

22 KW Onboard Charger (OBC)

Custom Designed Automotive Onboard Charger With Bidirectional Charging Mode And Universal Grid Compatibility





Highlights

HEPEG offers vertical integration for custom-made All-in-One Solution that seamlessly integrates with global charging standards solution for Bi-directional 22kW Onboard Charger (OBC) to charge any type of electric vehicle high-voltage battery system.







Why HEPEG?

Using solution by HEPEG will help to cut down building costs and avoid dependency from other suppliers.



EXPERIENCE
 HEPEG has successfully delivered OBC for production



BENEFITS

HEPEG can provide all design manufacturing files to EV OEM

FAMILIARITY
 HEPEG knows EV US/EU charging standards, systems and equipment



HISTORY
 HEPEG has collaborated successfully with EV OEMs in the past

RESPONSIVENESS
 HEPEG can adapt quickly and respond to EV costumers needs





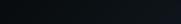
OBC Key Features

V2X CHARGING ENABLES BIDIRECTIONAL ENERGY FLOW BETWEEN ELECTRIC VEHICLES (EVS) AND THE FOLLOWING EXTERNAL SOURCES

- > V2L vehicle supplies external or internal AC Loads
- > V2B/V2H Vehicle supplies AC to building or home
- > V2G Vehicle supplies AC directly into the public grid
- V2V vehicle supplies AC into another vehicle/trailer or vice versa







ALLROUNDER FOR GLOBAL APPLICATION

Charging standards:

Type2, Type1, CCS 1/2, optional: CHAdeMO, GB/T, NACS

AC Direct Mode Universal Grid-topologies:

Standard three phase TT/TN/IT w/ or w/o neutral Single phase (EU:L1-N) / Split phase (USA: L1-L2/N) Generator and range extender operation

DURABILITY AND SAFETY

- High IP protection level IP6K9K/IP67
- Functional Safety ISO 26262 ASIL B for on road vehicle application.
- ECE R10/IEC 61581 compliant
- ISO 16740-4 (Environmental Durability) compliant Cyber Security
- ISO 21434



COMMUNICATION AND DIAGNOSTICS

CAN 1

- SAE J1939 vehicle CAN interface
- UDS Diagnostic Services ISO 14229

CAN 2 Internal

- Enhanced diagnostics
- Inter cluster communication in Master-/Slave- Mode

OUTSTANDING PERFORMANCE AND EFFICIENCY

- Outstanding efficiency using high frequency Silicon Carbide (SiC) technology
- Extremely compact and lightweight design
- Shortest charging time due to continuous full load performance
- Fully EMI/EMC compliant according to ECE R10







OBC Technical Data



- Input/output AC voltage 1-ph.
- Input/output AC current 1-ph.
- Battery Voltage Range
- Battery Current
- Voltage total harmonic distortion
- AC Power
- Power factor
- Starting inrush current
- Input frequency
- Insulation resistance Leakage current
- Output/Input capacitor(Without Battery)
- Output/Input current ripple (3 Ph.)
- Output/Input voltage tolerance (3 Ph.) Operating temperature (8.2 ltr/min)
- Storage temperature
- Max. liquid temperature
- Liquid temperature range

- Outline dimensions
- IP Protection
- Functional safety
- AC overvoltage protection
- AC undervoltage protection
- Short circuit/ overcurrent protection
- Over temperature protection
- Insulation resistance
- +24V/12V reverse polarity protection
- Communication failure protection
- Passive Discharge

360V to 525V (400V/480V) x 3 <32A x 3 (G2V-FCM Mode) 85V to 305V (120V/240V) <80A (Type 1 Split Ph.)

200V to 920V (Optional Range) -70A to +70A (Optional Range)

< 5.5% 0.98

14.7A

45Hz to 65Hz

5.5Meg 3.5mA

<97% 100uF

-30°C to +60°C -40°C to +85°C

+70°C -30°C to +65°C

-2500m to +2500m 19.7kG

Aluminum Die-Casting or CNC

590 x 385 x 99mm IP6K9K/ IP67

ASIL B

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Let's Do Something Unique and Valuable





Contact us: in

Phone: (747) 955-2555

Email: <u>info@hepeg.com</u>

Web: <u>www.hepeg.com</u>

Location: Los Angeles, CA

Thank You!



