

ADAPTOR 2000

Two Generator Set Automatic Paralleling Switchgear



- Automatic paralleling of two gensets
- Complete manual paralleling facilities: synch check relay and synch lights
- Complete generator protection
- Complete generator and bus metering
- First Up – First On logic connects first available generator (which builds up voltage and frequency) to a dead bus
- Inhibits closing of multiple generators to a dead bus simultaneously
- Silver Plated Copper bus
- Compatible with ATS transfer inhibit logic to prevent transfer before 2nd genset is online.
- Optional load shed controls
- Optional load sense demand controls
- Optional SCADA-ready Modbus communications port for monitoring and control
- Onboard engine battery fault detection will trip corresponding generator circuit breaker to protect from prolonged reverse power.

Feature	ADAPTOR 2100	ADAPTOR 2200
Generator Metering - True RMS, 3 phase (V, Hz)	Standard	Standard
Seamlessly interfaces with the Caterpillar EMCP3.x generator control panels. Utilizing on package start/stop controls, engine/generator protection and load sharing module.	Standard	Standard
Fixed mounted insulated case generator circuit breakers with Longtime and Instantaneous solid state trip unit.	Standard	Standard
Interface with ATS transfer inhibit to prevent ATS transfer until both gensets are paralleled to the bus.	Standard	Standard
Backup battery trip control	Standard	Standard
Generator Metering - True RMS, 3 phase (A, kW, PF, kVAR, kWh, kVARh)	Option	Standard
Redundant door mounted speed and voltage adjust potentiometer/switch.	Option	Standard
Synchronizing Lights and Switch for Manual Paralleling	Option	Standard
Generator Protection - Three (3) phase under/overvoltage, under/overfrequency, reverse power (two setpoints), reverse VARs (two setpoints), current balance (two setpoints).	Option	Standard
SCADA-ready Modbus serial or Ethernet communications port	Option	Option
Load Shed / Load Add Control	Option	Option
Load Sense Demand Control	Option	Option
Draw out circuit breaker with upgradeable trip unit	Option	Option
UL 891 label	Option	Option

Specifications:

Voltage:	208 – 690V
Current:	800- 3000 Amp
Enclosure options:	NEMA 1 for indoor use NEMA 3R for outdoor use
Dimensions:	28"W x 80"H x 32" or 46" or 54" or 62"D
Metering accuracy:	0.3% - voltage and current 0.6% - power and energy

Minimum system requirements:

- Engine-Generator set with engine control module (Caterpillar ADEM, EMCP or similar), load sharing module or load sharing governor and generator voltage regulator capable of voltage droop operation.

Overview of Operation:

Upon receipt of an automatic start signal initiated locally by the operator or remotely by customer's ATS or SCADA or DCS (via closure of a dry contact or optional Modbus interface), the control panel shall issue a start signal to both generator sets. If the bus is dead and other conditions are appropriate, the first generator to build up voltage and frequency shall close its circuit breaker, energizing the bus. The second genset shall be automatically synchronized with the load bus under the supervision of the dedicated synchronizing check relay. When all the synchronizing conditions are met the generator circuit breaker shall close. At this time, transfer switch inhibit logic will allow the ATS to transfer to generator power.

Upon receipt of an automatic stop signal initiated locally by the operator or remotely by customer's ATS or SCADA or DCS system the switchgear shall automatically open the circuit breakers and remove the genset start signals, allowing shutdown of the gensets after their EMCP3 programmed cooldown period.

Synchronizing lights, synchronizing check relay, circuit breaker control switch and speed adjust potentiometer are available for Manual-Permissive synchronizing.