CUTLER HAMMER BR1224L125R

Cutler-Hammer BR1224L125R 125-Amp Main Lug Load Center Instruction Manual

Introduction

This manual provides essential instructions for the safe installation, operation, and maintenance of your Cutler-Hammer BR1224L125R 125-Amp Main Lug Load Center. Please read this manual thoroughly before proceeding with any installation or service to ensure proper function and safety. Retain this manual for future reference.

Safety Information

WARNING: Electrical shock hazard. This product must be installed and serviced by a qualified electrician in accordance with all national and local electrical codes. Failure to follow these instructions can result in serious injury or death.

- Always disconnect power at the main service panel before working on or near the load center.
- Use only approved tools and personal protective equipment.
- Ensure all wiring connections are secure and properly torqued.
- Do not install in wet or damp locations unless specifically rated for such environments. This unit is rated for outdoor mount.
- Verify correct voltage and amperage ratings before installation.

Product Overview

The Cutler-Hammer BR1224L125R is a 125-Amp Main Lug Load Center designed for outdoor installation. It features 12 (1-inch) spaces, accommodating up to 24 single-pole circuits. This unit is suitable for use as service equipment when installed according to NEC guidelines.

Figure 1: Exterior view of the Cutler-Hammer BR1224L125R 125-Amp Main Lug Load Center, showing its robust construction and outdoor-rated enclosure.

Key Features:

- 125 Amp Main Lug capacity.
- Outdoor mount design.
- 12 (1-inch) spaces, 24 single poles.
- Single phase, 3-wire, 120/240 Volts AC.
- Insulated/bondable split neutral with non-removable cross bus.
- Tin-plated aluminum bus bar.
- Electrostatic powder coat, baked urethane painted finish.
- Convertible to main breaker load center by adding BR2100 (100A) or BR2125 (125A) main breaker (uses 2 full spaces).

Installation and Setup

IMPORTANT: All installation procedures must be performed by a qualified electrician. Ensure power is disconnected at the source before beginning installation.

Mounting:

1. Select a suitable outdoor location for mounting, ensuring it complies with local electrical codes and provides adequate clearance.
2. Securely mount the load center to a sturdy surface using appropriate fasteners. The unit can be rotated 180 degrees for bottom feed applications.
3. Install the required (DS) Hub for conduit entry.

Wiring:

1. Route incoming service conductors (#6-2/0 wire compatible) to the main lugs. Ensure proper insulation and secure connections.
2. Connect the neutral conductor to the insulated/bondable split neutral bar. When bonded for service entrance applications, unused neutral connections may be used for equipment ground protectors.
3. Install the Ground Bar (GBK14P) if required for your application, especially for sub-feeding.
4. Install branch circuit breakers into the available 1-inch spaces.
5. Connect branch circuit conductors to their respective breakers and neutral/ground bars.
6. Ensure all connections are tight and secure.

This load center has a notch for a No. BREQS125 hold down kit, which may be required for certain main breaker installations.

Operation

The Cutler-Hammer BR1224L125R load center distributes electrical power to various circuits within a building, providing overcurrent protection through individual circuit breakers. Once installed and wired, the operation primarily involves managing the circuit breakers.

Circuit Breaker Function:

- **ON/OFF:** Each circuit breaker has a switch to turn the power to its circuit on or off.
- **Tripped Breaker:** If a circuit is overloaded or experiences a short circuit, the breaker will automatically trip to the "OFF" or a central "TRIPPED" position to prevent damage. To reset a tripped breaker, first turn it completely to the "OFF" position, then push it firmly to the "ON" position. Investigate the cause of the trip before resetting.

Converting to Main Breaker Load Center:

This main lug load center can be converted into a main breaker load center by installing a compatible main breaker. This requires adding a BR2100 (100A) or BR2125 (125A) main breaker, which will occupy two full spaces within the panel. This conversion should only be performed by a qualified electrician.

Maintenance

Regular maintenance helps ensure the safe and reliable operation of your load center. Always disconnect power to the unit before performing any maintenance.

- **Periodic Inspection:** Annually inspect the load center for any signs of damage, corrosion, loose connections, or overheating (discoloration).
- **Cleaning:** Keep the area around the load center clear. If cleaning is necessary, ensure power is off and use a dry,

non-conductive brush or cloth to remove dust and debris. Do not use liquids.

- **Tighten Connections:** Periodically, a qualified electrician should check and re-torque all electrical connections to prevent arcing and overheating.

Troubleshooting

If you experience issues with your load center, consider the following common troubleshooting steps. For complex issues or if you are unsure, contact a qualified electrician.

Common Issues:

- **Circuit Breaker Trips Frequently:**
  - *Cause:* Overloaded circuit, short circuit, or ground fault.
  - *Solution:* Unplug appliances from the circuit, reset the breaker. If it trips again immediately, there may be a short circuit or ground fault requiring professional diagnosis.
- **No Power to a Circuit:**
  - *Cause:* Tripped breaker, loose connection, or faulty breaker.
  - *Solution:* Check if the breaker is in the "TRIPPED" or "OFF" position and reset it. If power is still out, inspect connections (with power off) or consider replacing the breaker (by a qualified electrician).
- **Humming or Buzzing Sound:**
  - *Cause:* Loose connections, faulty breaker, or normal operation (slight hum).
  - *Solution:* A slight hum can be normal. A loud or unusual buzzing indicates a problem. Immediately contact a qualified electrician to inspect and tighten connections or replace faulty components.

Specifications

Brand	CUTLER HAMMER
Model Number	BR1224L125R
AC Adapter Current	125 Amps
Number of Circuits	24 (12 spaces)
Phase Type	Single Phase
Voltage	120/240 Volts AC
Material	Aluminum (Tin-plated bus bar)
Item Weight	20.2 pounds
Product Dimensions	19.8 x 15.5 x 4.7 inches
Mounting Type	Outdoor Mount
Wire Compatibility	#6-2/0 wire
UL Listed	File E52977

Warranty and Support

For specific warranty information, please refer to the documentation provided with your purchase or contact Cutler-Hammer customer support directly. Please note that returns may not be honored on this closeout item, as stated in product information.
For technical assistance or support, please contact the manufacturer, Cutler-Hammer, or consult a qualified electrical professional.