

FLC with 3DSVM for 4LEG 4WIRE Shunt Active Power Filter

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Abstract : In this paper, a controller based on fuzzy logic control (FLC) associated to Three Dimensional Space Vector Modulation (3DSVM) is applied for shunt active filter in $\alpha\beta$ axes domain. The main goals are to improve power quality under disturbed loads, minimize source currents harmonics and reduce neutral current magnitude in the four-wire structure. FLC is used to obtain the reference current and control the DC-bus voltage at the inverter output. The switching signals of the four-leg inverter are generating through a Three Dimensional Space Vector Modulation (3DSVM). Selected simulation results have been shown to validate the proposed system.

Keywords : flc, 3dsvm, sapf, harmonic, inverter

Conference Title : ICPESE 2015 : International Conference on Power and Energy Systems Engineering

Conference Location : Paris, France

Conference Dates : August 27-28, 2015