max for a 75% load change*
Ripple & Noise	•	*100 mV pK-pK max (20 MHz bandwidth)*
Temperature Coefficient	•	*±0.02%/°C max*
Short Circuit Protection	•	*Continuous*

General

Switching Frequency	•	*200 kHz typical*
Efficiency	•	*See Table*
Isolation	•	*500 V DC input to output (1000 MΩ/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 °C to +71 °C*
Storage Temperature	•	*-40 °C to +100 °C*

Safety

Safety Approvals	•	*UL1950 for LU versions only*

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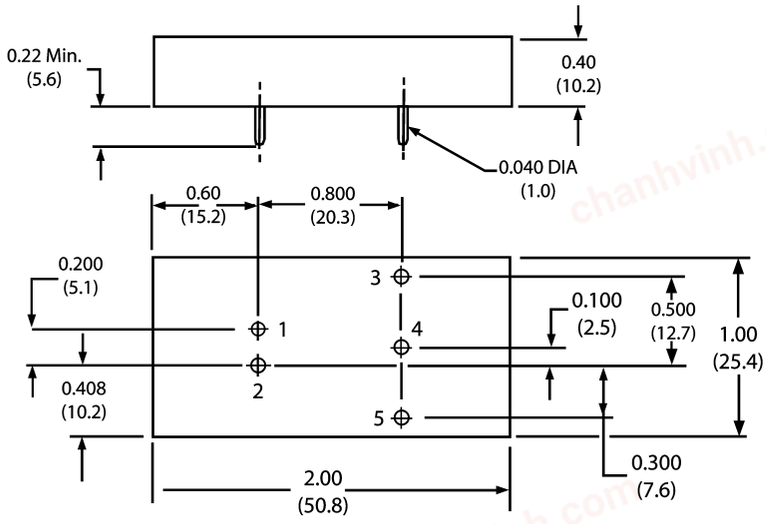
OUTPUT VOLTAGE & CURRENT RATINGS — WD

Input Voltage[1]	Output Voltage	Output Current	Input Current[4] No Load	Input Current[4] Full Load	Efficiency	Model Number[2,3]
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