

HVR 1200RG

High-Current Ripple Generator System



100 Ap Configuration

Key Features:

- **Max. Ripple Current:** 100Ap – 600Ap
- **Max. Ripple Voltage:** 0 – 150Vp / 300Vp-p
- **Frequency Range:** 150 Hz – 300 kHz
- **Supported DC Voltages:** 0 to 1200 V, or 2000V in bridged configuration
- **Data Gathered:** Tracks and reports Voltage, Current, and Impedance
- **Rugged:** Protected against all kinds of DUT failure (including failure to a short when DUT under full load)
- **Compatibility:** Most HV Standard DC power supplies

Voltage/Current Ripple Immunity Testing of EV Voltage Class B Equipment:

MBN LV123 • ISO 21498-2 • MAN CVS 43:2021-01 • VW 80300 • VW 80303 • Stellantis CS.00245

Electric vehicles are a rapidly growing automotive market, with a completely new set of high-voltage EV test requirements. AE Techron's **HVR 1200RG** is a high-current ripple generator system that can produce a wide range of ripple interference on electric vehicle high-voltage power systems. It is specifically focused on meeting this customer test requirement at the highest power levels, into the most difficult loads such as traction inverters, and Power-HIL test stands. The HVR 1200RG was designed from the ground up for this specific test, making it highly reliable without the need for tacked on protection systems. Protection systems that can cause nuisance interventions and dramatically extend test times.

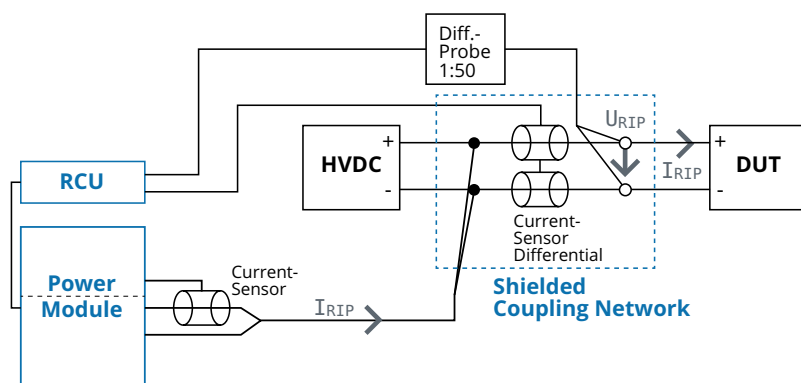
Some DUTs can cause significant noise, creating conditions that can cause other test solutions great difficulty. Noise-rejecting monitoring circuits are built into the HVR 1200RG, which allow for accurate testing in conditions even where DUT noises are higher than ripple test signals.

High-voltage EV testing is new. The standards and test levels are frequently changing and customers will often ask for test levels that exceed what is specified in published standards. Modular, expandable design and field configurability make the HVR 1200RG a great solution for testing all major auto makers and standards now and in the future.

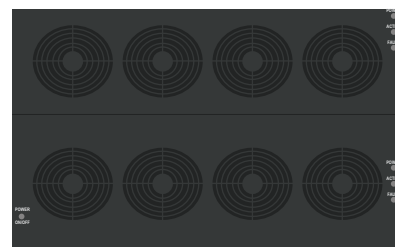


System Components:

- Ripple Control Unit (RCU): Ripple Generator and Software
- Power Module
- Shielded Coupling Network:
DC + AC Current Sensor (Danisense DM1200ID)



Ripple Control Unit (RCU)



Power Module



Shielded Coupling Network

Configurations:

MODEL	HVR 1200RG-100	HVR 1200RG-200	HVR 1200RG-300	HVR 1200RG-400	HVR 1200RG-500	HVR 1200RG-600
Dimensions (HxWxD)	35.1×22.6×39.6 in 89×57.3×110.5 cm	48.5×22.6×39.6 in 123.3×57.3×110.5 cm	48.5×22.6×39.6 in 123.3×57.3×110.5 cm	64.6 x 22.6 x 39.6 in 164.1 x 57.4 x 110.5 cm	(x2) 64.6×22.6×39.6 in (x2) 164.1×57.3×110.5 cm	(x2) 64.6×22.6×39.6 in (x2) 164.1×57.3×110.5 cm
Volts Peak	75	75	75	75	75	75
Amps Peak	100	200	300	400	500	600
Bandwidth	150Hz - 300kHz	150Hz - 300kHz	150Hz - 300kHz	150Hz - 300kHz	150Hz - 300kHz	150Hz - 300kHz
Supported DC Voltages	0 - 1200	0 - 1200	0 - 1200	0 - 1200	0 - 1200	0 - 1200
Mains Power	Single Phase, 110 - 240VAC	Single Phase, 110 - 240VAC	Single Phase, 110 - 240VAC	Single Phase, 110 - 240VAC	Single Phase, 110 - 240VAC	Single Phase, 110 - 240VAC
Communication	RS485/Ethernet	RS485/Ethernet	RS485/Ethernet	RS485/Ethernet	RS485/Ethernet	RS485/Ethernet
Testing Applications	<ul style="list-style-type: none"> • HVAC Compressors • HV Pumps • D/DC Converters • Small Inverters 	<ul style="list-style-type: none"> • HVAC Compressors • HV Pumps • D/DC Converters • Small Inverters 	<ul style="list-style-type: none"> • Medium Power Converters • HV Axle Drives • Small Batteries 	<ul style="list-style-type: none"> • Medium Power Converters • HV Axle Drives • Medium Batteries 	<ul style="list-style-type: none"> • Medium Power Converters • HV Axle Drives • Medium Batteries 	<ul style="list-style-type: none"> • High Power Converters • HV Axle Drives • Large Batteries

Optional Accessory:

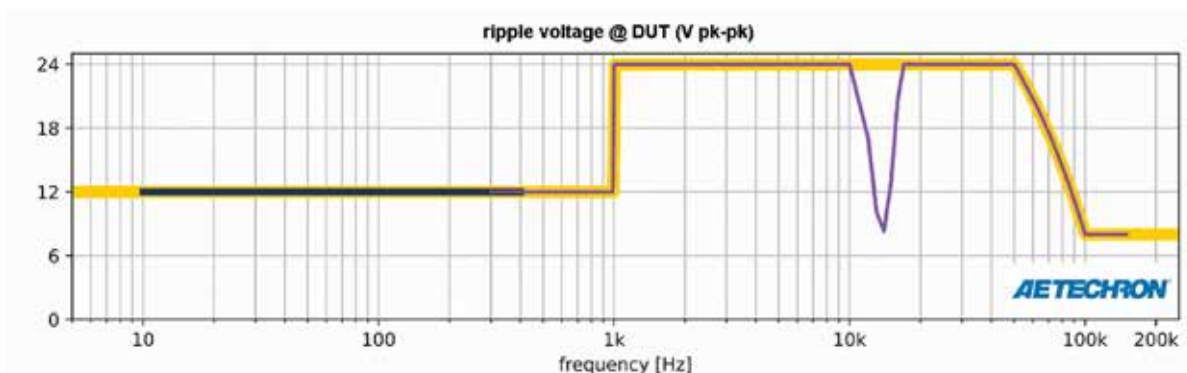
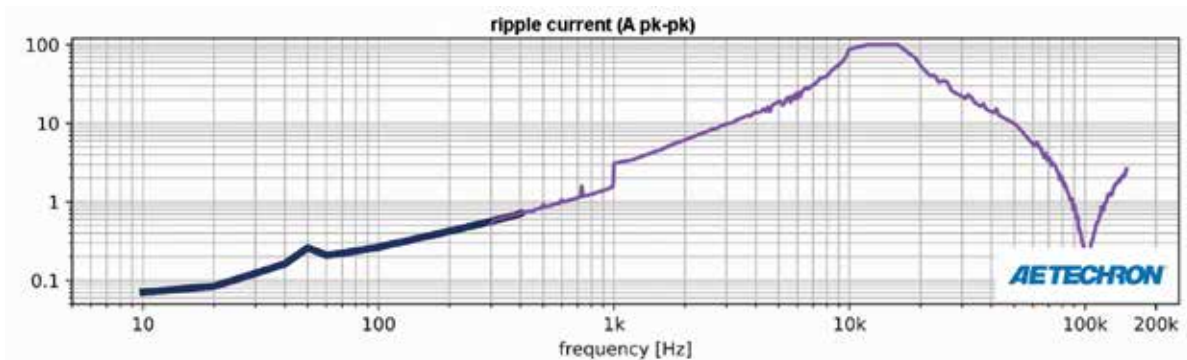
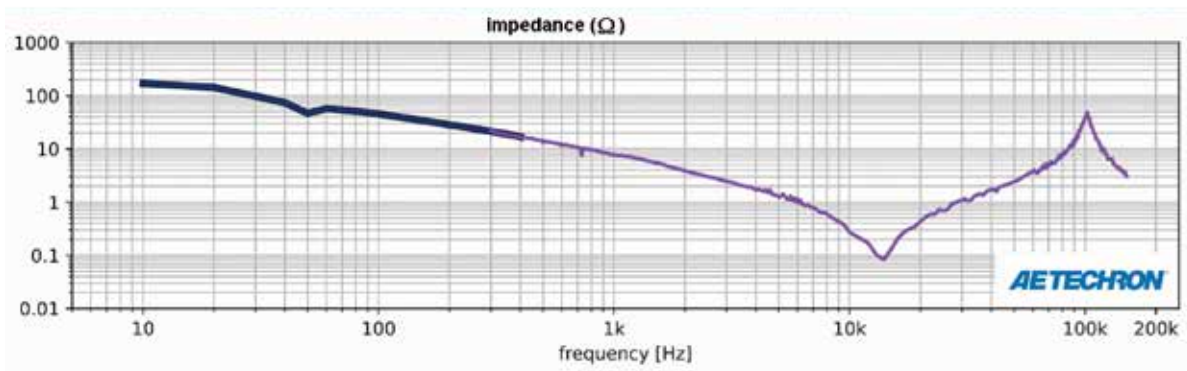
HVR 1200RG ARTIFICIAL NETWORK

- Used in conjunction with the HVR 1200RG Shielded Coupling Network to create an Artificial Network as specified in ISO 21498-2, MBN 11123 and VW80300
- Impedance matches requirements of ISO21498-2
- Resistance values adaptable: 10 mΩ, 25 mΩ, 50 mΩ, 60 mΩ, 100 mΩ
- Supports DUT currents up to 1200A continuous



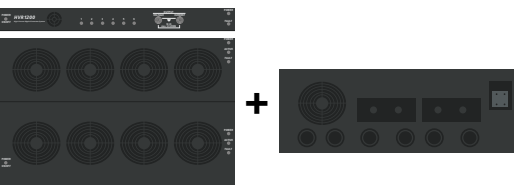
Example Test Results:

DUT: Hydraulic pump for active suspension ($U_{HV} = 400\text{ V}$)

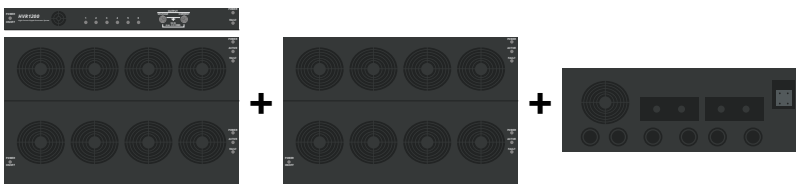


Models Available:

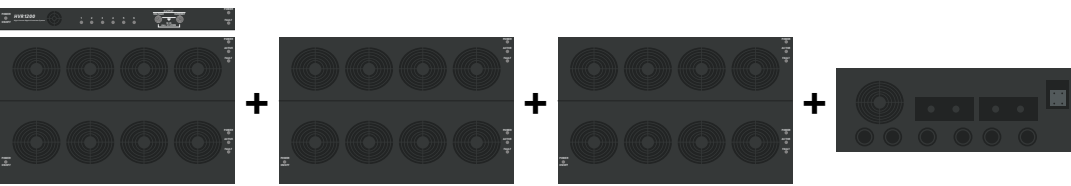
HVR 1200-100RG (100 Ap Ripple)



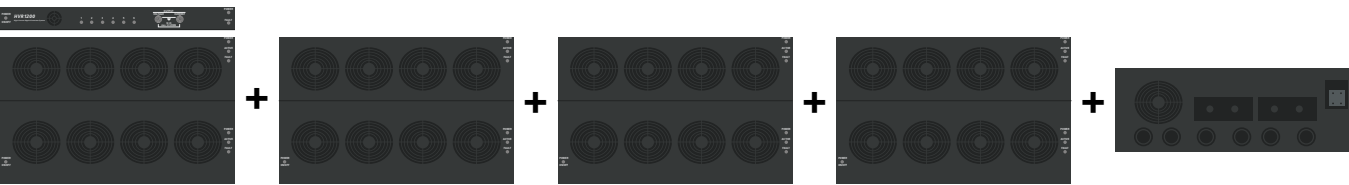
HVR 1200-200RG (200 Ap Ripple)



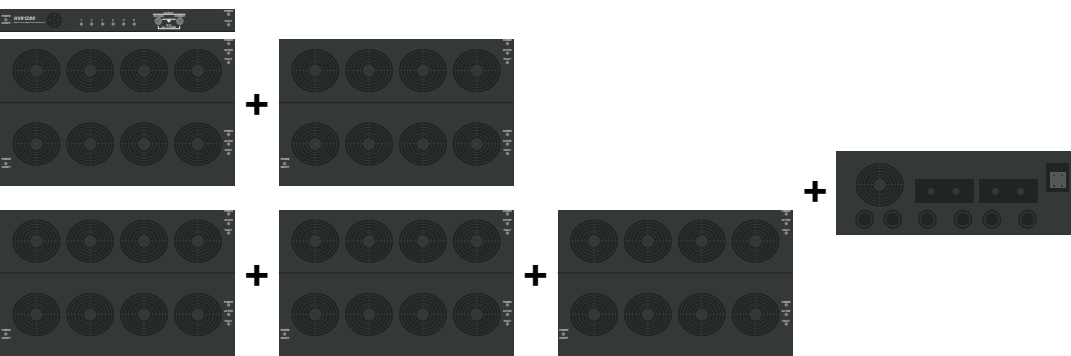
HVR 1200-300RG (300 Ap Ripple)



HVR 1200-400RG (400 Ap Ripple)



HVR 1200-500RG (500 Ap Ripple)



HVR 1200-600RG (600 Ap Ripple)

