

## Q-PRV Series

PCB mount, 0.1inch<sup>3</sup>, isolated, proportional high voltage DC/DC converter

Wide operating temperature range: -25/+70°C



- 0.5Watt
- Output voltage from 100Vdc to 500Vdc
- Input voltage 12Vdc or 24Vdc
- Output proportional to input
- 500VDC input to output isolation
- Short circuit protection
- Low ripple
- No minimum load
- 0.5x0.5x0.5"

Other models than those listed below are available, especially with 5V input voltage.



### Features :

**These DC/DC converters are proportional: the output is proportional to the input from 0.7V to maximum input voltage (either 12Vdc or 24Vdc, depending of the model)**

Operating temperature range: -25/+70°C with no derating no heatsink

Isolation: >100 MΩ under 500Vdc

Miniature and lightweight

PCB mount, through holes

Dimension: 0.5 x 0.5 x 0.5 inch

Excellent TC: 0.01%/°C

Excellent Load stability: 20% no load/full load

Low ripple

RoHS compliant product

Potted in an UL resin

| Model number  | Output Voltage | Output Current | Ripple | Polarity        | Input Voltage | Input Current, No Load | Input Current, Full Load |
|---------------|----------------|----------------|--------|-----------------|---------------|------------------------|--------------------------|
| Q-PRV01-12    | 0 to 100V      | 5.00mA         | <1.0%  | Reversible      | 12V           | <40mA                  | <100mA                   |
| Q-PRV01CT-12  | 0 to +/-50V    | 5.00mA         | <1.0%  | Dual-Reversible | 12V           | <40mA                  | <100mA                   |
| Q-PRV01-24    | 0 to 100V      | 5.00mA         | <1.0%  | Reversible      | 24V           | <20mA                  | <50mA                    |
| Q-PRV01CT-24  | 0 to +/-50V    | 5.00mA         | <1.0%  | Dual-Reversible | 24V           | <20mA                  | <50mA                    |
| Q-PRV015-12   | 0 to 150V      | 3.33mA         | <1.0%  | Reversible      | 12V           | <40mA                  | <100mA                   |
| Q-PRV015CT-12 | 0 to +/-75V    | 3.33mA         | <1.0%  | Dual-Reversible | 12V           | <40mA                  | <100mA                   |
| Q-PRV015-24   | 0 to 150V      | 3.33mA         | <0.50% | Reversible      | 24V           | <20mA                  | <50mA                    |
| Q-PRV015CT-24 | 0 to +/-75V    | 3.33mA         | <0.50% | Dual-Reversible | 24V           | <20mA                  | <50mA                    |
| Q-PRV02-12    | 0 to 200V      | 2.50mA         | <0.25% | Reversible      | 12V           | <40mA                  | <100mA                   |
| Q-PRV02CT-12  | 0 to +/-100V   | 2.50mA         | <0.25% | Dual-Reversible | 12V           | <40mA                  | <100mA                   |
| Q-PRV02-24    | 0 to 200V      | 2.50mA         | <0.25% | Reversible      | 24V           | <20mA                  | <50mA                    |



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Rev 2.0– Sept 25

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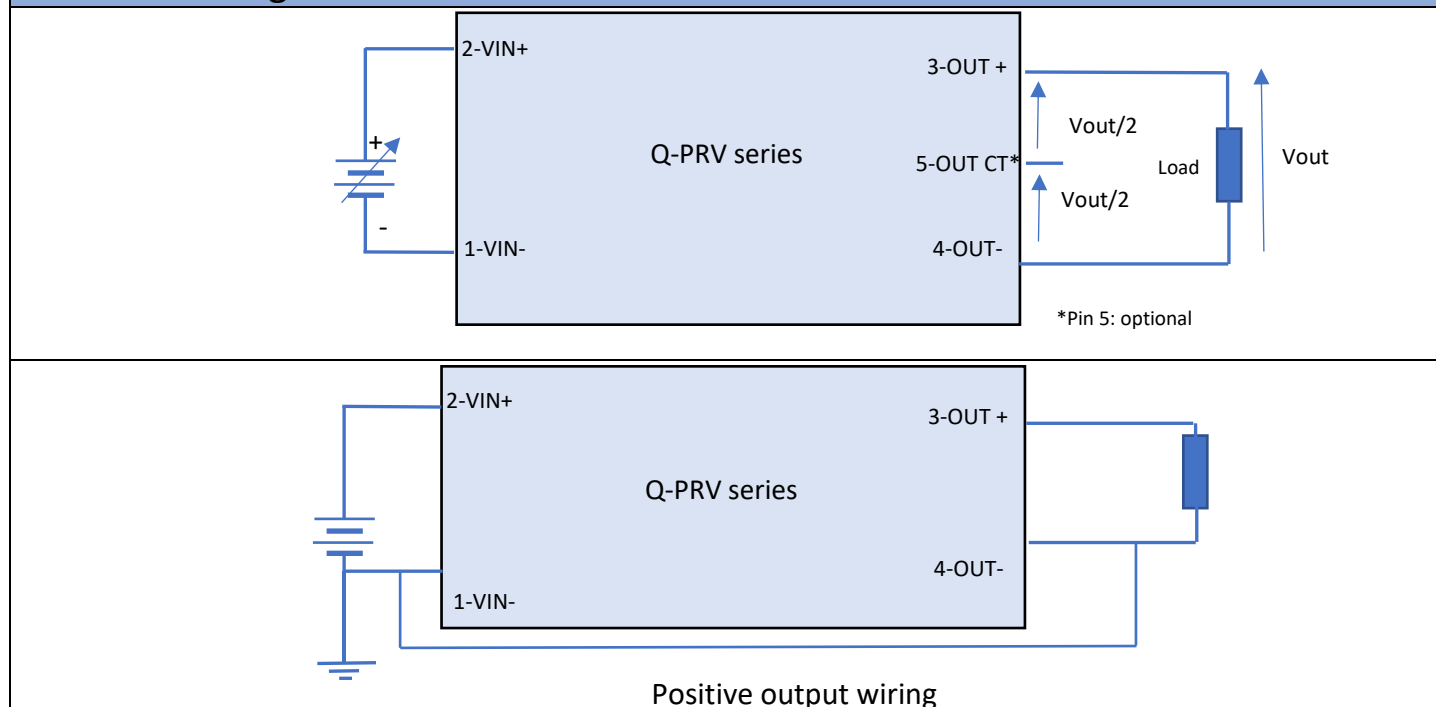
Wide operating temperature range: -25/+70°C

| Model number | Output Voltage | Output Current | Ripple | Polarity        | Input Voltage | Input Current, No Load | Input Current, Full Load |
|--------------|----------------|----------------|--------|-----------------|---------------|------------------------|--------------------------|
| Q-PRV02CT-24 | 0 to +/- 100V  | 2.50mA         | <0.25% | Dual-Reversible | 24V           | <20mA                  | <50mA                    |
| Q-PRV025-12  | 0 to 250V      | 2.00mA         | <0.25% | Reversible      | 12V           | <40mA                  | <100mA                   |
| Q-PRV25CT-12 | 0 to +/- 125V  | 2.00mA         | <0.25% | Dual-Reversible | 12V           | <40mA                  | <100mA                   |
| Q-PRV025-24  | 0 to 250V      | 2.00mA         | <0.25% | Reversible      | 24V           | <20mA                  | <50mA                    |
| Q-PRV25CT-24 | 0 to +/- 125V  | 2.00mA         | <0.25% | Dual-Reversible | 24V           | <20mA                  | <50mA                    |
| Q-PRV05-12   | 0 to 500V      | 1.00mA         | <0.15% | Reversible      | 12V           | <40mA                  | <100mA                   |
| Q-PRV05CT-12 | 0 to +/- 250V  | 1.00mA         | <0.15% | Dual-Reversible | 12V           | <40mA                  | <100mA                   |
| Q-PRV05-24   | 0 to 500V      | 1.00mA         | <0.15% | Reversible      | 24V           | <20mA                  | <50mA                    |
| Q-PRV05CT-24 | 0 to +/- 250V  | 1.00mA         | <0.15% | Dual-Reversible | 24V           | <20mA                  | <50mA                    |

### Pin function

|        |                                                                                      |
|--------|--------------------------------------------------------------------------------------|
| Input  | #1: Supply (IN-)<br>#2: 0V supply (IN+)                                              |
| Output | #3: Output Return (OUT+)<br>#4: Output (OUT-)<br>#5: Center tape (OUT CT) (optional) |

### Functional diagram



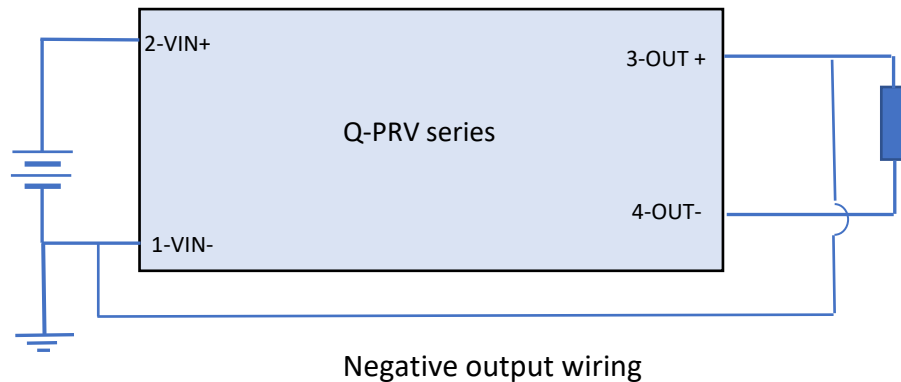
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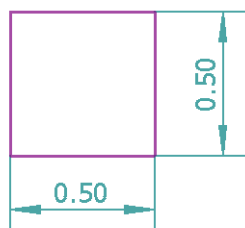
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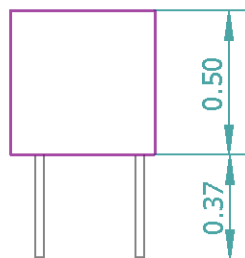


## Mechanical details (not to scale) - All dimensions in inch

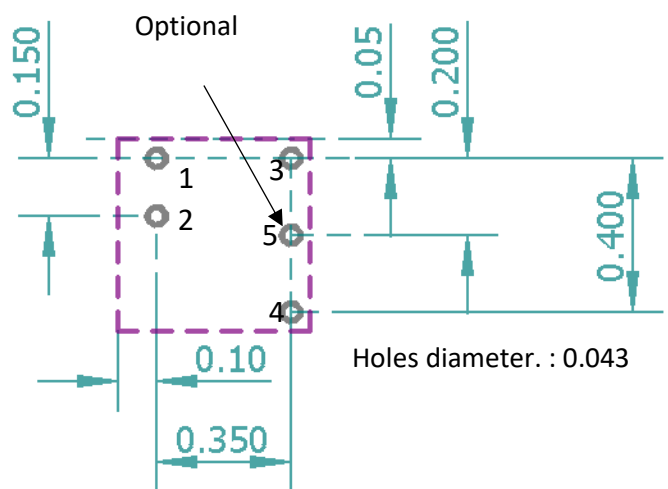
TOP VIEW



FRONT VIEW



PCB LAYOUT



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