Perseus Range

100kV 1000W X-Ray Generator

Specification Summary

Perseus Range is a series of high voltage power supply which is designed for industry probing by using x-ray. It's highly stable and accurate, and capable to be applied to material analysis, security check etc.

It can be either controlled by local or remote control mode, and therefore to adjust output voltage, output current and maximum filament current by either at the front panel or remote control.

Input Specifications

AC input voltage range	180V to 264V
Power factor	0.92

Output Specifications

Output voltage	0-100kV Negative
Output current	0-10mA
Output voltage stability	Within 0.1% of set value after warm-up
Ripple	Less than 0.05% rms
Filament voltage	0-6V DC
Filament current	0-5A DC

Parameter settings

Voltage setting	0-10V = 0-100kV
Current setting	0-10V = 0-10mA
Maximum filament current setting	0-10V = 0-5A (This is set to prevent the filament from failing when over-current)

Output feedback

Output voltage feedback	0-100kV
Output current feedback	0-10mA
Filament current feedback	0-5A

Control Interface

- Output voltage, output current and the maximum filament current set up by 10 turn potentiometers at the front panel.
- Output voltage feedback, output current feedback and filament current feedback are displayed on the 4-digital screens at the front panel.
- Default and working status are indicated by LED lights.
- Remote control mode is achieved by connecting 25 pin connector on rear panel.
- Details for 25 way D type female connector

1	A GND	Analogue ground
2	FIL STDBY SER	Filament standby, remote setting, 10V=5A
3	HV DEM SER	High voltage setting, 10V=100kV
4	BIAS FBK	Bias voltage feedback (Not applicable)
5	mA FBK	Output current feedback, 10V=10mA
6	SERVICE SW	Remote switch, ground=remote control, float=local control

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7	INTERLOCK	Interlock, TTL low=interlock open circuit
8	CONST HV	Constant voltage mode, TTL low=working in constant voltage mode
9	HV ERR	High voltage error indicator, TTL low=output less than set voltage
10	SPARK	Spark indicator, TTL low=spark
11	INV C/L ERR	Inverter over-current, TTL low= Inverter over-current
12	HV ON SER	Switch on high voltage by remote control, 5V=ON, 0V=OFF
13	D GND	Digital ground
14	BIAS DEM SER	Set bias voltage by remote control (Not applicable)
15	mA DEM SER	Set output current 10V=10mA
16	FIL MAX SER	Set the maximum filament current 10V=5A
17	FIL FBK	Filament current feedback 10V=5A
18	HV FBK	High voltage feedback, 10V=100kV
19	EMERGENCY	Emergency stop indicator, TTL low=device being stopped (Not applicable)
20	FIL ERR	Filament error indicator, TTL low=filament current has not reached the set value
21	BIAS ERR	Bias voltage error indicator, TTL low=bias voltage has not reached the set value (Not applicable)
22	OVER TEMP	Temperature is too high, TTL low= oil temperature over 70°C
23	PFC ERR	PFC error indication, TTL low=PFC output undervoltage or overvoltage
24	CONST mA	Constant current mode, TTL low= output current is 10mA
25	+24V	Providing 24V DC, current<100mA

Environmental Requirements

Temperature	0 to 50°C
Humidity	Less than 90% non condensing

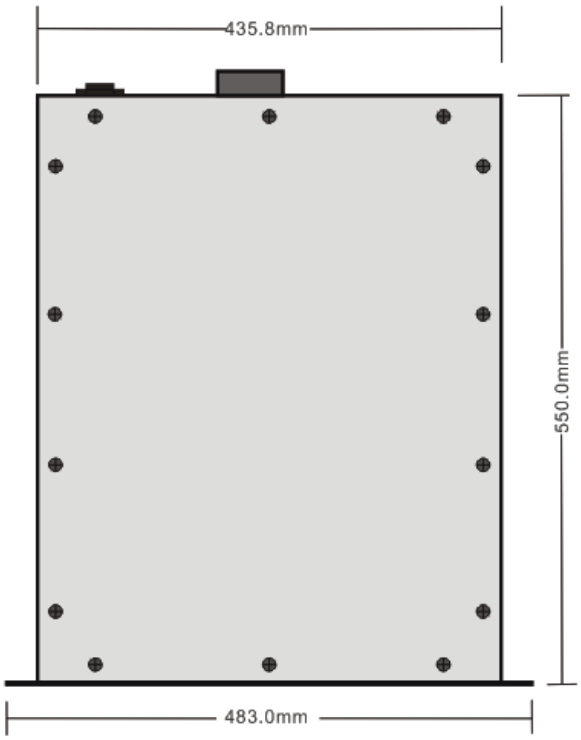
Mechanical Specifications

Weight	32kg
Dimensions	Width 483mm, height 178mm, depth 600mm
Power input connector	Standard IEC socket
HV output connector	Claymount CA1 (03) 100kV high voltage socket
Control interface connector	25 pin female D connector

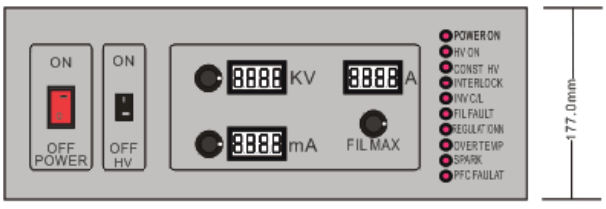
Safety

- This power supply contains hazardous voltages and stored energy. Contact with the output may result in fatal injury. It should only be used and maintained by trained personnel.
- The area where the power supply is to be used should be kept clean and dry.
- Keep a safe distance from the output connector and any items connected to it.
- Ensure that a secure connection is made between the Earth side of the load and the green and yellow Earth lead.

Dimensions



Top View



Front View

For requirements other than those specified, please do not hesitate to contact the factory.