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(57) Abstract :

TITLE:œNOVEL INTERLINE UNIFIED POWER QUALITY CONDITIONER (IUPQC) FOR MULTI-FEEDER SYSTEMS WITH FOUR CONVERTERS• 7. ABSTRACT The present invention relates to an improved Interline unified power -quality conditioner (IUPQC) with a novel circuit design (100) capable of compensating both voltage and current imperfections in both feeders by transferring power between the two adjacent feeders. In this system, a new topology of IUPQC is proposed with four converters (102) (two shunt and two series VSCs) sharing a common dc-link capacitor. With this arrangement power transfer is possible from one feeder to adjacent feeders to compensate the problems like sag/swell and Current/Voltage Harmonics by sharing power compensation capabilities. The Proposed System performance is analyzed under various conditions such as sag and/or swell and Current and/or Voltage Harmonics by sharing power compensation capabilities by simulation results using MATALB/SIMULINK. Figure related to abstract is FIG. 1.

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