



XR802 Series Data Sheet
High Voltage Power Supply
Capacitor Charging and DC
Optimized for high performance
at High Repetition rates
Output Voltage from 1kV - 30kV
Output Power 6kJ/sec or 6kW



TDK-Lambda

www.us.tdk-lambda.com/hp

XR802 Series Features and Specification

High performance, high rep rate air-cooled capacitor charging and DC power supplies available with a power rating of 6kJ/sec for capacitor charging, or 6kW in DC applications.

- Output Voltages from 0-1kV to 0-30kV
- Power rating of 6kJ/sec ave, 7kJ/sec peak
- Compact air cooled rack mount package
- Optional Remote Voltage Sense input
- 208 or 400VAC 3Ø input
- Full remote control interface
- Better than 0.1% pulse-pulse repeatability at rep rates to 2kHz
- Passive PFC (pf = 0.85)
- Full local output voltage and HV On/Off controls (L version)
- Lab, Slave, or OEM front panel options

Average Capacitor Charging Power	6,000 Joules/sec ($\frac{1}{2}CV^2 \times \text{Rep Rate}$)
Peak Capacitor Charging Power	7,000 Joules/sec ($\frac{1}{2}CV^2/t_{\text{charge}}$)
Average Continuous DC Power	6,000 Watts
Output Voltage Range	1, 2, 4, 5, 10, 15, 20, 30kV, variable from 10-100% of rated
Polarity	Available as fixed Positive or Negative. Please specify at time of ordering
HV Output Cable	All Models - DS2214 Coaxial cable with proprietary HV connector
HV Insulating Medium	Exxon Mobil Univolt N61B or equivalent insulating oil
AC Input Voltage	208VAC (180-264), 3Ø or 400VAC (340-460), 3Ø + N, specify at time of ordering
AC Input Current	40A/25A
AC Connector	UL/CSA approved terminal block. 3Ø + $\frac{1}{2}$ for 208VAC, 3Ø + N + $\frac{1}{2}$ for 400VAC
AC Line Contactor	UL/CSA approved AC line contactor (standard on XR802L and S, option for OEM)
Power Factor	Passive PFC pf = 0.85 at full load and nominal AC line
Efficiency	Better than 85% at full load
Front Panel	XR802L - Voltage Control, Voltage & Current Meters, Status Indicators XR802S - On/Off Switch, Status Indicators XR802-OEM - Blank front panel
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	±0.1% to 300Hz std, ±0.1% to 1000Hz optional, consult factory for higher rep rates
Dimensions - inches (mm)	19 (483) W x 8.72 (222) H x 17 (432) D
Weight - lbs (kg)	80 (37)
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, Safety Interlock
Remote Control (all models)	Via 25-pin D-sub connector on rear of unit, Signals include, Vprogram (0-10V), HV Enable/Reset, Inhibit, Summary Fault, Load Fault, Vanalog, Vpeak
Accessories	10ft HV cable, operating manual
Options	EN - Low Enable. Replaces standard high enable 5V - 0-5V Analog programming. Replaces standard 0-10V programming. LP - Latching Overload Protection, requires HV reset after overload fault DC - Continuous DC operation CT - AC line contactor (option for XR802OEM models only, standard for L and S) RS - Remote load voltage sense replaces local sense Double terminated HV cable, and mating bulkhead connector
Ordering Info	Model - XXkV - POS (or NEG) - YYYYVAC - ZZ (options)
Ordering Examples	XR802L-10kV-POS, XR802S-1kV-NEG-DC, XR802-OEM-30kV-POS-400VAC
All specifications subject to change without notice	

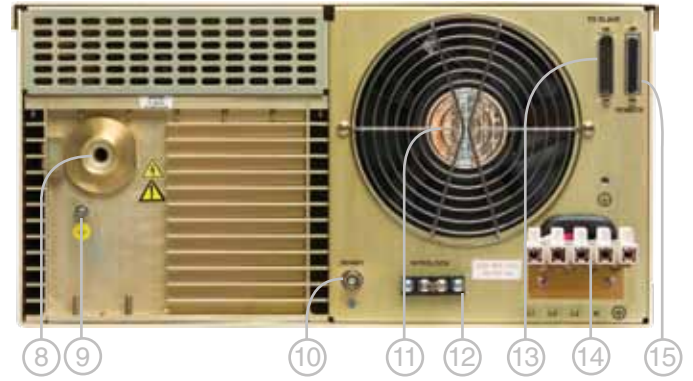
XR802 Series Mechanical Details

XR802L Front View



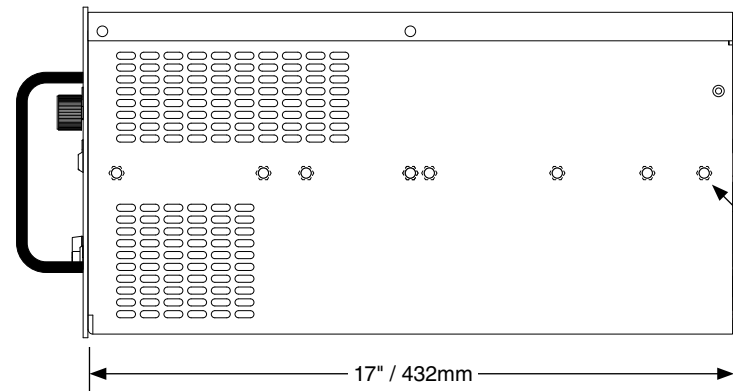
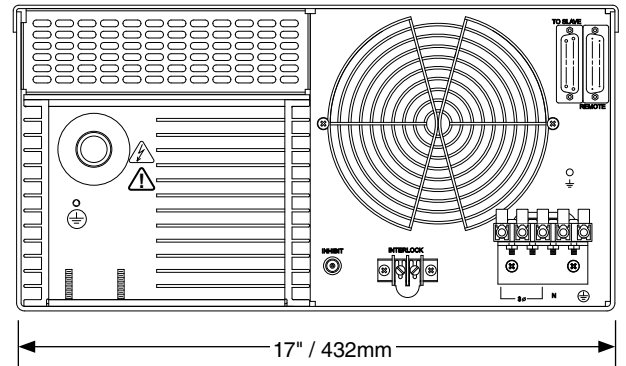
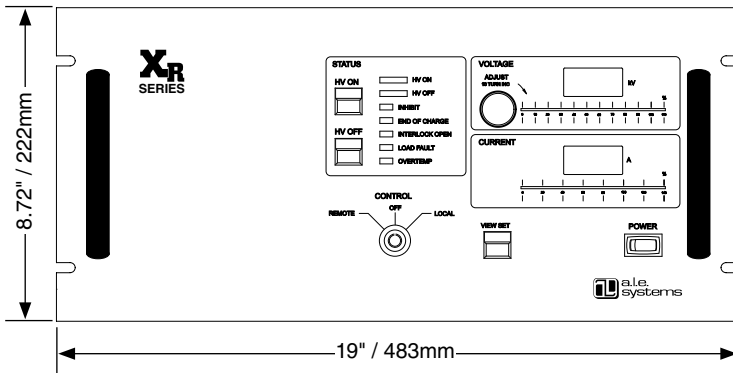
- 1 - HV On/Off Push Buttons (L model only)
- 2 - Status Indicator LEDs (L and S models only)
- 3 - Local/Remote Keyswitch (L model only)
- 4 - 10-Turn HV Output Control (L models only)
- 5 - View Set Push Button (L models only)
- 6 - Output Voltage and Current Displays (L models only)
- 7 - Power Switch (L and S models only)

XR802L Rear View



- 8 - HV Output Connector
- 9 - Ground Stud
- 10 - Inhibit BNC (L models only)
- 11 - Cooling Fan
- 12 - Interlock Terminals (L and S models only)
- 13 - Slave Supply Programming Connector (L models only)
- 14 - AC Input Terminal Block
- 15 - Remote Programming Connector

Dimensional Outline Drawings



Chassis slide mounting holes

Notes:

- 1 - Chassis slide mounting pattern matches General Devices CT series or equivalent with 3.875" hole spacing.
- 2 - Cooling air exits rear of unit and enters at either side. Do not block air vents or cooling fan and allow several inches of clearance at rear of unit.
- 3 - Allow 6" bend radius at rear of unit for HV cable.

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