

Can drive single-phase motor inverter





Overview

Can a three-phase motor drive a two-level inverter?

This paper proposes a multiple-motor drive system with a three-phase two-level inverter that consists of six switches for independent speed control of a three-phase motor and a single-phase motor. The three-phase motor used in the proposed drive system is a fan motor, and a single-phase motor is a pump motor.

What type of inverter is used in a three-phase motor drive system?

Two-level inverter configurations that can be used in three-phase motor drive systems include the three-phase bridge in-verter with wye or delta connected machines, and sets of single-phase full-bridge (H-bridge) inverters for machines with open-ended windings. The former is far more common .

Does a single phase motor affect a three phase motor?

As the single-phase motor current is a zero-sequence component flowing in the three-phase motor, it does not affect the operation of the three-phase motor. The proposed drive system can reduce the number of power switches compared with the conventional drive system that uses a single-phase and a three-phase inverter.

What is a single-phase motor?

The single-phase motor is connected in series between the neutral point of the three-phase motor and the midpoint of the DC-link capacitors. The proposed drive system can be an alternative for reducing the number of power electronic switches compared with the conventional drive system that has a single-phase and three-phase inverter.



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