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# On- Board Non-Isolated Battery Charger for EV Application Using the BDC

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## Abstract

Non-isolated battery charger has been giving solutions in industrial applications so far. The survey has explained that generated torque in the motor must be zero to use the motor in charger circuit. Furthermore, this paper has been presented bidirectional converter for electric drive the proposed non-isolated integrated chargers are following advantages viz. Less price; structure is simple and very easy to control. Furthermore the switching devices have been replaced with electronic switches therefore lower price of the charger compared to the other alternatives. Results have been presented using MATLAB/Simulink software.

**Keyword:** On- Board Battery Charger, DC/DC Boost converter, Bidirectional converter (BDC), electric vehicles (EVs), THD