

The invention relates to electrical engineering and electrical power engineering, in particular to alternating current voltage-to-alternating current voltage converters of the electrical and electrical power systems.

The bidirectional alternating current voltage-to-alternating current voltage converter comprises an alternating-current source (1), connected in series to  $n$  series connected circuits. Each circuit comprises two branches: the first – consisting of two higher harmonics filter capacitors (2), connected in series, and the second – consisting of two electronic alternating-current switches (4 and 5), connected in series. The converter further comprises a high-frequency transformer (7), consisting of a ferromagnetic core with a gap, a primary coil, consisting of  $n$  sections (3), each of which is connected between the connection point of two filter capacitors (2) and the connection point of two electronic switches (4 and 5) of each circuit, and a secondary coil (6). The secondary coil (6) of the transformer (7) is connected in series to an electronic alternating-current switch (8), the latter being connected in parallel to a higher harmonics filter capacitor (9) and to a second alternating-current source (10). Each of the electronic alternating-current switches (4, 5 and 8) consists of two series-opposite interconnected transistors, at the same time each transistor is shunted by a diode.

Claims: 1

Fig.: 3

