

ABSTRACT

At this time, the need for electrical energy is very much. To meet the needs of a lot of load, it takes more than one generator on one power plant provider. Instead of connecting more than one generator paralel on one bus to increase power. Power addition can be done in the nucleus of the MISO transformer with the resulting magnetic flux. Multiple input single output (MISO) transformer is a transformer that has more than one primary input and has only one sekunder, for the addition of power in the transformer core with the resulting magnetic flux. The design of miso transformer can be done manually with calculation and determination of the capacity of the transformer. MISO transformer that has been designed step-up type from 20 V to 60 V with specifications has two primary inputs with a total of 65 windings in primary 1 and primary 2 with a wire diameter of 1 mm, at its secondary output the winding amounted to 215 coils with a wire diameter of 0.8 mm, where the dimensions of the iron core are 15,36 cm² with an E-shaped core. Construction of a MISO transformer is not much different from a regular transformer. The result of the MISO transformer test can increase the voltage from 20 V to 60 V as designed and then combine the power from primary input 1 by 104 W and primary input 2 by 108 W to 183.6 W at its secondary output, with an efficiency of 86.6%.

Keywords: Electrical energy, generator, multiple input single output (MISO) transformer