Packard C230B

Instruction Manual for Packard C230B Double Pole A/C Contactor

Model: C230B | Brand: Packard

1. Product Overview

The Packard C230B is a double pole A/C contactor designed for industrial control equipment. It is manufactured in accordance with U. L. Bulletin No. 508, ensuring compliance with specifications for devices up to 600 VAC. The contactor features coils with class B insulation and includes necessary components such as lugs, spade terminals, and covers for ease of installation and use.

Key Features:

- Compatible with various models including TJT30A120V2P, 17325, PC230A, H230A, and 90-244.
- Designed to meet U. L. Bulletin No. 508 standards for industrial control equipment.
- Suitable for applications up to 600 VAC.
- Equipped with Class B insulation for coil durability.
- Includes lugs, spade terminals, and protective covers for secure connections.
- Resistive Amps: 40.

Figure 1: Front-side view of the Packard C230B Double Pole A/C Contactor, showing the main terminals and coil.

2. Specifications

Attribute	Value
Model Number	C230B
Brand	Packard
Poles	Double (2)
Amperage	30 Amps
Voltage	120 Volts A/C

Attribute	Value
Product Dimensions	3.4 x 2.8 x 2.2 inches
Weight	1.6 ounces
Insulation Class	Class B (Coils)
UL Compliance	U. L. Bulletin No. 508

3. Safety Information

WARNING: Installation and servicing of this contactor should only be performed by qualified and licensed personnel. Improper installation or handling of electrical components can result in serious injury, death, or property damage. Always disconnect power at the main circuit breaker or fuse box before beginning any work.

- Ensure all local and national electrical codes are followed.
- Verify the voltage and amperage ratings of the contactor match the requirements of your application.
- Use appropriate personal protective equipment (PPE), including insulated gloves and safety glasses.
- Do not operate the contactor if it appears damaged or has been exposed to moisture.
- Ensure all connections are tight and secure to prevent arcing and overheating.

4. Setup and Installation

The Packard C230B contactor is designed for straightforward integration into compatible electrical systems. Proper installation is crucial for safe and reliable operation.

Installation Steps:

1. **Power Disconnection:** Before starting any work, ensure that the main power supply to the circuit where the contactor will be installed is completely disconnected and locked out. Verify with a voltage tester.
2. **Mounting:** Securely mount the contactor in a suitable electrical enclosure using its integrated mounting base. Ensure it is in a location that allows for proper ventilation and access for wiring.
3. **Wiring Main Power:** Connect the main power lines (e.g., 120V A/C) to the appropriate load terminals of the contactor. These are typically the larger terminals designed to handle the main current. Ensure correct polarity if applicable.
4. **Wiring Load:** Connect the load (e.g., A/C unit, motor) to the corresponding output terminals of the contactor.
5. **Wiring Control Voltage:** Connect the low voltage control wires (e.g., from a thermostat or control panel) to the coil terminals of the contactor. These are usually smaller terminals. The C230B is designed for 120V A/C coil voltage.
6. **Secure Connections:** Ensure all wire connections are tight and secure. Use the provided lugs and spade terminals as appropriate. Double-check all wiring against your system's schematic.
7. **Replace Covers:** Once wiring is complete and verified, replace any protective covers on the contactor and close the electrical enclosure.
8. **Restore Power:** Carefully restore power to the circuit and test the contactor's operation.

Figure 2: Top-down view of the contactor, highlighting the main power and control terminals for wiring.

5. Operating Instructions

The Packard C230B contactor functions as an electrically controlled switch. When the appropriate control voltage (120V A/C) is applied to its coil terminals, an electromagnetic field is generated, pulling the contacts together and allowing the main power circuit to close. When the control voltage is removed, the contacts open, interrupting the main power circuit.

Basic Operation:

- **Activation:** The contactor is activated by applying 120V A/C to its coil terminals. This can be done via a thermostat, timer, or other low-voltage control device.
- **Power Flow:** Once activated, the main power contacts close, allowing current to flow from the input terminals to the output terminals, powering the connected load.
- **Deactivation:** When the 120V A/C control voltage is removed from the coil, the electromagnetic field collapses, and the contacts open, interrupting power to the load.
- **Audible Click:** A distinct "click" sound is normal when the contactor engages or disengages, indicating the physical

movement of the contacts.

6. Maintenance

Regular inspection and basic maintenance can help ensure the longevity and reliable operation of your Packard C230B contactor. Always disconnect power before performing any maintenance.

Maintenance Checklist:

- **Visual Inspection (Annually or as needed):**
  - Check for any signs of physical damage, cracks, or discoloration on the housing.
  - Inspect terminals for signs of overheating (e.g., melted insulation, burnt appearance).
  - Look for excessive dust or debris accumulation.
- **Connection Check (Annually or as needed):**
  - With power disconnected, gently tug on each wire connected to the terminals to ensure they are secure.
  - Tighten any loose terminal screws.
- **Cleaning:**
  - Use a soft, dry brush or compressed air to remove dust and debris from the contactor's exterior and around the terminals.
  - Do not use liquid cleaners or solvents.
- **Operational Check:**
  - Listen for a clear, crisp "click" when the contactor engages and disengages. A weak or buzzing sound may indicate an issue.

Note: Contactors are wear-and-tear components. Their lifespan depends on usage frequency and load. It is advisable to keep a spare contactor on hand for critical applications to minimize downtime.

7. Troubleshooting

This section provides guidance for common issues encountered with contactors. Always ensure power is disconnected before inspecting or working on the unit.

Problem	Possible Cause	Solution
Contactor does not engage (no click, load not powered)	◦ No control voltage to coil. ◦ Faulty control circuit (thermostat, timer). ◦ Open coil. ◦ No main power to contactor. ◦ Damaged contactor.	◦ Check control voltage at coil terminals (should be 120V A/C). ◦ Inspect control device and its wiring. ◦ Test coil resistance with a multimeter (should not be open). ◦ Verify main power supply to the contactor's input terminals. ◦ Replace contactor if coil is open or contacts are visibly damaged.

Problem	Possible Cause	Solution
Contactor buzzes loudly when engaged	◦ Loose mounting. ◦ Foreign object obstructing armature. ◦ Low control voltage. ◦ Damaged shading coil (internal).	◦ Ensure contactor is securely mounted. ◦ Inspect for debris. ◦ Verify control voltage is stable and within specifications. ◦ Replace contactor if buzzing persists and other causes are ruled out.
Contactor engages but load does not receive full power	◦ Pitted or burnt main contacts. ◦ Loose main power connections. ◦ Incorrectly sized contactor for load.	◦ Inspect main contacts for damage (replace contactor if severe). ◦ Tighten all main power connections. ◦ Ensure contactor amperage rating meets or exceeds load requirements.

If troubleshooting steps do not resolve the issue, consult a qualified electrician or contact Packard customer support.

8. Warranty and Support

Packard products are manufactured to high-quality standards. For specific warranty information, please refer to the documentation provided with your purchase or visit the official Packard website. In most cases, contactors come with a limited manufacturer's warranty covering defects in materials and workmanship.

Customer Support:

For technical assistance, warranty claims, or general inquiries, please contact Packard customer support through their official channels. Always have your product model number (C230B) and purchase details ready when contacting support.
Official Website: www.packardonline.com (Please check for the most current contact information)