

**APMS Automatic Power Management and Switching Controller – Sales Information.**

Data Centres & IT – “Tier 3”,  
Data Centres & IT – “Tier 4”,  
Call Centres and Internet.



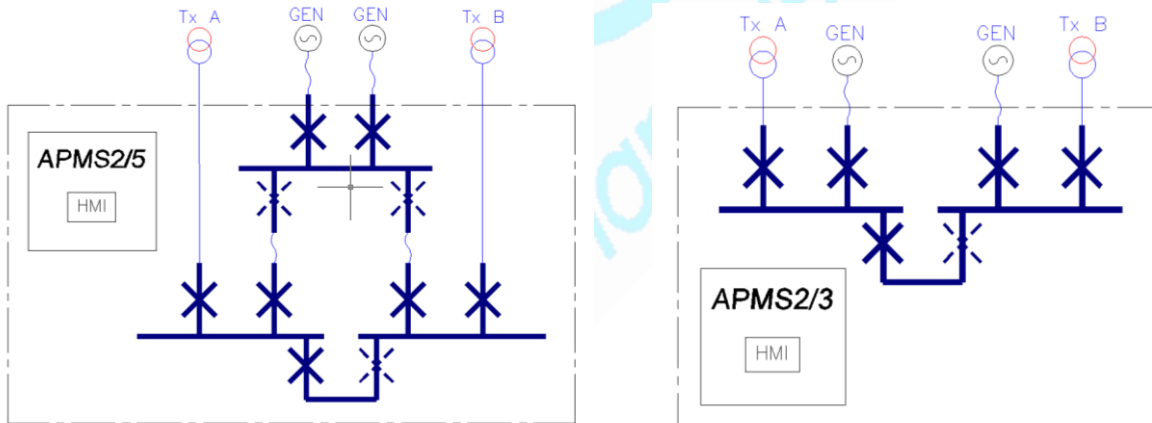
Broadcast and TV,  
Telecomms, Network Control,  
Security.



Hospitals and Medical Facilities,  
Laboratories and Research,  
Critical Process.

**APMS Applications.**

The APMS control system monitors mains incomers and busbars for loss of supply; it automatically requests generators and manages the transfer of load onto generators. On restoration of mains the APMS checks for stability and manages the transfer of load back to normal supplies. The APMS will, whenever it is safe, employ alternative routes in the event of switching malfunctions to maintain supply to the load. It will also continue to function in automatic with items of plant racked out or isolated for inspection or maintenance.



The APMS controller has been developed to manage split busbar LV power installations with circuit breaker and cable redundancy but can also be used at higher voltages. The most common model is the APMS2/5 for a “circular” system with two main busbars, three sources of supply available to each, including a bus-tie or bus-coupler.

The APMS controls five power switching breakers, the second breaker on the bus-tie is optional and would be a normally closed manually operated device. The bus tie can be run normally opened for dual transformer operation or normally closed for “flip-flop” transformer operation.

*Weirgrove Power Management Systems*

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*Weirgrove Power Management Systems is an Underwoods Group Company.*

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**Description.**

The **APMS** model controller is from the **Weirgrove** family of “off the peg” standard switchgear automation solutions. The controllers are based on rugged industrial PLC technology from Siemens Automation and the APMS design benefits from a large installed base which has been developed over 18 years to give extremely reliable and stable control in service.

**Features.**

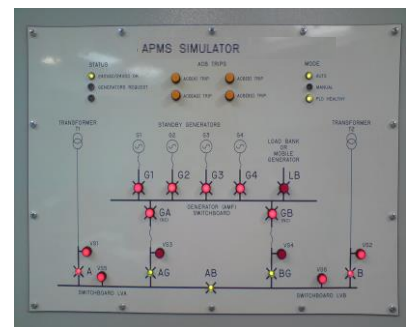
Every Weirgrove APMS includes many standard features designed to enhance reliability and reduce risk by making the systems easier to operate.

- Reliable, maintenance free automation using PLCs and HMIs with no moving parts or batteries.
- Fast PLC scanning times allow better resolution of cascade events and improved diagnostics.
- Alarms and events logged into non volatile retentive memory with timestamps for accurate diagnostics.
- Simple and reliable hardwired interlocking systems to prevent unsafe switching, in auto or manual.
- Totally hardwired manual control mode with hinged, lockable security window.
- Hardwired test facilities for offload and onload testing.
- Duplexed power supplies from batteries giving “black start” capability.
- Pulse on – pulse off state stable control and “bumpless transfer” between operating modes to reduce unwanted switching.
- Robust programming techniques using complementary Boolean logic for better diagnostics and state stable control under fault and transient conditions.
- Fast booting times and rapid synchronising to existing power conditions without unwanted switching.
- Multiple volt sensors checking with programmable stability timers and ride-through of “brown-out” conditions for extra stability.

**Options.**

APMS controllers are scalable solutions that can be easily customised without compromising the fundamental design.

- Enhanced hardwired mimic, with animated tri-colour LEDs giving status and diagnostic information.
- Larger 12” or 15” Touchscreen HMIs with enhanced diagnostics and status screens.
- Additional monitoring for remote generator switchboards and load feeder breakers.
- Automatic Load Shedding System (ALSS) bolt-on options, for partial operation under restricted power budgets.
- Generator controller interfaces to allow G59/G99 operation of generators in parallel with utility supply.
- Remote alarming by GSM text messaging to multiple mobile 'phones with automatic callout escalation.
- Modbus and Profibus communications interfaces to third party devices including energy metering, protection relays, generators, UPS, BMS and SCADA.
- Peer to peer communications links to other Weirgrove controllers in site-wide installations.
- “Level 4” version with dual redundant CPU and IO configuration.
- “Level 5” version with segregated A and B side PLCs for “N+N” or “Tier 4” architecture.
- Continuous thermal monitoring of busbar copperwork, connections and switchgear with intuitive alarming and displays.
- Dedicated simulation panels for onsite validation and operator training.



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