

# THF Series

## 45-240W AC/DC DIN Rail Power Supplies

CoolPower  
Solutions



- Wide Adjustment Range
- Rugged For Industrial Use
- High Efficiency
- Overvoltage Protection
- Overcurrent Protection
- Overtemperature Protection
- Lightweight Design

### Specification

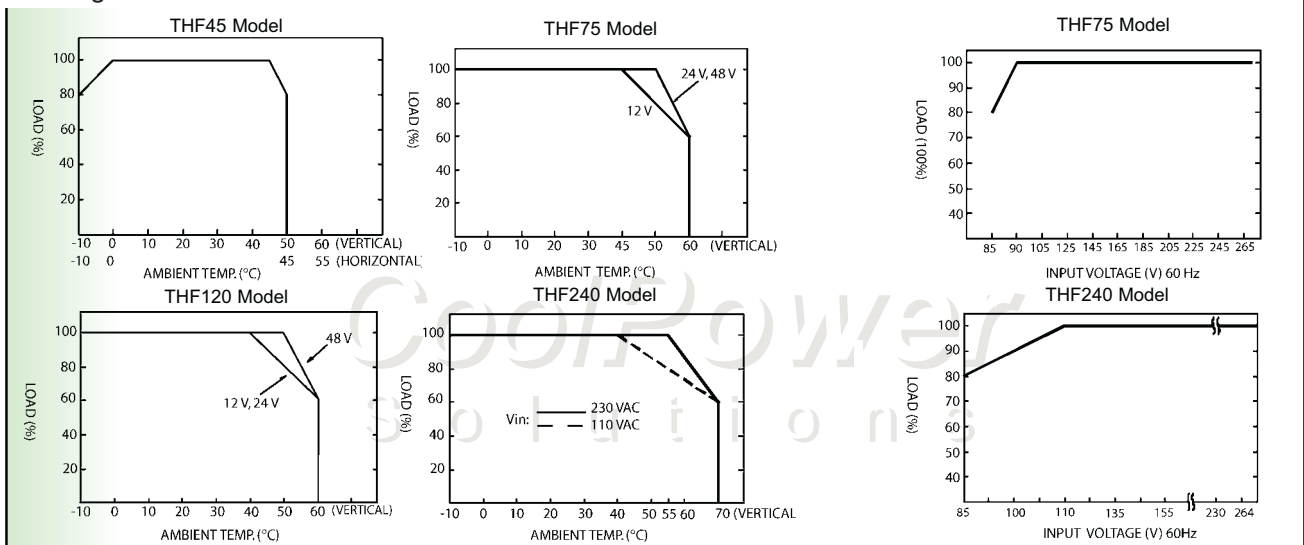
Input	General
Input Voltage	<ul style="list-style-type: none"> <li>• 85-264 VAC (120 W model 88-132 VAC /176-264 VAC switch selectable)</li> </ul>
Input Frequency	<ul style="list-style-type: none"> <li>• 47-63 Hz</li> </ul>
Inrush Current	<ul style="list-style-type: none"> <li>• 60 A max</li> </ul>
Input Current	<ul style="list-style-type: none"> <li>• 0.5 A at 230 VAC 45 W models, 0.8 A at 230 VAC 75 W models 1.4 A at 230 VAC 120 W models 1.8 A at 230 VAC 240 W models</li> </ul>
Earth Leakage	<ul style="list-style-type: none"> <li>• &lt;1.0 mA max 45 &amp; 75 W models, &lt;3.5 mA max 120 &amp; 240 W at 240 VAC</li> </ul>
Output	<ul style="list-style-type: none"> <li>• 72-85% (depending on model)</li> </ul>
Output Voltage	<ul style="list-style-type: none"> <li>• Input-Output 3000 VAC</li> <li>• Input-Earth 1500 VAC</li> <li>• Output-Earth 500 VAC</li> </ul>
Output Tolerance	<ul style="list-style-type: none"> <li>• 100 kHz typical 45 &amp; 240 W models, 50 kHz typical 75 &amp; 120 W models</li> </ul>
Output Adjustment	<ul style="list-style-type: none"> <li>• 0.40 kg 45 W models, 0.55 kg 75 W models, 0.65 kg 120 W models, 1.1 kg 240 W models</li> </ul>
Start Up Delay	<ul style="list-style-type: none"> <li>• 800 ms max 45 &amp; 240 W models, 1000 ms 75 W models, 500 ms 120 W models</li> </ul>
Start Up Rise Time	<ul style="list-style-type: none"> <li>• 60 ms max 45 &amp; 75 W models, 70 ms max 120 W models, 40 ms max 240 W models</li> </ul>
Hold Up Time	<ul style="list-style-type: none"> <li>• 50 ms at 230 VAC 45 &amp; 75 W models, 30 ms at 230 VAC 120 W models, 20 ms at 230 VAC 240 W models</li> </ul>
Line Regulation	<ul style="list-style-type: none"> <li>• ±1.0% max 45 W models, ±0.5% 75, 120 &amp; 240 W models,</li> </ul>
Load Regulation	<ul style="list-style-type: none"> <li>• ±1% max</li> </ul>
Ripple & Noise	<ul style="list-style-type: none"> <li>• See Table</li> </ul>
Overload Protection	<ul style="list-style-type: none"> <li>• 105-150% constant current with auto recovery</li> </ul>
Overvoltage Protection	<ul style="list-style-type: none"> <li>• 115-135%</li> </ul>
Temperature Coefficient	<ul style="list-style-type: none"> <li>• ±0.03%/°C</li> </ul>
	<b>Environmental</b> <ul style="list-style-type: none"> <li>• See Derating Curves</li> <li>• -20 °C to +85 °C</li> <li>• 90% RH max</li> <li>• 10-500 Hz, 2 G 10 min/cycle for 60 mins each axis</li> </ul>
	<b>EMC &amp; Safety</b> <ul style="list-style-type: none"> <li>• EN55022/55011 Class B conducted &amp; radiated, EN61000-3-2, 3</li> <li>• EN61000-4-2 Level 3 Air, Perf Criteria A</li> <li>• EN61000-4-3 10 V/m, Perf Criteria A</li> <li>• EN61000-4-4 Level 3, Perf Criteria A</li> <li>• EN61000-4-5 Level 3, Perf Criteria A</li> <li>• EN61000-4-6 10 V rms, Perf Criteria A</li> <li>• EN61000-4-8 30 A/m, Perf Criteria A</li> <li>• TÜV, EN60950, UL508, UL60950 on 120 &amp; 240 W models</li> </ul>

OUTPUT VOLTAGE & CURRENT RATINGS						THF
Maximum Output Power	Output Voltage Nominal	Output Voltage Adjustment	Output Current Maximum	Ripple & Noise	Efficiency	Model Number
25 W	5.0 V	4.75-5.00 V	5.0 A	100 mV	72%	THF45US05
42 W	12.0 V	10.80-12.20 V	3.5 A	200 mV	77%	THF45US12
42 W	15.0 V	13.50-16.50 V	2.8 A	240 mV	77%	THF45US15
48 W	24.0 V	21.60-26.40 V	2.0 A	480 mV	80%	THF45US24
76 W	12.0 V	12.00-14.00 V	6.3 A	100 mV	76%	THF75US12
77 W	24.0 V	24.00-27.00 V	3.2 A	150 mV	80%	THF75US24
77 W	48.0 V	48.00-53.00 V	1.6 A	240 mV	81%	THF75US48
120 W	12.0 V	12.00-14.00 V	10.0 A	80 mV	80%	THF120LS12
120 W	24.0 V	24.00-28.00 V	5.0 A	80 mV	84%	THF120LS24
120 W	48.0 V	48.00-53.00 V	2.5 A	100 mV	85%	THF120LS48
240 W	24.0 V	24.00-28.00 V	10.0 A	80 mV	84%	THF240PS24
240 W	48.0 V	48.00-53.00 V	5.0 A	150 mV	85%	THF240PS48

Notes

1. Measured at 20 MHz bandwidth using a 12" twisted pair terminated with a 0.1  $\mu$ F/47  $\mu$ F capacitor.

### Derating Curves



### Mechanical Details

