

## **A Three Phase Shunt Active Power Filter for Currents Harmonics Elimination and Reactive Power Compensation**

**Authors :** Amar Omeiri

**Abstract :** This paper presents a three-phase shunt active power filter for current harmonics suppression and reactive power compensation using the supply current as reference. The proposed APF has a simple control circuit; it consists of detecting the supply current instead of the load current. The advantages of this APF are simplicity of control circuits and low implementation cost. The simulation results show that the proposed APF can compensate the reactive power and suppress current harmonics with two types of non-linear loads.

**Keywords :** active power filter, current harmonics and reactive power compensation, PWM inverter, Total Harmonic Distortion, power quality

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