Pelacak matahari dua sumbu menggunakan ldr untuk meningkatkan absorbsi matahari / Elang Parikesit, Doddy Purwadianto, FA. Rusidi Sambada

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Abstrak

ABSTRACT
The position of the sun in the sky always changes periodically. A lot of research has been done to follow the sun's motion using a solar tracking system to increase the amount of solar energy that can be absorbed. The solar tracking system can be grouped into passive and active system. Active sun tracker system uses motor drive in following the motion of the sun. The current active tracking system is using one or two rotary axis. Active two-axis solar tracking system provides greater efficiency and effectiveness than one-axis solar tracking system. This study aims to increase the absorbable sun energy with a simple two-axis solar tracking system. This research has been done by experimental method by making a model of two-axis sun tracker and its field data retrieval. The main parts of the model in this study are (1) LDR sensor, (2) microcontroller and (3) motor drive. Initial data of field test results shows a maximum increase (269%) in absorbable solar energy on a model using a sun tracker than models that do not use a solar tracking system.