A three-phase filter of zero-phase-sequence (current) harmonics of autotransformer type comprises a three-legged core and four windings wound in the same direction of spiral line with equal number of turns. Windings of three-phase filter of zero-phase-sequence (current) harmonics of autotransformer type are located on two end legs of three-legged core as two identical coils having by two identical windings connecting so that winding start a first winding of a first end leg, for example left one, is connected to conductor of first phase, for example A. Winding finish of the first winding of the first end leg is connected to the neutral conductor. Winding finish of a second winding of the first end leg is connected to conductor of third phase, for example C. Winding start of the second winding of the first end leg is open-delta connected to winding finish of the second winding of a second end leg, for example of right one. Winding start of the second winding of the second end leg and to the neutral conductor. Winding start of the first winding of the second end leg is connected to conductor of second phase, for example B.