



Grid Interconnection and Paralleling Switchgear

Switchgear Features

- 800-5000 amp circuit breaker, low and medium voltage
- Parallels gensets with the utility in base-load, peak-shaving, import/export or zero-power-transfer mode
- Operate multiple gensets in parallel with the utility
- Automatically cycles the engine through the start, warm-up, load, unload, cool-down and stop sequence
- Constantly monitors the engine and sends alarms via pager and email — automatically shuts down the engine if necessary
- Complete set of protective relays
- Automatically synchronizes with the utility
- Supports both Modbus® and LONWORKS® communication protocols

GPC Features

- Embedded software provides kW and VAR load sharing, VAR and power factor control, base-load control, kW load-sharing and power transfer control with soft loading and unloading. In short, a true RMS real power sensor, protective relays, harmonics meter and PLC logic — all in one box!
- Remote access and control using Encorp's monitoring capabilities

Encorp paralleling switchgear is designed to be used as a peak shaving control system that allows the generator to operate when the utility is available or in island mode.

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Description of Operation

Encorp paralleling switchgear is designed to be used as a peak-shaving control system that allows the generator to operate only when the utility is available. Encorp switchgear includes an integrated control, display and circuit breaker panel. The generator can synchronize individually on and off to the power source in a soft transition mode, supplementing utility power to perform a peak-shaving operation.

Remote Dispatch

Encorp switchgear may command the generator to start by receiving a signal from the software located off site. Once the signal is received, Encorp switchgear will automatically start the generator, bring it to rated speed (50/60 Hz), synchronize it to the utility and then softload the generator to a predetermined base-load set point. The generator will remain paralleled to the utility until a signal is received to end the peak-shaving operation. When the remote signal is received to stop the generator, the switchgear will soft unload the generator, open the generator breaker, and cool down the engine for a set time period before shutting off.

Encorp switchgear may command the generator to start by receiving a signal from the remote devices located off site.

Manual Start

The generator may be started manually while standing next to the generator. This manual operation may be initiated by putting the switch on the front panel into the "RUN" position and pushing the "START" button on the HMI. This will start the generator, automatically synchronize it to the utility, close the generator breaker, softload the generator to a predetermined base-load point and remain paralleled to the utility. When the switch on the front panel is put back into the "OFF" position, the switchgear will soft unload the generator, open the generator breaker, cool down and shut off the generator.

Starting on Energy Demand

At a selected start time and/or set demand level, the switchgear will automatically start the generator, synchronize it to the utility, close the generator breaker, softload it to a predetermined base-load set point and remain paralleled to the utility. At the selected shut-down time and/or minimum demand level, the switchgear will automatically soft unload the generator, open the generator breaker and cool down and shut off the engine.