

Schneider Electric LRD21

Schneider Electric LRD21 TeSys D Thermal Overload Relay User Manual

Model: LRD21

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Schneider Electric LRD21 TeSys D Thermal Overload Relay. Please read this manual thoroughly before attempting any procedures with the device.

2. SAFETY INFORMATION

WARNING: Electrical Shock Hazard

- Only qualified personnel should install, operate, and maintain this equipment.
- Disconnect all power before working on the equipment.
- Always use appropriate personal protective equipment (PPE).
- Failure to follow these instructions can result in death or serious injury.

Ensure all local and national electrical codes are followed during installation and operation.

3. PRODUCT FEATURES

The Schneider Electric LRD21 TeSys D Thermal Overload Relay is designed to protect AC circuits and motors against overload, phase failure, and long starting times. Key features include:

- Adjustable thermal setting range: 12-18A.
- Class 10A tripping characteristic.
- Manual and automatic reset functions.
- STOP push-button for manual tripping.
- Auxiliary contacts: 1 Normally Open (NO) and 1 Normally Closed (NC).
- Direct mounting under TeSys D contactors.



Figure 1: Schneider Electric LRD21 TeSys D Thermal Overload Relay. This image displays the front view of the relay, highlighting the 'TeSys' and 'Schneider Electric' branding, the 'LRD 21' model designation, and the current adjustment dial with settings from 12 to 18 Amperes. Visible controls include a blue 'RESET' button and a red 'STOP' button. The main power terminals are labeled 2T1, 4T2, 6T3, and auxiliary contacts are labeled 97 NO, 98 NO, 95 NC, 96 NC.

4. SETUP AND INSTALLATION

The LRD21 relay is designed for direct mounting onto TeSys D contactors. Follow these steps for installation:

1. **Power Disconnection:** Ensure all power to the circuit is disconnected and locked out before beginning installation.
2. **Mounting:** Align the relay's power terminals (2T1, 4T2, 6T3) with the corresponding terminals on the contactor. Push the relay firmly onto the contactor until it clicks into place.
3. **Wiring:** Connect the motor load to the relay's output terminals (2T1, 4T2, 6T3). Connect the control circuit to the auxiliary contacts (97 NO, 98 NO, 95 NC, 96 NC) as required for your application.
4. **Thermal Setting:** Adjust the thermal setting dial (visible on the front of the relay, marked 12-18A) to match the motor's full load current (FLC). Use a screwdriver to turn the dial to the desired amperage.

5. **Verification:** Double-check all connections for tightness and correct polarity.

5. OPERATING INSTRUCTIONS

Once installed and powered, the LRD21 relay operates automatically to protect the motor. Manual controls are available:

- **RESET Button (Blue):** After an overload trip, the relay will open its normally closed (NC) contacts and close its normally open (NO) contacts. To reset the relay, press the blue RESET button. The relay can be configured for manual or automatic reset. The 'H' setting on the dial indicates manual reset, while 'A' indicates automatic reset.
- **STOP Button (Red):** Pressing the red STOP button manually trips the relay, opening the main circuit through the contactor. This can be used for emergency stops or testing.
- **Thermal Adjustment Dial:** The dial allows precise setting of the overload trip current within the 12-18A range. Ensure this is set correctly to the motor's full load current.

6. MAINTENANCE

The LRD21 thermal overload relay is designed for minimal maintenance. Regular inspection is recommended:

- **Visual Inspection:** Periodically check the relay for any signs of physical damage, discoloration, or loose connections.
- **Cleanliness:** Ensure the relay and its surroundings are free from dust, dirt, and moisture.
- **Connection Tightness:** Verify that all terminal connections remain tight to prevent overheating.
- **Functionality Test:** Occasionally test the STOP and RESET functions to ensure they operate correctly.

7. TROUBLESHOOTING

If the LRD21 relay is not functioning as expected, consider the following common issues:

- **Relay Trips Frequently:**
 - Verify the thermal setting matches the motor's full load current.
 - Check for actual motor overload (e.g., mechanical binding, low voltage).
 - Inspect for phase imbalance or phase loss in the motor circuit.
- **Relay Does Not Trip on Overload:**
 - Ensure the thermal setting is correctly adjusted and not set too high.
 - Check the wiring to ensure the motor current passes through the relay's main poles.
 - Verify the auxiliary contacts are correctly wired into the control circuit.
- **Relay Cannot Be Reset:**
 - Allow sufficient cooling time after an overload trip.
 - Ensure the reset mode is set to 'H' (manual) if manual reset is desired.
 - Check for continuous overload conditions that prevent resetting.

If issues persist, consult a qualified electrician or contact Schneider Electric support.

8. SPECIFICATIONS

Parameter	Value
Brand	Schneider Electric
Model Number	LRD21
Thermal Adjustment Range	12-18A
Tripping Class	Class 10A
Auxiliary Contacts	1 NO + 1 NC
Reset Type	Manual (H) / Automatic (A)
Package Dimensions	3.46 x 3.11 x 1.93 inches
Item Weight	0.01 ounces

9. WARRANTY AND SUPPORT

Information regarding the specific warranty terms for the Schneider Electric LRD21 TeSys D Thermal Overload Relay was not provided in the product data. For warranty details, please refer to the official Schneider Electric website or contact your authorized distributor.

For technical support or further assistance, please visit the [Schneider Electric official website](#) or contact their customer service department.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question