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(57) Abstract :

There are numerous power quality issues as a result of the widespread usage of solid-state converters in modern loads like electric cars and smart gadgets as well as renewable energy sources like solar and wind. Poor power quality may have an impact on utility assets such as distribution equipment, power protection, and control devices. Harmonics can also taint meter readings, which can lead to erroneous or unsuccessful relay trips. Although significant progress has been achieved in this area, considerable study still needs to be done to fully understand the effects of power quality on distribution grids. The proliferation of power electronics-based equipment has caused a slew of serious issues with the quality of electric power supply. Conventional power quality mitigation equipment is proving insufficient for an increasing number of applications, prompting researchers to focus on developing dynamic and adjustable solutions to power quality issues.

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