

# A Passive EMI Filter for the Reduction of Active Filter Generated Network Distortions

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*Abstract*— EMI – Electro Magnetic Interference- filtering represents an anti-distortion measure used in the mitigation of the conducted interference, i.e. electromagnetic perturbations on the supply cord, data or signal lines. The paper reviews the design of the magnetic circuit of a three-phase EMI filter, neglecting the displacement current. The designed EMI filter is meant to mitigate harmonic components injected in the power grid by a perturbation source (a PWM - Pulse Width Modulation - controlled power converter). The principles of design are confirmed by simulation and conducted interference tests on the filter.