

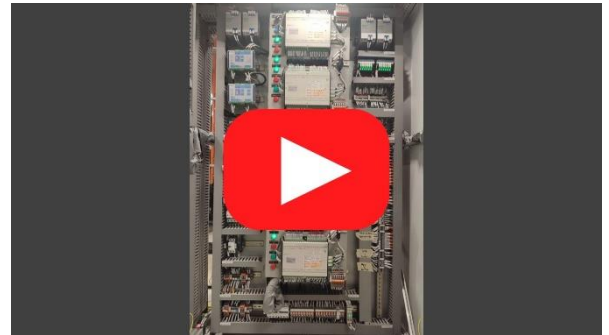
ENGENTECH Malaysia



Redundant Control Solution

Customer Background:

An electronics manufacturing plant in Malaysia, specializing in high-tech production, required a robust and reliable emergency power solution to maintain uninterrupted operations. The plant operates critical manufacturing lines that demand a continuous power supply to avoid production delays, potential equipment damage, and economic losses. With stringent requirements for operational efficiency and safety, the facility sought a cutting-edge solution to manage its emergency power system effectively.



Problem Statement:

The electronics manufacturing plant needed to ensure uninterrupted power supply during grid outages or instability. The new plant required emergency power system with advanced redundancy, intelligent load management, and seamless synchronization capabilities. This exposed the facility to risks, including production downtime, increased operational costs, and potential safety hazards. User-friendly controls are needed for operators to efficiently manage and troubleshoot the system during emergencies.

Solution:

ENGENTECH's engineering team designed and implemented a state-of-the-art emergency power control solution tailored to the plant's needs. The solution centered around the Woodward **easYgen 3400XT-P1 controller for redundancy control**, ensuring **high reliability**.

Key features of the solution included:

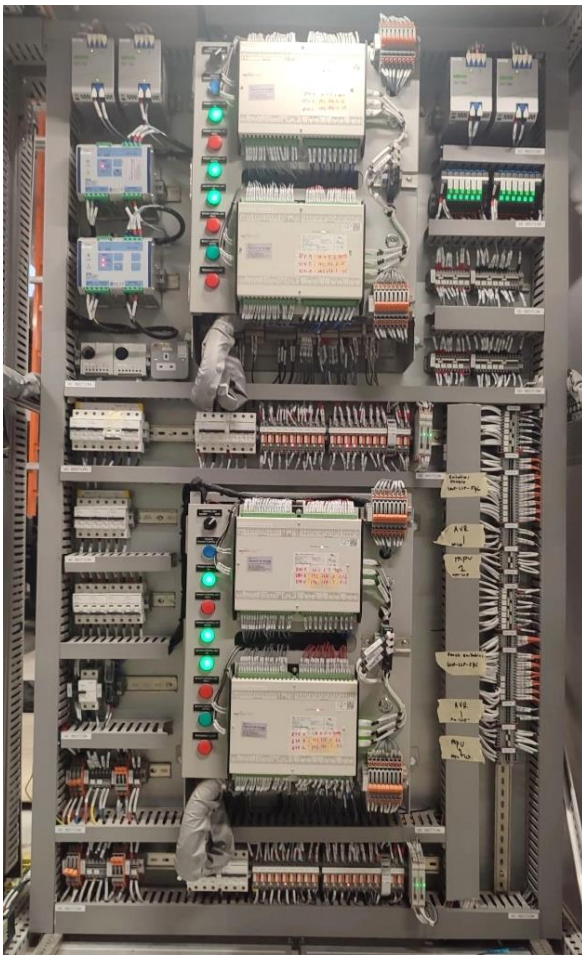
- **Intelligent Load Management**
Incorporated intelligent load management and active load shedding capabilities to prioritize critical loads during power outages, ensuring optimal utilization of emergency power resources
- **Advanced Synchronization with LS-6XT**
Enabled synchronization across three grid incoming feeders and two bus ties for enhanced power management.



- **User-Friendly HMI**
Developed an intuitive Human-Machine Interface (HMI) to simplify operations and troubleshooting for the plant's operators.
- **Expansion of digital I/O's with IKDM Modules**
Integrated auxiliary support systems, such as remote radiator and water circulation systems, fuel cooling systems, diesel fuel management, and engine preheating systems, using flexible Logic Manager.

Key Features of the Microgrid

- **Enhanced Reliability**
The redundancy control system and intelligent load management ensured uninterrupted operations during grid outages.
- **Operational Efficiency**
The user-friendly HMI reduced operator training time and allowed for quick troubleshooting, minimizing downtime.
- **Economic Benefits**
By preventing production halts and optimizing power utilization, the plant achieved substantial cost savings.
- **Scalability**
The solution's modular design allowed for future expansions and upgrades without significant disruptions.



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woodward.com/xyz