

ONLY SELECT MODELS AFTER JANUARY 2023 ⁽²⁾



202A Series Data Sheet
High Voltage Power Supply
Capacitor Charging and DC
Output Voltage from 1kV - 40kV
Output Power 2kJ/sec or 2kW
Comprehensive remote control
Compact OEM Design



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202A Series Specification

High Performance, cost effective, reliable, OEM style capacitor charging power supply with average power rating of 2kJ/sec.

- Power rating of 2kJ/sec, 2.2kJ/sec peak
- Output Voltages up to 40kV
- Compact air cooled OEM style package
- Patented parallel resonant inverter
- Excellent pulse to pulse repeatability
- 230VAC 1Ø input voltage
- Reliable, cost effective design with reduced parts count
- Standard Active PFC (pf = 0.98)
- Full remote control interface
- Simple parallel operation for higher power

| | |
|--|--|
| Average Capacitor Charging Power | 2,000 Joules/sec ($\frac{1}{2}CV^2 \times \text{Rep Rate}$) |
| Peak Capacitor Charging Power | 2,200 Joules/sec ($\frac{1}{2}CV^2 / t_{\text{charge}}$) |
| Average Continuous DC Power | 2,000 Watts |
| Output Voltages (see note 2 below) | Positive Polarity Models: 1.5kV, 4.5kV, 6kV, 20kV, 40kV Negative Polarity Models: 3kV, 20kV, 40kV, variable from 10-100% of rated |
| Polarity | Available as fixed Positive or Negative. Please specify at time of ordering |
| HV Output | 1-6kV Models - Air Insulated with RG58/U Coaxial cable and MHV connector |
| | 7-40kV Models - Oil Insulated with DS2024 Silicone lead & proprietary HV connector |
| AC Input Voltage | 230VAC (180-254), 50-60Hz 1Ø |
| AC Input Current - Active PFC ^(1,2) | 13.5A with optional Active Electronic PFC |
| AC Connector | UL/CSA approved terminal block. |
| Power Factor | Active PFC - 0.98 at full load and nominal AC line |
| Efficiency | Better than 85% at full load |
| Stability | ±0.2% per hour after 1 hour warmup |
| Temperature Coefficient | 100ppm per °C typical |
| Stored Energy | Less than 0.3J all models |
| Pulse to Pulse Repeatability | ±0.2% to 300Hz, consult factory for higher rep rates |
| Dimensions - inches (mm) | 5.75 (146) W x 5.56 (141) H x 14.8 (376) D |
| Weight - lbs (kg) - 1-6kV Models | 12.5 (6) |
| | 10-40kV Models |
| Ambient Temperature | Storage: -40 to +85°C. Operating: -20 to +45°C |
| Altitude | Storage: 40,000ft (12,000m), Operating: 9,900ft (3,000m) |
| Humidity | 10-90%, non-condensing |
| Protection | Open/short circuits, Overloads, Arcs, Overtemp, Overvoltage |
| Agency Approvals | Pending |
| Remote Control (all models) | Via 15-pin D-sub connector on rear of unit, Signals include, Vprogram (0-10V), HV Enable/Reset, Inhibit, Summary Fault, Load Fault, Vanalog, Vpeak |
| Accessories | Mating HV cable, control connector, operating manual, mounting brackets |
| Ordering Info | Model - XXkV - POS (or NEG) - PFC - YY (options) |
| Ordering Examples | 202A-1.5kV-POS-PFC, 202A-40kV-POS-PFC |
| (1) Input current figure valid for repetition rates greater than 10Hz. For operation below 10Hz contact factory. | |
| (2) Available models: 202A-1.5kV-POS-PFC, 202A-3kV-NEG-PFC, 202A-4.5kV-POS-PFC, 202A-6kV-POS-PFC, 202A-20kV-NEG-PFC, 202A-20kV-POS-PFC, 202A-40kV-POS-PFC, 202A-40kV-NEG-PFC | |
| All specifications subject to change without notice | |

202A Mechanical Details

Front View

All Models



Rear Views

Outputs Voltages from 1-6kV



Output Voltages from 7-40kV

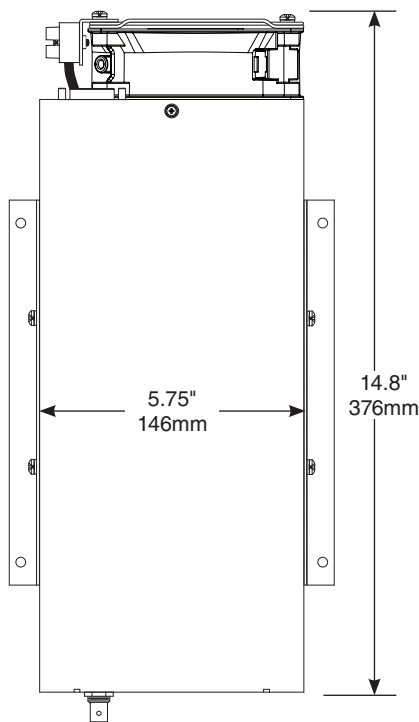


- 1 - Cooling Fan (Air exits this end)
- 2 - AC Input Connector
- 3 - 15pin D-sub Female Control Connector

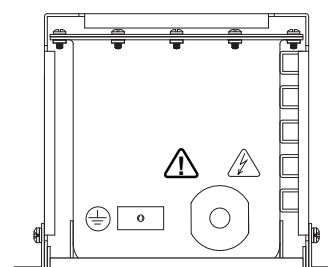
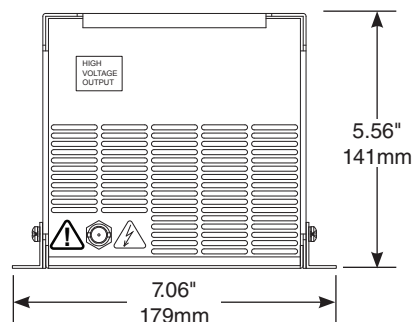
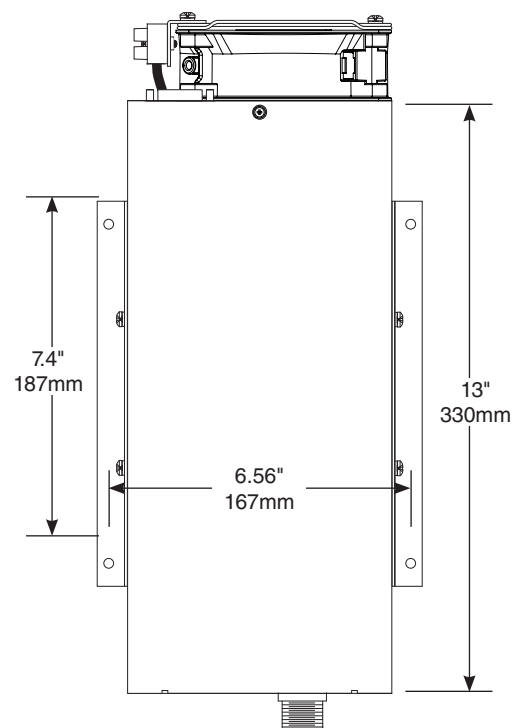
- 4 - MHV Output Connector (1-6kV Models)
- 5 - Ground Stud (7-40kV Models)
- 6 - HV Output Connector (7-40kV Models)

Dimensional Outline Drawings

Outputs From 1kV to 6kV



Outputs From 7kV to 40kV



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