

**OEM Production**  
*First Article - April 2023*  
*Full Production - July 2023*



# LCHBA600

- *Hybrid Systems*

# LCEBA600

- *Battery Electric Systems*
- *Fuel Cell Systems*



**High Power - 17.1kW**  
**600VDC to 24VDC Converter**



## Silicon Carbide (SiC) Design

**Ultra High Efficiency - 94% @ 650V Input / 600A Output**

- Liquid-cooled for high power density.
- 600A of 28.5VDC low voltage power for the most demanding HEV, ZEV or FCV accessory electrification.
- IP67 Environmental Rating
- Combine with Vanner's Model Based Battery Monitoring to dynamically charge low voltage batteries for optimum life.
- Bi-directional for transmission integrated generator systems.

***Population of 6000+ air-cooled HBA & EBA units in world-wide service, since 2010.***

LCHBA Electrical Specifications		
Parameter	Rating	Units
Output Current Rating/Max Continuous Ambient Air Max / Coolant Temp = 55°C	550 85 (185)	A °C (°F)
Output Current Rating/Max Intermittent Ambient Air Max / Coolant Temp = 55°C	600 50 (122)	A °C (°F)
Input Voltage Range	500 – 800	VDC
Min Input Voltage for Full Power Out	600	VDC
Efficiency (650VDC In / 600A Out)	94	%
Max Input Current	35	A
Output Voltage Range	24 - 30	VDC
Power Rate of Rise	15	kW/s
Max Ripple Voltage	<100	mV rms
Standby Current	<50	mA
High Voltage Discharge	< 42 within 30 seconds	VDC
LCHBA Mechanical Specifications		
Parameter	Rating	Units
Cooling Method / Coolant Type	50/50 Mix of Water and Ethylene Glycol	-
*Coolant Inlet Temperature Range	-40 to +70 (-40 to 158)	°C (°F)
Coolant Flow Rate Min / Nom / Max	6 / 10 / 15 (1.6 / 2.6 / 4)	L/min (gpm)
Coolant Working Pressure Range	28 - 140 (4 - 20)	kPa (psi)
Coolant Cavity Volume	500 (.13)	mL (gal)
Storage Temperature	-40 to +105 (-40 to 221)	°C (°F)
Weight	45 (100)	kg (lb)
Enclosure Environmental Protection Rating	IP67	-
Pollution Degree	4	-
Enclosure and Cover Material	Plated cast aluminum	-
Cooling Loop	Cast in place stainless steel tube	-
Service	There are no field serviceable components. Components shall be serviced by Vanner personnel only.	-
Environmental Considerations	Plated cast aluminum enclosure provides protection against salt, fungus, dust, water, fuel vapors and all fluids associated with commercial and off-highway vehicle operations.	-
Mounting Location	Mount on a flat, horizontal surface close to the high voltage batteries/high voltage distribution to permit short cable runs.	-

