

Title (en)

POWER SUPPLY FOR NON-LINEAR LOADS

Title (de)

STROMVERSORGUNG FÜR NICHTLINEARE LASTEN

Title (fr)

ALIMENTATION ELECTRIQUE POUR CHARGES NON LINEAIRES

Publication

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Application

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Abstract (en)

[origin: WO9721264A1] The invention relates to a power supply for non-linear loads (2), such as high pressure sodium lamps in greenhouses or road lighting. Non-linear loads connected between phase (R, S, T) and neutral (N) generate third harmonic currents causing losses and temperature rise in for example conductors and transformers. To reduce the third harmonic current a zero-inductor (6) is inserted either with one winding on a common core in series with each of the phase conductors, or just one winding in series with the neutral conductor. In a preferred version the conductors (R, S, T or N) are threaded through the core forming single-turn windings. In a further development of the invention the core is fitted with an air gap (9) and a multi-turn winding (8) connected to a capacitor (7), which together with the zero-inductor constitute a parallel resonant filter tuned to a frequency in the vicinity of that of the third harmonic.

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