

## Proportional



### Q Series

- 0.5W, +/- 100V to +/- 10kV
- Input Voltage: 0 to 5/12/15/24VDC
- Optional Dual Output/ Center Tap (Up to 900V)
- External Copper Shield Option
- Control Pin Option
- Standard & Extended Temperature Ranges
- Input/Output Isolation
- UL Recognized



### G Series

- 1.5W, +/- 100V to +/- 6kV
- Input Voltage: 0 to 12VDC
- External Mounting Box/Shield (AB Option)
- Optional Dual Output/Center Tap
- Input/Output Isolation
- Short Circuit Protection
- Low EMI/RFI
- UL Recognized



### A / AH Series

- A: 1W, +/- 100V to +/- 6kV
- AH: 1.5W, +/- 100V to +/- 6kV
- Input Voltage: 0 to 5/12/24VDC
- Low Profile (0.25 in/6.35 mm)
- Control Pin Standard
- Standard & Extended Temperature Ranges
- Input/Output Isolation
- UL Recognized



### E Series

- 3W, +/- 200V to +/- 7kV, 2W, +/- 8kV
- Input Voltage: 0 to 12/15VDC
- Low Ripple, EMI/RFI
- External Mounting Box/Shield (AB Option)
- Optional Dual Output/Center Tap & Mounting Holes
- Alternate Pin Patterns Available
- Input/Output Isolation
- Low Leakage Current



### AG / AGH Series

- AG: 1W, +/- 100V to +/- 6kV
- AGH: 1.5W, +/- 100V to +/- 6kV
- Input Voltage: 0 to 5/12/24VDC
- Low Profile (0.128 in/3.25 mm)
- Control Pin Standard
- Surface Mount
- Input/Output Isolation
- UL Recognized



### F Series

- 10W, +/- 200V to +/- 8kV
- Input Voltage: 0 to 12/15VDC
- Low Ripple, EMI/RFI
- Optional Dual Output/Center Tap & Mounting Holes
- Input/Output Filtering
- 5-sided Metal Enclosure
- Input/Output Isolation
- Short Circuit Protection



### GP Series

- 1W, +/- 100V to +/- 6kV
- Input Voltage: 0 to 12VDC
- External Mounting Box/Shield (AB Option)
- User-selectable Output Polarity
- Low Power Consumption
- Input/Output Isolation
- Short Circuit Protection
- Low EMI/RFI



### FS Series

- 10W, +/- 200V to +/- 6kV
- Input Voltage: 0 to 12/15/24/28VDC
- Optional Dual Output/Center Tap
- Standard & Extended Temperature Ranges
- Input/Output Isolation
- Mounting Holes for Chassis Mount or Heat Sink
- Arc, Short Circuit Protection, Disable Pin, Alarm Signal
- Low EMI/RFI

## Regulated



### P Series

- 2mW, +/- 2kV, 2.4mW, +/- 1.2kV
- Input Voltage: 5 to 12VDC
- Low Power, Low Profile
- Ultra-low Noise Magnetic-free Design & EMI/RFI
- 0-100% Programmable
- Standard & Extended Temperature Ranges
- Voltage Monitor
- Reference Voltage



### CB Series

- 1W, 100V to +/- 10kV
- Input Voltage: 11.5 to 16VDC
- Low Noise, Quasi-sinewave Oscillator
- Very Low EMI/RFI
- Programming Over-voltage Protection
- Voltage & Current Monitor Outputs
- External Gain Adjust for Calibration
- Thermal Shutdown



### C Series

- 1W, +/- 100V to +/- 8kV
- Input Voltage: 11.5 to 16VDC
- Very Low Ripple, EMI/RFI
- Low Noise, Quasi-sinewave Oscillator
- Shield Case with Isolated Case Ground
- Analog Voltage Programming: 0 to 5V
- External Gain Adjust for Calibration
- UL Recognized



### SIP Series

- 0.1W, 25V to 90V, 1W, 25V to 100V
- Input Voltage: 3 to 6.7VDC
- SIL Package
- Low Ripple, High Stability
- Ultra-thin (0.16in/4mm)
- Analog Voltage Programming
- Disable/Enable
- Epoxy Coated



### CA Series

- 1W, +/- 200V to +/- 2kV
- Input Voltage: 4.75 to 5.25/11.5 to 15.5VDC
- Precision Regulated
- Very Low Ripple, EMI/RFI
- Voltage Monitor Output
- Analog Voltage Programming
- Short Circuit Protection
- UL Recognized



### HRL30 Series

- 30W, +/- 100V to +/- 6kV
- Input Voltage: 22 to 30VDC
- Output Voltage & Current Regulated
- 0 to 100% Programmable Voltage & Current
- Voltage & Current Monitor Outputs
- Short Circuit, Arc & Overload Protections
- Efficiency >80%
- Low Ripple and Noise



### CA-T Series

- 1W, +/- 200V to +/- 2kV
- Input Voltage: 4.75 to 5.25/11.5 to 15.5VDC
- Precision Regulated
- Very Low Ripple, EMI/RFI
- Voltage Monitor Output
- Analog Voltage Programming
- Extended Temperature Ranges
- Short Circuit Protection

## Accessories



### C Series Chassis Mounts, CM3 & CM4

- Input Voltage 11.5 to 16VDC
- C models  $\geq 2.5$ kVDC (C25-C80)
- Three Programming Options
- Reverse Polarity Protection
- Connectors & Mates Included
- CM3 has SHV (C25 to C40)
- CM4 has LGH (C50 to C80)



### CA & CA-T Series Chassis Mounts, CM1 & CM2

- Input Voltage 11.5 to 16VDC
- Three Programming Options
- Reverse Polarity Protection
- Mating Connectors Included
- CM1 has MHV
- CM2 has SHV



### FS-EB Evaluation Board

- All FS Models
- Easy Prototyping & Evaluation
- Banana Jacks for Easy Connection



### FS-VM Series Adapter Board

- All FS Models
- Vertical Mounting Option
- Minimizes X-Y Footprint

# HELIOS

POWER SOLUTIONS

Helios Power Solutions , authorized engineering company to supply XP Power solutions

Contact our sales engineers:

**Australia:** sales@heliosps.com.au  
**New Zealand:** sales@heliosps.co.nz  
**Middle East & Asia:** sales@heliosps.asia

# High Voltage Selector Guide

## High Voltage Power Supplies



We offer a broad range of component high voltage power supplies with output voltages from 100 V to 10 kV in both proportional and regulated topologies for use as stand-alone modules or integration into application specific assemblies. These standard modules are miniaturized, PCB mounting, encapsulated, low noise assemblies generating a high voltage output that is fully controllable using standard low voltage circuitry.

Our high voltage power supplies meet a wide range of high performance demands. From precision, analytical instruments to mission-critical equipment, whether developing sensitive laboratory instruments, wafer handling electrostatic chuck, detection or scientific equipment, our products can be trusted to fulfil your needs for high performance and reliability.

### Proportional

Provides versatile low cost DC to high voltage DC conversion with proven reliability. The output voltage is directly proportional to the input voltage and is linear from 0.7V to the maximum input. Options include an output center tap to provide both positive and negative outputs from one low cost module.

### Regulated

Precision regulated DC to high voltage DC modules that feature easy external control and design-in, providing a stable high voltage output over the specified input voltage and load range. Fully programmable from 0 - 100% of the nominal output voltage via a linear low voltage control input.

### Custom Power Solutions

XP Power can design a custom or semi-custom AC-DC or DC-DC power system that meets your project's individual specifications. We design high voltage products for a broad spectrum of applications including satellite communications systems, electrostatic chucks, mass spectrometry and precision scientific instruments.

## Products By Application

	Product Series															
	Q	A/AH	AG/AGH	GP	G	E	F	FS	P	C	CA	CA-T	CB	SIP	HRL 30	
Electrostatic Chuck				•	•	•	•	•							•	
Mass Spectrometry		•	•	•	•	•	•			•				•	•	
Electro Adhesion							•	•		•	•	•			•	
Electrostatic Precipitators							•	•							•	
Electrophoresis	•	•	•	•	•	•	•	•		•	•	•	•	•	•	
Capacitor Charging	•	•	•	•	•	•	•	•		•	•	•	•	•	•	
Photomultiplier Tubes	•	•	•	•	•					•	•	•	•	•	•	
Avalanche Photodiodes	•	•	•							•	•	•		•		
Solid State Detectors										•	•	•				
Lamp Supplies					•											
Light Sources	•	•	•													
Piezo Devices		•	•	•		•		•	•	•	•	•		•		
Ignitors/Spark Ignition	•				•	•	•							•		
Printers	•	•	•	•												
Ion Pumps	•	•	•	•		•	•									
E-Beam/Ion Beam							•	•	•						•	
Image Intensifiers										•				•		
Baggage Inspection	•	•	•							•	•	•				
Portable Battery Powered Devices				•					•							
Field Generation				•		•	•							•		
Vacuum Gauges				•	•											
EO Lenses										•	•	•				
Test Instrumentation	•													•		
Grid Bias							•		•							

## Applications By Market

### Aerospace

From satellite communications systems to spacecraft charge monitors, aerospace technologies require high voltage power supplies that provide a stable source of high voltage under the most extreme conditions. Undergoing rigorous temperature, shock, electromagnetic, and vibration testing, XP Power's high voltage power supplies demonstrate consistent performance and reliability.

- Charged Particle Energy Analyzer
- Satellite

### Industrial/Semiconductor

High stability, low ripple, and well-regulated output levels make XP Power's high voltage power supplies perfect for integration into precision measurement devices and other high sensitivity equipment. Through the use of sophisticated filtering and shielding techniques, our power supplies exhibit exceedingly low ripple, noise, and EMI/RFI. Our units are ideally suited for a wide range of consumer and industrial high voltage applications.

- Air Filtration
- Air Quality Testing
- Dielectric Testing
- Electrostatic Chuck
- Food and Beverage Testing
- Scanning Electron Microscopes
- Water Quality Analysis

### Medical

XP Power helps further the advancement of medical high voltage technologies by delivering compact, reliable, economical products that can be produced in high volume with consistent dependability. Our miniature high voltage power supplies are immune to electrostatic discharge events and radiate neither emissions nor noise. These and other reliability features make them suitable for use in sensitive equipment.

- Imaging
- PET Scanners
- Bone Densitometers
- X-Ray Detectors
- Detectors (PMTs, APDs)

### Military/Defense

A trusted supplier of high voltage power supplies to military and defense programs for over 40 years, XP Power meets the most exacting demands for performance and reliability. In mission critical applications, there is no room for error. Our power supplies are designed with redundancy and protection for primary circuits and are immune to electrostatic discharge events and RF.

- Baggage Scanners
- Radiation Detection
- Threat Detection
- Detectors (PMTs, APDs)

### Scientific Instruments

The development of precision scientific instruments demands power supplies with proven long-term reliability. Miniature high voltage power supplies designed by XP Power meet the most extreme performance criteria. We have experience designing power supplies for use in mission critical applications that must deliver in any climate and place.

- Neutrino Telescope
- Capillary Electrophoresis
- Cell Separation
- Imaging
- Mass Spectrometers
- Spectrometry