

عنوان مقاله:

Topological and structural review of EV fast chargers

محل انتشار:

فصلنامه سیستم های تبدیل انرژی الکترومکانیکی، دوره 1، شماره 2 (سال: 1398)

تعداد صفحات اصل مقاله: 10

نویسندگان:

Faculty of Electrical and Computer Engineering, Shahid Beheshti University, Evin, Tehran, Iran - - -

Faculty of Electrical and Computer Engineering, Shahid Beheshti University, Evin, Tehran, Iran - - -

Faculty of Electrical and Computer Engineering, Shahid Beheshti University, Evin, Tehran, Iran - - -

خلاصه مقاله:

The increasing growth of the technology and industry of electric propulsion, and consequently the growth of the industry of electric energy storage systems, including batteries, have raised challenges such as optimizing the charging process and storage of electric energy. One of the important factors in optimizing the charging process is reducing the time interval. Hence, today, topologies such as fast charging and stations equipped with this topologies are expanding. Quick charging topologies reduce the length of the charging process by optimizing the electric charge circuit and optimizing the design of switching elements and its control system. This paper first examines the electric vehicle charging system in terms of the standards that classify the input voltage level as well as the technologies that increase the flexibility and efficiency of the electric vehicle charging system. Technologies such as unidirectional and bi-directional charging system, inductive and conductive charging system, integrated and non-integrated systems are presented and discussed in this article. In the second step, these systems are transformed into switching components and features such as the possibility of development with renewable energy production systems, the possibility of injecting power from the electric vehicle energy storage system into the power grid to provide part of the power required at peak demand and also The complexity and multiplicity of key elements have been examined and compared.

کلمات کلیدی:

Fast Charge, Storage systems, Charging Process, Fast Charge Stations

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1150193>

