Caterpillar is leading the power generation marketplace with power solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost effectiveness.

**Features**

- 15” color, touchscreen operator interface
- Integral protective functions
- Annunciation and alarm history
- Selectable transition modes to and from generator power
- Selectable load sense/load demand mode to avoid unnecessary generator set operation and reduce fuel consumption
- Automatic load shed/load add control based on available capacity to prevent generator set overloading
- High-speed communications with individual EMCP 4.4 generator set controls provide the operator with control and data acquisition capability of each generator set from a centralized location
- Easy-to-follow, step-by-step installation and start-up instructions
- Password security system for user interface
- Interface capability with SCADA system
- Two-year standard Caterpillar warranty

**General Description**

The EMCP 4.4 master control panel is a wall-mounted system that monitors and controls up to ten (10) Cat® EMCP 4.4 equipped generator sets.

The EMCP 4.4 master control panel will support emergency standby as well as parallel the common generator bus with a single utility source.

Together with the EMCP 4.4 generator set controllers, this cost-effective approach provides centralized, automatic controls and communications through an intuitive graphic interface.
Operating Modes

- Emergency standby
  - Closed transition (with soft unload) or open transition on return to normal service
- Optional utility parallel, import power from grid
  - Minimum import kW setpoint is maintained
- Optional utility parallel, export power to grid
  - Target export setpoint is maintained
- Optional utility parallel, base load operations
- Load sense/load demand
  - Generator set priority or engine-hour balancing
  - Automatically matches on-line generator capacity to the loads
- Load shed/load add
  - Automatic or manual load shed up to eight (8) stages
- No load test mode

User System Requirement

- All Cat diesel engine generators are required to be packaged with EMCP 4.4 configured for Multiple Genset Data Link (MGDL)
- The EMCP 4.4 master control panel requires an ethernet connection to the EMCP 4.4 generator control on each generator set
- For utility control, the utility circuit breaker should be provided with:
  - Two (2) auxiliary contacts (1A & 1B)
  - Bell alarm contact
  - Circuit breaker open circuit
  - Circuit breaker close circuit
  - Integral short circuit protection
- The utility source must be furnished with voltage sensing (3-phase, 4-wire) on both the source side and bus side and current sensing (3-phase, 5 amp secondary)

Images shown may not reflect actual configuration.
## Specifications

<table>
<thead>
<tr>
<th>Generator Sets Supported</th>
<th>Cat Engine-Generators C9 ACERT™ - C32 ACERT, C175, 3500</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Capacity</td>
<td>2-10 generator sets &amp; 1 utility</td>
</tr>
<tr>
<td>Voltage and Frequency</td>
<td>208V - 480V, 50/60Hz</td>
</tr>
</tbody>
</table>

### System Control Voltage

| Utility Circuit Breaker Control Relay Ratings* | 40A @ 120 VAC, 3A @ 480 VAC, 50/60 Hz |
| Control Relay Ratings                     | 10A @ 110 VDC, 4A @ 225 VDC resistive |
| Control Voltage Nominal                   | 24 VDC                                  |
| Maximum Control Voltage Range             | 10-36 VDC                               |

### SCADA Interface

<table>
<thead>
<tr>
<th>Modbus RTU [RS 485] 2-Wire</th>
<th>Standard feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modbus TCP (Ethernet)</td>
<td>Optional feature</td>
</tr>
</tbody>
</table>

### Environmental Parameters

| Certifications             | UL 508A/cUL, CSA, OSP-0165-10 |
| Vibration and Shock        | SDS(g) = 2.77, z/h = 1.0, Ip = 1.5 |
| Humidity                   | 10%-90% non-condensing humidity |
| Operating Temperature      | 0°C to 50°C                  |
| Storage Temperature        | -10°C to +60°C               |
| Control Panel Enclosure    | NEMA 12 Type (IP52)          |

### Utility Protective Devices and Functions**

<table>
<thead>
<tr>
<th>ANSI Protective Devices</th>
<th>15/25, 27/59, 81 O/U, 32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metering***</td>
<td>Voltage L-L, current, frequency (0.5%); power, kW, power factor, kVAR, (1%) of measured values</td>
</tr>
</tbody>
</table>

### Enclosure Dimensions & Weights

| Dimensions & Weights | 30H x 24W x 11.125 inches, 74 lbs. wall mount |

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*Generator circuit breaker controlled directly by EMCP 4.4 controller on-package (supplied with generator set).

**EMCP 4.4 master industrial grade protective functions may not satisfy local utility protection requirements. Additional protection may be required within the switchgear to meet local standards.

***Dependent on CT/PT accuracy.