



ULTRAVOLT® PM SERIES
HIGH VOLTAGE POWER SUPPLIES





Single-output micro-sized HV modules

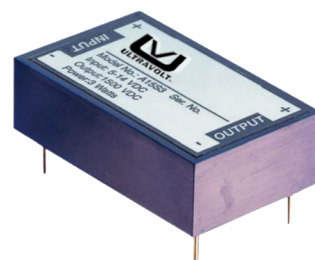
The PM series of **proportional micro-sized high voltage power supplies** are low-cost nominal performance DC-to-DC high voltage devices for applications that require a bias voltage ranging from 0 to 1 kV to 4 kV at 0 to 3 W. With 2 kV of isolation or low ripple, these modules are ideal for use in size-critical reduced-cost applications.

Features

- › 5 models from 0 to 1 kV DC to 4 kV DC
- › Proportional—HV output tracks the input to within 10%
- › Output power of 0 to 3 watts—no minimum load!
- › Output ripple of 0.5% V peak to peak, < 0.25% with -F option
- › Output regulation < 5% (half load to full load)
- › 2000 V of isolation from input to output
- › No heat sink or electrical derating required
- › CE Mark (LVD and RoHS)

Typical Applications

- › Small, lightweight, portable devices
- › Ion trap mass spectrometry
- › Residual gas analyzers (RGA)
- › Electrophoresis
- › Ink jet printing
- › Hi-pot/leakage testers
- › Pulse generators
- › Laser electro-optic modulation
- › Detectors
- › Geiger-Muller tubes (GM)
- › Avalanche photo diodes (APD)
- › Photo multiplier tubes (PMT)
- › Channel electron multipliers (CEM)
- › Silicon detectors (SiD)
- › Ionization chamber detectors
- › Ultrasonic transducers
- › Small PZT drivers
- › ATE leakage testing
- › Bias supplies

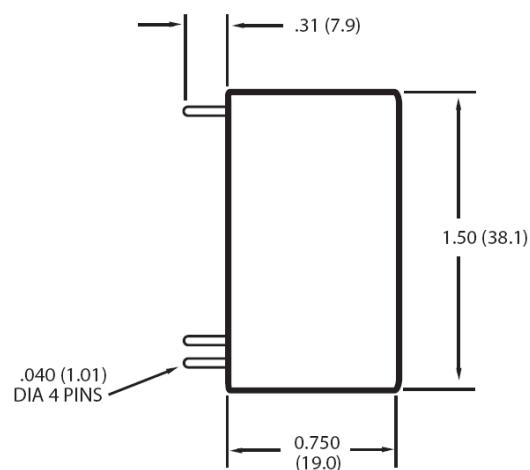
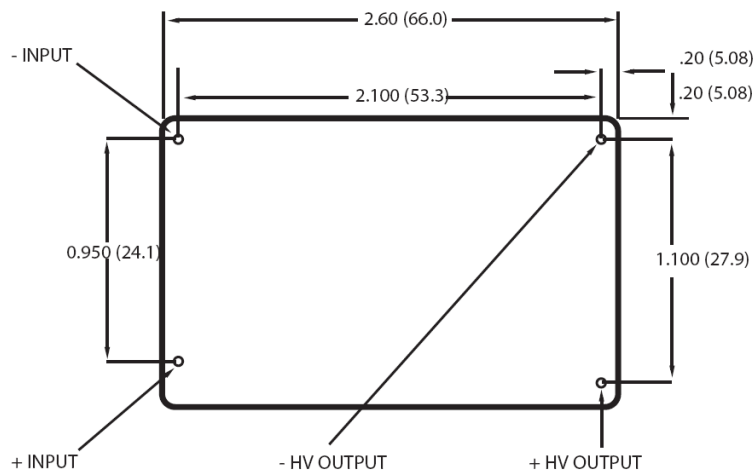




PARAMETER	CONDITIONS	MODELS					UNITS
Input							
Voltage Range	Full Power	5 to 12					VDC
Current	No Load, Max Eout	Typically 40 to 60 mA					mA
Current	Max Load, Max Eout/Nominal	200					mA
Output		1000	1500	2000	3000	4000	
Voltage	Nominal Input	400 to 1000	600 to 1500	800 to 2000	1200 to 3000	1600 to 4000	VDC
Power	Nominal Input, Max Eout	3	3	3	3	3	W
Current	Iout Entire Output Voltage Range	3	2	1.5	1	0.75	mA
Output		All Type					
Voltage Adjust	Proportional	Input voltage of 40 to 100% programs the output voltage 40 to 100% ±10% full scale					V
Ripple	Full Load, Max Eout	0.5%					%V pk to pk
Ripple With -F Option	Full Load, Max Eout	0.25%					%V pk to pk
Line Regulation	Nominal Input, Max Eout, Full Power	Output is proportional to input over a 40 to 100% input range, with a variation of +10% of rated output voltage					VDC
Static Load Regulation	No Load to Full Load, Max Eout	Typically 5% half load to full load, < 10% (for a 0 to 3 W load change) max 20%					VDC
Stability	30 Min Warmup, Per 8 h, Per Day	< 0.10%					VDC
Environmental		All Types					
Operating	Full Load, Max Eout, Case Temp.	-20 to +85					°C
Temperature Coefficient	Over the Specified Temperature	250					PPM/°C
Storage	Non-Operating, Case Temp.	-40 to +85					°C
Humidity	Non-Condensing	0 to 90% non-condensing					-
Vibration	Mil-Std-810, Method 514.5, Fig.14.5C-3	20					Gs
Shock	Mil-Std-810, Method 516.5, Proc. IV	40					Gs

Note: See the PXS and RS series for higher performance.

Drawing dimensions are in inches (mm)



PHYSICAL SPECIFICATIONS

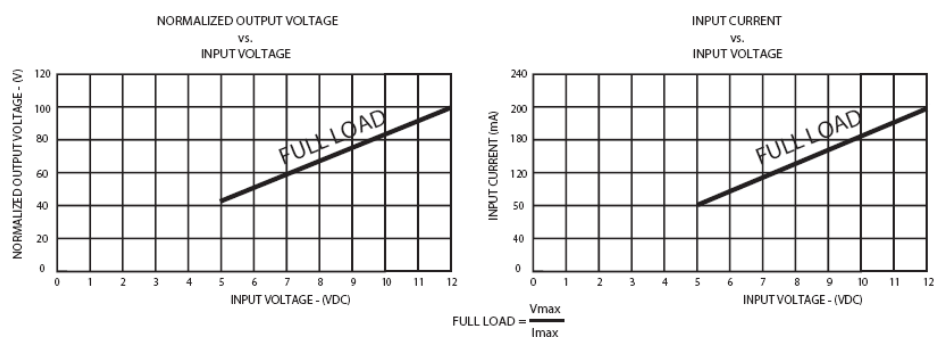
Construction	Black ABS case
	Insulation: fully encapsulated in RTV silicon.
Dimensions (L x W x H)	38 mm x 63.5 mm x 19 mm (1.5" x 2.5" x 0.75")
Volume	45.884 cc (2.8 in ³)
Weight	114 g (4 oz)

CONNECTIONS

Pin	Function
I/P	INPUT POWER
I/P	INPUT POWER GROUND
O/P	OUTPUT POWER GROUND
O/P	OUTPUT POWER

Mounting tabs must be connected to ground.

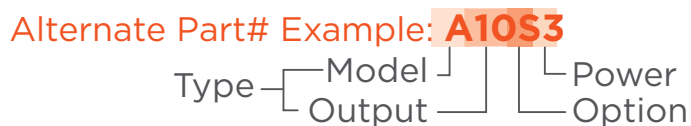
TYPICAL PERFORMANCE @ 25°C



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

ORDERING INFORMATION		P/N	ALT P/N
Output	0 to 1000 VDC	1	10
	0 to 1500 VDC	1.5	15
	0 to 2000 VDC	2	20
	0 to 3000 VDC	3	30
	0 to 4000 VDC	4	40
Model	Series Name	PM	A
Input	5 to 12 V	12	
Polarity	Floating (up to 2000 V isolation)	-FL	S
	Positive (only available with -F)	-P	P
	Negative (only available with -5)	-N	N
Power	0 to 3 W Output	3	3
Option	Ripple Stripper® Output Filter	-F	

Contact the factory for other output requirements!



For international contact information, visit advanced-energy.com.