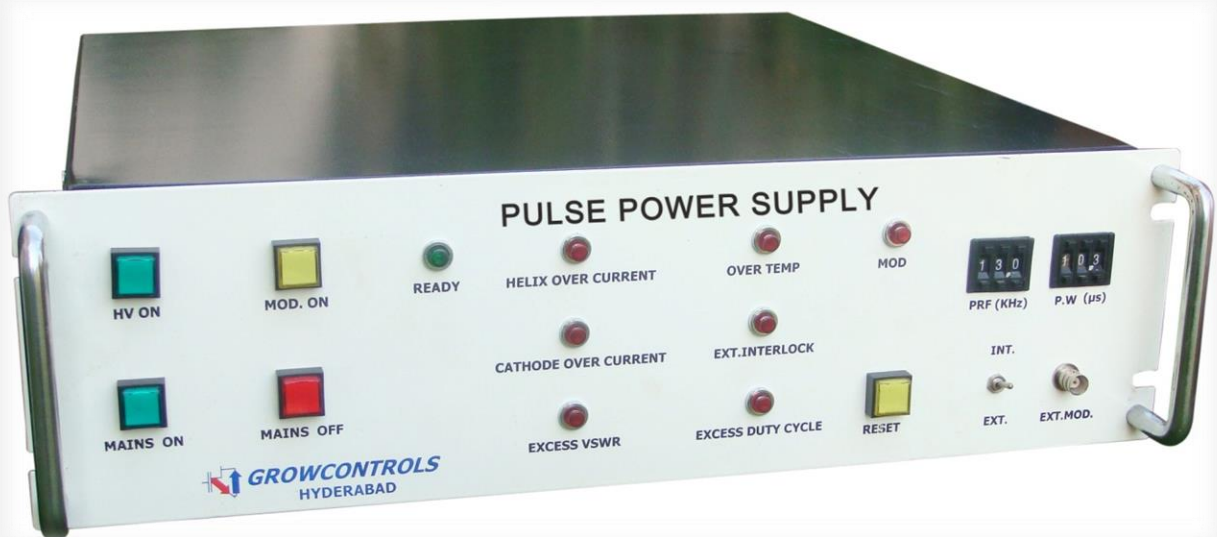


**GROW CONTROL**  
**POWER TECH PVT. LTD.**

We Provide Solutions....

**AN ISO 9001:2015 COMPANY**



**SOLID STATE PULSE POWER SUPPLY**



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**GROW CONTROL** is a research-based power electronics organization that blends technology, innovation, and engineering to transform concepts into world class products and solutions.

The **Solid-State Pulse Power Supply** from **GROW CONTROL** is a cutting-edge solution designed for high-precision pulsed power applications. Utilizing advanced indigenous technology, this power supply offers exceptional performance in delivering controlled, high-voltage pulses for a variety of demanding applications such as plasma generation, particle acceleration, and surface treatment. Its robust design ensures reliability and efficiency, making it a vital component for both research and industrial environments.

**GROW CONTROL Solid State Pulse Power Supply** offers a high-performance solution for a wide range of applications requiring reliable and precise pulsed power. Utilizing **indigenous technology**, these power supplies are engineered to deliver efficiency, performance, and durability, meeting the needs of both industrial and research sectors.

### Features

- **High Voltage and Current Output:** Capable of delivering output voltages up to 100 kV and peak currents exceeding several kiloamperes, suitable for high-energy applications.
- **Rapid Pulse Generation:** Engineered for fast switching speeds with minimal rise and fall times, enabling high repetition rates for continuous operation.
- **Precision Control:** Fine-tunable pulse parameters, including amplitude, duration, and frequency, to meet the specific needs of various applications.
- **Integrated Safety Features:** Built-in over-voltage, over-current, and thermal protection mechanisms for safe operation under extreme conditions.
- **User-Friendly Interface:** Equipped with digital control options, allowing for easy monitoring and adjustment of pulse settings remotely.
- **Modular and Compact Design:** Space-efficient and scalable, facilitating easy integration into existing systems or experimental setups.



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- **EMI/EMC Compliance:** Designed to **EN 55022** standards, ensuring minimal electromagnetic interference.

### Key Advantages

1. **Indigenous Technology:**  
Developed and manufactured in India, these pulse power supplies are tailored to meet the local industry's requirements with readily available support.
2. **High Reliability:**  
Engineered for stability and longevity, ensuring consistent performance even in demanding environments.
3. **Flexible Application Use:**  
Adaptable for various applications, from medical devices to defense systems, providing versatility in high-energy operations.
4. **Energy Efficient Operation:**  
Low energy losses during operation lead to reduced operational costs and extended equipment lifespan.
5. **Comprehensive Customization:**  
**GROW CONTROL** offers tailored solutions to meet specific operational and performance requirements, ensuring optimal functionality.

### Applications

1. **Plasma Generation:**  
Ideal for applications in plasma physics research, providing the necessary power for plasma initiation and sustenance.
2. **Particle Accelerators:**  
Supports high-energy physics experiments requiring precise pulse power for particle acceleration.
3. **Medical Equipment:**  
Suitable for medical applications such as electrotherapy, where controlled high-voltage pulses are essential.
4. **Surface Treatment:**  
Enhances processes like surface cleaning, etching, and coating by providing reliable and consistent pulse power.



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#### 5. **Defense Systems:**

Utilized in various defense applications requiring high-energy pulse systems for testing and operational purposes.

### Customization Options

**GROW CONTROL** offers a wide range of customization options for Solid State High Voltage Switches to fit specific high-energy applications:

- **Custom Voltage and Current Ranges**
- **Enhanced Protection Mechanisms** (Arc suppression, Short-circuit)
- **Optimized Cooling Solutions (Air or Liquid)**
- **Triggering Control Options (Analog, Digital, Remote)**
- **Stackable Modular Design for Scalability**
- **Pulse Modulation Options** for specialized applications

Our engineering team works closely with clients to deliver solutions that meet exact specifications, ensuring compatibility with their systems and operational needs.

### Why Choose **GROW CONTROL**?

- **Indigenous Expertise:** Tailored to meet the standards of Indian industries, with accessible, localized support and customization.
- **Reliable High-Speed Switching:** Ensures precise, repeatable switching, critical for applications demanding rapid response.
- **Durable and Low Maintenance:** Extended lifecycle and robust design reduce operational downtime and maintenance needs.
- **Energy Efficient and Cost-Effective:** Minimizes power losses for efficient operation, reducing energy costs over time.
- **Customer Support:** From customization to installation and technical support, **GROW CONTROL** provides end-to-end assistance.

### Certifications

- **EN 55022** – EMI Compliance
- **ISO 9001:2015** – Quality Management Systems



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## Technical Specification

Model no.	GC23SSPS	GC203SSPS-IPR
Input	230V, 1-ph, 50Hz	230V, 1-ph, 50Hz
Output Voltage	100V to 10kV	10 to 100 V
Output Current	20 mA	20 to 200 A
Output Peak Power	2KW	20KW
Output pulse rise time	100 ns	$\leq 1 \mu s$
Output pulse width	0.1 $\mu s$ to 10 $\mu s$	3 to 15 $\mu s$
Output pulse repetitive rate	1000 PRR	1000 PRR
Output voltage control	Thumb wheel switch	Thumb wheel switch



