

# Coordinated Electrical Houses

## Contents

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General Description ..... 40.0-2  
 Technical Data — Layout Dimensions ..... 40.0-4

### Specifications

See Eaton’s Cutler-Hammer Product Specification Guide on enclosed CD-ROM:

1995 CSI Format: ..... **Section 16920**

2004 CSI Format: ..... **Section 26 05 91**



*Typical Integrated Power Assembly™*

## General Description

### Power Distribution Products in a Single Enclosure at a Lower Installed Cost

Eaton's electrical business can supply different types of electrical distribution and control equipment in a modular building called an Integrated Power Assembly (IPA)...custom designed to meet each customer's specific requirements.

### Each IPA Arrives Complete and Ready to Connect...Saving Time and Money

When an Integrated Power Assembly is delivered, all the customer typically needs to do is: (1) place it on the suitable foundation such as a concrete pad or base with suitable strength and durability and (2) make the incoming and outgoing load connections. Since the IPA is a complete unit, it can be prewired and factory tested if required.

An IPA provides these significant cost savings:

- **Lower installation cost.** Job site labor and material costs are sharply reduced because an IPA arrives complete, ready for connections.
- **Minimal start-up time.** Each IPA is checked to ensure wiring accuracy, control scheme correctness, and equipment operation.
- **Installation delays reduced.** Job site delays caused by trying to coordinate multiple vendors are eliminated.
- **Reduced procurement time.** Scheduling and expediting are handled through a single point contact and only one purchase order is required.
- **Construction efficiency.** Projects using IPA buildings are not as affected by weather conditions and seasonal labor shortages.
- **Customized design.** IPA buildings have very few restrictions. They can be of almost any size, shape or color...and in addition to the Cutler-Hammer® electrical distribution and control equipment, can include other non-Cutler-Hammer equipment a customer may require.

### Single Source for IPA

Eaton Corporation offers the industry's most complete family of electrical distribution and control equipment and components. The widest selection of ratings are provided, as well as IPAs that meet or exceed distribution system requirements.

As a single source supplier, the following significant advantages are provided:

- **Designing, assembling and testing.** Eaton certifies that all equipment and components are in compliance with applicable NEMA®, IEEE, ANSI, UL® and IEC standards. The building is certified to meet IBC®, UBC®, SBCCI® and BOCA® requirements, while the installation of the equipment meets NEC® requirements.
- **Consistent terms and conditions.** Eaton provides a single uniform set of terms and conditions for all equipment and components. Additionally, the terms and conditions are compatible with those of other Cutler-Hammer products that may be on the same project...providing the benefit of single package negotiation.
- **One contact point.** Eaton's worldwide network of engineers, sales representatives, and authorized distributors provides design and application assistance, pricing, delivery and warranty information.
- **One overall warranty.** Eaton warrants all IPA equipment and components, plus the structure itself.



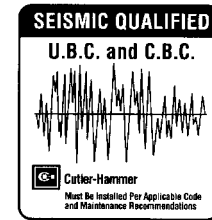
Typical IPA

### IPAs Offer Installation Flexibility

Installation flexibility is essential since IPAs are often used in applications where a controlled, protective environment is required. However, the actual location of an IPA can often vary from customer-to-customer.

IPAs have been installed indoors on the main floor or second deck, outdoors on roofs, or as separate detached structures.

Cutler-Hammer distribution equipment is seismically tested, seismically qualified and exceeds requirements of both the Uniform Building Code (UBC) and the California Building Code (CBC).



Seismic Qualification Label



IPA Assembly Area



Two-Tiered IPA

### Typical Cutler-Hammer Equipment that Can Be Installed in an IPA

Almost any type of Cutler-Hammer electrical equipment can be installed in an IPA, including:

- MVS and MEB load interrupter switchgear.
- Medium voltage VacClad-W metal-clad switchgear.
- AMPGARD™ medium voltage starters.
- Medium voltage non-segregated bus.
- Low voltage switchgear Type Magnum™ DS.
- Low voltage switchboards — Pow-R-M-S — fixed or drawout.
- Pow-R-Line C™ low voltage group mounted switchboards.

## General Description

- Pow-R-Line C low voltage panelboards.
- Freedom™ 2100 *IT* and Advantage™ LV motor control centers.
- Dry-type distribution transformers.
- Adjustable speed control.
- Automatic transfer switches.
- Low voltage bus.
- Microprocessor-based metering, protection, control and monitoring devices.

## Additional Equipment and Modifications

Since each IPA is custom designed, we not only provide the electrical gear specified but can include any additional equipment and modifications requested. Some examples include:

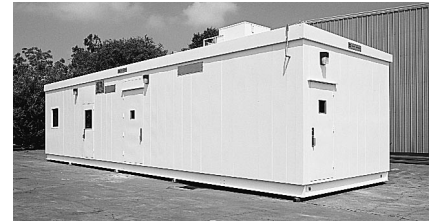
- HVAC systems.
- Pressurization units.
- Battery systems.
- UPS systems.
- Annunciators.
- Communications equipment.
- Security systems.
- Marshaling cabinets.
- Installation and wiring of customer furnished PLCs and analyzers.
- SCADA and DCS control cabinets.
- Office or work areas.
- Plumbing and restrooms.
- Doors and windows.
- Indoor, outdoor and emergency lights.
- Wireway and cable trays.
- Custom paint finishes.
- Switches and receptacles.
- Any other customer specified equipment.

## A Variety of Industries and Service Organizations

- Communications.
- Food processing.
- Heavy industry.
- Materials handling.
- Medical.
- Mining.
- Petrochemical.
- Pollution control.
- Public utilities.
- Pulp and paper.
- Rail and mass transit.
- Water and waste treatment.
- Many others.

## With a Broad Range of Applications

- Control center rooms.
- Equipment skids.
- Generator systems.
- Motor control.
- Offshore platforms.
- Pipelines.
- Power substations.
- Process control.
- Pumping stations.
- Refineries.
- Switchgear enclosures.
- Many others.



Front View



Rear Equipment Access Doors



Air Conditioned Unit

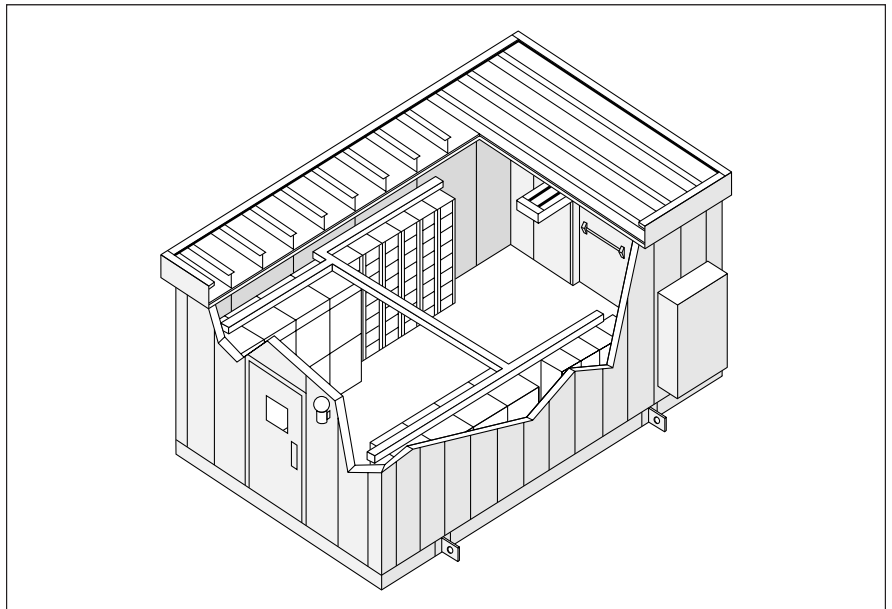


Figure 40.0-1. Integrated Power Assembly Section View

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Manufacturers Association. Uniform Building Code (UBC) is a trademark of the International Conference of Building Officials (ICBO). UL is a federally registered trademark of Underwriters Laboratories Inc. SBCCI is a registered trademark of Southern Building Code Congress International.

Typical Layout Plan Views — Dimensions in Feet and Inches

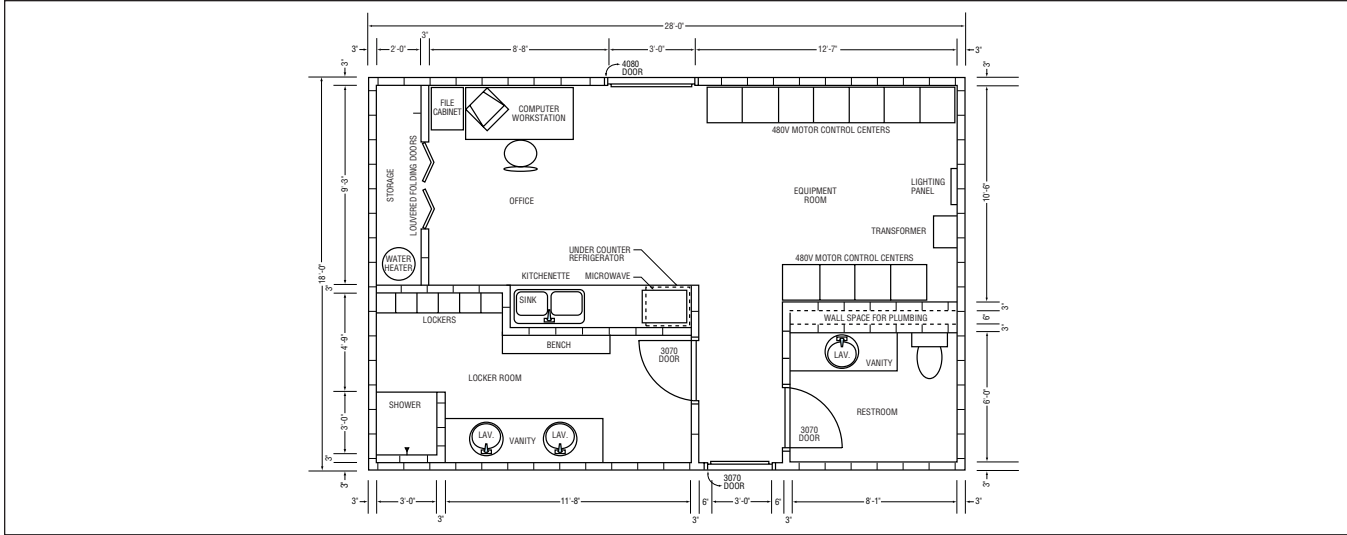


Figure 40.0-2. Typical Layout Plan Views

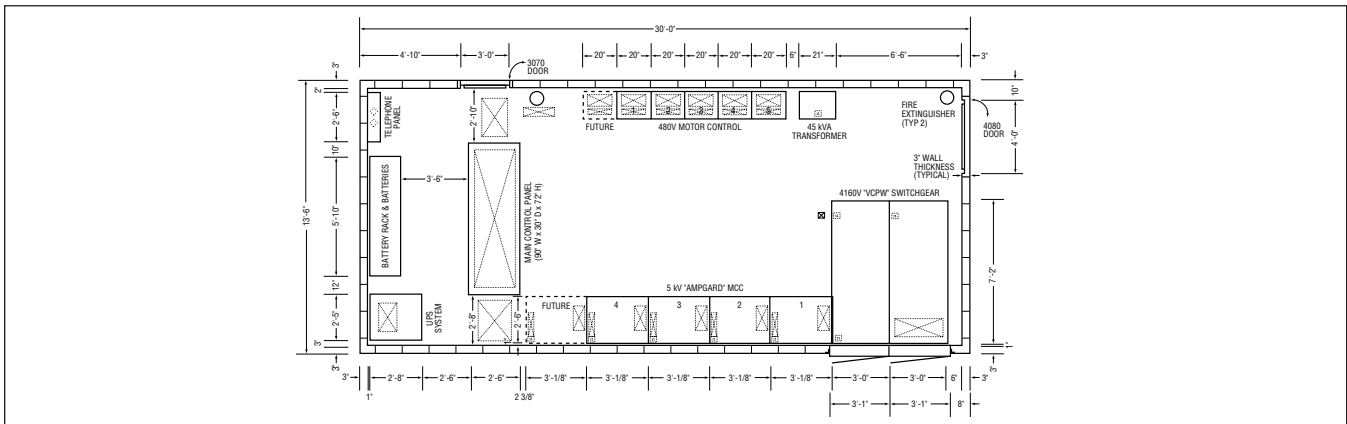


Figure 40.0-3. Typical Layout Plan Views

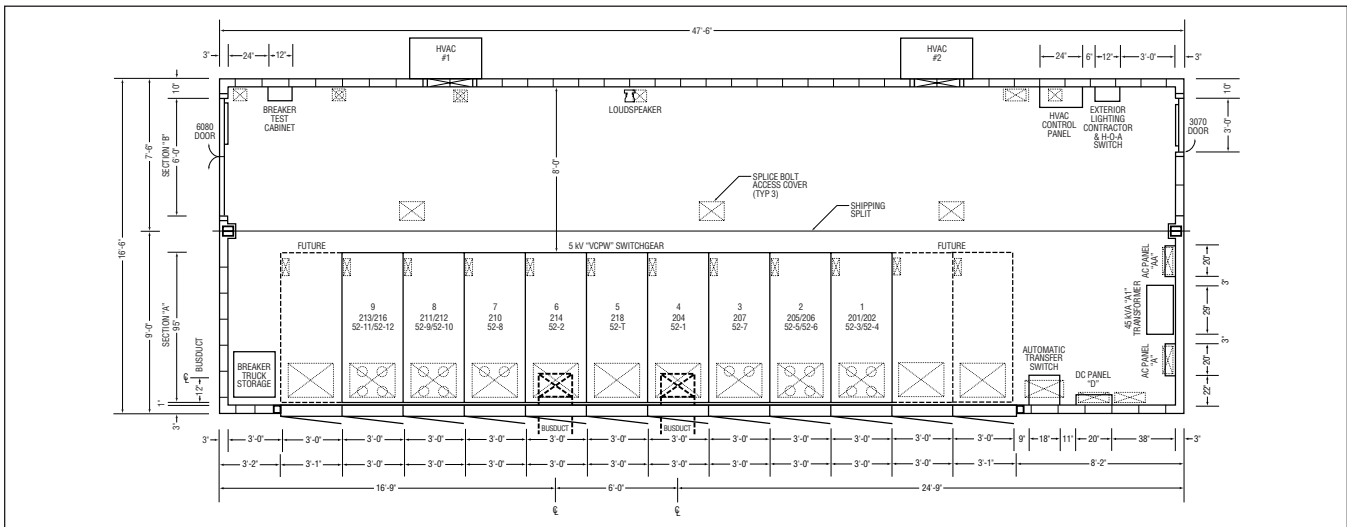


Figure 40.0-4. Typical Layout Plan Views

For metric conversion: inches x 25.4 = mm.