Implementation of Automatic Load Sharing in Power Transformers Using Arduino Uno

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Abstract: *The rising demand for electricity and the proliferation of high-power appliances have underscored the need for efficient load management in power systems. This paper introduces a prototype model for automatic load sharing among transformers using Arduino UNO. The system dynamically distributes loads between multiple transformers to prevent overloading, ensuring a stable power supply and extending transformer lifespan. By balancing the load efficiently, the proposed solution enhances reliability and reduces the risk of transformer failures. Additionally, the system is cost-effective, scalable, and well-suited for small to medium-scale power distribution networks. Its implementation can significantly improve energy efficiency and reduce operational costs in power distribution systems. The use of Arduino UNO makes the design accessible and adaptable for various real-world applications, offering a practical approach to modern load management challenges.*

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