



ULTRAVOLT SINGLE-OUTPUT AND BIPOLAR MICRO-SIZED HV MODULES

PXS SERIES PROPORTIONAL EXTRA-SMALL
HIGH VOLTAGE POWER SUPPLY

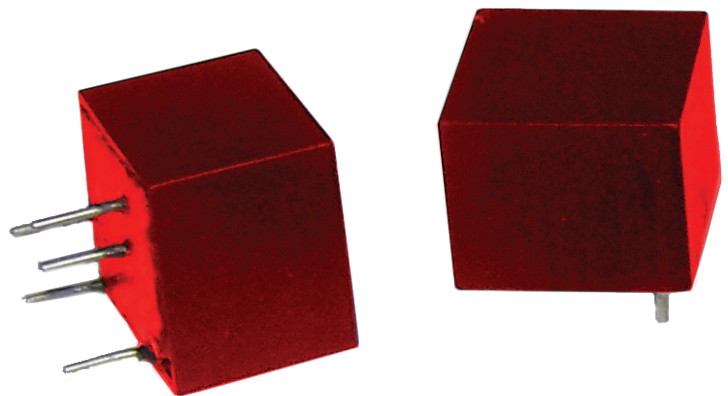




The PXS Series of proportional extra-small high voltage power supplies has excellent load regulation characteristics, as well as superior temperature stability performance. The small size of the units, ease of control, and high stability, make the PXS Series optimal for hand-held devices, portable equipment, and other small high voltage projects.

- › Ultra-miniature: 0.1 in³ (1.6 cc)
- › Unipolar models: 50 to 300 V
- › Bipolar models: ± 25 to ± 150 V
- › Output power: 0 to 1.5 W or 3 W
- › Efficiency: up to 90%
- › Isolation from input to output: 1000 V
- › Proportional or fixed output voltage
- › Excellent load regulation

- › Output can be floated up to 1 kV.
- › No heat sink or electrical derating are required.





PARAMETER	CONDITIONS	MODELS										UNITS
Input		All Types										
Voltage Range	Proportional output range and fixed output	2.5 to 3.47 = 75% to 105% max, 3.3 = 100%	3.0 to 5.25 = 60% to 105% max, 5.0 = 100%	4.5 to 9.45 = 50% to 105% max, 9.0 = 100%	6.0 to 12.6 = 50% to 105% max, 12.0 = 100%	7.5 to 15.75 = 50% to 105% max, 15.0 = 100%	18.0 to 25.2 = 75% to 105% max, 24.0 = 100%	21.0 to 29.4 = 75% to 105% max, 28 = 100%				VDC
Current	Standby/disable	< 10										mA
Current	No load, max Eout	3.3 V: < 140 mA, 28 V: < 40 mA										mA
Current	Max load, max Eout	3.3 V: < 600 mA, 28 V: < 100 mA										mA
Output (Unipolar)		50 V	100 V	150 V	200 V	250 V	300 V				VDC	
Voltage, Fixed	Nominal input	50	100	150	200	250	300				VDC	
Voltage Range Proportional	XX% to 105%, model specific	25 to 52.5	50 to 105	75 to 157.5	100 to 210	125 to 262.5	150 to 315				VDC	
Power	Nominal input, max Eout	1.5	3	1.5	3	1.5	3				W	
Current	lout entire output voltage range	30 60	15 30	10 20	7.5 15	6 12	5 10				mA	
Output (Unipolar)		±25 V	±50 V	±75 V	±100 V	±125 V	±150 V				VDC	
Voltage, Fixed	Nominal input	±25	±50	±75	±100	±125	±150				VDC	
Voltage Range Proportional	XX% to 105%, model specific	±12.5 to ±26.25	±25 to ±52.5	±37.5 to ±78.75	±50 to ±105	±62.5 to ±131.25	±75 to ±157.5				VDC	
Power	Nominal input, max Eout	1.5	3	1.5	3	1.5	3				W	
Current	lout entire output voltage range	30 60	15 30	10 20	7.5 15	6 12	5 10				mA	
Output		All Types										
Isolation	Input to output	100 MΩ minimum at 1000										VDC
Ripple	Full load, max Eout	< 1%										%V p-p
Dynamic Load Regulation	½ to full load, max Eout	< 5%										VDC
Line Regulation	Nom. input, max Eout, full power	Unregulated: Output directly proportional to input, excellent tracking (see TN-XX)										-
Static Load Regulation	No load to full load, max Eout	1.5 W: < 6%; 3 W: < 10%										VDC
Stability	30 min warmup, per 8 hr per day	< 5%										VDC
Programming and Controls		All Types										
Enable/Disable		0 to +0.7 disable, +2.9 to +5 V or Vin (whichever is less) (default = enable)										-
Environmental		All Types										
Operating	Full load, max Eout, case temp.	1.5 W: -55 to +85; 3 W: -55 to +60										°C
Storage	Non-operating, case temp.	-55 to +125										°C
Temperature Coefficient	Over the specific temperature	200										PPM/°C
Humidity	All conditions, standard package	0 to 95% non-condensing										-
Shock	Mil-Std-810, method 516.5, proc. IV	20										Gs
Vibration	Mil-Std-810, method 514.5, Fig.514.5C-3	10										-

ORDERING INFORMATION

Type (Nominal)	25 VDC output (bipolar only)	0.025PXS
	50 VDC output	0.05PXS
	75 V output (bipolar only)	0.075PXS
	100 V output	0.1PXS
	125 V output (bipolar only)	0.125PXS
	150 V output	0.15PXS
	200 V output (unipolar only)	0.2PXS
	250 V output (unipolar only)	0.25PXS
Input	300 V output (unipolar only)	0.3PXS
	3.3 VDC nominal	3.3
	5 VDC nominal	5
	9 VDC nominal	9
	12 VDC nominal	12
	15 VDC nominal	15
Case	24 VDC nominal	24
	28 VDC nominal	28
Polarity	Through-hole pins	(standard)
	SMT pins	-SMT
Power	Floating output (floating center tap)	-FL
	Bipolar output	-BP
Power	1.5 W output	1.5
	3 W output	3

Example: **0.05PXS5-BP1.5**



CONNECTIONS

Pin	Function (-BP)	Function (-FL)
1	-Vin	-Vin
2	Enable	Enable
3	+Vin	+Vin
4	+Vout	+Vout
5	Center tap common	-Vout
6	-Vout	N/A



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

Notes: Output is isolated from the input by 1 kV. Either output can be floating ground or grounded, thereby setting output polarity to + or -. The PXS Series only has intermittent short-circuit protection.

PHYSICAL SPECIFICATIONS

Construction	Epoxy-filled red DAP box certified to ASTM-D-5948
Tolerance	All dimensions have a tolerance of $\pm 0.010''$ (0.25 mm) unless otherwise specified.
Size	Dimensions (L x W x H) : 0.500" (12.7 mm) x 0.500" (12.7) x 0.400" (10.2 mm)
	Volume: 0.1 in ³ (1.639 cc)
	Weight: 0.127 oz (3.6 g)
Pins	Standard through-hole: brass, tin over nickel plated, 0.020" (0.51 mm), round
	SMT: Copper, tin plated, 0.012" (0.30 mm) x 0.027" (0.69 mm)



AE World Headquarters
1625 Sharp Point Drive
Fort Collins, Colorado 80525

1 800 446 9167
+1 970 221 4670

sales.support@aei.com
advanced-energy.com