

Legrand 412505

Legrand CX³ Power Contactor 412505 User Manual

Model: 412505

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Legrand CX³ Power Contactor, model 412505. Please read this manual thoroughly before using the product and retain it for future reference.

The Legrand CX³ Power Contactor 412505 is designed for controlling electrical circuits, conforming to standard NF EN 61095. It is compatible with up to 25 A comb-shaped bus bars.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Installation and maintenance should only be performed by qualified personnel. Disconnect all power before working on the contactor or connected circuits.

- Always follow local and national electrical codes.
- Ensure the power supply matches the contactor's specifications.
- Do not operate the contactor if it appears damaged.
- Wear appropriate personal protective equipment (PPE).

3. PRODUCT DESCRIPTION AND FEATURES

The Legrand CX³ Power Contactor 412505 is a compact and reliable device for switching electrical loads. Key features include:

- **Model:** 412505
- **Coil Voltage:** 24V
- **Rated Current (I Max):** 25 Amps
- **Rated Voltage:** 250V (Bipolar)
- **Contact Type:** 2 Normally Open (2F)

- **Number of Modules:** 1
- **Mounting:** DIN Rail Mount
- **Protection Rating:** IP20
- **Material:** Kunststoff (housing), Copper (contacts)

4. SETUP AND INSTALLATION

The contactor is designed for DIN rail mounting. Follow these steps for installation:

1. **Power Disconnection:** Ensure all power to the circuit is disconnected at the main breaker. Verify with a voltage tester.
2. **Mounting:** Clip the contactor onto a standard DIN rail. Ensure it is securely fastened.
3. **Wiring (Power Circuit):**
 - Connect the incoming power lines to the main terminals (e.g., L1, L2).
 - Connect the load lines to the outgoing terminals (e.g., T1, T2).
 - Ensure all connections are tight using the clamp connector type.
4. **Wiring (Control Circuit):**
 - Connect the 24V control voltage to the coil terminals (A1, A2).
 - The control method is remote, typically via a switch or control system.
5. **Verification:** Double-check all wiring for correctness and security before restoring power.

5. OPERATING INSTRUCTIONS

The Legrand CX³ Power Contactor 412505 operates in an ON-OFF mode, controlled by its 24V coil.

- **Activation:** Apply 24V DC or AC (depending on coil type, typically AC for contactors unless specified) to the coil terminals (A1 and A2). This will energize the coil, closing the main contacts and allowing power to flow to the connected load.
- **Deactivation:** Remove the 24V control voltage from the coil terminals. The coil will de-energize, opening the main contacts and disconnecting power from the load.
- **Indicator:** Some models may include a visual indicator to show the contactor's state (energized/de-energized).

Note: The contactor is designed for remote control. There is no manual control mechanism on this specific model (as per "Coil without Manual Control").

6. MAINTENANCE

The Legrand CX³ Power Contactor 412505 is designed for minimal maintenance. However, periodic checks are recommended to ensure optimal performance and safety.

- **Visual Inspection:** Regularly inspect the contactor for any signs of physical damage, discoloration, or loose connections.
- **Terminal Tightness:** Periodically check that all terminal connections are secure. Loose connections can lead to overheating and failure.
- **Cleaning:** If necessary, gently clean the exterior of the contactor with a dry, lint-free cloth. Do not use solvents or abrasive cleaners. Ensure power is disconnected before cleaning.
- **Operating Environment:** Ensure the operating environment remains within the specified temperature and humidity

ranges to prevent premature wear.

If any issues are observed, disconnect power and consult a qualified electrician.

7. TROUBLESHOOTING

Before troubleshooting, ensure all power is disconnected. Only qualified personnel should perform troubleshooting and repairs.

Problem	Possible Cause	Solution
Contactors does not energize when control voltage is applied.	<ul style="list-style-type: none">No control voltage (24V) to coil.Incorrect wiring of control circuit.Damaged coil.	<ul style="list-style-type: none">Check 24V supply to A1/A2 terminals.Verify control circuit wiring against diagram.Replace contactor if coil is faulty.
Contactors energizes but load does not receive power.	<ul style="list-style-type: none">No main power supply.Incorrect wiring of power circuit.Damaged main contacts.	<ul style="list-style-type: none">Check main power supply and circuit breaker.Verify power circuit wiring against diagram.Replace contactor if contacts are faulty.
Contactors hums loudly or overheats.	<ul style="list-style-type: none">Incorrect coil voltage.Loose connections.Contactors operating beyond its rated capacity.	<ul style="list-style-type: none">Verify coil voltage matches specifications.Tighten all terminal connections.Ensure load current does not exceed 25A.

8. SPECIFICATIONS

Parameter	Value
Model Number	412505
Brand	Legrand
Operation Mode	ON-OFF
Current Rating (I Max)	25 Amps
Operating Voltage (Main)	250 Volts (Bipolar)
Operating Voltage (Coil)	24 Volts
Contact Type	2 Normally Open (2F)
Connector Type	Clamp
Switch Type	Contactors

Parameter	Value
Terminal Type	Blade
Housing Material	Kunststoff
Contact Material	Copper
Circuit Type	2-way
Mounting Type	DIN Rail Mount
Actuator Type	Plunger
Number of Positions	1
Control Method	Remote
Connectivity Protocol	Wi-Fi (<i>Note: Refers to system integration, not inherent Wi-Fi in contactor</i>)
Wattage (Max Load)	600 watts
International Protection Rating	IP20
Item Weight	0.13 Kilograms

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Legrand website or contact your local Legrand distributor. Keep your purchase receipt as proof of purchase.

