

## WT Series



- 2:1 Input Range
- Optional 4:1 Input Range
- Isolated Outputs
- Efficiency to 82%
- Fully Regulated Outputs
- Optional 3 kVDC Isolation
- UL Approved Versions

## Specification

## Input

Input Voltage Range	<ul style="list-style-type: none"> <li>• 12 V (9-18 or 9-36 VDC - A version)</li> <li>• 24 V (18-36 or 18-72 VDC - A version)</li> <li>• 48 V (36-72 VDC)</li> </ul>
Input Current (no load)	<ul style="list-style-type: none"> <li>• See table</li> </ul>
Input Filter	<ul style="list-style-type: none"> <li>• Pi network</li> </ul>
Undervoltage Lockout	<ul style="list-style-type: none"> <li>• Turn On &gt; 65% nominal input</li> <li>• Turn Off &lt; 63% nominal input</li> </ul>

## Output

Output Voltage	<ul style="list-style-type: none"> <li>• see tables</li> </ul>
Output Voltage Balance	<ul style="list-style-type: none"> <li>• <math>\pm 1\%</math> max, dual output models</li> </ul>
Initial Set Accuracy	<ul style="list-style-type: none"> <li>• <math>\pm 2\%</math> max</li> </ul>
Start Up Rise Time	<ul style="list-style-type: none"> <li>• 3 ms max</li> </ul>
Line Regulation	<ul style="list-style-type: none"> <li>• <math>\pm 0.5\%</math> max from high line to low line</li> </ul>
Load Regulation	<ul style="list-style-type: none"> <li>• <math>\pm 0.5\%</math> max for 10-100% load change for single output models,</li> <li>• <math>\pm 1.0\%</math> max for 25-100% load change for dual output models</li> </ul>
Cross Regulation	<ul style="list-style-type: none"> <li>• <math>\pm 2.2\%</math> on dual output models</li> </ul>
Transient Response	<ul style="list-style-type: none"> <li>• &lt;1.0% max deviation, recovering within 200 <math>\mu</math>s for a 50% load change</li> </ul>
Ripple & Noise	<ul style="list-style-type: none"> <li>• 100 or 1.0% pk-pk, whichever is greater, 20MHz BW</li> </ul>
Short Circuit Protection	<ul style="list-style-type: none"> <li>• Continuous with auto recovery</li> </ul>
Temperature Coefficient	<ul style="list-style-type: none"> <li>• <math>\pm 0.05</math> /<math>^{\circ}</math>C max</li> </ul>

## General

Efficiency	<ul style="list-style-type: none"> <li>• See table</li> </ul>
Isolation	<ul style="list-style-type: none"> <li>• 500 VDC Input to Output (1000 M<math>\Omega</math>/80 pF)</li> <li>• Optional high isolation version, 3000 VDC Input to Output, add suffix 'X'</li> </ul>
Switching Frequency	<ul style="list-style-type: none"> <li>• 100 kHz typical</li> </ul>
MTBF	<ul style="list-style-type: none"> <li>• 1,000 kHrs to MIL-HDBK-217F</li> </ul>

## Environmental

Operating Temperature	<ul style="list-style-type: none"> <li>• -25 <math>^{\circ}</math>C to +70 <math>^{\circ}</math>C (see derating curve)</li> </ul>
Case Temperature	<ul style="list-style-type: none"> <li>• +95 <math>^{\circ}</math>C max</li> </ul>
Storage Temperature	<ul style="list-style-type: none"> <li>• -40 <math>^{\circ}</math>C to +100 <math>^{\circ}</math>C</li> </ul>

## EMC &amp; Safety

Emissions	<ul style="list-style-type: none"> <li>• EN55022, level A conducted</li> <li>• EN55022, level A radiated</li> </ul>
ESD Immunity	<ul style="list-style-type: none"> <li>• EN61000-4-2, level 2</li> <li>• Perf Criteria A</li> </ul>
Radiated Immunity	<ul style="list-style-type: none"> <li>• EN61000-4-3 3 V/m</li> <li>• Perf Criteria A</li> </ul>
Conducted Immunity	<ul style="list-style-type: none"> <li>• EN61000-4-6 3 V rms</li> <li>• Perf Criteria A</li> </ul>
Safety	<ul style="list-style-type: none"> <li>• UL1950 (for XU versions only)</li> </ul>

**Models and Ratings**

Input Voltage <sup>(1,2,4)</sup>	Output Voltage	Output Current	Input Current <sup>(6)</sup>		Efficiency	Model Number <sup>(3)</sup>
			No Load	Full Load		
9-18 VDC	3.3 VDC	1000 mA	7.5 mA	393 mA	70%	WT200
	5.0 VDC	1000 mA	7.5 mA	545 mA	76%	WT201
	12.0 VDC	470 mA	7.5 mA	585 mA	80%	WT202
	15.0 VDC	400 mA	7.5 mA	625 mA	80%	WT203
	±5.0 VDC	±500 mA	12.0 mA	545 mA	76%	WT204
	±12.0 VDC	±230 mA	12.0 mA	575 mA	80%	WT205
	±15.0 VDC	±190 mA	12.0 mA	590 mA	80%	WT206
18-36 VDC	3.3 VDC	1000 mA	5.0 mA	197 mA	70%	WT300
	5.0 VDC	1000 mA	5.0 mA	265 mA	78%	WT301
	12.0 VDC	470 mA	5.0 mA	285 mA	82%	WT302
	15.0 VDC	400 mA	5.0 mA	305 mA	82%	WT303
	±5.0 VDC	±500 mA	7.5 mA	265 mA	78%	WT304
	±12.0 VDC	±230 mA	7.5 mA	285 mA	81%	WT305
	±15.0 VDC	±190 mA	7.5 mA	295 mA	81%	WT306
36-72 VDC	3.3 VDC	1000 mA	2.0 mA	98 mA	70%	WT400
	5.0 VDC	1000 mA	2.0 mA	133 mA	78%	WT401
	12.0 VDC	470 mA	2.0 mA	145 mA	81%	WT402
	15.0 VDC	400 mA	2.0 mA	154 mA	81%	WT403
	±5.0 VDC	±500 mA	3.0 mA	133 mA	78%	WT404
	±12.0 VDC	±230 mA	3.0 mA	142 mA	81%	WT405
	±15.0 VDC	±190 mA	3.0 mA	147 mA	81%	WT406

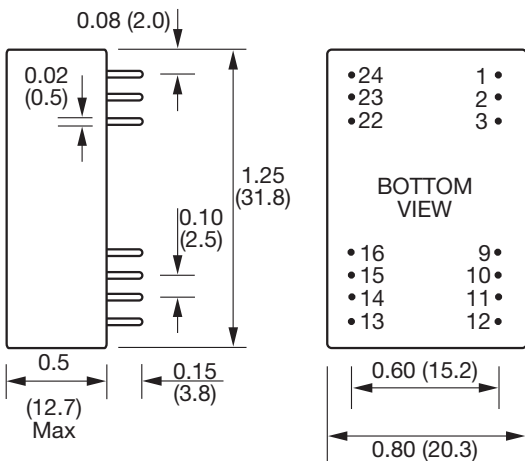
**Notes**

- Nominal input voltage 12, 24 or 48 VDC.
- For optional 4:1 input range: 9-36 VDC: Add suffix 'A' to WT2xx model number, 20-72 VDC: Add suffix 'A' to WT3xx model number.
- For 3000 VDC isolation add suffix 'X' to model number.
- For UL1950 approval, add suffix 'XU' to model number. UL approved product is only available with 3000 VDC isolation and option 'X' pinout.
- 'X' or 'XU' versions are not available with optional 4:1 input range.
- Input current is at nominal input voltage.

**Mechanical Details**

All dimensions are in inches (mm)

Weight: 0.06 lbs (25 g) approx.



PIN CONNECTIONS		
Pin	Single Output	Dual Output
1	+V input	+V input
2	N/C	-V output
3	N/C	Common
9	No pin	No pin
10	-V output	Common
11	+V output	+V output
12	-V input	-V input
13	-V input	-V input
14	+V output	+V output
15	-V output	Common
16	No pin	No pin
22	N/C	Common
23	N/C	-V output
24	+V input	+V input

OPTION 'X' / 'XU' PIN CONNECTIONS		
Pin	Single Output	Dual Output
1	No pin	No pin
2	-V input	-V input
3	-V input	-V input
9	N/C	Common
10	N/C	N/C
11	N/C	-V output
12	No pin	No pin
13	No pin	No pin
14	+V output	+V output
15	N/C	N/C
16	-V output	Common
22	+V input	+V input
23	+V input	+V input
24	No pin	No pin

**Derating Curve**

