# REGULATED HIGH VOLTAGE POWER SUPPLY

## 1kV to 50kV, 10W to 1.5kW

This series of power supplies are battery operated and can generate output that ranges from 1kV to 50kV, 10W to 1.5kW. These units are housed in compact 19" racks to give a highly regulated output.

**Features:**

- Precision Regulated
- Low Ripple
- High Stability
- 19" Rack Mountable
- OEM Customization Available

**TECHNICAL SPECIFICATIONS**

| PARAMETER | SPECIFICATION |
|---|---|
| Input Voltage | 12V/24V/48V/72V DC |
| Output Voltage Range* | 1kV DC to 50kV DC |
| Output Power Range* | 10W to 1.5kW |
| Polarity* | Positive |
| Line Regulation | Better than 0.05% for ±10% variation in input voltage |
| Load Regulation | Better than 0.05% for 0 to 100% load variation |
| Ripple | 0.05% rms OR 0.1% rms at full rating |
| Stability | Better than 0.01%/hour after 1 hour warm up |
| Regulation Mode* | Constant voltage – Constant current |
| Voltage & Current Control* | Local : By 10-turn potentiometers on the front panel<br>Remote : 0 to 10V DC signals for voltage & current control; OR<br>Control through computer interface |
| Protections* | Against over load, over current, over voltage, short-circuit and arc |
| Remote Controls & Signals through Pluggable Connector / D-Connector (External RS232 Microcontroller Module)* | 10V DC reference<br>10V DC HV enable signal<br>0 to 10V DC signal for voltage & current control<br>0 to 10V DC signal for voltage & current monitoring |
| Front Panel | Input power ON/OFF switch with indication<br>HV ON/OFF switch with indication<br>3½ digit voltage and current meters<br>10-turn potentiometers for voltage and current control<br>Constant voltage – constant current mode indication |
| Back Panel | Terminal block for battery input<br>Fuse holder with fuse<br>Terminal for HV output with 10ft of detachable high voltage cable<br>Stud for grounding the unit<br>Remote interface connector* |
| Topology | High frequency resonant / PWM-controlled switch mode |
| Switching Device | IGBT |
| Cabinet | 2U to 3U 19" rack, powder coated |

*Optional. To be specified by the user.

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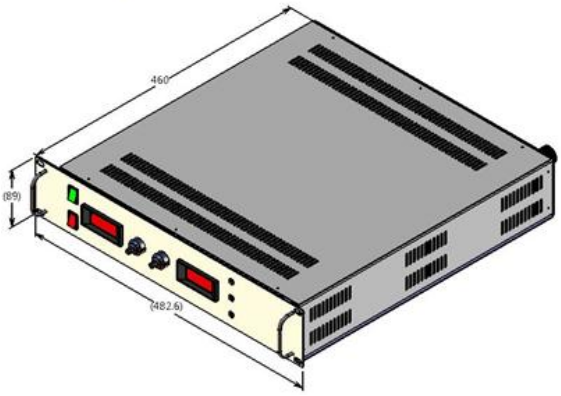
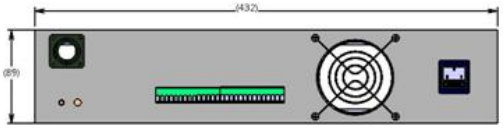
**Cabinet Details:**




**Front Plate**

**Back Plate**




| Remote Interface Connector Configuration | | |
|---|---|---|
| **Pins** | **28 Pin Pluggable Connector** | **25 Pin D Connector** |
| 1 | Earth | Earth |
| 2 | Common | Common |
| 3 | Interlock | HV Enable |
| 4 | HV Enable | Voltage Control Remote |
| 5 | Reference | Current Control Remote |
| 6 | Common | Over Voltage Control Remote* |
| 7 | Voltage Control Remote | Over Current Control Remote* |
| 8 | Voltage Control Local | Common |
| 9 | Common | Voltage Monitor |
| 10 | Current Control Remote | Current Monitor |
| 11 | Current Control Local | Reserved Monitor* |
| 12 | Common | Reserved Monitor* |
| 13 | Voltage Monitor | Common |
| 14 | Current Monitor | Mode Status |
| 15 | Common* | Interlock Status |
| 16 | Voltage Mode Status* | HV ON Status |
| 17 | Current Mode Status* | Common |
| 18 | HV ON Status* | PS Fault Status* |
| 19 | Common* | Over Voltage Status* |
| 20 | PS Fault Status* | Over Current Status* |
| 21 | Over Voltage Status* | Over Temperature Status* |
| 22 | Over Current Status* | Open Circuit Status* |
| 23 | Over Temperature Status* | Phase Failure Status* |
| 24 | Open Circuit Status* | Reserved Status* |
| 25 | Phase Failure Status* | Common |
| 26 | Common* | |
| 27 | Over Voltage Control* | |
| 28 | Over Current Control* | |

*Optional. To be specified by the user only as per application's requirement.

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| Ordering Code | HV | 040 | K | 600 | W | N | C | 1 | D | 5 | T |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | | 2 | | 3 | | 4 | 5 | 6 | 7 |

| Section | Description | Options | Options Description |
|---|---|---|---|
| 1 | Output Voltage | XXX | Value of output voltage |
| 2 | Output Power | YYY | Value of output power |
| 3 | Polarity | P | Positive |
| | | N | Negative |
| 4 | Input Battery Voltage | 1 | 12V DC |
| | | 2 | 24V DC |
| | | 3 | 48V DC |
| | | 4 | 72V DC |
| 5 | Short Circuit | A | Shut down |
| | | B | Shut down & manual reset |
| | | C | Shut down & automatic restart |
| | | D | Constant current |
| 6 | Regulation Mode | 4 | Constant voltage |
| | | 5 | Constant voltage & constant current |
| 7 | Control Mode | L | Local control |
| | | R | Remote control through D-connector |
| | | T | Remote control through pluggable connector |

For any queries or customization requests contact us at **info@ionics.co.in**
For product line information visit us at **www.ionics.co.in**