

3 PHASE LOAD BALANCING SYSTEM



Introduction

Power systems are designed to work in 3 Phase during major portion of their operation. They work best if balanced, which means that load on each phase is equal in magnitude. However, due to various reasons ranging from operation of different facilities, designing and placement of various loads and their working, power system suffers serious imbalance. An imbalanced load causes higher losses & inferior efficiency, reduces equipment life and poses higher risk of failure.

Residential and commercial consumers mostly operate in power imbalance which makes them major contributor in power system imbalance and cause all the related mis-happenings. This product ensures power balance amongst all three phases and helps in significant reduction in electricity bills.



Features

- Enhance power system efficiency by ensuring balanced operation of electricity load
- Ensures equal load distribution amongst three phases
- Smart, efficient and uninterrupted load shifting
- Electricity and cost saving of upto 20%

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Product Market

- Electricity Distribution Companies (DISCOs)
- · Commercial & Domestic Users
- Electronics Industry

NATIONAL UNIVERSITY OF SCIENCES & TECHNOLOGY



BI-DIRECTIONAL SMART METER

Introduction

Humans are enjoying the present life style primarily due to presence of electricity and technologies which can be termed as its derivatives. However, conventional means of electricity generation are facing serious opposition due to variety of reasons such as depletion of fossil fuels, environment degradations and nuclear risks. There is an urgent need to develop modern technologies, hardware and procedures to include renewable and alternate energy sources in power grids.

For installation of renewable sources at residential and commercial places and their use as distribution generation, a product has been developed to employ bidirectional metering system. Any excess electricity produced will be returned to the respective Distribution Company (DISCO) resulting in reduction of electricity bills.

Features

- Bidirectional metering
- Complete digital design with enhanced security
- · Power Quality Analysis (PQA)
- Interface of Home Area Network (HAN) will allow cross-checking and easy verification of meter readings while sitting at home using mobile-app
- Reasonable cost as compared to competitors

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SOLAR PANEL CLEANING ROBOT



Introduction

Accumulation of dust on surface of solar panels in natural. The accumulated dust can reduce the system efficiency up to 50%. Main environmental factors that affect the efficiency are dust, bird dropping, snow, pollen, and sea salt. This robot will clean your solar panels without using water.



Features

- Energy efficient by 20% percent
- · Cleans an array of 30 plates in less than a minute
- Reduces water wastage
- Reduces the need of man power for cleaning solar panels
- · Lightweight and user friendly

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Product Market

- Renewable Energy Industry
- Solar Powered Sites