



Intelligent Power Systems

GENKIT/GENBOX

Generator Mounted Power Distribution & Control Solutions

- **GENKIT** and **GENBOX** are ideal systems for site specific power distribution and control mounted directly on a generator
- Solutions are available for new generators and retrofit applications
- A **GENKIT** consists of breakers, busing, cabling, mounting hardware and control (if required) to be mounted in an *existing* breaker enclosure
- A **GENBOX** consists of breakers, busing, cabling, mounting hardware, control (if required) and a *new or expansion* breaker enclosure
- **GENKIT** and **GENBOX** are ideal systems for site specific power distribution and control mounted directly on a generator

GENKIT and **GENBOX** provide an economical answer to power distribution and control for generators as it eliminates the need for costly external switchgear. They can streamline generator installations with resulting reduction in engineering, wiring, use of external switchgear, construction, use of space, testing and commissioning.



Fig. 1, Main and House Power, Lower Voltage Convenience Outlet

Benefits

- **Cost effective power distribution for connected loads**
- **Eliminate cost of separate power distribution equipment**
- **Eliminates space of separate power distribution equipment**
- **Minimizes site work and field engineering**

Benefits:

- Cost effective power distribution for local loads
- Utility interconnectivity with transfer switches or breakers
- Eliminate the costs associated with separate output distribution equipment
- Eliminates the floor/wall space required by separate output distribution equipment
- Minimizes site work and field engineering

Applications for New and Retrofit Installations:

- Single (1) Circuit Breaker Configurations
- Twin (2) Circuit Breaker Configurations
- Multiple (3 and 4) Circuit Breaker Configurations (Dependent Upon Enclosure Size)
- Optional Additional Circuit Breakers including House Power CBs, Fire Pump CBs, Convenience Power CBs, and Load Bank CBs
- UL Listing Available for Many Configurations

Optional Controls

- Utility-Generator Automatic Transfer Switch Controls
- Utility-Generator Manual Transfer Switch Controls
- Generator-Generator Emergency Power Source Selection Controls

- Utility-Generator Paralleling Controls
- Generator-Generator Paralleling Controls
- Load Management Controls
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Protection Options

- LS, LI, LSI, LSG, LSIG, LSIA Trip Unit Options (varies by manufacturer)
- Supplemental Protection
- Lockout Relays

Instrumentation and Interface Options

- Metering; Instrumentation and Revenue Grade
- Communications to External Systems such as Utility and BAS
- HMIs using Touchscreens
- Control Interface with Pushbuttons, Switches, and Indicators
- Current and Voltage Transformers for Desired Sensing

Miscellaneous

- New Enclosures Painted to Match Generator Color
- Convenience Power Outlets

Many generators have multiple compartments with access to the alternator power conductors. These compartments may be used with bolt-on adaptation providing combinations of power circuit breakers for feeders and motors, transfer switches, and other power distribution for needs such as house power and convenience outlets.

In addition to the power distribution, various types of sensing, control, protection and external system communication connectivity may be provided. If required, Utility connection using transfer switches or circuit breakers can be made in various modes: emergency transfer without paralleling, grid paralleled operation for load testing and demand management, bumpless grid isolation and return, and bumpless emergency power run return.

The following figures demonstrate the flexibility of GENKIT and GENBOX to meet various power system needs. These figures are illustrative purposes, and the GENKIT and GENBOX solution can be configured to meet other requirements as needed.

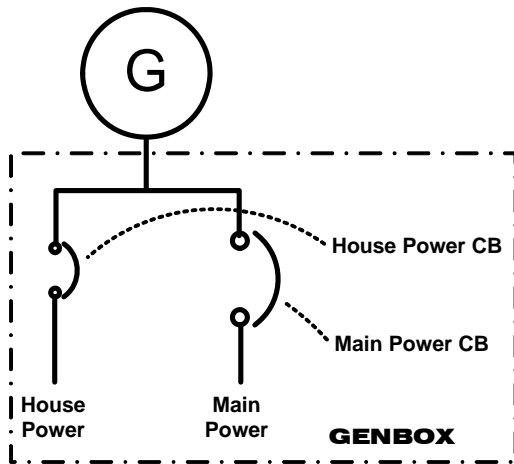


Fig. 2, Main and House Power

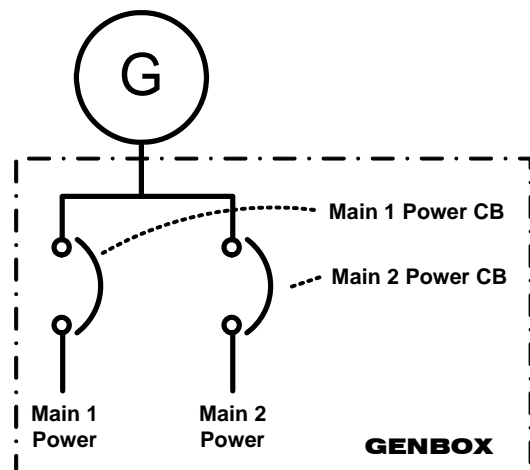


Fig. 3, Main Power 1 & 2

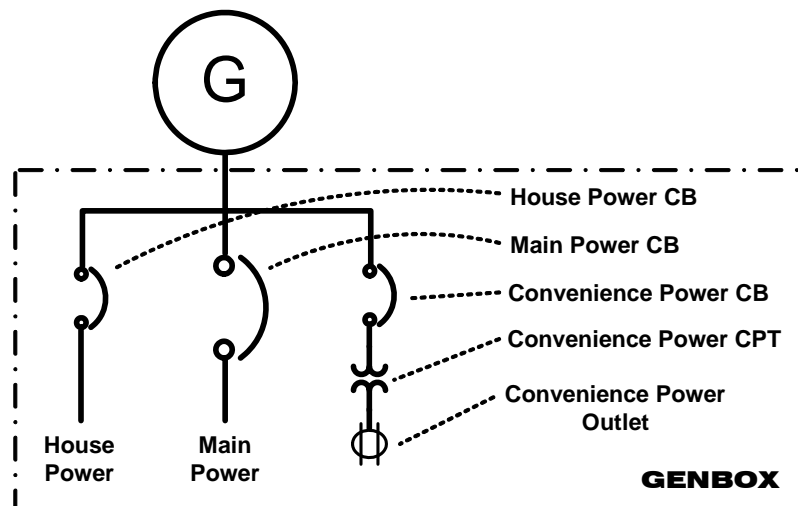


Fig. 4, Main and House Power, Lower Voltage Convenience Outlet

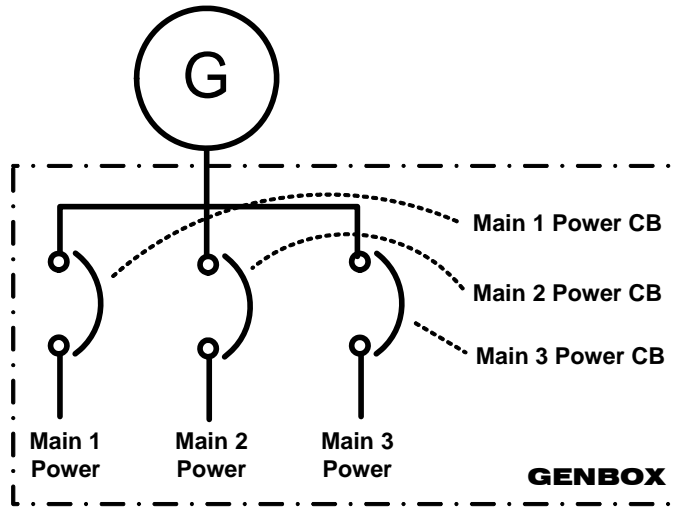


Fig. 5, Main Power 1, 2 & 3

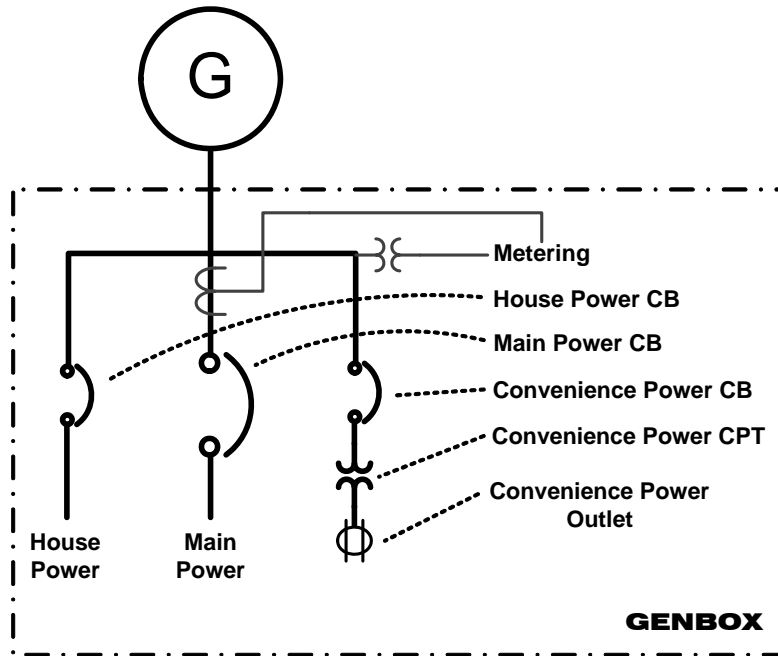


Fig. 6, Main and House Power, Lower Voltage Convenience Outlet, Main Metering

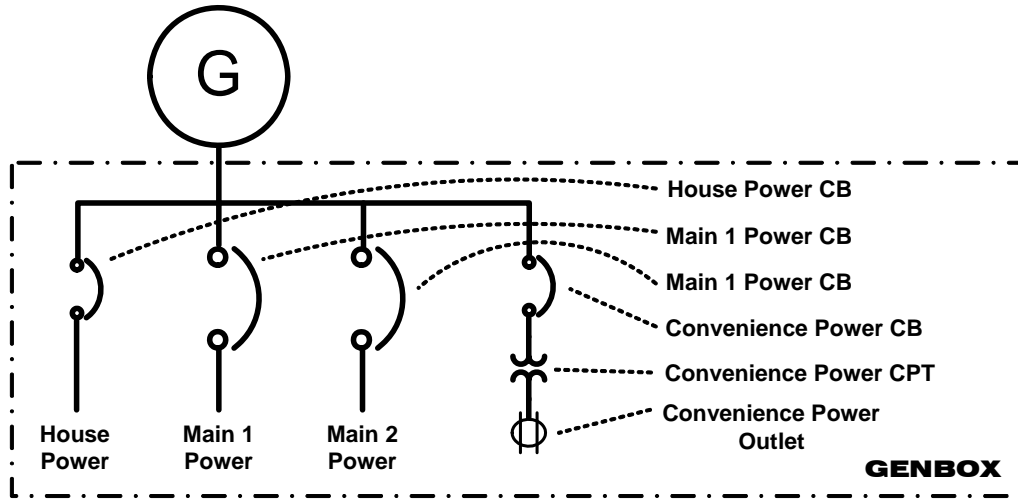


Fig. 7, Main 1 & 2, House Power, Lower Voltage Convenience Outlet

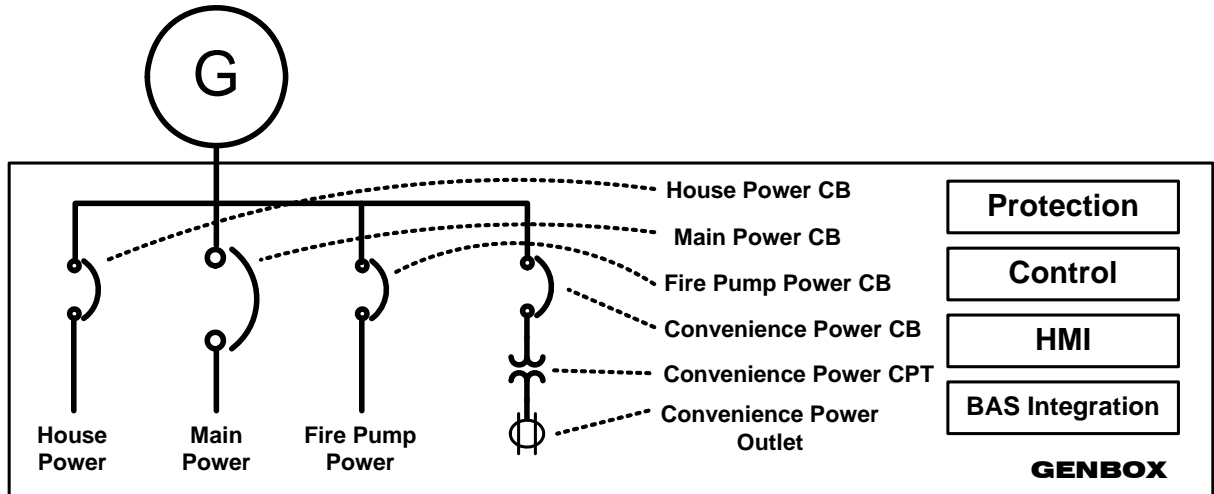


Fig. 8, Main, House and Fire Pump Power, plus Protection, Control, HMI and BAS Integration

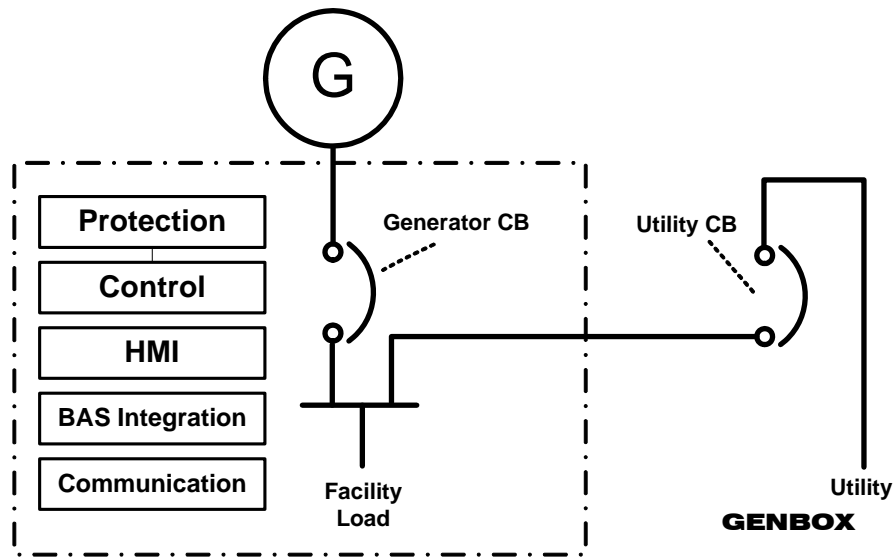


Fig. 9, Generator and Utility CBs, plus Protection, Control, HMI, BAS Integration and Communications

GENKIT and GENBOX solutions are complete with detailed drawings that document physical and electrical attributes. Excerpted examples are shown following:

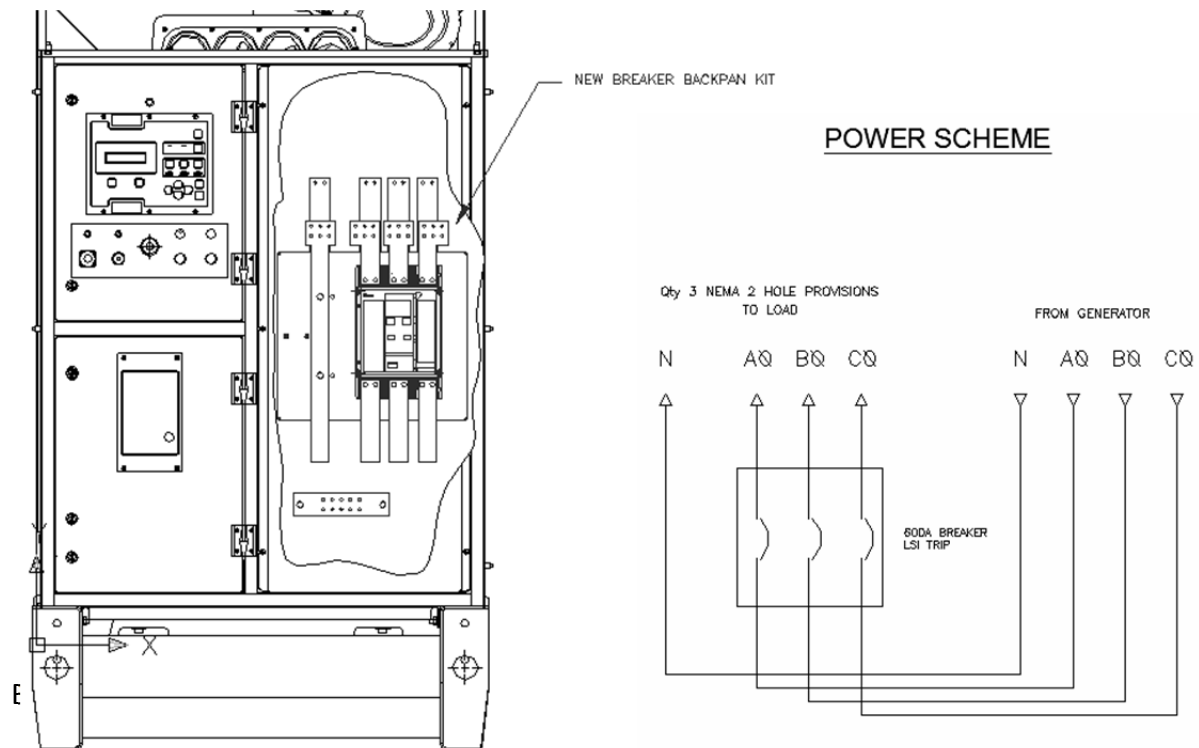


Fig. 10, Typical Single CB with Backpan Mounting, Top Cable Exit

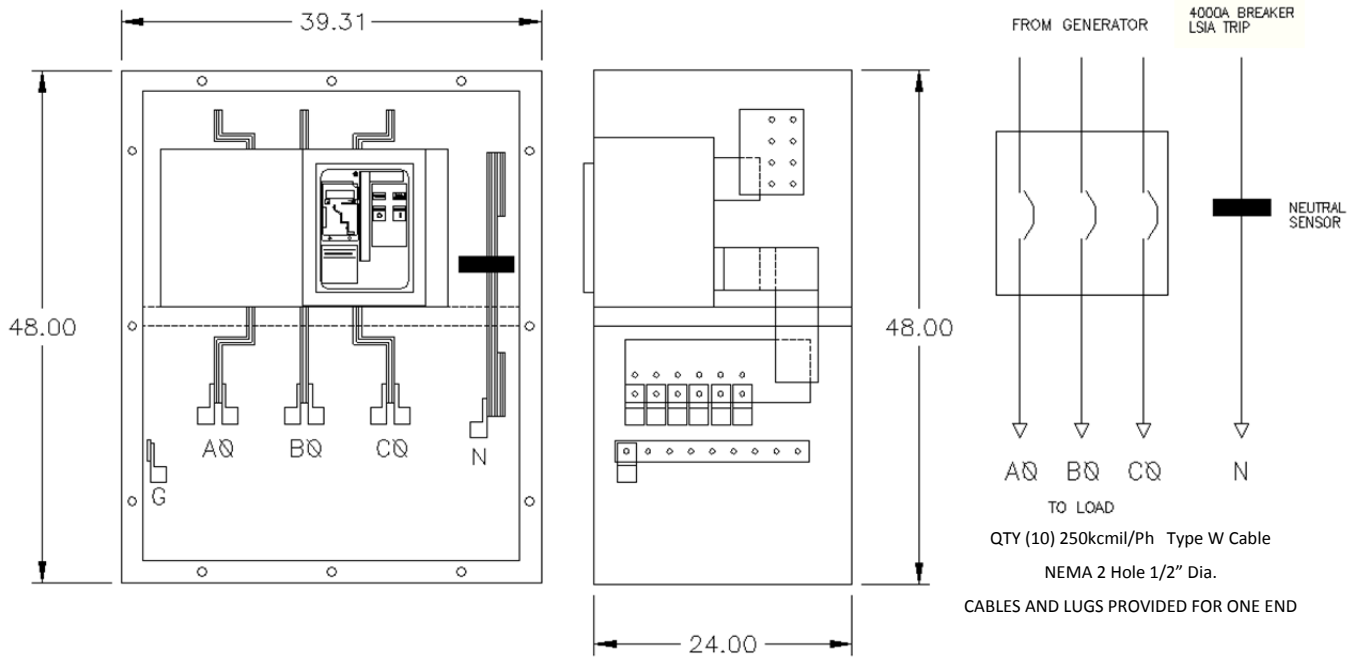


Fig. 11, Typical Single CB with Neutral Sensor, Bottom Cable Exit



Fig. 12, Typical Single CB with Neutral Sensor, Bottom Right Hand Side Cable Connections (Front and Rear Views)



Fig. 13, Before and After GENBOX Conversion, Single CB

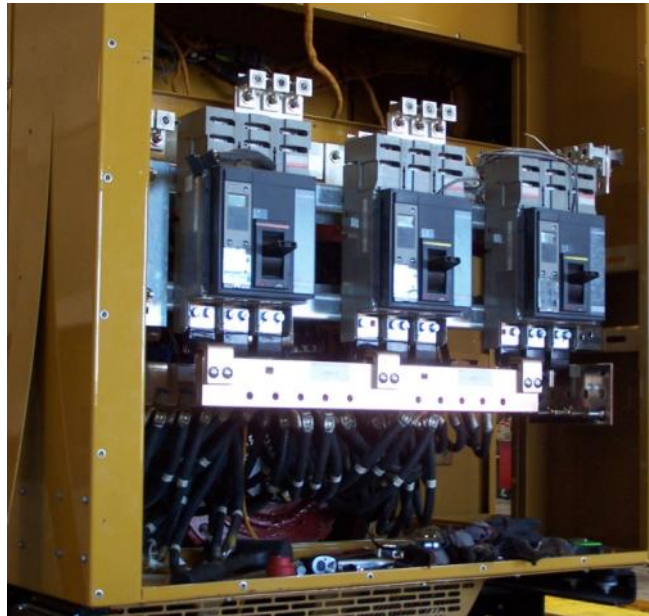


Fig. 14, Typical Three CB



Fig. 15 Typical One CB

- **Other GENKIT and GENBOX variants are possible. Contact us to explore solutions that include other breakers, multiple breakers, controls, relays and more.**
- **No set up charge for non-stock designs**

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