

Moeller DILM9-10

Moeller DILM9-10 Contactor User Manual

Model: DILM9-10 | Brand: Moeller

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Moeller DILM9-10 3-pole contactor. Please read this manual thoroughly before attempting any installation or operation.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Only qualified personnel should install, operate, or service this device.

- Always disconnect power before working on the contactor or associated circuitry.
- Ensure proper grounding and wiring in accordance with local and national electrical codes.
- Do not exceed the specified voltage and current ratings.
- Protect the device from moisture, dust, and extreme temperatures.
- Use appropriate personal protective equipment (PPE) when handling electrical components.

3. PRODUCT OVERVIEW

The Moeller DILM9-10 is a compact 3-pole contactor designed for switching resistive, inductive, and capacitive loads in various industrial and commercial applications. It features one normally open (N/O) auxiliary contact for control circuit integration.



This image displays the front of the Moeller DILM9-10 contactor. Visible markings include terminal designations (1 L1, 3 L2, 5 L3, 13 NO, A1 at the top; 2 T1, 4 T2, 6 T3, 14 NO, A2 at the bottom), the model number DIL M9-10, and coil voltage ratings of 110V 50Hz / 120V 60Hz. The Eaton logo is also present on the left side.

3.1. Key Components

- **Main Power Terminals (L1, L2, L3, T1, T2, T3):** For connecting the main power circuit.
- **Auxiliary Contact Terminals (13 NO, 14 NO):** For control circuit connections (Normally Open).
- **Coil Terminals (A1, A2):** For connecting the control voltage to energize the contactor coil.
- **Mounting Mechanism:** Designed for DIN rail mounting or screw mounting.

4. SETUP AND INSTALLATION

4.1. Mounting

The DILM9-10 contactor can be mounted on a 35mm DIN rail or directly to a panel using screws. Ensure sufficient clearance for ventilation and wiring.

1. For DIN rail mounting: Snap the contactor onto the DIN rail until it clicks into place.
2. For screw mounting: Use appropriate screws to secure the contactor through the designated mounting holes.

4.2. Wiring

Connect the power and control circuits to the appropriate terminals as indicated on the contactor and in the table below. Ensure all connections are secure and properly torqued to prevent loose connections and overheating.

Terminal Designations

Terminal	Description
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Terminal	Description
1 L1, 3 L2, 5 L3	Main Power Input (Line)
2 T1, 4 T2, 6 T3	Main Power Output (Load)
13 NO	Normally Open Auxiliary Contact Input
14 NO	Normally Open Auxiliary Contact Output
A1, A2	Coil Control Voltage Input (110VAC 50Hz / 120VAC 60Hz)

5. OPERATING INSTRUCTIONS

The DILM9-10 contactor operates by energizing its coil. When the specified control voltage (110VAC 50Hz / 120VAC 60Hz) is applied to terminals A1 and A2, the coil creates a magnetic field, pulling the armature and closing the main power contacts (L1-T1, L2-T2, L3-T3) and the auxiliary contact (13 NO - 14 NO). When the control voltage is removed, the coil de-energizes, and springs return the contacts to their open position.

- Ensure all wiring is correct and secure before applying power.
- Apply the rated control voltage to terminals A1 and A2 to close the main and auxiliary contacts.
- Remove the control voltage to open the contacts.

6. MAINTENANCE

Regular inspection and maintenance can extend the lifespan of the contactor and ensure reliable operation. Always disconnect power before performing any maintenance.

- **Visual Inspection:** Periodically check for signs of wear, damage, discoloration, or loose connections.
- **Cleaning:** Keep the contactor free from dust, dirt, and debris. Use a dry, lint-free cloth. Do not use solvents or abrasive cleaners.
- **Terminal Tightness:** Verify that all terminal screws are properly tightened to the recommended torque specifications.
- **Contact Wear:** While not typically user-serviceable, excessive arcing or pitting on contacts may indicate the need for replacement.

7. TROUBLESHOOTING

This section provides solutions to common issues encountered with the DILM9-10 contactor.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Contactors does not energize (does not pull in)	No control voltage to A1/A2; Incorrect control voltage; Open circuit in control wiring; Damaged coil.	Check control voltage supply; Verify correct voltage (110VAC 50Hz / 120VAC 60Hz); Inspect control wiring for breaks; Test coil resistance (replace if open).
Contactors hums loudly	Loose armature; Dirt/debris on pole faces; Incorrect voltage.	Ensure proper mounting; Clean pole faces; Verify correct control voltage.
Contactors overheats	Overload condition; Loose power connections; Incorrect voltage.	Check load current against contactor rating; Tighten all power terminal connections; Verify correct control voltage.
Contacts are welded or stuck closed	Excessive current/short circuit; Frequent switching of high inductive loads; End of life.	Identify and rectify overload/short circuit; Consider adding surge suppression; Replace contactor.

8. SPECIFICATIONS

Parameter	Value
Model	DILM9-10
Brand	Moeller
Poles	3-Pole
Auxiliary Contacts	1 N/O (Normally Open)
Rated Current (AC-3)	9A
Rated Power (AC-3, 400V)	4KW
Coil Voltage	110VAC 50Hz / 120VAC 60Hz
ASIN	B07HCFJ9DM
Date First Available	July 17, 2019

9. WARRANTY AND SUPPORT

For specific warranty information, please refer to the documentation provided at the time of purchase or contact your Moeller product supplier. Technical support may be available through authorized distributors or the manufacturer's official channels.

For further assistance, please contact your local Moeller representative or visit the official Moeller website.

