

V SERIES

Vertical, Microsize High Voltage Biasing Supply

The vertical, microsize V Series is the ideal solution for applications that require a bias voltage ranging from 0 to 1500V and very small current, at only 0.84in³ (13.8cc). With a footprint under 1in² (2.54cm²), these modules are perfect for applications with limited board space.

- 4 models from 0 to 600V, 1000V, 1250V, or 1500V
- 1 watt of output power
- Tight line/load regulation
- Arc and continuous short circuit protection
- Self restoring output voltage
- 12, 15 or 24 Volts DC Input
- Low cost
- Miniature and lightweight
- 5V reference
- Voltage monitoring
- Low ripple (0.01% peak to peak)
- Optional flying lead for HV output



Typical applications for the V Series include the following:

- Bias Supplies
- Scanning Electron Microscopes (SEM)
- Avalanche Photo Diodes (APD)
- Photomultiplier Tubes (PMT)

Please contact UltraVolt's customer service department for an analysis of your requirements.

PARAMETER	SPECIFICATION
Input voltage V_{in} (pins 1 & 2)	12VDC $\pm 0.5V_{dc}$ or 15VDC $\pm 0.5V_{DC}$ or 24VDC $\pm 1V_{DC}$, According to type
Input current	At no load: 15mA At full load: from 65mA to 100mA
Polarity	Fixed positive and fixed negative
HV setting (pins 3, 4 & 5)	Via external potentiometer, minimum resistance 10k Ω or Via external voltage source 0/ 5V $\pm 0.5\%$ at full scale, and input impedance >1M Ω
Load voltage regulation	$\pm 0.01\%$ of full output voltage for no load to full load
Line voltage regulation	$\pm 0.01\%$ of full output voltage over specified input voltage range
Residual ripple	Between 10mV and 50mV peak-to-peak at full load
Temperature coefficient	100ppm/ $^{\circ}C$ for the maximum output voltage after starting and over temperature range 0 to 50 $^{\circ}C$
Output HV monitoring (pin 6)	+1V/1kV max. or -1V/-1kV max. according to model polarity Output impedance = 200k Ω $\pm 1\%$
Output reference voltage (pin 5)	5V $\pm 0.5\%$, TC:50ppm/ $^{\circ}C$, max. output current:1mA
Operating temperature	0 $^{\circ}C$ to +50 $^{\circ}C$
Storage temperature	-20 $^{\circ}C$ to +70 $^{\circ}C$
Safeguards	Arc and short circuit protection
Options	<ul style="list-style-type: none"> • Flying wire for HV output instead of pin 7 • Suitable for use with an external potentiometer

Specifications subject to change without notice.



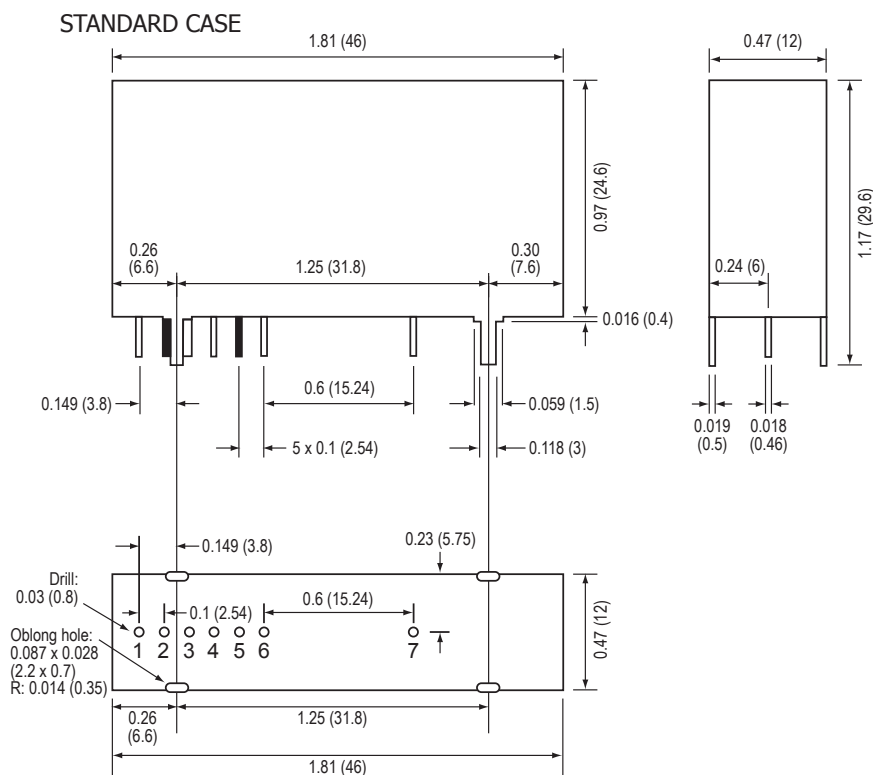
Making High Voltage Easier!®

Higher Service, Higher Performance, Higher Reliability

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CONSTRUCTION

Tin steel plate, thickness 0.02" (0.5)
 Insulation: fully potted in an epoxy resin

SIZE

Volume: 0.84in³ (13.8cc)
 Weight: 1.23oz (35g)

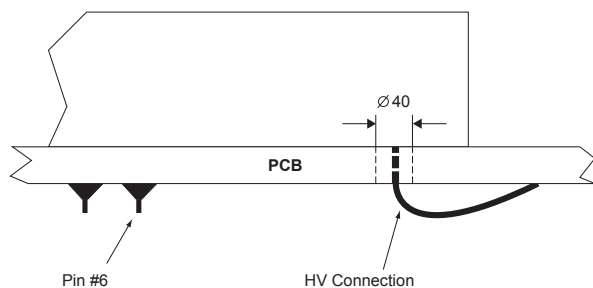
TOLERANCE

Overall $\pm 0.0039"$ (0.1)
 Pin to Pin $\pm 0.0039"$ (0.1)
 Tabs location $\pm 0.0118"$ (0.3)

NOTES

0.018" (0.46) round pins, length: 0.12" (3),
 spacing: 0.1" (2.54)
 PCB mounting through 4 mounting tabs:
 Length: 0.2" (5), width: 0.059" (1.5),
 thickness: 0.02" (0.5)
 Optional flying lead for HV output:
 Coaxial cable (RG178), diameter = 0.079" (2)
 length = 19.685" (500)

FLYING LEAD OPTION



CONNECTIONS	
PIN	FUNCTION
1	Positive Power Input
2	Power Ground
3	Signal Ground
4	Remote Adjust Input
5	+5VDC Reference Output
6	Eout Monitor
7	HV Output

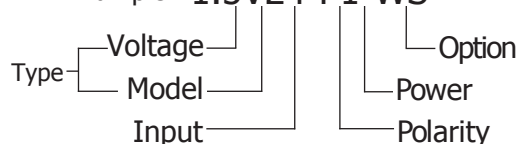
Note: Mounting tabs must be connected to ground.



Non-RoHS compliant units are available. Please contact the factory for more information.

ORDERING INFORMATION		
Type	0 to 600 VDC Output	0.6V
	0 to 1,000 VDC Output	1V
	0 to 1,250 VDC Output	1.25V
	0 to 1,500 VDC Output	1.5V
Input	12VDC Nominal	12
	15VDC Nominal	15
	24VDC Nominal	24
Power	Watts Output (12Vin only)	0.5
	Watts Output (15Vin only)	0.8
	Watts Output (24Vin only)	1
Case	Tin Steel Case	(Standard)
Polarity	Positive Output	-P
	Negative Output	-N
Option	Flying Lead for HV Output	-WS

Example: 1.5V24-P1-WS



Popular accessories ordered with this product include the PCB-CONN-M/V.

