

## PRV Series

Isolated proportional high voltage DC/DC converter- 1kV to 4kV - 6W

PCB flat mounting



- 3 standard output voltages : 1kV 2kV & 4kVdc
- The output is proportional to the input.
- Input voltage: 2.5 to 15Vdc
- 2 output configurations: single or dual (center taped pin)
- Output power: 6W at maximum output voltage
- Output polarity: user configurable (reversible)
- ip/op insulation: 500Vdc



### Features :

Operating temp range: -10/+70°C (case)	Low noise due to metal shielding and quasi-sinewave oscillator	High efficiency (75-80%)
Miniature and lightweight	Dimension: L47xW28xH12.5mm	Digital ON-OFF input
Thermal protection with automatic shutdown.	Over input voltage protection with automatic shutdown.	Logical alarm output (thermal and over input voltage protections)
RoHS compliant product	Potted with an UL epoxy resin	

### Parameters

Specifications (at Tamb=25°C unless otherwise specified)

Input voltage Vin (pins 1 & 3)	<ul style="list-style-type: none"><li>• 2.5 to 15Vdc (absolute maximum: 30Vdc, see protection section for details)</li><li>• Reverse: -0.2Vdc max.</li><li>• Turn on voltage: 2.5Vdc typical</li></ul>			
Efficiency	>75% at full load (input current in off state <4mA)			
HV output Vout (pins 5, 6 & 7)	Output voltage is proportional to the input voltage			
Output polarity	Customizable (see diagram below for details)			
Nominal output current & Residual ripple	Version	Output voltage	Output current	Ripple (Fs ~ 50kHz)
	1K Series	1 kV (2x0.5kV or 2x1kV)	6 mA	<1%
	2k Series	2 kV (1x2kV or 2x1kV)	3.0 mA	<1%
	4K Series	4 kV (1x4kV or 2x2kV)	1.5 mA	<1%
Switch frequency	50 to 70kHz			
Load voltage regulation	+40 % for full load to no load. (see diagram below)			
Temperature coefficient	<300ppm/°C			
Operating temperature range	-10°C to +70°C (case)			
Storage temperature range	-40°C to +125°C			
HV power ON/OFF (pin 4)	Connect Pin 4 to Vin return (pin3) to activate the HV output. Compatible with open collector switches, relay...			



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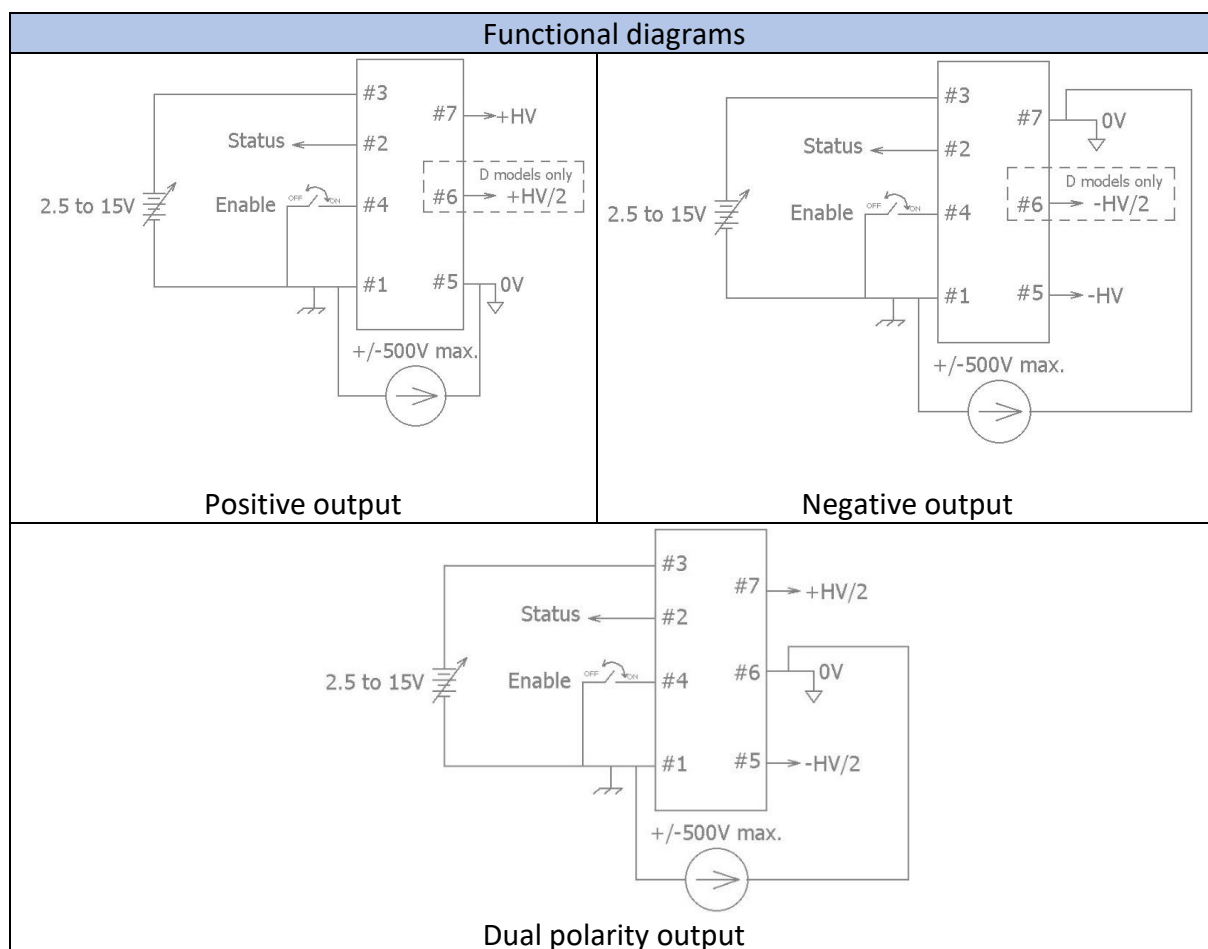
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Safeguards & Alarm (pin 2)	<ul style="list-style-type: none"><li>•Over voltage at the input is detected above 15V and the module automatically turns off</li><li>•Thermal detection automatically turns off the module above 70°C</li><li>•Alarm is a logical 5V output which turns high when <math>V_{in} &gt; 15V</math> or when the thermal protection occurs.</li></ul> The converter resumes normal operation once the fault condition disappears.
Shielding	The metal case is internally grounded to the $V_{in}$ Return pin 1.
Pins	0.63 x 0.63 mm square pins Length : > 2 mm
Weight	<40g
Insulation	Fully potted in an UL certified epoxy resin



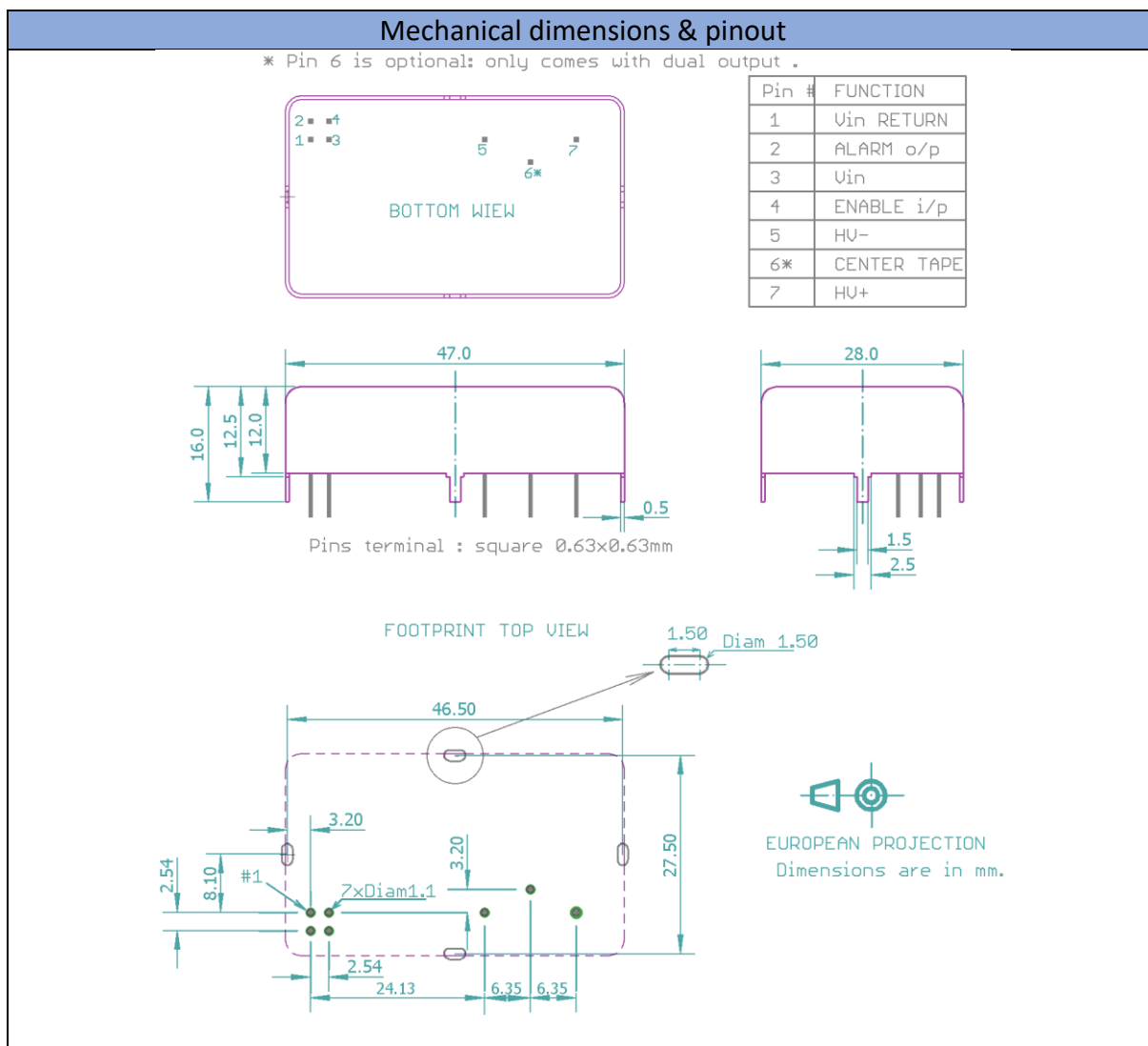
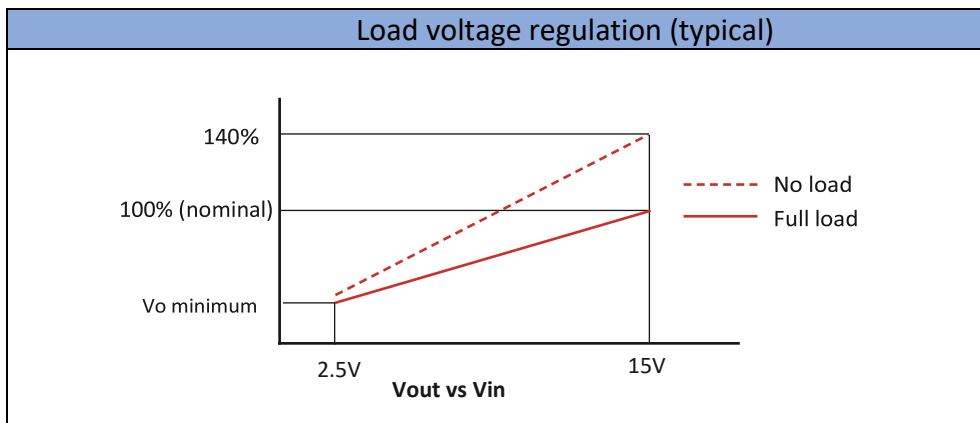
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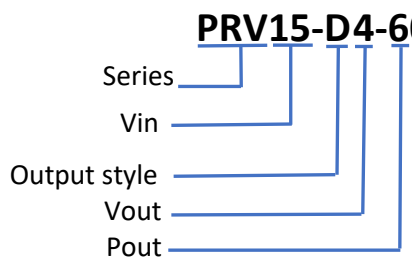
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### Ordering information

Model	Series name	PRV
Input voltage Vin	Nominal input voltage	15
Output style	Single output	S
	Dual output	D
Output voltage	1kV (1x1kV or 2x0.5kV)	1
	2kV (1x2kV or 2x1kV)	2
	4kV (1x4kV or 2x2kV)	4
Output power	6 Watt	6

Example of reference to order:



Some other models may be possible on demand.



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