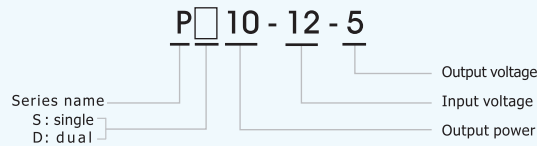


DC-DC CONVERTER (P series)



Ordering Information



|        |  |
|--------|--|
| INPUT  | DC 4.5V - 9V, 9V - 18V, 18V - 36V, 36V - 72V |
| OUTPUT | 3.3V, 5V, 12V, 15V, ±5V, ±12V, ±15V          |

Features

- RoHS directive compliance
- Single and dual output
- Encapsulated small and compact size
- High quality, reliability and efficiency
- Current mode control
- Remote on/off control
- Wide 2 : 1 input range
- 300KHz fixed frequency
- Output voltage variation (TRM)
- Over voltage protection (O.V.P.)
- Surface mounting technology
- Isolated output
- Approved by **CE** (EN 60950) - through TÜV (Only for single)
- 3 years warranty

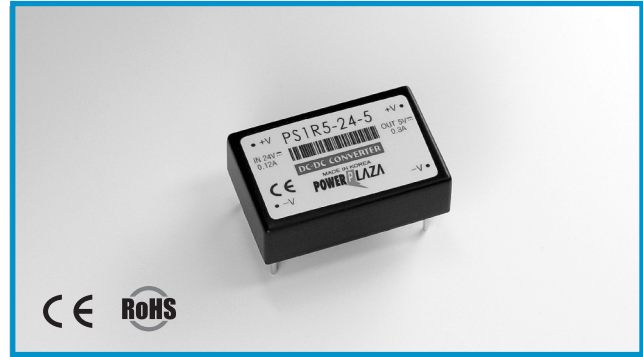
## P SERIES

| Series Name     | Input Voltage  | Output1<br>( ) : 5V Input  | Output2<br>( ) : 5V Input  | Model        | Page      |
|-----------------|--|--|--|--------------|-----------|
| <b>P1R5</b><br> | 5V (4.5 ~ 7.2)<br>12V (8.0 ~ 16.5)<br>24V (18.0 ~ 32.0)<br>48V (32.0 ~ 63.0) | 3.3V / 0.3A<br>5.0V / 0.3A<br>12.0V / 0.125A<br>15.0V / 0.1A                             |  | <b>PS1R5</b> | <b>17</b> |
|                 |  | 12.0V / 0.06A<br>15.0V / 0.05A   | -12.0V / 0.06A<br>-15.0V / 0.05A   | <b>PD1R5</b> |           |
| <b>P3</b><br>   | 5V (4.5 ~ 7.2)<br>12V (8.0 ~ 16.5)<br>24V (18.0 ~ 32.0)<br>48V (32.0 ~ 63.0) | 3.3V / 0.60A<br>5.0V / 0.60A<br>12.0V / 0.25A<br>15.0V / 0.20A                           |  | <b>PS 3</b>  | <b>19</b> |
|                 |  | 12.0V / 0.12A<br>15.0V / 0.10A   | -12.0V / 0.12A<br>-15.0V / 0.10A   | <b>PD 3</b>  |           |
| <b>P6</b><br>   | 5V (4.5 ~ 7.2)<br>12V (8.0 ~ 16.5)<br>24V (18.0 ~ 32.0)<br>48V (32.0 ~ 63.0) | 3.3V / 1.2A (1.0A)<br>5.0V / 1.2A (1.0A)<br>12.0V / 0.5A (0.45A)<br>15.0V / 0.4A (0.35A) |  | <b>PS 6</b>  | <b>21</b> |
|                 |  | 12.0V / 0.25A (0.23A)<br>15.0V / 0.20A (0.18A)<br>5.0V / 0.80A<br>5.0V / 0.80A           | -12.0V / 0.25A (0.23A)<br>-15.0V / 0.20A (0.18A)<br>+12.0V / 0.13A<br>+15.0V / 0.10A | <b>PD 6</b>  |           |
| <b>P10</b><br>  | 5V (4.5 ~ 7.2)<br>12V (8.0 ~ 16.5)<br>24V (18.0 ~ 32.0)<br>48V (32.0 ~ 63.0) | 3.3V / 2.0A (1.6A)<br>5.0V / 2.0A (1.6A)<br>12.0V / 0.9A (0.7A)<br>15.0V / 0.7A (0.6A)   |  | <b>PS 10</b> | <b>23</b> |
|                 |  | 12.0V / 0.45A (0.35A)<br>15.0V / 0.35A (0.3A)<br>5.0V / 0.90A<br>5.0V / 0.90A            | -12.0V / 0.45A(0.35A)<br>-15.0V / 0.35A(0.3A)<br>+12.0V / 0.40A<br>+15.0V / 0.32A    | <b>PD 10</b> |           |
| <b>P15</b><br>  | 5V (4.5 ~ 7.2)<br>12V (8.0 ~ 16.5)<br>24V (18.0 ~ 32.0)<br>48V (32.0 ~ 63.0) | 3.3V / 2.4A (2.0A)<br>5.0V / 2.4A (2.0A)<br>12.0V / 1.2A (1.0A)<br>15.0V / 1.0A (0.8A)   |  | <b>PS 15</b> | <b>25</b> |
|                 |  | 5.0V / 1.5A (1.0A)<br>12.0V / 0.6A (0.5A)<br>15.0V / 0.5A (0.4A)                         | -5.0V / 1.5A (1.0A)<br>-12.0V / 0.6A (0.5A)<br>-15.0V / 0.5A (0.4A)                  | <b>PD 15</b> |           |
| <b>P25</b><br>  | 5V (4.5 ~ 9.0)<br>12V (9.0 ~ 18.0)<br>24V (18.0 ~ 36.0)<br>48V (36.0 ~ 72.0) | 3.3V / 4.0A (3.2A)<br>5.0V / 4.0A (3.2A)<br>12.0V / 2.1A (1.7A)<br>15.0V / 1.7A (1.4A)   |  | <b>PS 25</b> | <b>27</b> |
|                 |  | 5.0V / 2.00A (1.6A)<br>12.0V / 1.05A (0.85A)<br>15.0V / 0.85A (0.7A)                     | -5.0V / 2.00A (1.6A)<br>-12.0V / 1.05A (0.85A)<br>-15.0V / 0.85A (0.7A)              | <b>PD 25</b> |           |

# P1R5

## P 1.5 Watt Series DC/DC Converters

**Total power** 1.5 Watts  
**Input voltages** 5V, 12V, 24V, 48V  
**#of outputs** Single, Dual Output



### SPECIAL FEATURES

- CE(LVD) Marking
- High efficiency
- 300KHz fixed frequency
- Wide 2:1 input range
- Isolated output
- Surface mounting technology
- Small, compact size 1.3"×0.83"×0.4"
- Current mode control
- Output low ripple and noise
- 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
- Case material ..... Zn
- MTBF (MIL-HDBK-217F) .....  $7.9 \times 10^5$  hrs
- Safety(Single output) ..... CE(EN60950)  
 \*Approved through TÜV

### ELECTRICAL SPECIFICATIONS

|                              |   |
|------------------------------|---|
| <b>INPUT</b>                 | <ul style="list-style-type: none"> <li>• Input range ..... DC 4.5V - 7.2V, 8V - 16.5V, 18V - 32V, 32V - 63V</li> <li>• Efficiency ..... 66 - 81% typ.</li> </ul>  |
| <b>OUTPUT</b>                | <ul style="list-style-type: none"> <li>• Voltage tolerance ..... <math>\pm 2\%</math> (Single and uncomplementary dual)<br/> <math>\pm 3\%</math> (Complementary dual)</li> <li>• Line regulation ..... <math>\pm 0.5\%</math></li> <li>• Load regulation ..... <math>\pm 1\%</math> @ Single<br/> <math>\pm 2.5\%</math> @ dual(minimum load 10%)</li> <li>• Ripple and Noise, pk-pk ..... Bandwidth : 20MHz<br/>           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> </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, 1minute</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) PS10-24-5M  
 2. Long term continuous operation into a short circuit will compromise the reliability of the unit.

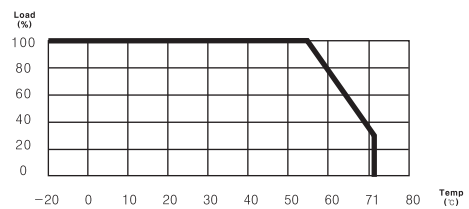
## Ordering Information

| Input      | Output1    | Output2    | Maximum Power | Ripple&Noise max | Efficiency Typ. | Model Number         |
|------------|------------|------------|---------------|------------------|-----------------|----------------------|
| 4.5 – 7.2V | 3.3V@0.30A |            | 0.99W         | 50mVp-p          | 66%             | <b>PS1R5-5-3R3</b>   |
| 4.5 – 7.2V | 5V@0.30A   |            | 1.5W          | 50mVp-p          | 70%             | <b>PS1R5-5-5</b>     |
| 4.5 – 7.2V | 12V@0.125A |            | 1.5W          | 120mVp-p         | 75%             | <b>PS1R5-5-12</b>    |
| 4.5 – 7.2V | 15V@0.10A  |            | 1.5W          | 150mVp-p         | 75%             | <b>PS1R5-5-15</b>    |
| 4.5 – 7.2V | +12V@0.06A | -12V@0.06A | 1.44W         | 120/120mVp-p     | 72%             | <b>PD1R5-5-1212</b>  |
| 4.5 – 7.2V | +15V@0.05A | -15V@0.05A | 1.5W          | 150/150mVp-p     | 75%             | <b>PD1R5-5-1515</b>  |
| 8 – 16.5V  | 3.3V@0.30A |            | 0.99W         | 50mVp-p          | 75%             | <b>PS1R5-12-3R3</b>  |
| 8 – 16.5V  | 5V@0.30A   |            | 1.5W          | 50mVp-p          | 78%             | <b>PS1R5-12-5</b>    |
| 8 – 16.5V  | 12V@0.125A |            | 1.5W          | 120mVp-p         | 81%             | <b>PS1R5-12-12</b>   |
| 8 – 16.5V  | 15V@0.10A  |            | 1.5W          | 150mVp-p         | 81%             | <b>PS1R5-12-15</b>   |
| 8 – 16.5V  | +12V@0.06A | -12V@0.06A | 1.44W         | 120/120mVp-p     | 81%             | <b>PD1R5-12-1212</b> |
| 8 – 16.5V  | +15V@0.05A | -15V@0.05A | 1.5W          | 150/150mVp-p     | 81%             | <b>PD1R5-12-1515</b> |
| 18 – 32V   | 3.3V@0.30A |            | 0.99W         | 50mVp-p          | 70%             | <b>PS1R5-24-3R3</b>  |
| 18 – 32V   | 5V@0.30A   |            | 1.5W          | 50mVp-p          | 73%             | <b>PS1R5-24-5</b>    |
| 18 – 32V   | 12V@0.125A |            | 1.5W          | 120mVp-p         | 78%             | <b>PS1R5-24-12</b>   |
| 18 – 32V   | 15V@0.10A  |            | 1.5W          | 150mVp-p         | 78%             | <b>PS1R5-24-15</b>   |
| 18 – 32V   | +12V@0.06A | -12V@0.06A | 1.44W         | 120/120mVp-p     | 74%             | <b>PD1R5-24-1212</b> |
| 18 – 32V   | +15V@0.05A | -15V@0.05A | 1.5W          | 150/150mVp-p     | 75%             | <b>PD1R5-24-1515</b> |
| 32 – 63V   | 3.3V@0.30A |            | 0.99W         | 50mVp-p          | 68%             | <b>PS1R5-48-3R3</b>  |
| 32 – 63V   | 5V@0.30A   |            | 1.5W          | 50mVp-p          | 70%             | <b>PS1R5-48-5</b>    |
| 32 – 63V   | 12V@0.125A |            | 1.5W          | 120mVp-p         | 75%             | <b>PS1R5-48-12</b>   |
| 32 – 63V   | 15V@0.10A  |            | 1.5W          | 150mVp-p         | 73%             | <b>PS1R5-48-15</b>   |
| 32 – 63V   | +12V@0.06A | -12V@0.06A | 1.44W         | 120/120mVp-p     | 74%             | <b>PD1R5-48-1212</b> |
| 32 – 63V   | +15V@0.05A | -15V@0.05A | 1.5W          | 150/150mVp-p     | 73%             | <b>PD1R5-48-1515</b> |

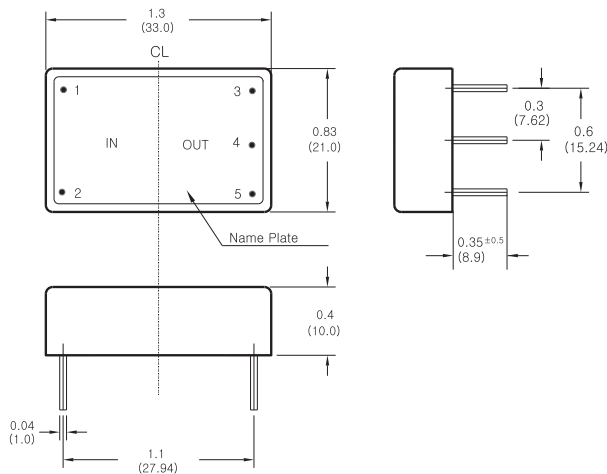
## Pin assignments

| 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

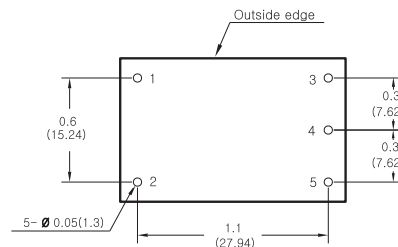


## Dimensions



### NOTES

- All dimensions are in inches and(mm).
- Weight : 12g or less



※ Mounting hole top view

# P3

## P 3 Watt Series DC/DC Converters

**Total power** 3 Watts  
**Input voltages** 5V, 12V, 24V, 48V  
**#of outputs** Single, Dual Output



### SPECIAL FEATURES

- CE(LVD) Marking
- High efficiency
- 300KHz fixed frequency
- Wide 2:1 input range
- Isolated output
- Surface mounting technology
- Small, compact size 1.85"×1.1"×0.35"
- Current mode control
- Output low ripple and noise
- 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
- Case material ..... Zn
- MTBF (MIL-HDBK-217F) .....  $7.3 \times 10^5$  hrs
- Safety(Single output) ..... CE(EN60950)  
\*Approved through TÜV

### ELECTRICAL SPECIFICATIONS

|                              |   |
|------------------------------|---|
| <b>INPUT</b>                 | <ul style="list-style-type: none"> <li>• Input range ..... DC 4.5V - 7.2V, 8V - 16.5V, 18V - 32V, 32V - 63V</li> <li>• Efficiency ..... 66 - 85% typ.</li> </ul>  |
| <b>OUTPUT</b>                | <ul style="list-style-type: none"> <li>• Voltage tolerance ..... <math>\pm 2\%</math> (Single and uncomplementary dual)<br/> <math>\pm 3\%</math> (Complementary dual)</li> <li>• Line regulation ..... <math>\pm 0.5\%</math></li> <li>• Load regulation ..... <math>\pm 1.0\%</math><br/> <math>\pm 2.5\%</math> @ dual (minimum load 10%)</li> <li>• Ripple and Noise, pk-pk ..... Bandwidth : 20MHz<br/> 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> </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, 1minute</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) PS3-24-5M  
2. Long term continuous operation into a short circuit will compromise the reliability of the uni.

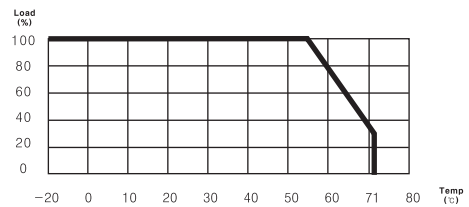
## Ordering Information

| Input      | Output1    | Output2    | Maximum Power | Ripple&Noise max | Efficiency Typ. | Model Number |
|------------|------------|------------|---------------|------------------|-----------------|--------------|
| 4.5 - 7.2V | 3.3V@0.60A |            | 1.98W         | 50mVp-p          | 66%             | PS3-5-3R3    |
| 4.5 - 7.2V | 5V@0.60A   |            | 3.0W          | 50mVp-p          | 68%             | PS3-5-5      |
| 4.5 - 7.2V | 12V@0.25A  |            | 3.0W          | 120mVp-p         | 74%             | PS3-5-12     |
| 4.5 - 7.2V | 15V@0.20A  |            | 3.0W          | 150mVp-p         | 70%             | PS3-5-15     |
| 4.5 - 7.2V | +12V@0.12A | -12V@0.12A | 2.88W         | 120/120mVp-p     | 75%             | PD3-5-1212   |
| 4.5 - 7.2V | +15V@0.10A | -15V@0.10A | 3.0W          | 150/150mVp-p     | 72%             | PD3-5-1515   |
| 8 - 16.5V  | 3.3V@0.60A |            | 1.98W         | 50mVp-p          | 77%             | PS3-12-3R3   |
| 8 - 16.5V  | 5V@0.60A   |            | 3.0W          | 50mVp-p          | 80%             | PS3-12-5     |
| 8 - 16.5V  | 12V@0.25A  |            | 3.0W          | 120mVp-p         | 80%             | PS3-12-12    |
| 8 - 16.5V  | 15V@0.20A  |            | 3.0W          | 150mVp-p         | 81%             | PS3-12-15    |
| 8 - 16.5V  | +12V@0.12A | -12V@0.12A | 2.88W         | 120/120mVp-p     | 85%             | PD3-12-1212  |
| 8 - 16.5V  | +15V@0.10A | -15V@0.10A | 3.0W          | 150/150mVp-p     | 83%             | PD3-12-1515  |
| 18 - 32V   | 3.3V@0.60A |            | 1.98W         | 50mVp-p          | 75%             | PS3-24-3R3   |
| 18 - 32V   | 5V@0.60A   |            | 3.0W          | 50mVp-p          | 79%             | PS3-24-5     |
| 18 - 32V   | 12V@0.25A  |            | 3.0W          | 120mVp-p         | 84%             | PS3-24-12    |
| 18 - 32V   | 15V@0.20A  |            | 3.0W          | 150mVp-p         | 82%             | PS3-24-15    |
| 18 - 32V   | +12V@0.12A | -12V@0.12A | 2.88W         | 120/120mVp-p     | 81%             | PD3-24-1212  |
| 18 - 32V   | +15V@0.10A | -15V@0.10A | 3.0W          | 150/150mVp-p     | 82%             | PD3-24-1515  |
| 32 - 63V   | 3.3V@0.60A |            | 1.98W         | 50mVp-p          | 75%             | PS3-48-3R3   |
| 32 - 63V   | 5V@0.60A   |            | 3.0W          | 50mVp-p          | 78%             | PS3-48-5     |
| 32 - 63V   | 12V@0.25A  |            | 3.0W          | 120mVp-p         | 78%             | PS3-48-12    |
| 32 - 63V   | 15V@0.20A  |            | 3.0W          | 150mVp-p         | 78%             | PS3-48-15    |
| 32 - 63V   | +12V@0.12A | -12V@0.12A | 2.88W         | 120/120mVp-p     | 78%             | PD3-48-1212  |
| 32 - 63V   | +15V@0.10A | -15V@0.10A | 3.0W          | 150/150mVp-p     | 78%             | PD3-48-1515  |

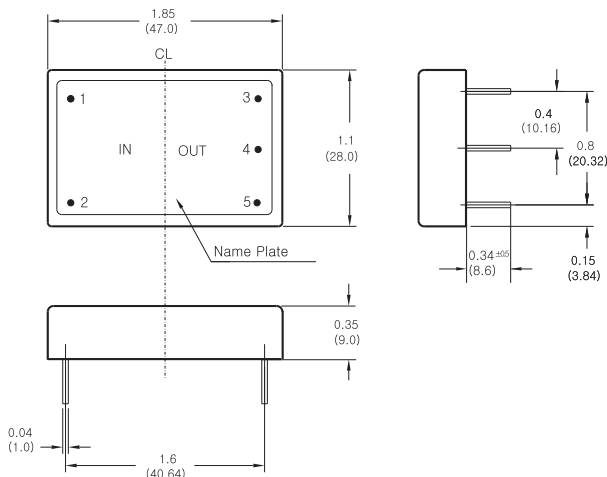
## Pin assignments

| 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

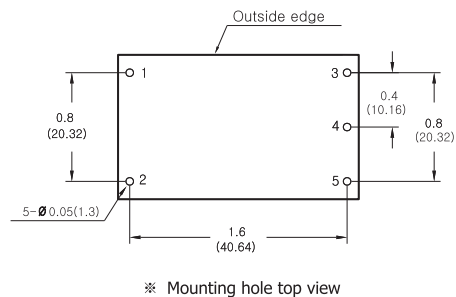


## Dimensions



### NOTES

1. All dimensions are in inches and (mm).
2. Weight : 22g or less



# P 6

## P 6 Watt Series DC/DC Converters

**Total power** 6 Watts  
**Input voltages** 5V, 12V, 24V, 48V  
**#of outputs** Single, Dual Output



### SPECIAL FEATURES

- CE(LVD) Marking
- High efficiency
- 300KHz fixed frequency
- Wide 2:1 input range
- Isolated output
- Surface mounting technology
- Small, compact size 1.85"×1.1"×0.35"
- Current mode control
- Output low ripple and noise
- 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
- Case material ..... Zn
- MTBF (MIL-HDBK-217F) ..... 7.4 × 10<sup>5</sup> hrs
- Safety(Single output) ..... CE(EN60950)  
\*Approved through TUV

### ELECTRICAL SPECIFICATIONS

|                              |  |
|------------------------------|--|
| <b>INPUT</b>                 | <ul style="list-style-type: none"> <li>• Input range ..... DC 4.5V - 7.2V, 8V - 16.5V, 18V - 32V, 32V - 63V</li> <li>• Efficiency ..... 69 ~ 83% typ.</li> </ul>   |
| <b>OUTPUT</b>                | <ul style="list-style-type: none"> <li>• Voltage tolerance ..... ±2% (Single and uncomplementary dual)<br/>±3% (Complementary dual)</li> <li>• Line regulation ..... ±0.5%</li> <li>• Load regulation ..... ±1% @ single<br/>±2.5% @ dual (minimum load 10%)</li> <li>• Ripple and Noise, pk-pk ..... Bandwidth : 20MHz<br/>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> </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, 1minute</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) PS6-24-5M  
 2. Long term continuous operation into a short circuit will compromise the reliability of the unit.

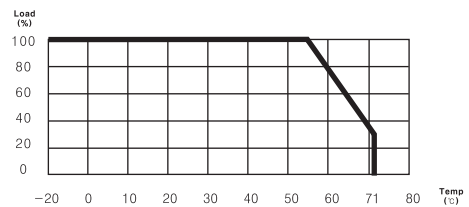
## Ordering Information

| Input      | Output1    | Output2    | Maximum Power | Ripple&Noise max | Efficiency Typ. | Model Number |
|------------|------------|------------|---------------|------------------|-----------------|--------------|
| 4.5 - 7.2V | 3.3V@1.00A |            | 3.3W          | 50mVp-p          | 69%             | PS6-5-3R3    |
| 4.5 - 7.2V | 5V@1.00A   |            | 5.0W          | 50mVp-p          | 72%             | PS6-5-5      |
| 4.5 - 7.2V | 12V@0.45A  |            | 5.4W          | 120mVp-p         | 70%             | PS6-5-12     |
| 4.5 - 7.2V | 15V@0.35A  |            | 5.25W         | 150mVp-p         | 68%             | PS6-5-15     |
| 4.5 - 7.2V | +12V@0.23A | -12V@0.23A | 5.25W         | 120/120mVp-p     | 69%             | PD6-5-1212   |
| 4.5 - 7.2V | +15V@0.18A | -15V@0.18A | 5.4W          | 150/150mVp-p     | 69%             | PD6-5-1515   |
| 4.5 - 7.2V | +5V@0.80A  | +12V@0.13A | 5.56W         | 75/120mVp-p      | 68%             | PD6-5-0512   |
| 4.5 - 7.2V | +5V@0.80A  | +15V@0.10A | 5.5W          | 75/150mVp-p      | 68%             | PD6-5-0515   |
| 8 - 16.5V  | 3.3V@1.20A |            | 3.96W         | 50mVp-p          | 78%             | PS6-12-3R3   |
| 8 - 16.5V  | 5V@1.20A   |            | 6.0W          | 50mVp-p          | 82%             | PS6-12-5     |
| 8 - 16.5V  | 12V@0.50A  |            | 6.0W          | 120mVp-p         | 82%             | PS6-12-12    |
| 8 - 16.5V  | 15V@0.40A  |            | 6.0W          | 150mVp-p         | 82%             | PS6-12-15    |
| 8 - 16.5V  | +12V@0.25A | -12V@0.25A | 6.0W          | 120/120mVp-p     | 82%             | PD6-12-1212  |
| 8 - 16.5V  | +15V@0.20A | -15V@0.20A | 6.0W          | 150/150mVp-p     | 82%             | PD6-12-1515  |
| 8 - 16.5V  | +5V@0.80A  | +12V@0.13A | 5.56W         | 75/120mVp-p      | 70%             | PD6-12-0512  |
| 8 - 16.5V  | +5V@0.80A  | +15V@0.10A | 5.5W          | 75/150mVp-p      | 70%             | PD6-12-0515  |
| 18 - 32V   | 3.3V@1.20A |            | 3.96W         | 50mVp-p          | 79%             | PS6-24-3R3   |
| 18 - 32V   | 5V@1.20A   |            | 6.0W          | 50mVp-p          | 83%             | PS6-24-5     |
| 18 - 32V   | 12V@0.50A  |            | 6.0W          | 120mVp-p         | 83%             | PS6-24-12    |
| 18 - 32V   | 15V@0.40A  |            | 6.0W          | 150mVp-p         | 83%             | PS6-24-15    |
| 18 - 32V   | +12V@0.25A | -12V@0.25A | 6.0W          | 120/120mVp-p     | 82%             | PD6-24-1212  |
| 18 - 32V   | +15V@0.20A | -15V@0.20A | 6.0W          | 150/150mVp-p     | 83%             | PD6-24-1515  |
| 18 - 32V   | +5V@0.80A  | +12V@0.13A | 5.56W         | 75/120mVp-p      | 72%             | PD6-24-0512  |
| 18 - 32V   | +5V@0.80A  | +15V@0.10A | 5.5W          | 75/150mVp-p      | 73%             | PD6-24-0515  |
| 32 - 63V   | 3.3V@1.20A |            | 3.96W         | 50mVp-p          | 78%             | PS6-48-3R3   |
| 32 - 63V   | 5V@1.20A   |            | 6.0W          | 50mVp-p          | 80%             | PS6-48-5     |
| 32 - 63V   | 12V@0.50A  |            | 6.0W          | 120mVp-p         | 83%             | PS6-48-12    |
| 32 - 63V   | 15V@0.40A  |            | 6.0W          | 150mVp-p         | 83%             | PS6-48-15    |
| 32 - 63V   | +12V@0.25A | -12V@0.25A | 6.0W          | 120/120mVp-p     | 81%             | PD6-48-1212  |
| 32 - 63V   | +15V@0.20A | -15V@0.20A | 6.0W          | 150/150mVp-p     | 81%             | PD6-48-1515  |
| 32 - 63V   | +5V@0.80A  | +12V@0.13A | 5.56W         | 75/120mVp-p      | 74%             | PD6-48-0512  |
| 32 - 63V   | +5V@0.80A  | +15V@0.10A | 5.5W          | 75/150mVp-p      | 74%             | PD6-48-0515  |

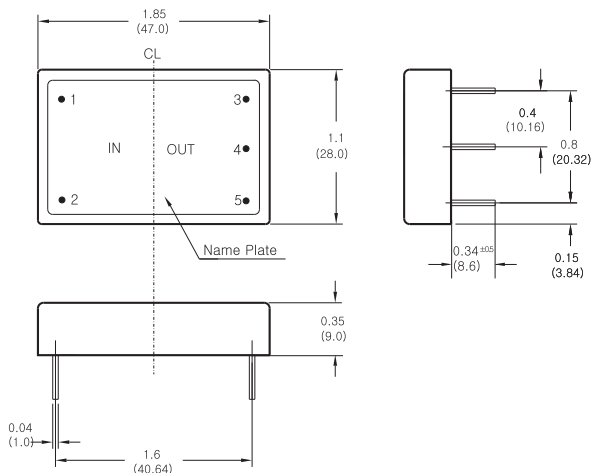
## Pin assignments

| 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

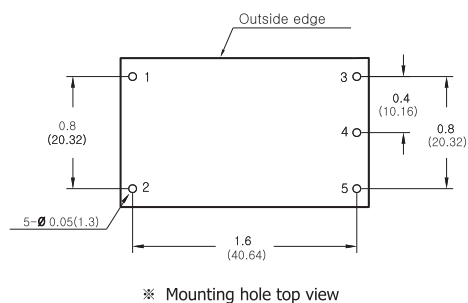


## Dimensions



### NOTES

1. All dimensions are in inches and(mm).
2. Weight : 22g or less

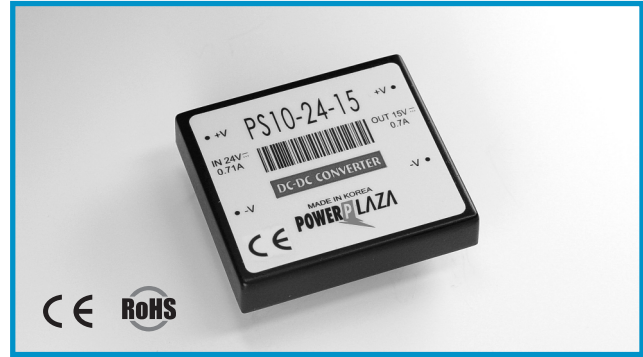




# P 10

## P 10 Watt Series DC/DC Converters

**Total power** 10 Watts  
**Input voltages** 5V, 12V, 24V, 48V  
**#of outputs** Single, Dual Output



### SPECIAL FEATURES

- CE(LVD) Marking
- High efficiency
- 300KHz fixed frequency
- Wide 2:1 input range
- Isolated output
- Surface mounting technology
- Small, compact size 1.85"×1.65"×0.35"
- Current mode control
- Output low ripple and noise
- 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
- Case material ..... Zn
- MTBF (MIL-HDBK-217F) ..... 4.8×10<sup>5</sup>hrs
- Safety(Single output) ..... CE(EN60950)  
\*Approved through TÜV

### ELECTRICAL SPECIFICATIONS

|                              |   |
|------------------------------|---|
| <b>INPUT</b>                 | <ul style="list-style-type: none"> <li>• Input range ..... DC 4.5V - 7.2V, 8V - 16.5V, 18V - 32V, 32V - 63V</li> <li>• Efficiency ..... 72 ~ 85% typ.</li> </ul>  |
| <b>OUTPUT</b>                | <ul style="list-style-type: none"> <li>• Voltage tolerance ..... ±2% (Single and uncomplementary dual)<br/>           ±3% (Complementary dual)</li> <li>• Line regulation ..... ±0.5%</li> <li>• Load regulation ..... ±1% @ single<br/>           ±2.5% @ dual (minimum load 10%)</li> <li>• Ripple and Noise, pk-pk ..... Bandwidth : 20MHz<br/>           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> </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, 1minute</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) PS10-24-5M  
 2. Long term continuous operation into a short circuit will compromise the reliability of the unit.

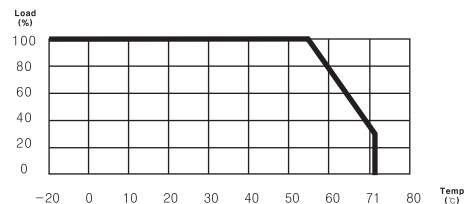
## Ordering Information

| Input      | Output1    | Output2    | Maximum Power | Ripple&Noise max | Efficiency Typ. | Model Number |
|------------|------------|------------|---------------|------------------|-----------------|--------------|
| 4.5 - 7.2V | 3.3V@1.60A |            | 5.28W         | 50mVp-p          | 76%             | PS10-5-3R3   |
| 4.5 - 7.2V | 5V@1.60A   |            | 8.0W          | 50mVp-p          | 77%             | PS10-5-5     |
| 4.5 - 7.2V | 12V@0.70A  |            | 8.4W          | 120mVp-p         | 81%             | PS10-5-12    |
| 4.5 - 7.2V | 15V@0.60A  |            | 9.0W          | 150mVp-p         | 81%             | PS10-5-15    |
| 4.5 - 7.2V | +12V@0.35A | -12V@0.35A | 8.4W          | 120/120mVp-p     | 80%             | PD10-5-1212  |
| 4.5 - 7.2V | +15V@0.30A | -15V@0.30A | 9.0W          | 150/150mVp-p     | 78%             | PD10-5-1515  |
| 4.5 - 7.2V | +5V@0.90A  | +12V@0.40A | 9.3W          | 75/120mVp-p      | 78%             | PD10-5-0512  |
| 4.5 - 7.2V | +5V@0.90A  | +15V@0.32A | 9.3W          | 75/150mVp-p      | 78%             | PD10-5-0515  |
| 8 - 16.5V  | 3.3V@2.00A |            | 6.6W          | 50mVp-p          | 80%             | PS10-12-3R3  |
| 8 - 16.5V  | 5V@2.00A   |            | 10.0W         | 50mVp-p          | 82%             | PS10-12-5    |
| 8 - 16.5V  | 12V@0.90A  |            | 10.8W         | 120mVp-p         | 82%             | PS10-12-12   |
| 8 - 16.5V  | 15V@0.70A  |            | 10.5W         | 150mVp-p         | 82%             | PS10-12-15   |
| 8 - 16.5V  | +12V@0.45A | -12V@0.45A | 10.8W         | 120/120mVp-p     | 83%             | PD10-12-1212 |
| 8 - 16.5V  | +15V@0.35A | -15V@0.35A | 10.5W         | 150/150mVp-p     | 85%             | PD10-12-1515 |
| 8 - 16.5V  | +5V@0.90A  | +12V@0.40A | 9.3W          | 75/120mVp-p      | 72%             | PD10-12-0512 |
| 8 - 16.5V  | +5V@0.90A  | +15V@0.32A | 9.3W          | 75/150mVp-p      | 72%             | PD10-12-0515 |
| 18 - 32V   | 3.3V@2.00A |            | 6.6W          | 50mVp-p          | 80%             | PS10-24-3R3  |
| 18 - 32V   | 5V@2.00A   |            | 10.0W         | 50mVp-p          | 82%             | PS10-24-5    |
| 18 - 32V   | 12V@0.90A  |            | 10.8W         | 120mVp-p         | 84%             | PS10-24-12   |
| 18 - 32V   | 15V@0.70A  |            | 10.5W         | 150mVp-p         | 85%             | PS10-24-15   |
| 18 - 32V   | +12V@0.45A | -12V@0.45A | 10.8W         | 120/120mVp-p     | 83%             | PD10-24-1212 |
| 18 - 32V   | +15V@0.35A | -15V@0.35A | 10.5W         | 150/150mVp-p     | 83%             | PD10-24-1515 |
| 18 - 32V   | +5V@0.90A  | +12V@0.40A | 9.3W          | 75/120mVp-p      | 74%             | PD10-24-0512 |
| 18 - 32V   | +5V@0.90A  | +15V@0.32A | 9.3W          | 75/150mVp-p      | 73%             | PD10-24-0515 |
| 32 - 63V   | 3.3V@2.00A |            | 6.6W          | 50mVp-p          | 80%             | PS10-48-3R3  |
| 32 - 63V   | 5V@2.00A   |            | 10.0W         | 50mVp-p          | 83%             | PS10-48-5    |
| 32 - 63V   | 12V@0.90A  |            | 10.8W         | 120mVp-p         | 83%             | PS10-48-12   |
| 32 - 63V   | 15V@0.70A  |            | 10.5W         | 150mVp-p         | 82%             | PS10-48-15   |
| 32 - 63V   | +12V@0.45A | -12V@0.45A | 10.8W         | 120/120mVp-p     | 82%             | PD10-48-1212 |
| 32 - 63V   | +15V@0.35A | -15V@0.35A | 10.5W         | 150/150mVp-p     | 83%             | PD10-48-1515 |
| 32 - 63V   | +5V@0.90A  | +12V@0.40A | 9.3W          | 75/120mVp-p      | 75%             | PD10-48-0512 |
| 32 - 63V   | +5V@0.90A  | +15V@0.32A | 9.3W          | 75/150mVp-p      | 75%             | PD10-48-0515 |

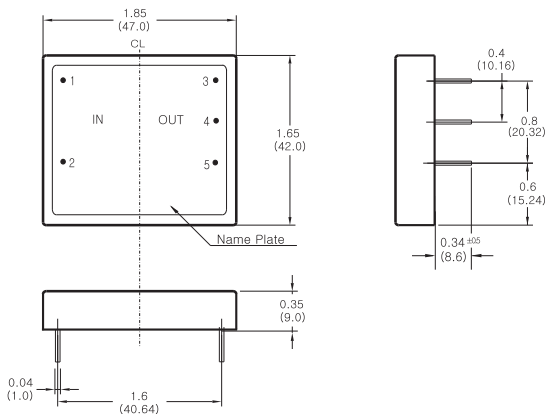
## Pin assignments

| 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

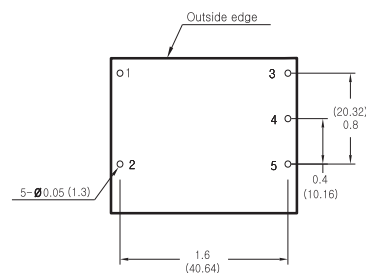


## Dimensions



### NOTES

- All dimensions are in inches and(mm).
- Weight : 35g or less



※ Mounting hole top view

# P 15

## P 15 Watt Series DC/DC Converters

**Total power** 15 Watts  
**Input voltages** 5V, 12V, 24V, 48V  
**#of outputs** Single, Dual Output



### SPECIAL FEATURES

- CE(LVD) Marking
- High efficiency
- 300KHz fixed frequency
- Wide 2:1 input range
- Surface mounting technology
- Small, compact size 1.8"×2.0"×0.35"
- Remote on / off control
- Output voltage variation (TRM)
- Over voltage protection (O.V.P.)
- Output low ripple and noise
- Current mode control
- Low start up current
- Isolated output
- 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
- Case material ..... Zn
- MTBF (MIL-HDBK-217F) ..... 5.2 × 10<sup>5</sup> hrs
- Safety(Single output) ..... CE(EN60950)  
 \*Approved through TÜV

### ELECTRICAL SPECIFICATIONS

|                              |  |
|------------------------------|--|
| <b>INPUT</b>                 | <ul style="list-style-type: none"> <li>• Input range ..... DC 4.5V - 7.2V, 8V - 16.5V, 18V - 32V, 32V - 63V</li> <li>• Efficiency ..... 76 - 87% typ.</li> <li>• Remote on / off ..... TTL compatible<br/>               on : 0 to 1.2 VDC or short Vin-V<br/>               off : 2.4 to 5.5 VDC or open</li> </ul>   |
| <b>OUTPUT</b>                | <ul style="list-style-type: none"> <li>• Voltage tolerance ..... ±2% (Single and uncomplementary dual)<br/>               ±3% (Complementary dual)</li> <li>• Line regulation ..... ±0.5%</li> <li>• Load regulation ..... ±1% @ single<br/>               ±2.5% @ dual</li> <li>• Ripple and Noise, pk-pk ..... Bandwidth : 20MHz<br/>               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 protect ..... Work at 115 - 140% of rating</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, 1minute</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) PS15-24-5M  
 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 |
|------------|------------|------------|---------------|------------------|-----------------|--------------|
| 4.5 - 7.2V | 3.3V@2.0A  |            | 6.6W          | 75mVp-p          | 76%             | PS15-5-3R3   |
| 4.5 - 7.2V | 5V@2.0A    |            | 10.0W         | 75mVp-p          | 78%             | PS15-5-5     |
| 4.5 - 7.2V | 12V@1.0A   |            | 12.0W         | 120mVp-p         | 80%             | PS15-5-12    |
| 4.5 - 7.2V | 15V@0.8A   |            | 12.0W         | 150mVp-p         | 80%             | PS15-5-15    |
| 4.5 - 7.2V | +5V@1.0A   | -5V@1.0A   | 10.0W         | 120/120mVp-p     | 80%             | PD15-5-55    |
| 4.5 - 7.2V | +12V@0.5A  | -12V@0.5A  | 12.0W         | 150/150mVp-p     | 80%             | PD15-5-1212  |
| 4.5 - 7.2V | +15V@0.4A  | -15V@0.4A  | 12.0W         | 150/150mVp-p     | 80%             | PD15-5-1515  |
| 8 - 16.5V  | 3.3V@2.40A |            | 7.92W         | 75mVp-p          | 83%             | PS15-12-3R3  |
| 8 - 16.5V  | 5V@2.40A   |            | 12.0W         | 75mVp-p          | 85%             | PS15-12-5    |
| 8 - 16.5V  | 12V@1.20A  |            | 14.4W         | 120mVp-p         | 88%             | PS15-12-12   |
| 8 - 16.5V  | 15V@1.00A  |            | 15.0W         | 150mVp-p         | 88%             | PS15-12-15   |
| 8 - 16.5V  | +5V@1.50A  | -5V@1.50A  | 15.0W         | 120/120mVp-p     | 85%             | PD15-12-55   |
| 8 - 16.5V  | +12V@0.60A | -12V@0.60A | 14.4W         | 150/150mVp-p     | 85%             | PD15-12-1212 |
| 8 - 16.5V  | +15V@0.50A | -15V@0.50A | 15.0W         | 150/150mVp-p     | 85%             | PD15-12-1515 |
| 18 - 32V   | 3.3V@2.40A |            | 7.92W         | 75mVp-p          | 84%             | PS15-24-3R3  |
| 18 - 32V   | 5V@2.40A   |            | 12.0W         | 75mVp-p          | 85%             | PS15-24-5    |
| 18 - 32V   | 12V@1.20A  |            | 14.4W         | 120mVp-p         | 88%             | PS15-24-12   |
| 18 - 32V   | 15V@1.00A  |            | 15.0W         | 150mVp-p         | 87%             | PS15-24-15   |
| 18 - 32V   | +5V@1.50A  | -5V@1.50A  | 15.0W         | 120/120mVp-p     | 86%             | PD15-24-55   |
| 18 - 32V   | +12V@0.60A | -12V@0.60A | 14.4W         | 150/150mVp-p     | 86%             | PD15-24-1212 |
| 18 - 32V   | +15V@0.50A | -15V@0.50A | 15.0W         | 150/150mVp-p     | 86%             | PD15-24-1515 |
| 32 - 63V   | 3.3V@2.40A |            | 7.92W         | 75mVp-p          | 78%             | PS15-48-3R3  |
| 32 - 63V   | 5V@2.40A   |            | 12.0W         | 75mVp-p          | 80%             | PS15-48-5    |
| 32 - 63V   | 12V@1.20A  |            | 14.4W         | 120mVp-p         | 83%             | PS15-48-12   |
| 32 - 63V   | 15V@1.00A  |            | 15.0W         | 150mVp-p         | 83%             | PS15-48-15   |
| 32 - 63V   | +5V@1.50A  | -5V@1.50A  | 15.0W         | 120/120mVp-p     | 83%             | PD15-48-55   |
| 32 - 63V   | +12V@0.60A | -12V@0.60A | 14.4W         | 150/150mVp-p     | 83%             | PD15-48-1212 |
| 32 - 63V   | +15V@0.50A | -15V@0.50A | 15.0W         | 150/150mVp-p     | 83%             | PD15-48-1515 |

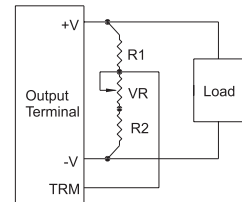
## Pin assignments

| Single Output | Dual Output |
|---------------|-------------|
| 1. +Vin       | 1. +Vin     |
| 2. -Vin       | 2. -Vin     |
| 3. CNT        | 3. CNT      |
| 4. +Vout      | 4. Output1  |
| 5. No pin     | 5. Com      |
| 6. -Vout      | 6. Output2  |
| 7. TRM.       | 7. TRM.     |

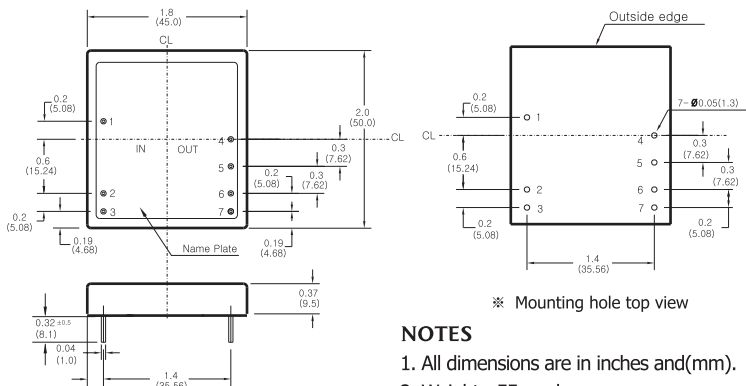
## External Parts

| Model | Output Voltage | VR | R1    | R2   |
|-------|----------------|----|-------|------|
| PS 15 | 5V             | 1K | 1K    | 680Ω |
|       | 12V            | 1K | 3.9K  | 680Ω |
|       | 15V            | 1K | 5.6K  | 750Ω |
| PD 15 | ±5V (10V)      | 1K | 3.3K  | 680Ω |
|       | ±12V (24V)     | 5K | 9.0K  | 820Ω |
|       | ±15V (30V)     | 5K | 20.0K | 910Ω |

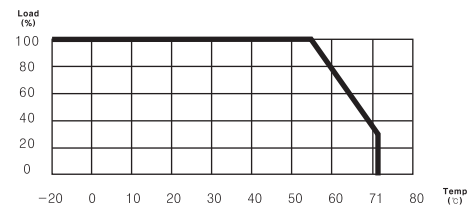
## Trim method



## Dimensions



## Derating Curve



# P 25

## P 25 Watt Series DC/DC Converters

**Total power** 25 Watts  
**Input voltages** 5V, 12V, 24V, 48V  
**#of outputs** Single, Dual Output



### SPECIAL FEATURES

- CE(LVD) Marking
- High efficiency
- 300KHz fixed frequency
- Wide 2:1 input range
- Surface mounting technology
- Small, compact size 2.56"×2.0"×0.35"
- Remote on / off control
- Output voltage variation (TRM)
- Over voltage protection (O.V.P.)
- Output low ripple and noise
- Current mode control
- Isolated output
- 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
- Case material ..... Zn
- MTBF (MIL-HDBK-217F) ..... 4.7×10<sup>5</sup> hrs
- Safety(Single output) ..... CE(EN60950)  
 \*Approved through TÜV

### ELECTRICAL SPECIFICATIONS

|                              |   |
|------------------------------|---|
| <b>INPUT</b>                 | <ul style="list-style-type: none"> <li>• Input range ..... DC 4.5V - 9V, 9V - 18V, 18V - 36V, 36V - 72V</li> <li>• Efficiency ..... 73 - 90% typ.</li> <li>• Remote on / off ..... TTL compatible<br/>               on : 0 to 1.2 VDC or short Vin-V<br/>               off : 2.4 to 5.5 VDC or open</li> </ul>  |
| <b>OUTPUT</b>                | <ul style="list-style-type: none"> <li>• Voltage tolerance ..... ±2% (Single and uncomplementary dual)<br/>               ±3% (Complementary dual)</li> <li>• Line regulation ..... ±0.5%</li> <li>• Load regulation ..... ±1% @ single<br/>               ±2.5% @ dual (minimum load 10%)</li> <li>• Ripple and Noise, pk-pk ..... Bandwidth : 20MHz<br/>               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 ..... Work at 115 - 140% of rating</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, 1minute</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) PS25-24-5M  
 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 |
|----------|------------|------------|---------------|------------------|-----------------|--------------|
| 4.5 - 9V | 3.3V@3.20A |            | 10.56W        | 75mVp-p          | 73%             | PS25-5-3R3   |
| 4.5 - 9V | 5V@3.20A   |            | 16.0W         | 75mVp-p          | 75%             | PS25-5-5     |
| 4.5 - 9V | 12V@1.70A  |            | 20.4W         | 120mVp-p         | 77%             | PS25-5-12    |
| 4.5 - 9V | 15V@1.40A  |            | 21.0W         | 150mVp-p         | 77%             | PS25-5-15    |
| 4.5 - 9V | +5V@1.60A  | -5V@1.60A  | 16.0W         | 100/100mVp-p     | 75%             | PD25-5-55    |
| 4.5 - 9V | +12V@0.85A | -12V@0.85A | 20.4W         | 120/120mVp-p     | 77%             | PD25-5-1212  |
| 4.5 - 9V | +15V@0.70A | -15V@0.70A | 21.0W         | 150/150mVp-p     | 77%             | PD25-5-1515  |
| 9 - 18V  | 3.3V@4.00A |            | 13.2W         | 75mVp-p          | 83%             | PS25-12-3R3  |
| 9 - 18V  | 5V@4.00A   |            | 20.0W         | 75mVp-p          | 85%             | PS25-12-5    |
| 9 - 18V  | 12V@2.10A  |            | 25.2W         | 120mVp-p         | 89%             | PS25-12-12   |
| 9 - 18V  | 15V@1.70A  |            | 25.5W         | 150mVp-p         | 89%             | PS25-12-15   |
| 9 - 18V  | +5V@2.00A  | -5V@2.00A  | 20.0W         | 100/100mVp-p     | 80%             | PD25-12-55   |
| 9 - 18V  | +12V@1.05A | -12V@1.05A | 25.2W         | 120/120mVp-p     | 86%             | PD25-12-1212 |
| 9 - 18V  | +15V@0.85A | -15V@0.85A | 25.5W         | 150/150mVp-p     | 86%             | PD25-12-1515 |
| 18 - 36V | 3.3V@4.00A |            | 13.2W         | 75mVp-p          | 83%             | PS25-24-3R3  |
| 18 - 36V | 5V@4.00A   |            | 20.0W         | 75mVp-p          | 85%             | PS25-24-5    |
| 18 - 36V | 12V@2.10A  |            | 25.2W         | 120mVp-p         | 89%             | PS25-24-12   |
| 18 - 36V | 15V@1.70A  |            | 25.5W         | 150mVp-p         | 90%             | PS25-24-15   |
| 18 - 36V | +5V@2.00A  | -5V@2.00A  | 20.0W         | 100/100mVp-p     | 82%             | PD25-24-55   |
| 18 - 36V | +12V@1.05A | -12V@1.05A | 25.2W         | 120/120mVp-p     | 86%             | PD25-24-1212 |
| 18 - 36V | +15V@0.85A | -15V@0.85A | 25.2W         | 150/150mVp-p     | 86%             | PD25-24-1515 |
| 36 - 72V | 3.3V@4.00A |            | 13.2W         | 75mVp-p          | 83%             | PS25-48-3R3  |
| 36 - 72V | 5V@4.00A   |            | 20.0W         | 75mVp-p          | 85%             | PS25-48-5    |
| 36 - 72V | 12V@2.10A  |            | 25.2W         | 120mVp-p         | 90%             | PS25-48-12   |
| 36 - 72V | 15V@1.70A  |            | 25.5W         | 150mVp-p         | 90%             | PS25-48-15   |
| 36 - 72V | +5V@2.00A  | -5V@2.00A  | 20.0W         | 100/100mVp-p     | 82%             | PD25-48-55   |
| 36 - 72V | +12V@1.05A | -12V@1.05A | 25.2W         | 120/120mVp-p     | 86%             | PD25-48-1212 |
| 36 - 72V | +15V@0.85A | -15V@0.85A | 25.2W         | 150/150mVp-p     | 86%             | PD25-48-1515 |

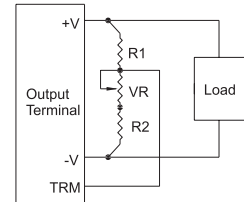
### Pin assignments

| Single Output | Dual Output |
|---------------|-------------|
| 1. +Vin       | 1. +Vin     |
| 2. - Vin      | 2. - Vin    |
| 3. CNT        | 3. CNT      |
| 4. +Vout      | 4. +Vout    |
| 5. No pin     | 5. COM      |
| 6. -Vout      | 6. -Vou     |
| 7. TRM        | 7. TRM      |

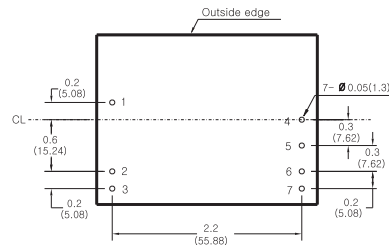
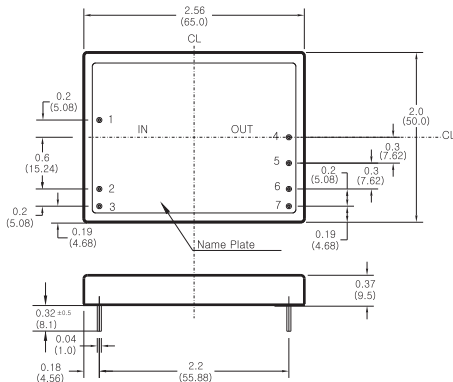
### External Parts

| Model | Output Voltage | VR | R1    | R2   |
|-------|----------------|----|-------|------|
| PS 25 | 5V             | 1K | 1K    | 680Ω |
|       | 12V            | 1K | 3.9K  | 680Ω |
|       | 15V            | 1K | 5.6K  | 750Ω |
| PD 25 | ±5V (10V)      | 1K | 3.3K  | 680Ω |
|       | ±12V (24V)     | 5K | 9.0K  | 820Ω |
|       | ±15V (30V)     | 5K | 20.0K | 910Ω |

### Trim method



### Dimensions



※ Mounting hole top view

### NOTES

- All dimensions are in inches and(mm).
- Weight : 65g or less

### Derating Curve

