

Info Sheet

MV Synchronization Control System

Medium voltage. Maximum reliability.

1. Overview

The **MV Synchronization Control System** by IPU SA is designed for medium-voltage applications that demand high resilience, precision control, and seamless power source integration. These systems enable safe and efficient synchronization of multiple generators, utility feeds, or hybrid setups — ensuring uninterrupted power in environments where downtime is not an option.

Developed with advanced PLC logic, redundancy options, and robust communication protocols, these systems are deployed in mission-critical facilities across Saudi Arabia and the region.

2. Key Features

- Manual or automatic synchronization
 - Back-synchronization for standby applications
 - Smooth load transfer and shedding
 - Load demand start/stop control
 - Main fail detection
 - Advanced communication protocol support
 - Redundant SCADA and PLC options
 - Full remote control and monitoring
 - Generator protection and VAR sharing logic
 - Compliant with third-party MV switchgear interfaces
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3. Applications

- Airports and transportation terminals
 - Government and utility infrastructure
 - Industrial manufacturing complexes
 - Large-scale water, oil & gas facilities
 - Smart grid and energy distribution projects
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4. Integration Capabilities

- Compatible with major OEM generator ECUs and governors
 - Supports Modbus, Ethernet, analog, and digital signals
 - Seamless integration with IPU SA's SCADA, load management, and protection systems
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5. Certifications & Standards

- IEC 61439 compliant
- Panel designs aligned with IEEE and local authority specifications
- Custom-built to meet the project specification, client's sequence of operation, and control matrix (Designed and tested as per the OEM technical guidelines and standards)
- Schneider, ComAp, and ABB integration-ready