

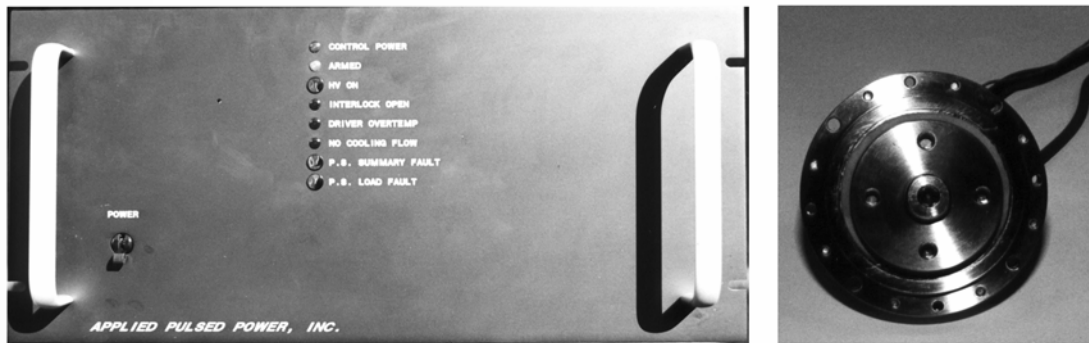


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10 kA, High Speed Gas Valve Driver



Driver shown with Model S20A valve

Our 10kA pulse generator was designed to drive from one to four Model S20A high speed gas valves, at up to 25 pulses/second. External triggering is either electrical or optical, with the mode selected by an internal jumper. The output current is monitored by an internal Rogowski coil. All versions have rear panel connectors for remote operation and monitoring.

Switching is accomplished with solid state components, and transient protection is provided for the high voltage power supply. Solid state crowbarring dissipates inductive energy in the driver and minimizes power dissipation in the load. The unit is mountable in a 19" rack.

The system can be used to drive other types of loads provided the maximum ratings are not exceeded. Different current, voltage, rise time and repetition rate requirements can be accommodated. Please consult with APP.

Specifications for Model S08 High Speed Gas Valve Driver

Maximum ratings (not all max. ratings are achievable together):

Output current	10 kA
Voltage	3 kV
I_{rms}	100 A
dI/dt	1 kA/ μ s

Other specifications:

Driver capacitance	40 μ F
Triggering (set with internal jumper)	Optical (HP HFBR-2521 optical receiver) or Electrical (≤ 10 V, ≤ 100 ns pulse)
Input	115 Vac +/- 10%, 10A, 50/60 Hz single phase
Cooling	Forced air, side air intake

Typical Operation with Model S20A High Speed Gas Valve:

Current	4 kA
Voltage (output cable length of 8 m)	1.5 kV
Repetition Rate	8 pulses/second
Current Rise time (0 to peak)	15 μ s

Four versions are available:

<u>Model</u>	<u>Description</u>
S08-S	19" rack mount package with internal 3kV, 500J/s power supply
S08-OEM	Front panel has circuit breaker and status indicators only. Unit is controlled via remote interface.
S08-NPS	Similar to S08-S without the internal high voltage power supply
S08-OEM-NPS	Similar to S08-OEM without the internal high voltage power supply

Since 1990, the mission of Applied Pulsed Power, Inc. has been the development of products for industrial applications where pulsed power technology has compelling advantages over existing methods. APP has been developing ion beam technology for industrial surface treatment for five years. The company also designs and supplies prototype systems including high power pulse generators, pulsed high magnetic field coils and high speed gas valves. We can work closely with you to meet your needs, often by modifying proven designs with a minimum of engineering costs.