

Explore our Technologies

RES-DCVC60-480 EV DC Fast Charging Power Conversion System (PCS)

for Electric Vehicles



RES-DCVC60-480 EV DC Fast Charging Power Conversion System (PCS) from BorgWarner

Medium- and Heavy-Duty Electric Vehicles (EVs) Require More From Their Chargers

Today's medium- and heavy-duty (M/HD) EVs can have storage capacities from 150kWh to over 600kWh. These vehicles need charging systems that have been designed to continuously supply high rates of clean, reliable DC power (60kW to 125kW) on a continuous basis. At BorgWarner, 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 of our units which are proudly **designed and manufactured in the USA**, with near-zero failure rates.

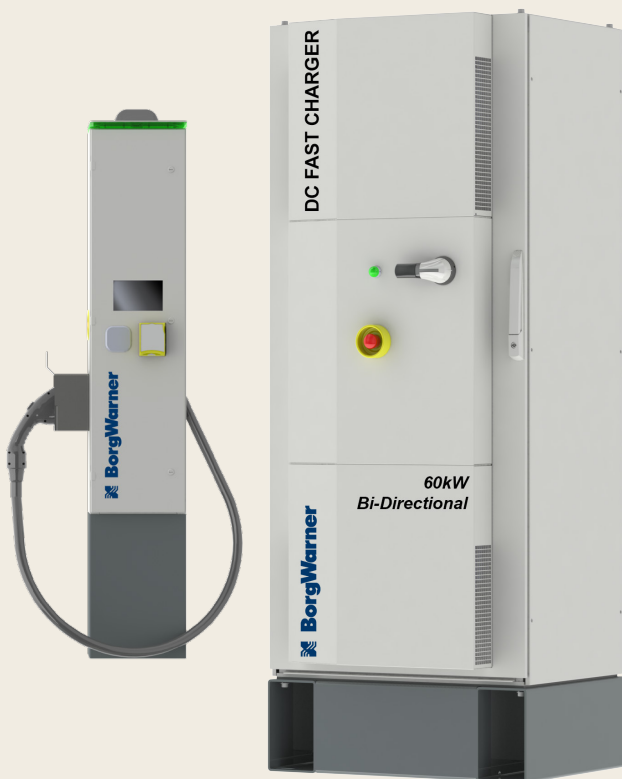
Solutions That Are Expert-Engineered for V2X-Capable EV Charging

The utility grid's resilience is constantly being challenged, from both weather events and peak loads. Vehicle to grid (V2G) provides the ability to offset peak loads by offering/selling excess vehicle power back to the grid, reducing total energy costs. Vehicle to building (V2B) enables vehicle energy to power critical building circuits during power outages, improving overall site power resilience. BorgWarner charging solutions are UL 1741-SA certified, simplifying fleet operator deployment of V2X-capable charging systems for the M/HD EV fleets.

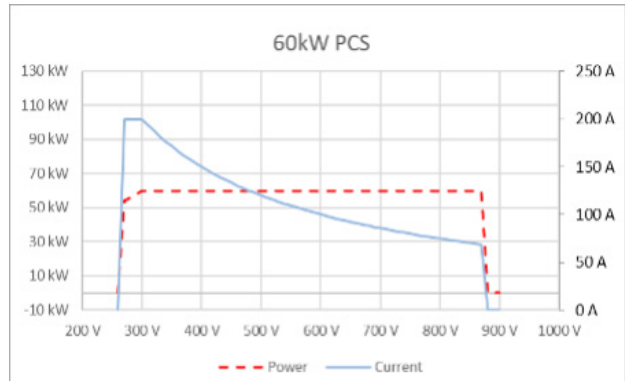


And If Your Fleet Only Needs Unidirectional Capabilities, BorgWarner Is Still Your Best Option

At BorgWarner, we also apply our 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 small footprint EV charging dispenser up to 600 feet away from the charger PCS. This allows for optimal site placement in a high density vehicle yards when considering utility power feeds and high density parking.



Power Profile



AC SPECIFICATIONS (POWER)

| | |
|----------------------------------|--|
| Bi-directional capable? | YES (RES-DCVC60-480-V2G); NO (RES-DCVC60-480) |
| Rated Power: (kW/kVA) | 60 |
| Utility Grid Voltage: (Vac) | 480VAC 3-P @ 79A |
| Max Rated Utility Current: (Aac) | +/-79A@480VAC/60Hz (V2G); 79A@480 VAC/60Hz (non-V2G) |
| Wiring | 3 phase, WYE (L1, L2, L3, Neutral, Gnd.) or Delta (L1, L2, L3, Gnd.) |
| Utility Grid Frequency: (Hz) | 60 |
| Power Factor Range | ± 0.5 |
| THD for Linear Loads | <5% |
| Maximum Efficiency: | >95% |
| Grid Isolation | Galvanic, Integrated |

DC OUTPUT

| | |
|-------------------------------|---------|
| Maximum Power (kW) | 60 |
| Voltage Operating Range (Vdc) | 270-870 |
| Maximum Current (Adc) | 200A |
| Connector and Cable | CCS1 |

ENERGY METERING

| | |
|---|------------------------------|
| AC Energy Meter (Option) / Req. for V2G | +/-1% from 10% to full scale |
|---|------------------------------|

MECHANICAL

| | |
|----------------|------------------------|
| PCS Dimensions | 31.5"W x 24.5"D x 82"H |
| PCS Weight | 1600 lbs. |

ENVIRONMENTAL

| | |
|---------------------------|--------------------------------------|
| Cooling | Air cooled |
| 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

| | |
|-------------------------------|--|
| Local Control | Modbus RTU/CAN |
| External Control & Management | VectorStat® for enhanced diagnostic and energy management. |

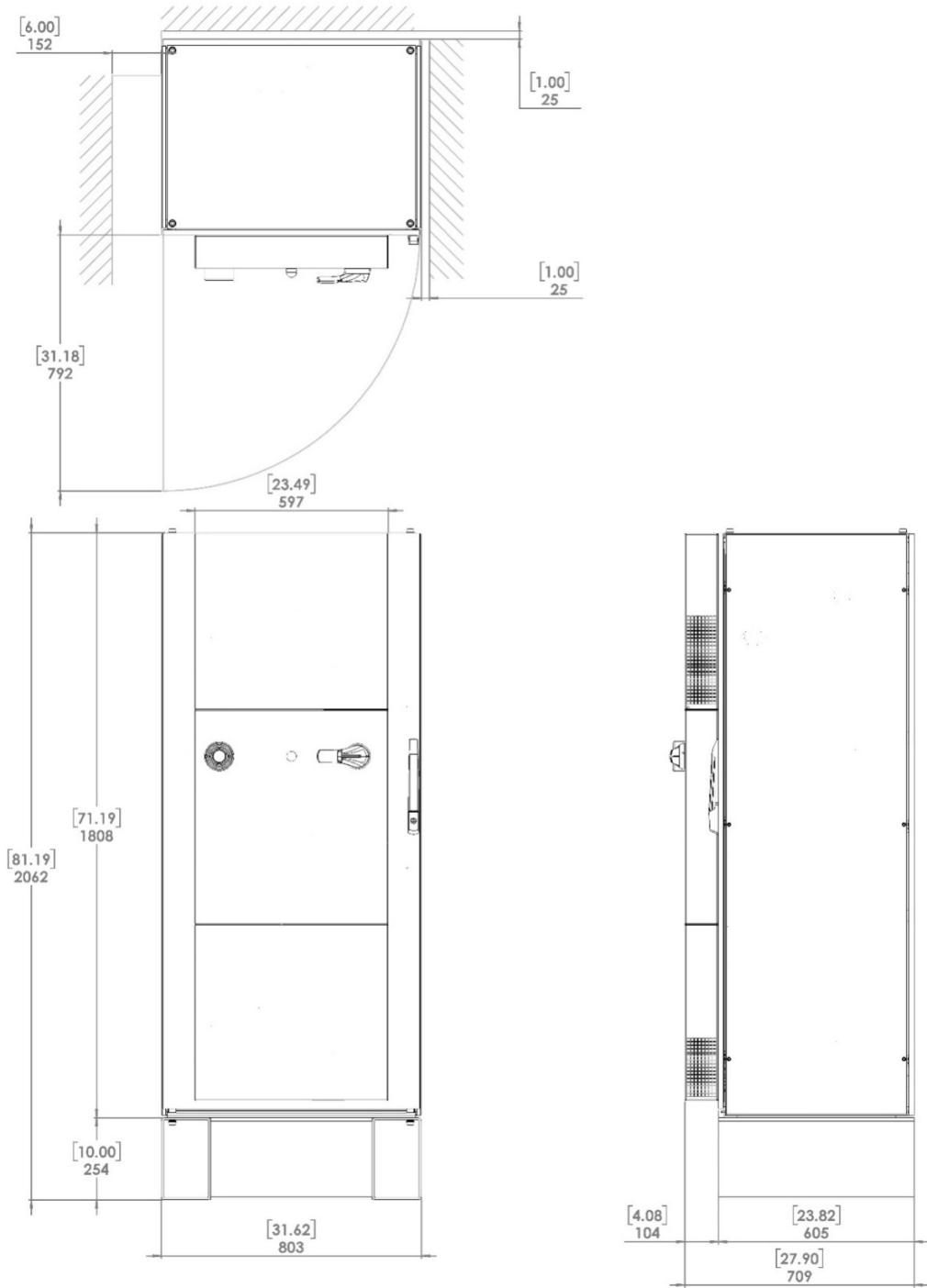
CERTIFICATION, SAFETY, COMPLIANCE

| | |
|----------------|--|
| Certifications | UL 2202, CSA22.2, IEEE 1547.1, UL1741-SA |
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COMPATIBILITY (MAX DISPENSERS TO PCS RATIO)

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|--------------------------------------|--|
| PCS Compatible with Dispenser Model: | RES-D2-CS20 (1:1) or RES-D2-CS20-V2G (1:1) RES-D3-CS20 (5:1) or RES D3-CS20-V2G (5:1) |
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RES-DCVC60-480 PCS DIMENSIONS



All specifications are configuration dependent and subject to change
VectorStat® is a registered trademark of BorgWarner Inc.



Find out more about our
DC Fast Charger here!

borgwarner.com

