

The proposed ac/dc converter with power factor close to unity contains thyristor gate blocks, a power active filter, a transformer, a phase-pulse control unit for controlling the thyristor gate blocks, voltage and current transducers, unit for converting instantaneous phase voltage values in the a, b, c coordinate system into voltage values in the α , β coordinate system, a filter for isolating the variable component of the active power, unit for calculating instantaneous values of the active and reactive power. Additionally, the converter contains auxiliary diodes, a mean reactive power regulator, a thyristor block control signal regulator, a unit for comparing the thyristor block control signal with the output signal of the mean reactive power regulator, and a filter for isolating the variable component of the reactive power.