

# PT 10

## PT 10 Watt Series DC/DC Converters

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



### SPECIAL FEATURES

- CE(LVD), UL marking
- Industrial standard pin out
- 300KHz fixed frequency
- Wide 4:1 input range
- Isolated output
- Small, compact size 2.0" × 1.0" × 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 °C ~ 71 °C
- Option, see Note 1 ..... -40 °C ~ 85 °C
- Storage temperature range ..... -40 °C ~ 105 °C
- 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 ..... 5.8 × 10<sup>4</sup> hrs
- Safety(single output)
  - └ UL (UL 60950, CSA C22.2 NO.60950) : E227474 /
  - └ CE (EN 60950) through TÜV

### ELECTRICAL SPECIFICATIONS

<b>INPUT</b>	<ul style="list-style-type: none"> <li>• Input range ..... 10V to 36 VDC (PT 10-24), 20 to 72 VDC (PT 10-48)</li> <li>• Efficiency ..... 78 ~ 83% typ.</li> </ul>
<b>OUTPUT</b>	<ul style="list-style-type: none"> <li>• Voltage tolerance ..... ±2% (single and uncomplementary dual)                ±3% (complementary dual)</li> <li>• Line regulation ..... ±0.5% @ single                ±1% @ dual</li> <li>• Load regulation ..... ±1% @ single                ±2.5% @ dual (minimum load 10%)</li> <li>• Ripple and Noise, pk-pk ..... Bandwidth : 20MHz                Magnitude : 1% Vout nom</li> </ul>
<b>PROTECTION CIRCUIT</b>	<ul style="list-style-type: none"> <li>• Short circuit protection ..... Current limited output (note2)</li> <li>• Over voltage protection ..... Zener clamp</li> </ul>
<b>ELECTRICALLY ISOLATED</b>	<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, 1 minute</li> </ul>

**NOTE** 1. As a factory added option, the all model can be operated down to -40 °C, the suffix 'M' should be added to the model number when ordering ex) PT10-48-5M  
 2. Long term continuous operation into a short circuit will compromise the reliability of the unit

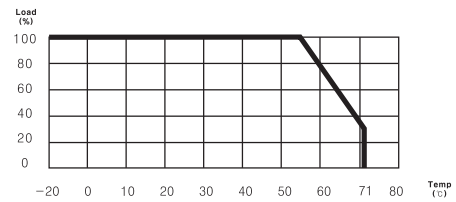
## Ordering Information

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

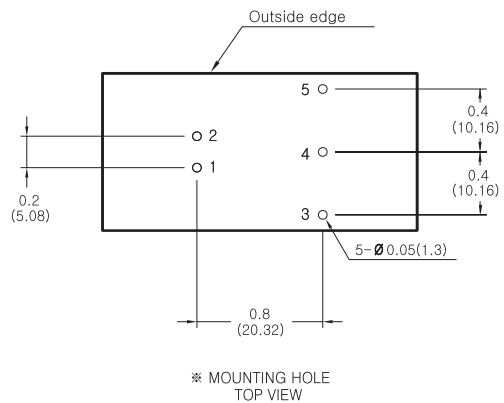
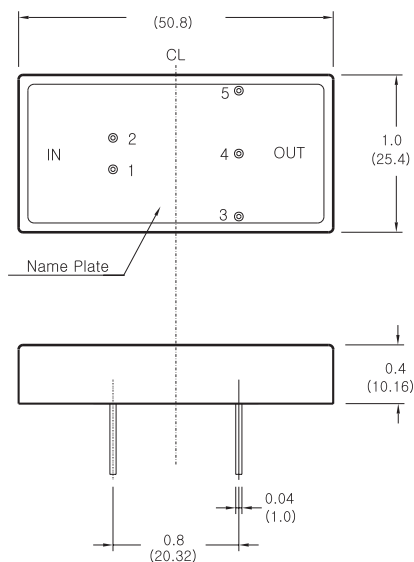
## Pin assignments

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

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