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Pleiades



Summary

The Pleiades 6kW precision high voltage power supply is a new generation of chassis power supply developed by Genvolt.

The Pleiades 6kW has an integrated 6U (10.5") standard chassis and offers an output voltage range from 1kV to 100kV.

There are 18 standard specifications as well as bespoke voltage and current settings which can be customized depending on customer requirements.

Local control can be performed through the front panel which controls the local voltage, current and emergency system.

Function, fault reset, full remote control, including analog control and RS232 remote control, is achieved through the integrated 50-pin socket on the rear panel.

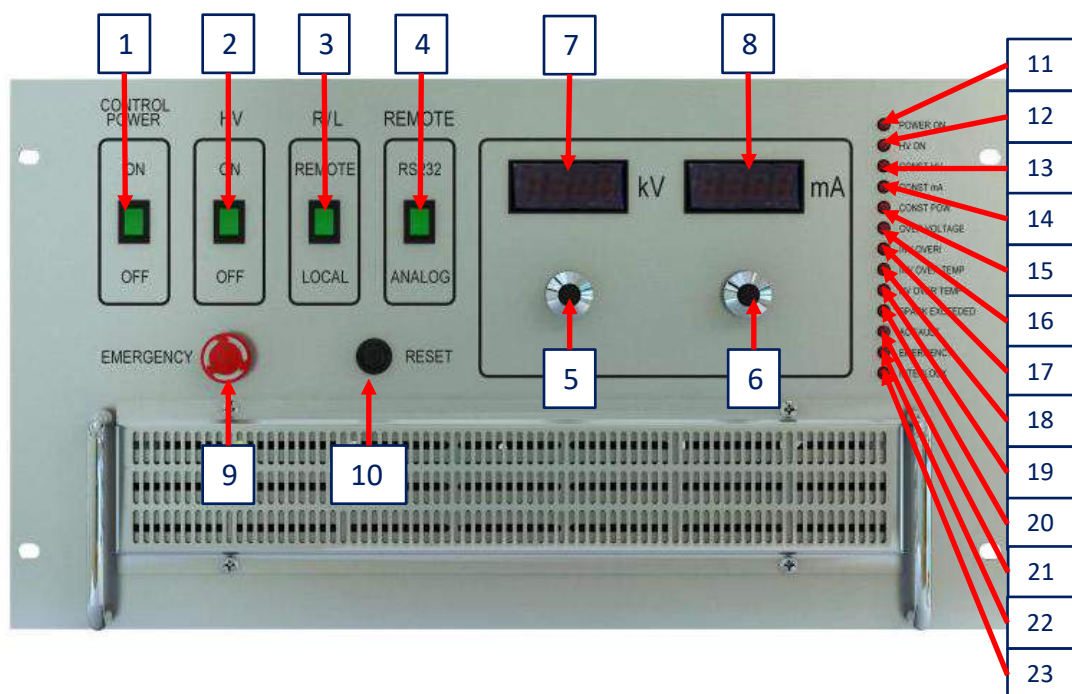


Technical Specification

Input Specifications	
Input Voltage	380VAC, three phase, efficiency 90%, power factor 0.92
Optional:	360 - 528VAC
Output Specifications	
Output Power	Up to 6kW
Output Voltage	18 units are available with voltages from 1kV - 100kV
Output Polarity	Positive or Negative
Output ripple	Better than 0.1%
Power adjustment rate	Better than 0.1%
Load Regulation	Better than 0.1%
Local output control	The voltage and current are continuously adjustable over the full range by using a ten-turn potentiometer with a lockable counting dial.
Environmental	
Operating Temperature	0 to 40°C
Storage Temperature	-40 to 85°C
Humidity	10% - 90%
Relative humidity	Non condensing
Cooling	Forced air cooling. The air inlet passes through the front panel and the outlet is on the rear panel.
System Status	The front panel indicators provide up to 13 system operating states, including: voltage and current regulation, fault conditions, and circuit control.
Analog interface connector	Genvolt provide a detachable 3 meter long shielded high voltage line. 1.8 m input power cord.
Dimensions	
Sizing	19" 6U rack mounted design
Height	266mm
Width	483mm
Length	573mm
Weight	1kV - 10kV - 40kg
	20kV - 100kV - 50kg
Controls	Both local and remote modes are available with remote control being via DB50 female D connector to the rear



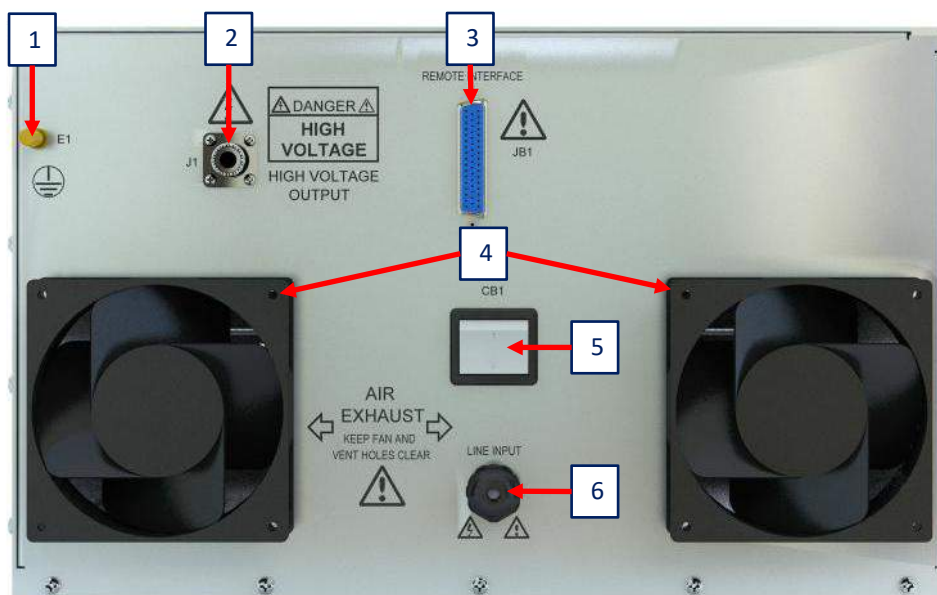
Front Panel



No.	Name	Function	No.	Name	Function
Switches and dials			LED Indicators		
1	Control power switch	Mains power on/ off switch	11	POWER ON	When lit indicates mains power is on
2	High voltage start / Off	High voltage on / off switch	12	HV ON	When lit indicates that High Voltage is on
3	Local remote switch	Local / Remote control selection switch	13	CONST. HV	When lit indicates that the supply is running in constant voltage mode
4	Remote analog and RS232 selection switch	Remote analog / RS232 control selection switch	14	CONST. mA	When lit indicates that the supply is running in constant current mode
5	High voltage setting dial	10 turn potentiometer for adjusting output voltage	15	CONST. POW	When lit indicates that the supply is running in constant power mode
6	Current setting dial	10 turn potentiometer for adjusting output current	16	OVER VOLTAGE	When lit indicates that the output voltage is higher than the set amount
7	Voltage output display	LED Digital display for output voltage	17	INV OVER	When lit indicates that the inverter is over current.
8	Current output display	LED Digital display for output current	18	INV OVER TEMP	When lit indicates that the inverter is over temperature.
9	Emergency stop switch	Emergency stop switch - When depressed the power supply will power down	19	HV OVER TEMP	When lit indicates that the supply is operating at a higher temperature than is recommended
10	Reset switch	Resets all settings back to factory standad	20	SPARK EXCEEDED	Discharge failure
			21	AC FAULT	AC Failure. AC is too high or too low
			22	EMERGENCY	When lit indicates that the emergency shut down has been initiated
			23	INTERLOCK	When lit indicates that the interlock is enabled.



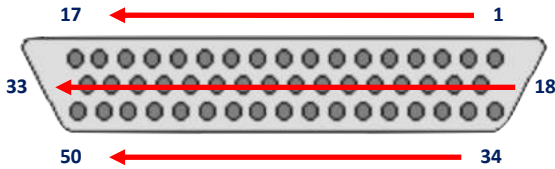
Rear Panel



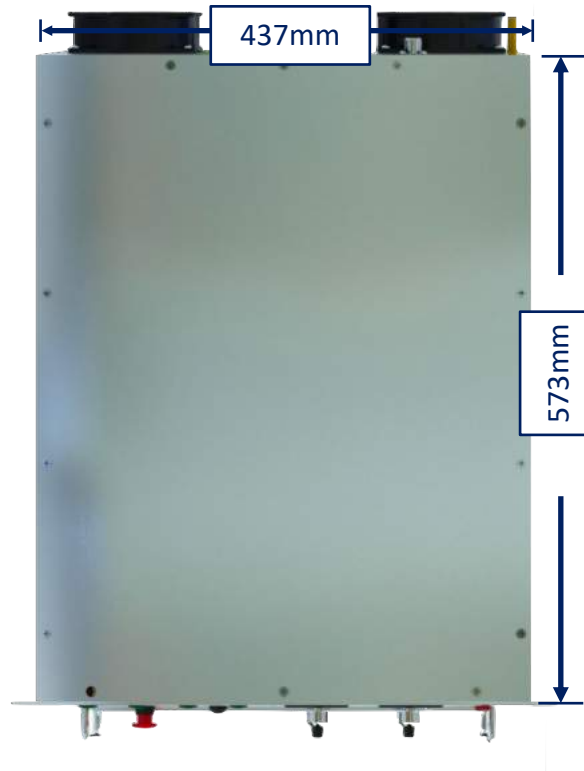
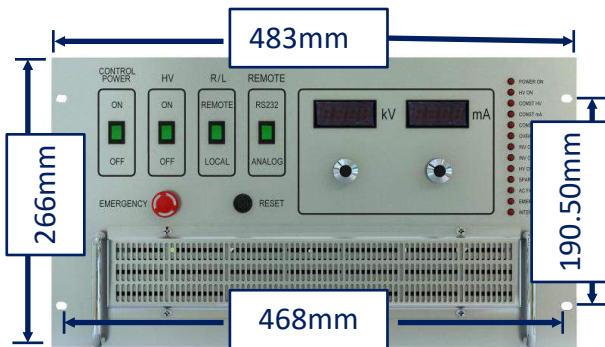
No.	Name	Function
1	E1	M6 for earth bonding
2	J1	High Voltage output cable
3	JB1	DB50 connection for remote analog control
4	Air Exhaust	Power supply cooling fan x 2
5	CB1	Main power switch: Up (1) ON / Down (0) OFF
6	Line input	Mains line input
Line input	Colour	Function
L1	Black	Three-phase alternating current phase line
L2	Red	Three-phase alternating current phase line
L3	Gray	Three-phase alternating current phase line
N	Blue	Neutral Line
PE	Green	Ground Wire
Remote mode:		
There are two modes: analogue remote control and RS232 communication remote control. RS232 communication remote control provides RS232 interface and control protocol.		



DB50 Pinout



Dimensions



Pin No.	Name	Function
1	Power Supply common	Power Ground
2	Reset high voltage prohibition	Usually open, low = reset / inhibit.
3	External interlock	Open circuit is +24Vdc, closed <25mA
4	External interlock return	External interlock return
5	mA Test point	0-10 VDC = 0-100% rated output, Z out = 1KΩ, 1%
6	kV Test point	0-10 VDC = 0-100% rated output, Z out = 1KΩ, 1%
7	+10 VDC reference output	+10 VDC @ 1mA
8	mA programming input	0-10 VDC = 0-100% rated output, Z in>10MΩ
9	Spare	
10	kV programming input	0-10 VDC = 0-100% rated output, Z in>10MΩ
11	Spare	
12	Spare	
13	Spare	
14	Spare	
15	Power Supply common	Power Ground
16	Remote high voltage on	The open circuit is +24Vdc, Closed to 2A peak, 1Adc, connected to 15 feet at any time to open high voltage.
17	Spare	
18	High pressure on indication	+24 VDC @ 25mA = high voltage on
19	Power Supply common	Power Ground
20	+24Vdc output +24Vdc @ max 100mA	+24Vdc output +24 VDC @ max 100mA
21	Voltage mode status	Open collector, low = active.
22	Current mode status	Open collector, Low level = active.
23	Spare	
24	Interlock closed state	Open collector, low = active.
25	Spare	
26	Spare	
27	Spare	
28	Spare	
29	Spare	
30	Spare	
31	Spare	
32	Spare	
33	Spare	
34	Arc	Open collector, low = active.
35	Over Temperature fault	Open collector, low = active.
36	AC Failure	Open collector, low = active.
37	Spare	
38	Spare	
39	Spare	
40	Spare	
41	Spare	
42	Spare	
43	Spare	
44	+5 VDC Output	+5 VDC @ 100mA, max
45	+15 VDC Output	+15 VDC @ 100mA, max
46	- 15 VDC Output	-15VDC @ 10mA, max.
47	RS232 Sending	RS232 Sending
48	RS232 Receiving	RS232 Receiving
49	RS232 Ground	RS232 Ground
50	Power Supply common	Power Ground



Genvolt
high voltage power supplies



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