High-power charging integrated inverter

What is an integrated charger-inverter (ICI)?
Integrated charger-inverters (ICI) allow using power electronic components as an inverter in driving modeand can be reconfigured by relays and contactors to be used as a charger in charging mode.

What are integrated Chargers?
Integrated chargers typically fall into one of two categories : the first uses electric machines with phase counts greater than three(herein referred to as multi-phase) due to issues surrounding the charging torque phenomenon; the second where additional power electronics are added to the drive,referred to as add-on interfaces.

Can an integrated charger-inverter be used for a high-performance electric motorcycle?
5. Conclusions An integrated charger-inverter (ICI) with an induction motor for high-performance electric motorcycle is proposed. To reduce the weight, volume, and cost, the main components are shared in drive and charge modes.

What is the efficiency of integrated charger?
The efficiency of the proposed integrated charger un- power is 98.4%. Other results in literature are in the range der different load and line conditions was measured to of 93-95% for 3.3kW add-on interface integrated chargers demonstrate its viability.

Integrated chargers provide the opportunity to bring high power charging on-board the vehicle with minimal need of additional power electronics by reusing existing traction ...

A stand alone building integrated PV tied bidirectional capability direct DC electric vehicle charging system through Z-source inverter impedance network capacitors.

This review examines the latest advancements in intelligent multilevel inverters (MLIs) with a focus on their integration into electric vehicle (EV) charging systems. MLIs are ...

Conventional IC-based transportation is replaced by modern electric vehicle EVs to limit Greenhouse gas emissions (GHG). However, EV charging is completely dependent on ...

A high-performance electric motorcycle (HPEM) integrated charger-inverter (ICI) with an induction motor (IM) is proposed in this article. Typical components are shared in drive and charge ...

The proposed charger is integrated with propulsion machine drive system that serves to utilize the high power-rated electrical machine and motor-drive voltage source ...

Various integrated chargers have been proposed in literature, based on different drivetrain configurations. A simple solution proposed in [8] demonstrated ac charging from a ...

This charge-inverter allows for both the slow charge and rapid charge function, at no cost, while at the same time offering significant reductions in terms of weight and size. In ...

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