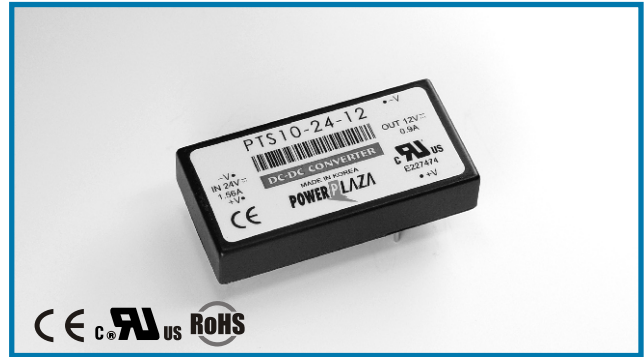


# PT 10

## PT 10 Watt Series DC/DC Converters

**Total power** 10 Watts  
**Input voltages** 24V, 48V  
**#of outputs** Single, Dual Output



### SPECIAL FEATURES

- CE(LVD), UL marking
- Industrial standard pin layout
- 300KHz fixed frequency
- Wide 4:1 input range
- Isolated output
- Small, compact size 2.0" x 1.0" x 0.40"
- Surface mount internal construction
- Six sided EMI shielding
- Low output ripple & noise
- Current mode control
- Low start up current
- 3 years warranty

### ENVIRONMENTAL

- Operating temperature range ..... -20 ~71
- Option, see Note 1 ..... -40 ~85
- Storage temperature range ..... -40 ~105
- Operating humidity (non condensing) ..... 20%~90%RH
- Storage humidity (non condensing) ..... 10%~95%RH
- Cooling method ..... Convection
- EMI / RFI ..... Six-sided continuous shield
- Case material ..... Zn
- MTBF (MIL-HDBK-217F) .....  $5.8 \times 10^5$  hrs
- Safety
  - ┌ UL (UL 60950, CSA C22.2 NO.60950, single) : E227474 /
  - └ CE (EN 60950) through TÜV

### ELECTRICAL SPECIFICATIONS

INPUT	<ul style="list-style-type: none"> <li>· Input range ..... DC 10V - 36V (PT 10-24), DC20V - 72V (PT 10-48)</li> <li>· Efficiency ..... 78 - 85% typ.</li> </ul>
OUTPUT	<ul style="list-style-type: none"> <li>· Voltage tolerance ..... <math>\pm 2\%</math> (single and uncomplementary dual) <math>\pm 3\%</math> (complementary dual)</li> <li>· Line regulation ..... <math>\pm 0.5\%</math> @ single <math>\pm 1\%</math> @ dual</li> <li>· Load regulation ..... <math>\pm 1\%</math> @ single <math>\pm 2.5\%</math> @ dual (minimum load 10%)</li> <li>· Ripple and Noise, pk-pk ..... Bandwidth : 20MHz Magnitude : 1% Vout nom</li> </ul>
PROTECTION CIRCUIT	<ul style="list-style-type: none"> <li>· Short circuit protection ..... Current limited output (note2)</li> <li>· Over voltage protection ..... Zener clamp</li> </ul>
ELECTRICALLY ISOLATED	<ul style="list-style-type: none"> <li>· Isolation ..... Input-output, input-case, output-case / DC 500V, 100Mohms</li> <li>· High pot ..... Input-output, input-case, output-case / AC 500V, 1minute</li> </ul>

**NOTE** 1. As a factory added option, the all model can be operated down to -40 , the suffix 'M' should be added to the model number when ordering. ex) PTS10-48-5M  
 2. Long term continuous operation into a short circuit will compromise the reliability of the unit.

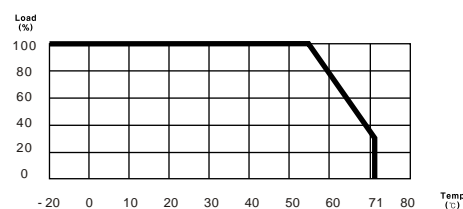
## Ordering Information

Input	Output1	Output2	Maximum Power	Ripple&Noise max	Efficiency Typ.	Model Number
10 - 36V	3.3V@2.40A		7.92W	75mVp-p	79%	<b>PTS10-24-3R3</b>
10 - 36V	5V@2.00A		10.0W	75mVp-p	82%	<b>PTS10-24-5</b>
10 - 36V	12V@0.90A		10.8W	120mVp-p	83%	<b>PTS10-24-12</b>
10 - 36V	15V@0.70A		10.5W	150mVp-p	84%	<b>PTS10-24-15</b>
10 - 36V	5V@1.00A	-5V@1.00A	10.0W	100/100mVp-p	80%	<b>PTD10-24-55</b>
10 - 36V	5V@1.50A	-5V@0.50A	10.0W	100/100mVp-p	78%	<b>PTD10-24-55A</b>
10 - 36V	12V@0.45A	-12V@0.45A	10.8W	120/120mVp-p	83%	<b>PTD10-24-1212</b>
10 - 36V	15V@0.35A	-15V@0.35A	10.5W	150/150mVp-p	83%	<b>PTD10-24-1515</b>
20 - 72V	3.3V@2.40A		7.92W	75mVp-p	78%	<b>PTS10-48-3R3</b>
20 - 72V	5V@2.00A		10.0W	75mVp-p	81%	<b>PTS10-48-5</b>
20 - 72V	12V@0.90A		10.8W	120mVp-p	84%	<b>PTS10-48-12</b>
20 - 72V	15V@0.70A		10.5W	150mVp-p	85%	<b>PTS10-48-15</b>
20 - 72V	5V@1.00A	-5V@1.00A	10.0W	100/100mVp-p	81%	<b>PTD10-48-55</b>
20 - 72V	5V@1.50A	-5V@0.50A	10.0W	100/100mVp-p	81%	<b>PTD10-48-55A</b>
20 - 72V	12V@0.45A	-12V@0.45A	10.8W	120/120mVp-p	83%	<b>PTD10-48-1212</b>
20 - 72V	15V@0.35A	-15V@0.35A	10.5W	150/150mVp-p	83%	<b>PTD10-48-1515</b>

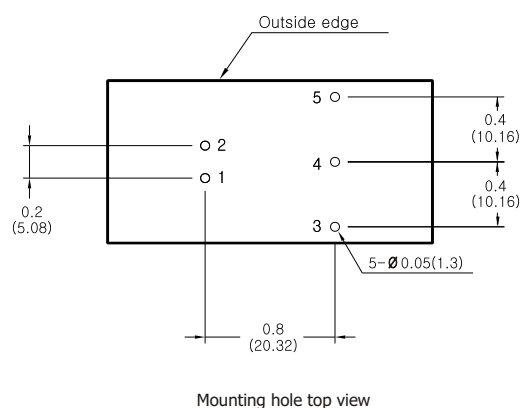
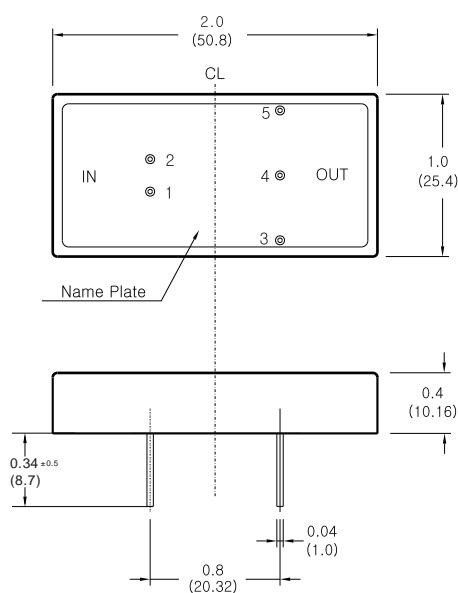
## Pin assignments

Single Output	Dual Output
1. +Vin	1. +Vin
2. -Vin	2. -Vin
3. +Vout	3. Output1
4. No pin	4. COM
5. -Vout	5. Output2

## Derating curve



## Dimensions



### NOTES

1. All dimensions are in inches and (mm).
2. Weight : 40g or less