'8910DPA43V09

Instruction Manual

Square D 208/240VAC Open Definite Purpose Contactor, 40 Full Load Amps-Inductive, 3 Number of Poles - 8910DPA43V09

Product Overview

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Definite Purpose Contactor. This device is designed for controlling electrical loads in various applications, particularly in HVAC and refrigeration systems.

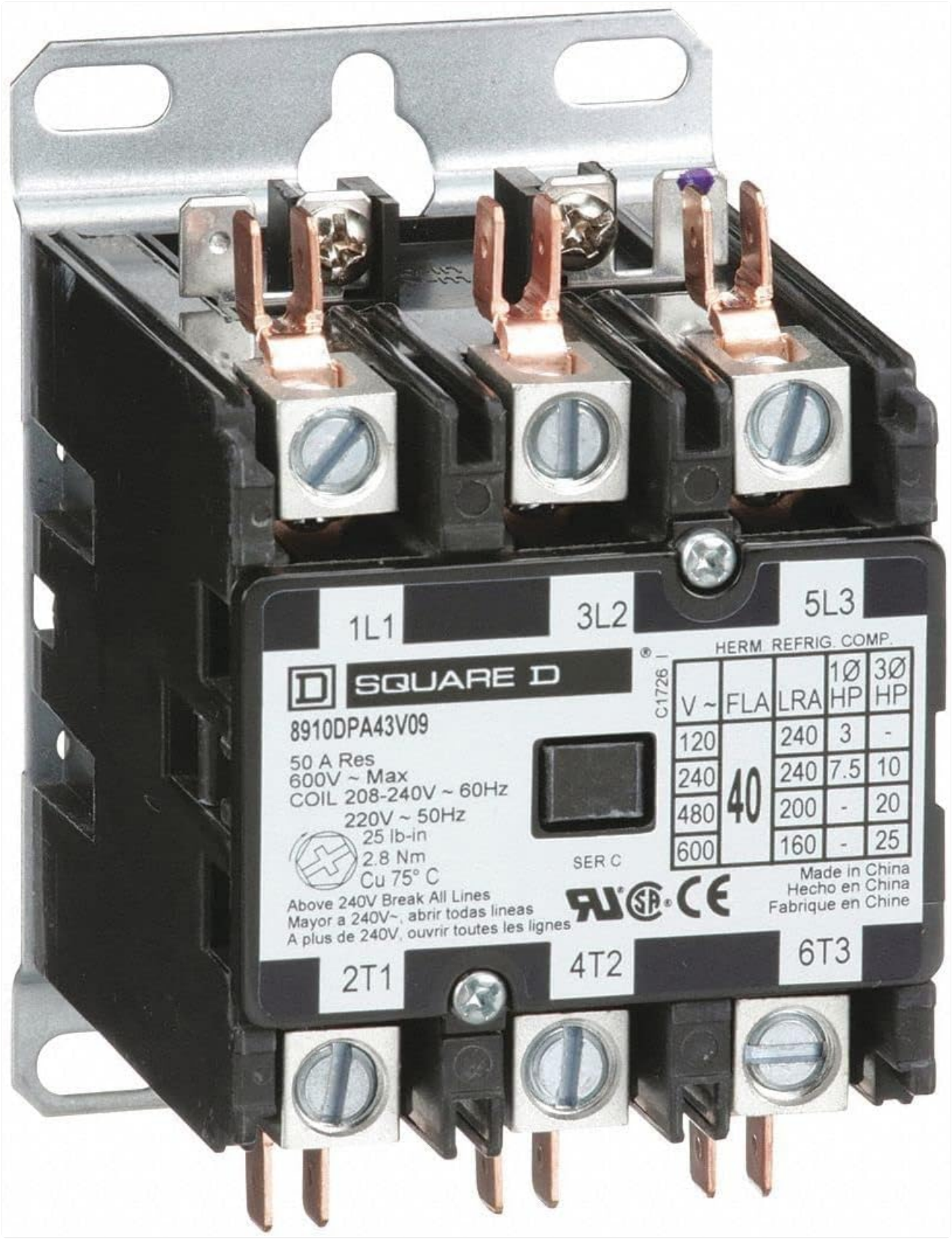

Figure 1: Front view of the Definite Purpose Contactor, model 8910DPA43V09. It features three main power terminals (1L1, 3L2, 5L3) at the top and corresponding load terminals (2T1, 4T2, 6T3) at the bottom. The coil voltage is specified as 208-240VAC, and it has a 40 Full Load Amps (FLA) rating. The device is open type and includes quick connect terminals.

Safety Information

Always disconnect power before installing or servicing this device. Installation should be performed by qualified personnel in accordance with all national and local electrical codes. Failure to follow these instructions can result in death, serious injury, or equipment damage.

- Ensure proper grounding.

- Verify correct voltage and current ratings before connection.
- Do not exceed the specified electrical ratings.
- Protect against short circuits and overloads.

Setup and Installation

This contactor is designed for open mounting within an enclosure. Ensure adequate ventilation and clearance around the unit.

Mounting

1. Select a suitable mounting surface within an electrical enclosure.
2. Secure the contactor using appropriate fasteners through the mounting holes on the base plate.
3. Ensure the contactor is mounted vertically for optimal performance and heat dissipation.

Wiring

Refer to the wiring diagram provided with your equipment. The contactor has three main power poles (1L1, 3L2, 5L3) for incoming line connections and three corresponding load terminals (2T1, 4T2, 6T3) for outgoing load connections. The coil terminals are typically located on the front face of the contactor.

- Connect the incoming power lines to terminals 1L1, 3L2, and 5L3.
- Connect the load wires to terminals 2T1, 4T2, and 6T3.
- Connect the control circuit wires to the coil terminals. The coil voltage for this model is 208-240VAC.
- Tighten all terminal screws to the specified torque of 25 lb-in (2.8 Nm) to ensure secure electrical connections and prevent overheating.

Operating Principles

The definite purpose contactor operates by energizing its coil, which creates a magnetic field that pulls the armature, closing the main power contacts. When the coil is de-energized, a spring returns the armature to its original position, opening the contacts and disconnecting power to the load.

- **Coil Voltage:** The coil requires 208-240VAC to operate.
- **Contact Rating:** Rated for 40 Full Load Amps (Inductive) and 50 Amps (Resistive).
- **Action:** Non-reversing.

Maintenance

Regular maintenance helps ensure the longevity and reliable operation of the contactor. Always disconnect power before performing any maintenance.

- **Inspection:** Periodically inspect the contactor for signs of wear, discoloration, or loose connections. Check for any unusual noises during operation.
- **Cleaning:** Keep the contactor free from dust, dirt, and debris. Use a dry, non-conductive brush or compressed air for cleaning.
- **Terminal Tightness:** Re-check terminal screw tightness periodically, especially after initial installation and during routine maintenance.
- **Contact Wear:** While contacts are designed for long life, excessive arcing or frequent cycling can lead to wear. If contacts appear pitted or severely eroded, the contactor may need replacement.

Troubleshooting

This section provides guidance for common issues. For complex problems, consult a qualified electrician.

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Contactor does not pull in (contacts do not close)	No control voltage to coil Incorrect coil voltage Open coil circuit Mechanical obstruction	Check control circuit wiring and power supply. Verify coil voltage matches supply (208-240VAC). Test coil for continuity; replace if open. Inspect for foreign objects preventing armature movement.
Contactor hums excessively	Loose laminations Incorrect voltage Dirt or debris on magnet faces	Tighten mounting screws. Verify correct coil voltage. Clean magnet faces (ensure power is off).
Contactor contacts weld or stick	Overload condition Short circuit Excessive arcing	Identify and correct overload. Check for short circuits in the load. Replace contactor if contacts are damaged.

Specifications

Parameter	Value
Item	Contactor
Contactor Type	Definite Purpose
Number of Poles	3
Full Load Amps (Inductive)	40A
Full Load Amps (Resistive)	50A
Coil Volts	208/240VAC, 50/60Hz
HP @ 1 Phase - 120V	3 HP
HP @ 1 Phase - 230V	7.5 HP
HP @ 3 Phase - 230V	10 HP
HP @ 3 Phase - 480V	20 HP
HP @ 3 Phase - 575V	20 HP
Height	4"
Width	2.5"
Depth	3.12"
Action	Nonreversing
Enclosure Type	Open
Series	C
Includes	Quick Connect Terminal
Standards	UL, CSA, CE
UNSPSC	39121529

Parameter	Value
Tightening Torque	25 lb-in (2.8 Nm)
Conductor Temperature Rating	Cu 75°C

Warranty and Support

For warranty information or technical support, please refer to the manufacturer's official website or contact their customer service. Keep your purchase receipt for warranty claims.
Manufacturer: **Generic**
Model Number: **'8910DPA43V09**
ASIN: **B09BN19LTZ**