# High Voltage Low Power Selector Guide

Regulated

**Proportional** 



. 0.5W. 100V to 10kVDC

**Q** Series

- · Positive or Negative
- Input Voltage: 0 to 5/12/15/24VDC
- · External Copper Shield Option
- · Control Pin Option
- · Standard & Extended Temperature Ranges
- · Input/Output Isolation
- UL62368-1 Approvals
- Optional Dual Output/Center Tap (Up to 900V)
  - . Input Voltage: 0 to 12VDC
    - · External Mounting Box/Shield (AB Option)

· Optional Dual Output/Center Tap

- Input/Output Isolation

· Positive or Negative

- · Short Circuit Protection
- Low FMI/RFI
- UL62368-1 Approvals





### A/AH Series

- A: 1W, 100V to 6kVDC
- AH: 1.5W, 100V to 6kVDC
- · Positive or Negative
- 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
- UL62368-1 Approvals

### E Series

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

### CA Series

C Series

1W. 100V to 8kVDC

· Positive or Negative

· Very Low Ripple, EMI/RFI

• UL62368-1 Approvals

• Input Voltage: 12V (11.5 to 16VDC)

· Low Noise, Quasi-sinewave Oscillator

· Shield Case with Isolated Case Ground

· Analog Voltage Programming: 0 to 5V

External Gain Adjust for Calibration

- 1W, 200V to 2kVDC
- · Positive or Negative
- Input Voltage: 5V (4.75 to 5.25)/12V (11.5 to 15.5VDC)
- · Precision Regulated
- · Very Low Ripple, EMI/RFI
- · Voltage Monitor Output
- · Analog Voltage Programming
- · Short Circuit Protection
- UL62368-1 Approvals

### HRC05 Series

- 5W, up to 6kVDC
- · Positive or Negative Output Models
- Input Voltage +24VDC Nominal (22 to 30VDC)
- Voltage Control & Remote On/Off
- Voltage & Current Monitor, On Board 5V Supply
- Line & Load Regulation < 0.01%; Low Ripple < 0.01%</li>
- Arc, Short-circuit & Thermal Overload Protection
- UL61010-1, UL62368-1 Approvals; CE & RoHS

### **CB Series**

- 1W, 10kVDC Adjustable
- Positive or Negative
- Input Voltage: 12V (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

# Accessories



- Input Voltage 11.5 to 16VDC
- C Models ≥2.5kVDC (C25- C80)
- Three Programming Options

C Series

FS-EB

All FS Models

CM3 & CM4

- Reverse Polarity Protection
- · Connectors & Mates Included
- CM3 has SHV (C25 to C40)

**Evaluation Board** 

• Easy Prototyping & Evaluation

· Banana Jacks for Easy Connection

- CM1 has MHV

CA & CA-T Series

Chassis Mounts.

• Input Voltage 11.5 to 16VDC

· Three Programming Options

Mating Connectors Included

· Reverse Polarity Protection

CM1 & CM2

CM2 has SHV



# **FS-VM Series Adapter Board**

### AG Series

- Input Voltage: 0 to 5/12/24VDC
- Low Profile (0.128 in/3.25 mm)
- Control Pin Standard
- · Surface Mount
- Input/Output Isolation • UL62368-1 Approvals

10W. 200V to 8kVDC

F Series

- · Positive or Negative
- Optional Dual Output/Center Tap & Mounting Holes
- Input Voltage: 0 to 12/15VDC
- · Low Ripple, EMI/RFI
- · Input/Output Filtering
- · Input/Output Isolation
- · 5-sided Metal Enclosure
- Short Circuit Protection



- Input Voltage: 5V (4.75 to 5.25)/12V (11.5 to 15.5VDC)
- · Voltage Monitor Output
- · Analog Voltage Programming
- Extended Temperature Range Short Circuit Protection



- 30W, 200V to 6kVDC
- Input Voltage: 24VDC Nominal (22 to 30VDC)
- Output Voltage & Current Regulated
- Voltage & Current Monitor, On Board 5V Supply
- Short Circuit, Arc & Overload Protections
- Arc, Short-Circuit & Thermal Overload Protection Low Ripple and Noise
- UL62368-1 Approvals; CE & RoHS



- AG: 1W. 100V to 6kVDC
- · Positive or Negative



# **GP Series**

- 1W, 100V to 6kVDC
- · Positive or Negative • 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/REI



- 10W, 200V to 6kVDC
- Optional Dual Output/Center Tap
- Input Voltage: 0 to 12/15/24/28VDC
- · Input/Output Isolation Mounting Holes for Chassis Mount or Heat Sink
- · Arc, Short Circuit Protection, Disable Pin, Alarm Signal Low EMI/REI





- · Positive or Negative
- Standard & Extended Temperature Ranges



- 1W. 200V to 2kVDC
- · Positive or Negative
- · Precision Regulated
- · Very Low Ripple, EMI/RFI



- Positive or Negative
- O to 100% Programmable Voltage & Current





# High Voltage Low Power Selector Guide

### **High Voltage Power Supplies**



We offer a broad range of high voltage DC-DC products with output voltages from 100V to 25kVDC in both proportional and regulated outputs for miniature high voltage applications. These DC-DC converters 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 DC-DC converters are suitable for 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 fulfill your needs for high performance and reliability.

### **Proportional**

Provides versatile low cost DC to high voltage DC conversion with proven reliability in ultra miniature size. The output voltage is directly proportional to the input voltage and is linear from 0.7V to the maximum input. Dual output options are available from one lower 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. These products are fully programmable from 0-100% of the nominal output voltage via a linear low voltage control input. These products have voltage and current monitors available as well.

### **Custom Power Solutions**

XP Power can design a custom or modified 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 electrostatic chucks, mass spectrometry and precision scientific instruments and detectors.

### **Typical Applications**

- Avalanche Photodiodes
- Baggage Inspection
- Capacitor Charging
- E-Beam/Ion Beam
- Electro Adhesion
- Electron Multiplier
- Electrophoresis
- Electrostatic Chuck

- Electrostatic Precipitators
- EO Lenses
- Field Generation
- Grid Bias
- Ignitors/Spark Ignition
- Image Intensifiers
- Industrial Printing
- Ion Pumps

- Ionization
- Mass Spectrometry
- Photomultiplier tubes
- Piezo Devices
- Portable Battery Powered Devices
- Solid State Detectors
- Test Instrumentation
- Vacuum Gauges

### **Applications by Market**

# **Semiconductor Fabrication and Inspection**

Miniature high voltage power supplies designed by XP Power meet the most extreme performance criteria. The products are designed to meet the consistency and repeatability of performance coupled with the specification required by this market segment.

Detectors

High Voltage Biasing

Electrostatic Chucks

Scanning Electron Microscopes

# **Analytical Instruments**

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. The development of precision scientific instruments demands power supplies with proven long-term reliability. Through the use of sophisticated filtering and shielding techniques, our power supplies exhibit exceedingly low ripple, noise, and EMI/RFI.

Cell Separation

Mass Spectrometers

Electrophoresis

· Neutrino Telescope

Imaging

Spectrometry

### 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. These and other reliability features make them suitable for use in sensitive equipment.

- Imaging and Diagnostic
- High Voltage Bias

Capacitor Charging

- PET and CT Scanners
- · Detectors (PMTs, APDs)
- X-Ray Detectors

### Industrial

We have experience designing power supplies for use in mission critical applications that must deliver in any clime and place. Our units are ideally suited for a wide range of consumer and industrial high voltage applications.

Air Filtration

Dielectric Testing

Air Quality Testing

Food and Beverage Testing

Detectors

· Water Quality Analysis

# Security/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, where there is no room for error.

Baggage Scanners

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