



High-Power Charging for Medium- and Heavy-Duty Electric Vehicles

Historically, commercial electric vehicle (EV) chargers have been fairly low-power devices. The typical commercial EV charger found in commercial and mixed-use areas are Level 2 chargers, which typically provides between 7.2kW and 19kW of output power.

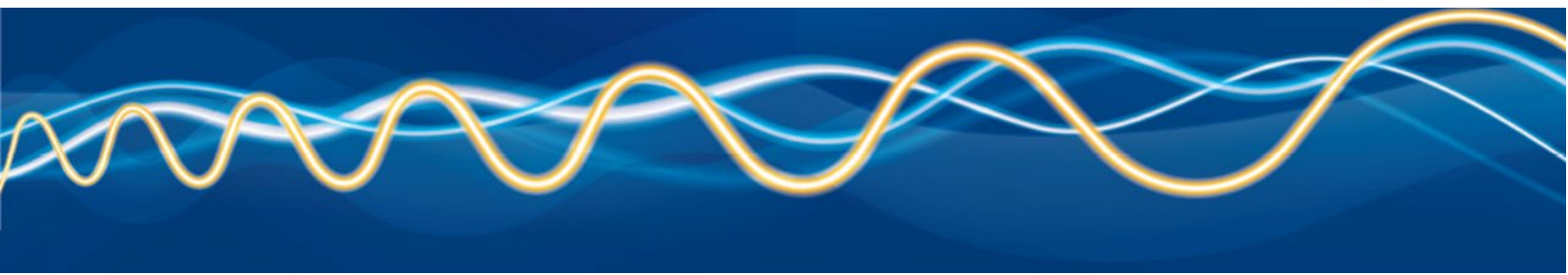
Today's medium- and heavy-duty (M/HD) EVs can have storage capacities from 150kWh to over 600kWh. The designs of Level 2 EV chargers are unable to be "scaled-up" to these power levels – their designs simply cannot handle the thermal or power loads required to support M/HD EV Fleets, which typically require chargers with over 50kW of DC output power.

At Rhombus, we are experts in the design of high-power electrical systems with exceptional reliability and maintainability for the most demanding applications – we have deployed thousands units, with near-zero failure rates.



Solutions That Are Expert-Engineered for Unidirectional M/HD EV Charging

Rhombus applies this high-power expertise to the design of our unidirectional DC fast charging solutions for M/HD EV fleets such as school buses, public transit buses, delivery vehicles, refuse trucks, and drayage tractors. Our EV charging solutions are designed specifically for continuous operation at rated loads. These systems are also designed to support the unique needs of EV fleet operators, including the ability to remotely locate the EV charging dispenser up to 600 feet away from the charger PCS. This allows all the PCS units for a vehicle yard to be located next to the incoming power feed, simplifying deployments.



Model	RES-DCVC125-480
Power Profile	
AC Specifications (Power)	RES-DCVC125-480
Bi-directional capable?	No
Rated Power: (kW/kVA)	125
Utility Grid Voltage: (Vac)	480-3P
Max Rated Utility Current: (Aac)	160A @ 480VAC (60 Hz)
Wiring	3 phase WYE (L1, L2, L3, Neutral, Ground) or Delta (L1,L2,L3, Gnd)
Utility Grid Frequency: (Hz)	60
Power Factor Range	0.5-1.0
THD for Linear Loads	<5%
Maximum Efficiency:	>95%
Grid Isolation	Galvanic, Integrated
DC Output	
Maximum Power (kW)	125
Voltage Operating Range: (Vdc)	530 to 920
Maximum Current: (Adc)	200A (Charging cable limited)
Connector and Cable	CCS 1, Up to 8m (25ft)
Energy Metering	
AC Energy Meter	±2% from 20% to full scale?
Mechanical	
PCS Dimensions: W x D x H mm (in.)	1000 x 600 x 2920 (39.5 x 24 x 115)
PCS Weight: kg (lbs)	975kg (2,150 lbs)
Environmental	
Cooling	Air + Integrated Liquid Heat Exchanger
Environmental Rating	NEMA 3R
Operating Ambient Temp.	-20 °C to 45 °C (-4 to 113°F)
Storage Temperature Range	-30 °C to 60 °C (-22 to 140°F)
Humidity	0 to 95% (non-condensing)
Altitude	De-rated over 2,000m above sea level
Communication & Control	
Network Interface	Standard: Ethernet (Optional: Wifi, 4G, LTE)
External Control & Management	Rhombus VectorStat® for enhanced diagnostics and energy management.
Certification, Safety, Compliance	
Certifications	UL 2202, UL 2231, CSA 22.2
Compatibility	
PCS Compatible with Dispenser Model:	RES-D2-CS20

All specifications are configuration dependent and subject to change
 VectorStat® is a registered trademark of Rhombus Energy Solutions, Inc.

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