



PowerMod Technology Breakthrough Brings High Availability to High Power Electronics

# PowerMod™

## High Voltage Power Supplies



**Free-standing 50 kV, 150 kW switching power supply.** Enclosure is 24" w x 36" d x 60" high.

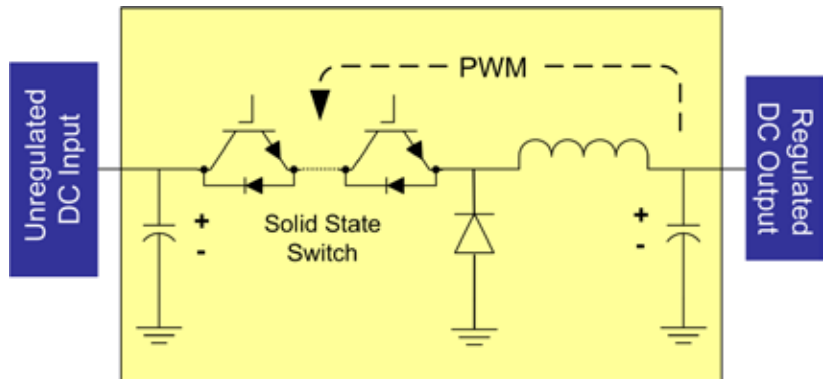
PowerMod high voltage power supplies offer advanced high voltage power conditioning for demanding research and manufacturing applications. DTI incorporates the latest advances in solid-state switching technology into efficient, compact, inverter and buck regulator designs. High efficiency and a small footprint mean DTI power supplies can significantly reduce facilities and utility costs.

PowerMod high voltage power supplies are ideal for applications such as magnetron heating, lasers, electron beams, and RF transmitters. They offer typical voltage regulation to  $\pm 1\%$  and maximum voltage ripple of  $<0.1\%$ . Regulation to  $0.01\%$  and ripple  $<0.001\%$  are available, if required. Supplies are available up to 200 kW average power, at voltages up to 200 kV, and can be paralleled for higher output.

When combined with a solid-state DTI "opening" switch, the power supply system offers very fast response to arcs, limiting arc energy while the power supply remains at full voltage. Power can be restored immediately after the arc clears, or if the arc clears quickly enough, operation is uninterrupted.

DTI power supplies use front panel controls and rear panel connectors that enable running under full local or remote control with internal overcurrent, overvoltage, and fault protection. All control systems are fully isolated from the EM effects of high voltage switching via noise-immune fiber-optic interfaces. Component inputs and outputs are fully protected against spikes, overvoltages, transients, and short circuits.

PowerMod™ Power Supplies		
Model	Maximum Voltage	Avg. Power
19" Rack Mount Enclosures		
HVPS 30	10 kV, 15 kV, 20 kV, 30 kV	30 kW
HVPS 40		40 kW
Free Standing Enclosures		
HVPS 50	50 kV, 60 kV, 75 kV, 90 kV, 100 kV	50 kW
HVPS 100	50 kv - 200 kV	100 kw
HVPS 200		200 kw
Buck Regulators		
Custom	5 - 100 kV	250 kW-5MW



**DTI's buck regulator power supplies employ the company's patented seriesed IGBT design.**



DTI pioneered the scaling of active regulator topology to high power. PowerMod buck regulator and boost regulator power supplies eliminate large, low frequency, step-up and step-down transformers for high voltage, high power, DC-DC conversion needs. Conceptually similar to low power buck regulators, they employ DTI's patented high-speed solid-state opening switches to deliver voltages of 50-200 kV and average DC power of 250 kW-5 MW.

PowerMod buck regulator power supplies are highly reliable. Isolated switch module failures do not force the power supply to shutdown because the solid-state components have full soft-fail capability. More than 20% of the switch modules in any power supply can fail without reducing power supply operation below full specification.

All PowerMod power supplies are available in custom configurations to meet your specific system requirements. Integrate your PowerMod power supply with a DTI PowerMod Pulse Modulator for the best choice in complete pulse power systems.



**PowerMod 30 kW rack-mount switching power supply.** Size 19" w x 30" d x 24" high.

