Schneider Electric LC1D50AM7

SCHNEIDER ELECTRIC Tesys D 3P Everlink AC Contactor LC1D50AM7 User Manual

Model: LC1D50AM7

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Schneider Electric TeSys D 3P Everlink AC Contactor, model LC1D50AM7. Please read this manual thoroughly before attempting any installation or operation to ensure proper function and safety.

2. Safety Information

WARNING: Risk of Electric Shock or Explosion.

- Only qualified personnel should install, operate, service, and maintain this equipment.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors, and covers before turning on power to this equipment.
- Failure to follow these instructions will result in death or serious injury.

This product must be installed and used in accordance with national and local electrical codes.

3. Product Overview

The Schneider Electric TeSys D LC1D50AM7 is a 3-pole AC contactor designed for controlling motors and other resistive loads. It features Everlink terminals for reliable and secure connections. This contactor is rated for AC-3 applications up to 50 Amperes and complies with IEC standards.

Figure 1: Schneider Electric TeSys D 3P Everlink AC Contactor LC1D50AM7. This image shows the front and side view of the contactor, highlighting the main power terminals (1 L1, 3 L2, 5 L3 at the top, and corresponding output terminals at the bottom), auxiliary contacts (13 NO, 21 NC, 14 NO, 22 NC), and the coil terminals (A1, A2). The Schneider Electric logo and TeSys branding are visible on the front face.

Key components include:

- **Power Terminals:** L1, L2, L3 (input) and T1, T2, T3 (output) for the main power circuit.
- **Auxiliary Contacts:** Normally Open (NO) and Normally Closed (NC) contacts for control circuits.
- **Coil Terminals:** A1 and A2 for energizing the contactor coil.
- **Operating Lever:** Indicates the contactor's status (open/closed).

4. Installation and Setup

4.1 Mounting

The contactor can be mounted on a 35mm DIN rail or directly to a panel using screws. Ensure adequate ventilation around the contactor.

- **DIN Rail Mounting:** Clip the contactor onto the DIN rail until it locks securely.
- **Screw Mounting:** Use appropriate screws to secure the contactor to a flat surface through the designated mounting holes.

4.2 Wiring

All wiring must be performed with power disconnected. Refer to local and national electrical codes for proper wire sizing and protection.

1. **Power Circuit Wiring:**
    - Connect the incoming power lines to terminals 1 L1, 3 L2, and 5 L3.
    - Connect the load (e.g., motor) to terminals 2 T1, 4 T2, and 6 T3.
    - Ensure all connections are tight and secure. The Everlink terminals are designed for reliable connections.
2. **Control Circuit Wiring:**
    - Connect the control voltage to the coil terminals A1 and A2. The coil voltage rating is specified on the contactor label.
    - Utilize the auxiliary contacts (13 NO, 14 NO, 21 NC, 22 NC) for interlocking, signaling, or other control functions as required by your application.

CAUTION: Verify all wiring connections before applying power. Incorrect wiring can damage the contactor or connected equipment.

5. Operation

The TeSys D contactor operates by energizing its coil. When the appropriate control voltage is applied to terminals A1 and A2, the coil creates an electromagnetic field, pulling the armature and closing the main power contacts (L1-T1, L2-T2, L3-T3). Simultaneously, the auxiliary contacts change state (NO contacts close, NC contacts open).

- **Energized State:** Main contacts are closed, auxiliary NO contacts are closed, auxiliary NC contacts are open. The operating lever will indicate the closed position.
- **De-energized State:** Main contacts are open, auxiliary NO contacts are open, auxiliary NC contacts are closed. The operating lever will indicate the open position.

To de-energize the contactor, remove the control voltage from terminals A1 and A2. The spring mechanism

will return the contacts to their original state.

6. Maintenance

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

6.1 Inspection

- Periodically inspect the contactor for signs of overheating, discoloration, or physical damage.
- Check all terminal connections for tightness. Loose connections can cause overheating and arcing.
- Ensure the operating mechanism moves freely and without obstruction.

6.2 Cleaning

- Use a dry, lint-free cloth to wipe away any dust or debris from the contactor's exterior.
- Do not use solvents or abrasive cleaners, as these can damage the plastic components.

7. Troubleshooting

This section addresses common issues you might encounter with the contactor.

Problem	Possible Cause	Solution
Contactor does not energize when control voltage is applied.	• No control voltage to A1/A2. • Incorrect control voltage. • Open circuit in control wiring. • Damaged coil.	• Check control circuit power supply. • Verify control voltage matches coil rating. • Inspect control wiring for breaks or loose connections. • Replace contactor if coil is damaged.
Contactor hums loudly.	• Loose connections. • Foreign object obstructing armature. • Incorrect voltage.	• Tighten all connections. • Inspect and remove any obstructions. • Verify control voltage.
Contactor contacts are welded or stuck.	• Overcurrent condition. • Frequent switching under heavy load.	• Identify and correct the cause of overcurrent. • Replace the contactor. Consider a higher-rated contactor or soft starter for demanding applications.

If the problem persists after attempting these solutions, contact Schneider Electric technical support.

8. Specifications

Attribute	Value
Model Number	LC1D50AM7
Brand	Schneider Electric
Type	3P Everlink AC Contactor
Current Rating (AC-3)	50 Amperes
Certification	IEC
Material	Copper (internal components)
Item Weight	1.6 ounces (approx. 45 grams)
Product Dimensions	10 x 10 x 10 inches (approximate package dimensions)
Country of Origin	CHINA

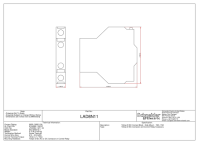
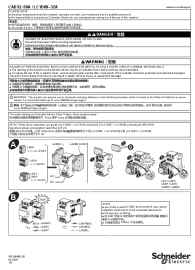
Note: Specific coil voltage (e.g., 110V, 220V) is determined by the exact model variant and should be verified on the product label.

9. Warranty and Support

For warranty information, technical support, or service inquiries, please contact Schneider Electric directly or visit their official website. Keep your purchase receipt and product model number (LC1D50AM7) handy when contacting support.
Schneider Electric is committed to providing high-quality products and support. For further assistance, refer to the contact information available on the official Schneider Electric website: www.se.com

Related Documents - LC1D50AM7

	Schneider Electric TeSys Catalog 2024: Motor Control Solutions Explore the Schneider Electric TeSys Catalog 2024, featuring innovative and connected solutions for motor starters, control, protection, and power management. Discover a century of expertise in motor control technology.

	[LAD8N11 TeSys D IEC Contact Block - Schneider Electric Technical Specifications] Detailed technical specifications, dimensional drawing description, and manufacturer information for the Schneider Electric LAD8N11 TeSys D IEC Contact Block. This 1NO 1NC side-mount accessory is for TeSys D IEC Contactors and Control Relays.
	[Schneider Electric LC1D/LC2D Series Contactors: Technical Specifications and Installation Guide] Comprehensive guide to Schneider Electric's LC1D and LC2D series contactors, covering product specifications, safety warnings, installation procedures, dimensions, wiring, and accessories. Features detailed information for electrical engineers and technicians.
	[Schneider Electric TeSys Deca Contactor Installation and Safety Guide] Comprehensive guide for installing and operating Schneider Electric TeSys Deca contactors (CAD32-50A, LC1D09-32A). Includes safety warnings, wiring diagrams, and technical specifications.
	[Schneider Electric TeSys Control: Contactors & Motor Starters Catalog] Explore the Schneider Electric TeSys Control catalog, featuring a wide range of SK, K, Deca, and Modular contactors, reversing contactors, and essential motor control components like circuit breakers and relays.
	[Schneider Electric TeSys IEC Contactors and Starters - Section 17] Comprehensive guide to Schneider Electric's TeSys IEC contactors, overload relays, motor starters, and related accessories, detailing specifications, selection, and dimensions for industrial motor control applications.