

WR Series



- 2:1 Input Range
- DIP-24 Metal Package
- -25 °C to +100 °C Operating Temperature
- 1500 VDC Isolation
- Efficiency to 83%
- Input Pi Filter
- Continuous Short Circuit Protection

Specification

Input

- | | |
|-------------------------|---|
| Input Voltage Range | • 12 V (9-18 VDC)
• 24 V (18-36 VDC)
• 48 V (36-72 VDC) |
| Input Current (no load) | • See table |
| Input Filter | • Pi network |
| Undervoltage Lockout | • Turn On >70% nominal input
• Turn Off <65% nominal input |

Output

- | | |
|--------------------------|---|
| Output Voltage | • See table |
| Start Up Delay | • 900 ms max |
| Initial Set Accuracy | • ±2.0% max |
| Line Regulation | • ±0.2% max |
| Load Regulation | • ±0.5% max single output models,
• ±1.0% max dual output models,
• for 75% load change |
| Cross Regulation | • ±1.5% on dual output models |
| Transient Response | • <1% max deviation, recovery to within
• 1% in 200 µs for a 50% load change |
| Ripple & Noise | • 100 mV max pk-pk, 20 MHz BW |
| Overload | • 110-130% constant current |
| Characteristics | |
| Short Circuit Protection | • Continuous with auto recovery |
| Temperature Coefficient | • 0.05%/°C max |

General

- | | |
|---------------------|--|
| Efficiency | • See table |
| Isolation Voltage | • 1500 VDC min Input to Output (1000 MΩ) |
| Switching Frequency | • 300 kHz typical |
| MTBF | • 900 kHrs to MIL-HDBK-217F |

Environmental

- | | |
|-----------------------|--|
| Operating Temperature | • -25 °C to +100 °C (see derating curve) |
| Case Temperature | • +100 °C max |
| Storage Temperature | • -40 °C to +100 °C |

EMC

- | | |
|--------------------|---|
| Emissions | • EN55022, level A conducted
• EN55022, level A radiated |
| ESD Immunity | • EN61000-4-2, level 2
• Perf Criteria A |
| Radiated Immunity | • EN61000-4-3 3 V/m
• Perf Criteria A |
| Conducted Immunity | • EN61000-4-6 3 V rms
• Perf Criteria A |

Models and Ratings

Input Voltage ⁽¹⁾	Output Voltage	Output Current	Input Current ⁽²⁾		Efficiency	Model Number
			No Load	Full Load		
9-18 VDC	3.3 VDC	1500 mA	25 mA	557 mA	74%	WR200
	5.0 VDC	1500 mA	25 mA	801 mA	78%	WR201
	12.0 VDC	625 mA	25 mA	762 mA	82%	WR202
	15.0 VDC	500 mA	25 mA	762 mA	82%	WR203
	±5.0 VDC	±750 mA	30 mA	791 mA	79%	WR204
	±12.0 VDC	±310 mA	30 mA	753 mA	83%	WR205
	±15.0 VDC	±250 mA	30 mA	753 mA	83%	WR206
18-36 VDC	3.3 VDC	1500 mA	20 mA	271 mA	76%	WR300
	5.0 VDC	1500 mA	20 mA	396 mA	79%	WR301
	12.0 VDC	625 mA	20 mA	381 mA	82%	WR302
	15.0 VDC	500 mA	20 mA	381 mA	82%	WR303
	±5.0 VDC	±750 mA	25 mA	386 mA	81%	WR304
	±12.0 VDC	±310 mA	25 mA	377 mA	83%	WR305
	±15.0 VDC	±250 mA	25 mA	377 mA	83%	WR306
36-72 VDC	3.3 VDC	1500 mA	10 mA	136 mA	76%	WR400
	5.0 VDC	1500 mA	10 mA	195 mA	80%	WR401
	12.0 VDC	625 mA	10 mA	190 mA	82%	WR402
	15.0 VDC	500 mA	10 mA	190 mA	82%	WR403
	±5.0 VDC	±750 mA	15 mA	193 mA	81%	WR404
	±12.0 VDC	±310 mA	15 mA	188 mA	83%	WR405
	±15.0 VDC	±250 mA	15 mA	188 mA	83%	WR406

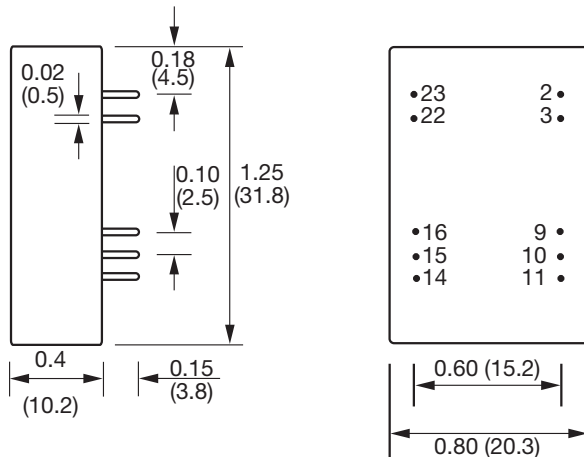
Notes

- Nominal input voltage is 12 VDC for WR2xx models, 24 VDC for WR3xx models and 48 VDC for WR4xx models.
- Input current is at nominal input voltage.

Mechanical Details

All dimensions are in inches (mm)

Weight: 0.08 lbs (35 g) approx.



PIN CONNECTIONS		
Pin	Single Output	Dual Output
2	-V input	-V input
3	-V input	-V input
9	N/C	Common
10	N/C	N/C
11	N/C	-V output
14	+V output	+V output
15	N/C	N/C
16	-V output	Common
22	+V input	+V input
23	+V input	+V input

Derating Curve

