

# ENGENTECH | Malaysia

## Redundant Control Solution

ELECTRONICS MANUFACTURING PLANT



### 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

Reliable power is not assured, and disruption causes unplanned downtime, increased operational costs, potential safety hazards, and the opportunity cost of missing customer deliveries.

### Solution

The manufacturing plant invested in an emergency power system to ensure continuous power during grid instability or outages. They chose Woodward's easYgen 3400XT-P1 platform for reliable control of the backup genset, providing advanced redundancy, intelligent load management, and seamless synchronization capabilities. User-friendly controls enable operators to efficiently manage and troubleshoot the system during emergencies.

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.

## LOCATION

Malaysia

## OBJECTIVE

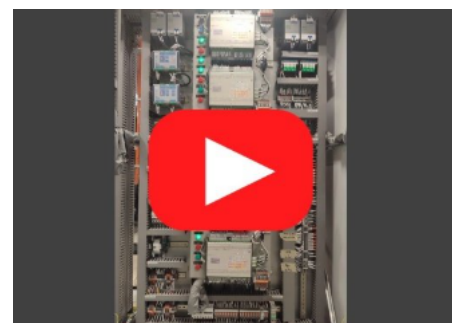
Delivering maximum power reliability using a redundant control system to safeguard operations during grid outages or instability

## SOLUTION

- > Redundant easYgen-3400XT-P1
- > LS-6XT

## RESULT

Enhanced reliability, operational efficiency, economic benefits, and scalability



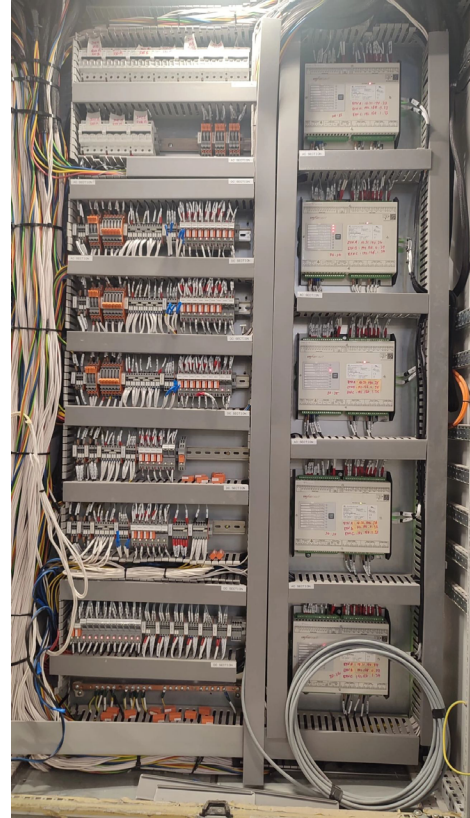
### Key Features of the MicroGrid

**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:** High-end safeguard designed to prevent operation outages and severe financial impacts, while also delivering the added benefit of optimizing costs of backup power generation.

**Scalability:** The solution's modular design allowed for future expansions and upgrades without significant disruptions.



### About Woodward

Woodward is a designer and manufacturer of energy control and optimization solutions for Turbines, Engines and Power Management. For 150 years, Woodward has provided control systems, safety systems, fuel systems, and power management solutions for industrial applications. Our customers have relied on us to help them meet their efficiency and emissions goals and to support the transition to alternative fuels.

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