

Metal-Enclosed Switchgear

Manual Automatic Source Transfer Remote-Supervisory Control 5 to 38 kV

Federal Pacific is a vertically-integrated manufacturer producing the complete system of components necessary to be a single-source supplier of UL® listed and ANSI and NEMA tested load interrupter switchgear for:

- Transformer Primaries
- Single-Circuit Systems
- Multi-Circuit Systems
- Automatic Transformer Systems

Load interrupter switches designed, tested and built by Federal Pacific to the latest applicable industry standards. Stored-energy switch operators and microprocessor controls for automatic source transfer . . . designed and built by Federal Pacific.

Complete metal fabrication, design and production capability ensures total functionality as a complete assembly to match your configuration, application and installation parameters.

Federal Pacific Metal-Enclosed Switchgear, incorporating load interrupter switches and power fuses . . . both current limiting and expulsion types can be arranged in virtually any configuration to match the load-segmentation requirements of the installation. In addition, FP Metal-Enclosed Switchgear can be provided with the ancillary components matched to the power-service continuity needs of the load circuits.

Whether Manual, Automatic Source Transfer or Remote-Supervisory Control, FP switchgear can be designed to provide the specific level of functionality and automation for effective operation of the in-plant power distribution system. In addition, the installation environmental requirements can be met with indoor or outdoor features and welded or panel construction. A broad selection of accessory components can also be furnished to meet application needs such as surge arresters, Category A security features, grounding provisions, switched outlet, voltage and current transformers, etc.

The superior quality and durability of FP Metal-Enclosed Switchgear is exemplified by the enclosure finishing system. An electrostatically-deposited coating bakes to a hard, tough uniform coating that has passed 2000 hours salt-spray testing, exceeding by 10-fold the salt-spray testing requirement in ANSI C37.20.3.



Multi-bay switchgear assemblies allow loads to be segmented into individual blocks of power. This increased load segmentation allows the in-plant power distribution system to be sectionalized to minimize the extent of any power outage. With the addition of two or more incoming power sources, an increased level of power availability can be achieved. Critical loads can be provided with a backup source, which can be an alternate primary feeder from the serving utility or an on-site generator.



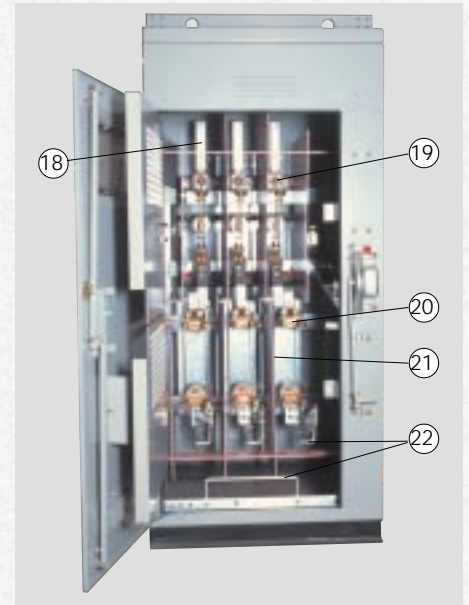
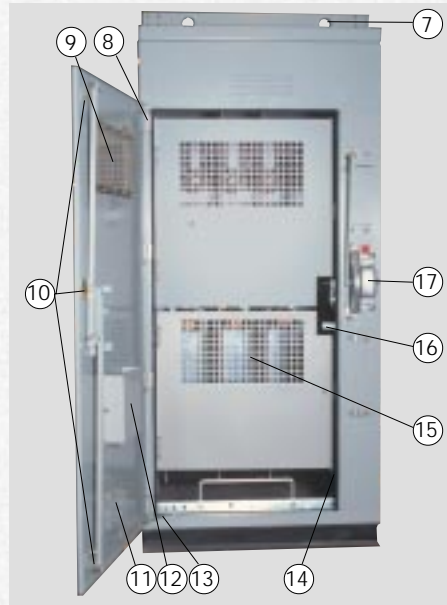
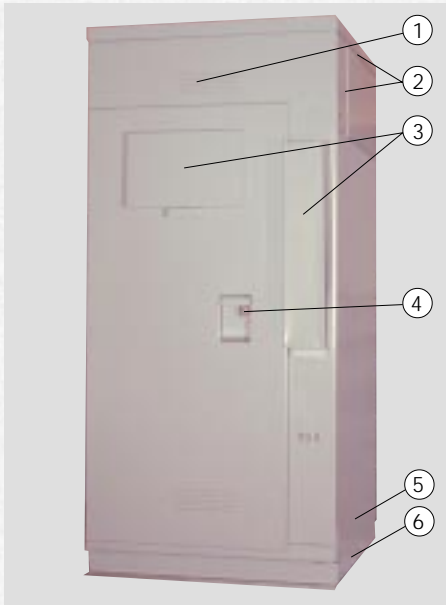
Automatic transfer switchgear can be arranged in a variety of bus configurations. The most frequently used bus configurations are common-bus and split-bus primary selective systems.

In the common-bus configuration (pictured above), one incoming power source energizes the load and the second source is available as an alternate source if the normal source is lost. Only one source is in use at any given time.

In the split-bus configurations, both incoming source switches are closed and each energizes the loads connected to separate bus sections. Between the bus sections is a normally-open bus-tie switch. When one source is lost, the switch associated with that source opens and the bus-tie switch closes. The entire load is then served through the remaining incoming switch. The split-bus configuration makes economic use of both sources.



A 35 kV, 200 kV BIL switchgear assembly (pictured above) demonstrates the wide range of switchgear capabilities offered by FP. The switchgear bus is arranged for loop feed and load feeder bays include fused load interrupter switches. Removable cover plates on the end bays allow the connection of additional bays in the future. The ability to extend a switchgear assembly provides increased system flexibility for future growth.



1. Ventilation openings with internal baffle
2. Weather sealant between roof and enclosure
3. Security covers at windows and operating handles (optional)
4. Padlockable handle with pentahead bolt
5. Cover plates of heavy-gauge steel
6. Heavy-gauge channel base
7. Lifting angles

8. Stainless-steel door hinges
9. Windows of mar-resistant polycarbonate
10. High-strength door latches and rods
11. Ventilation opening backup plates
12. Storage space for spare fuses
13. Self-setting door holder
14. Gasketing around door opening on outdoor units
15. Internal screens

16. Interlock prevents access to fuses when main door is open
17. Cast-aluminum operating handle
18. 600-amp main bus
19. Auto-jet® switch 40000 amp 3-time fault closing
20. Choose any fuse
21. 3/16" GPO3 red fiberglass barriers
22. Ground studs on enclosure and fuse terminals
23. Heaters in outdoor switchgear



Low Voltage Control Compartments Contain Switch Operators and Microprocessor-Based Control for Automatic Source Transfer

Automatic source-transfer components are installed within low-voltage compartments that provide security for controls requiring access for operation or maintenance. These compartments are gasketed and may include optional heater elements. Illustrated in the compartment at left are a microprocessor-based automatic source transfer control and a stored-energy switch operator. The low-voltage compartments are isolated from high-voltage components. The access doors are hinged and include a heavy-duty three-point door latching system that requires a pentahead socket for opening. The door is anchored by a set of three stainless-steel hinges and pins and is held open with a self-locking wind brace. Customized features include a high-strength, mar-resistant polycarbonate viewing window and low-voltage circuit breakers for switching and protection of associated secondary control circuits.