Pegasus SC Series

RACK MOUNT SMART HIGH VOLTAGE POWER SUPPLY

We recommend visiting our website for updates

- ✓300, 600 and, 900 Watts, air cooled
- ✓ Smart Control and Monitor
- ✓ 19" Standard Racks
- ✓ Positive or Negative Polarity Available
- ✓ Low to mid PRF Capacitor Charging
- ✓ Stable output voltage

See Pegasus Series on Website

Summary

The Pegasus SC High Voltage Power Supplies are suitable for laboratory and industrial use. RS485/Bluetooth remote control facilitates safe programming and adds the wave forming capabilities to the device. Available in a standard 19-inch rack with reduced weight, ease of serviceability is ensured. The supplies are air insulated below 20kV while for higher output voltages encapsulated insulation is provided.

The power supply is available in both positive and negative polarity configurations, with one or two output connectors depending on customer requirements.

Equipped with the Genvolt Smart Controller, this power supply features an LCD screen display and a navigation keypad for seamless control. The unit provides an adjustable voltage range, adjustable current range, configurable output waveform, highly stable output, and low ripple.

GUIs are available to connect a PC or smartphone to the power supply, not only provide a safe remote control and monitoring, but also additional features including different waveform generation.

Regulatory approvals

Pegasus power supplies are in conformity of RoHS compliant and CE marks.

General Specifications

Input Voltage	220-240 VAC
Input Frequency	50 - 60Hz
Input current	Max. 4.7 A
Efficiency	>80%
Line Regulation	Not more than 100ppm of maximum rated output voltage for ±10% input line change
Load Regulation	Not more than 100ppm of maximum rated output voltage for 10% to maximum output current change
Voltage Ripple	Better than 0.05% (peak to peak) of maximum output voltage
Temperature Drift	Typically, not more than 100ppm of maximum output per °C
Dimensions	482.6mm X 88.1mm X 478.2mm
Weight	Approx. 11kg
Operating temperature	0 to 35°C
Storage temperature	0 to 60°C
Operating Humidity	Operating at 30% to 80%. Do not store the unit at above 95% humidity.

Protection

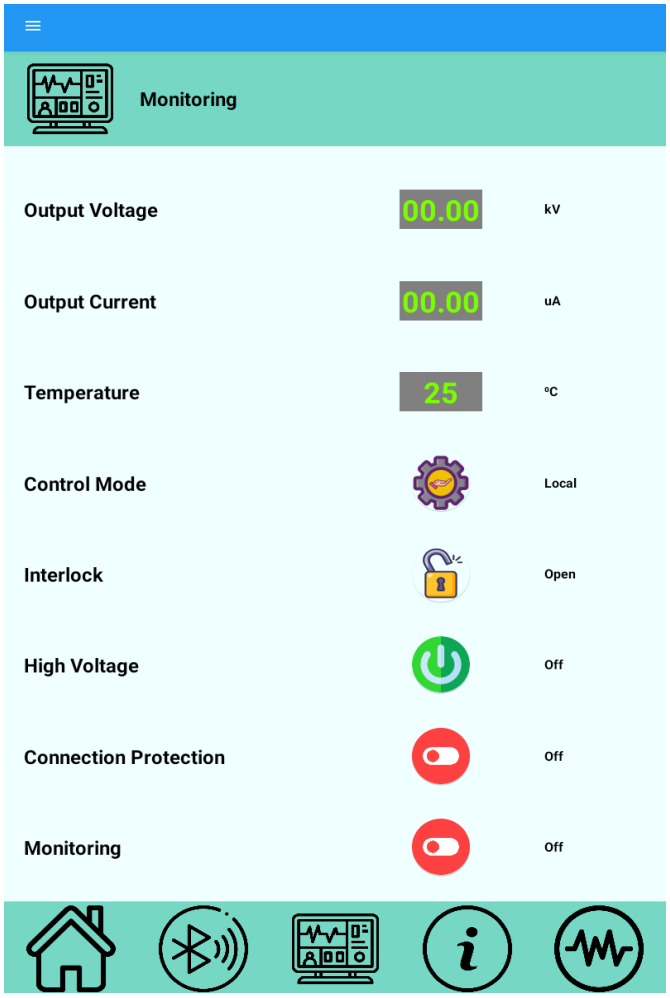
Circuit Protections	Overload, Arcing, and Short-circuit protections.
Safety Interlock	There are both hardware and software safety interlock to enable or disable high voltage.

Output Specifications

300W	P300/15	P300/20	P300/30	P300/40	P300/50
Output Voltage	0-15kV	0-20kV	0-30kV	0-40kV	0-50kV
Maximum Output Current	20mA	15mA	10mA	7.5mA	6.0mA
Output Power	0 - 300W				
Insulation	Air		Encapsulated		

600W	P600/15	P600/20	P600/30	P600/40	P600/50
Output Voltage	0-15kV	0-20kV	0-30kV	0-40kV	0-50kV
Max. Output Current	40mA	30mA	20mA	15mA	12mA
Output Power	0 - 600W				
Insulation	Air		Encapsulated		

900W	P900/15	P900/20	P900/30	P900/40	P900/50
Output Voltage	0-15kV	0-20kV	0-30kV	0-40kV	0-50kV
Max. Output Current	60mA	45mA	30mA	22.5mA	18mA
Output Power	0 - 900W				
Insulation	Air		Encapsulated		



Smart Control and Monitoring

The Smart Pegasus series of high voltage power supplies is equipped with an integrated remote RS485/USB and Bluetooth communication interface, enabling seamless interaction with the Genvolt GUI computer software and Genvolt Mobile Phone Application. This integration allows for a fully automatic control and monitoring experience.

Wired Serial Interface

The Pegasus SC supports USB/RS485 communication interfaces, providing users with the capability to control the power supply using a computer.

Wireless Interface

The Pegasus SC also supports Bluetooth communication interfaces, enabling users to control and monitor the power supply using a phone or tablet.

Output Monitor

The Pegasus SC measures the output voltage, output current, and device temperature. These values are displayed in both the computer software and the LCD display.

Local/Remote Operation Mode

The Pegasus SC offers two operation modes: Local and Remote. Upon powering on the power supply, it defaults to the local operation mode. In this mode, all front panel keys are available for use. However, in the remote operation mode, users can send programming commands from a controller (computer) via RS485/USB or Bluetooth.

Interlock

The interlock serves as an additional safety mechanism within the Smart Pegasus series of high voltage power supplies. The Pegasus SC continually monitors the interlock status and promptly turns off the power supply in the event of an open interlock. Furthermore, the system prevents users from turning on the power supply when the interlock is open, enhancing safety protocols and preventing potential hazards.

High Voltage Control

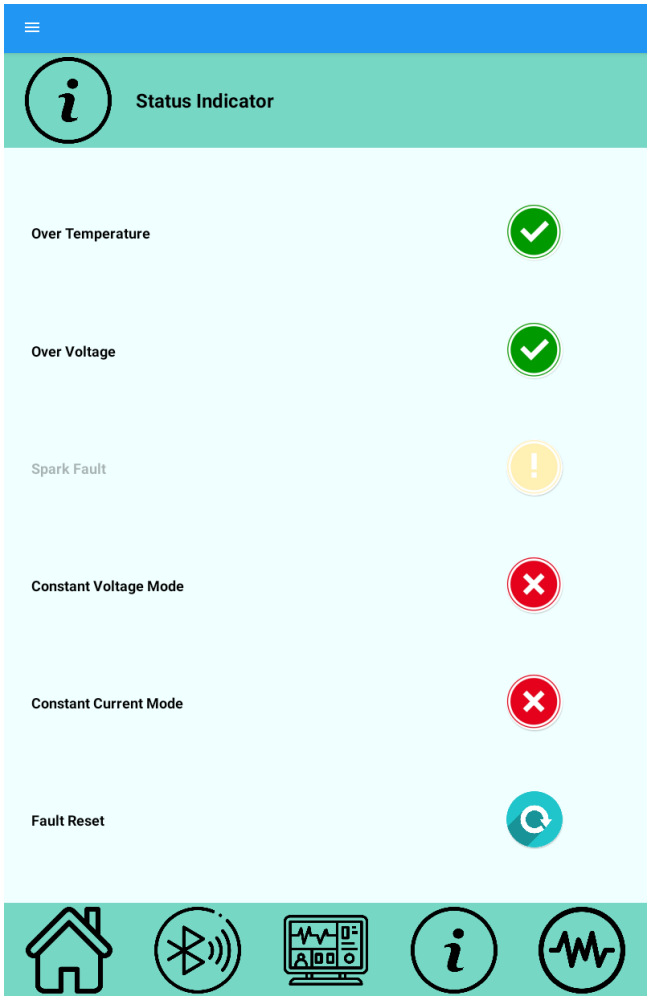
The Pegasus SC facilitates remote activation and deactivation of the power supply's high voltage using the front panel keypad, wired serial communication, or a wireless Bluetooth interface. This versatile control capability ensures flexibility and convenience in managing the power supply's high voltage functionality.

Connection Protection

If activated, the connection protection feature automatically turns off the power supply in case of a lost connection between the power supply and the controller.

Fault Indicator

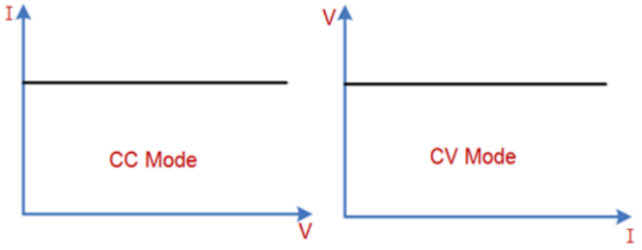
The Pegasus SC provides a comprehensive fault indication system, displaying the status of power supply faults. Over Voltage, Over Temperature, and, where applicable, Spark Fault indications are presented in the computer software, mobile application and on the front panel LCD display.



Operation Mode Indicator

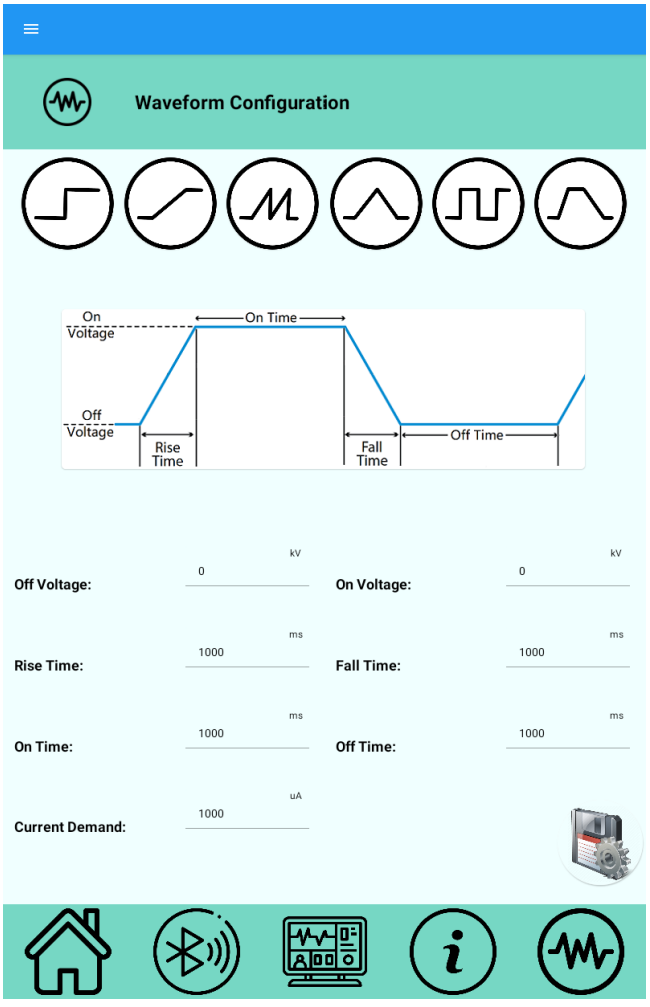
The Smart Pegasus series feature two static operation modes: Constant Current (CC) Mode and Constant Voltage (CV) Mode. In CV mode, the power supply maintains a fixed output voltage corresponding to the programmed value, regardless of the output current (as long as the current is below the setpoint). In CC mode, the power supply regulates the output current at the setpoint current, as per the programmed value, irrespective of the output voltage (as long as the voltage is below the setpoint).

Users can conveniently select the constant current value and constant voltage value using the front panel, computer software, and mobile application interfaces. The status of the control mode is consistently monitored and displayed in both the computer software and mobile application for real-time awareness and control.



Data Recording

The Pegasus SC is equipped with data recording capabilities, allowing for the storage of power supply output voltage, output current, and temperature data. This recorded information proves valuable for subsequent analyses. Additionally, the Pegasus SC records faults and status logs of the power supply, storing the data in a .txt format for future analysis and reference.



Output Voltage Waveform Selection

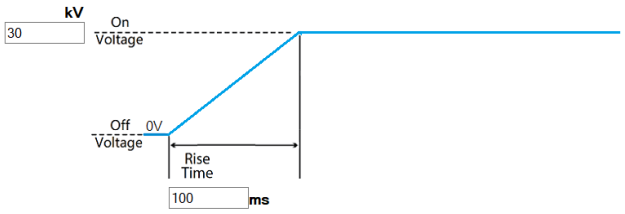
A distinctive and exclusive capability of the Pegasus SC is the ability to control the output voltage of the high voltage power supply based on user-selected waveforms. The Pegasus SC computer software offers a wide array of waveform options, all fully configurable to produce the desired output.

Step Voltage

The most common waveform, providing a step-up in voltage.

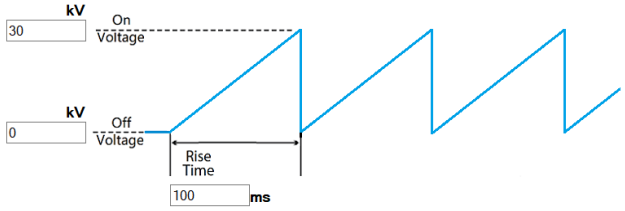
Ramp-Up

Smoothes the increase of the output voltage, reducing high voltage pulse tension over the load and power supply. The rise time of the ramp is configurable.



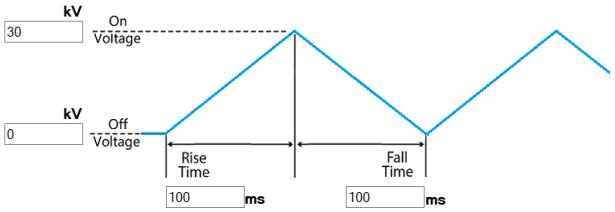
Sawtooth

Repeats the ramp-up waveform continuously, with configurable on voltage, off voltage, and rise-time.



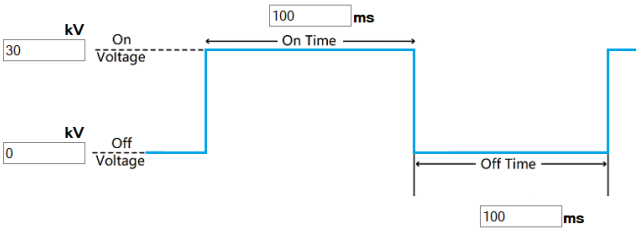
Triangle

Provides a soft increase and soft decrease of the output voltage. Configurable parameters include on voltage, off voltage, rise-time, and fall time.



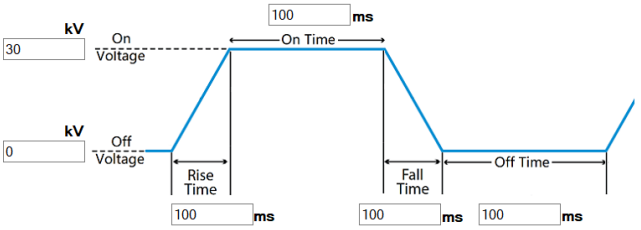
Rectangular (Pulse)

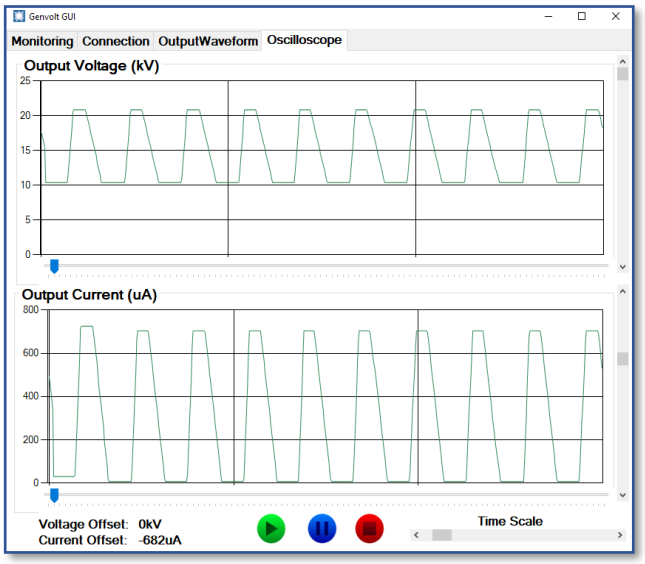
Repeats the step-up waveform continuously, with configurable on voltage, off voltage, on-time, and off-time.



Arbitrary

Allows user-customized waveform configurations with configurable on voltage, off voltage, rise-time, fall-time, on-time, and off-time.





Virtual Oscilloscope

To address the critical concern of understanding the exact waveform of the output voltage and current, the Pegasus SC features a virtual oscilloscope within its computer software.

Auto Amplitude Scale

Automatically adjusts the amplitude axis scale of the output voltage and current based on their values.

Time Scale Adjustment

Allows adjustment of the display window of the output waveforms.

Voltage and Current Offset Adjustment

Provides the option to adjust the offset on output waveforms, enabling the observation of small changes over large DC values of the output (e.g., small overshoots or undershoots, output instability, and output ripple).

Model Number Coding

PXXYYSC

- Pegasus Series
- Smart Control
- Output power
  - 600 = 600 watts
  - 300 = 300 watts
- Output Voltage
  - 30 = 30 KV
  - 50 = 50KV

Options

- Remote interlock option available
- Dual HV output sockets
- Mounting bars
- Please specify when ordering. For further information please contact us.
- Parallel PSU capability that should be done by Genvolt

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