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› OLZFJAJE EACT-4P-100 100A Household AC Contactor Instruction Manual

## OLZFJAJE EACT-4P-100

# OLZFJAJE EACT-4P-100 100A Household AC Contactor Instruction Manual

Model: EACT-4P-100

## 1. INTRODUCTION

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Thank you for choosing the OLZFJAJE EACT-4P-100 Household AC Contactor. This device is designed for controlling electrical loads in residential and light commercial applications, offering reliable switching capabilities. It features a compact, modular design and is built with high-performance insulation materials to ensure operational safety. This manual provides essential information for the safe and efficient installation, operation, and maintenance of your AC contactor.

## 2. SAFETY INFORMATION

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Please read and understand all safety instructions before installing or operating this product. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Installation and maintenance should only be performed by qualified personnel.
- Always disconnect power before working on the contactor or associated wiring.
- Ensure proper grounding and wiring according to local electrical codes and standards.
- Do not operate the contactor if it is damaged or if any parts are missing.
- Verify that the voltage and current ratings of the contactor match your application requirements.

## 3. PRODUCT OVERVIEW

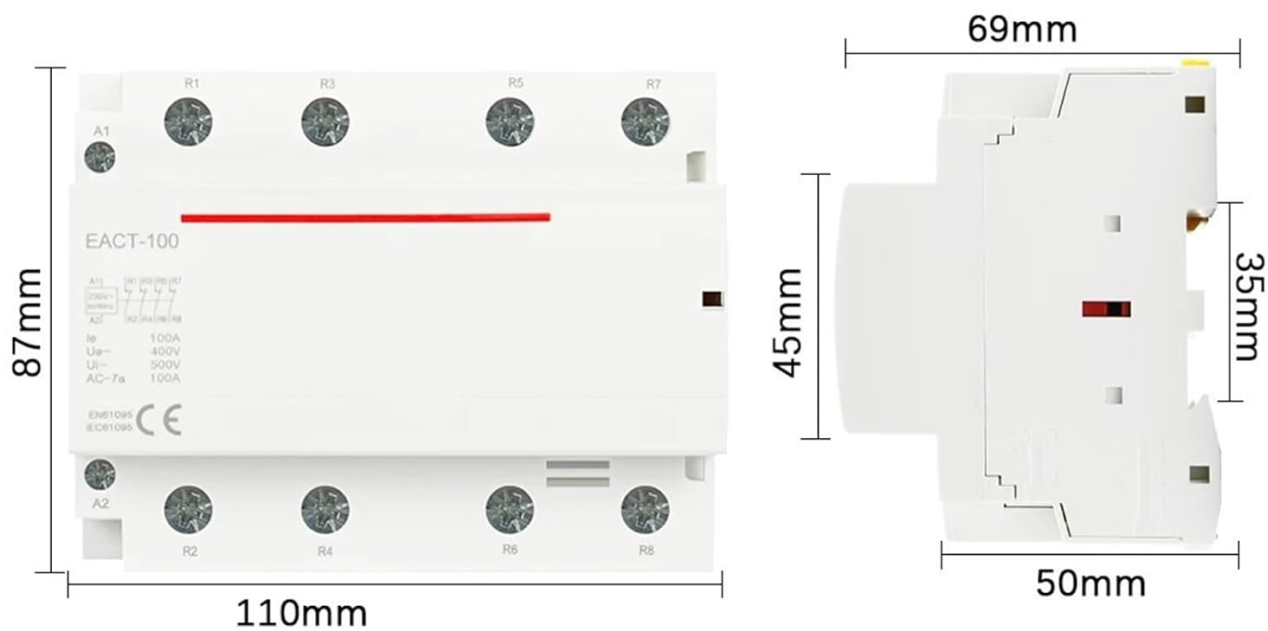
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The EACT-4P-100 is a modular AC contactor designed for DIN rail mounting. It is available in various contact configurations (4NO, 4NC, 2NO2NC, 3NO1NC) to suit different control needs. Its compact design and quiet operation make it suitable for diverse applications.

# AC110V AC220V AC/DC24V Din Rail Contactor 4NO 4NC 2NONC 3NONC



Figure 3.1: Front view of the EACT-4P-100 AC Contactor, showing terminals A1, A2, R1-R8, and product labeling.



| Product Parameters  |                                      |
|---|--------------------------------------|
| Voltage rating(Ue):400VAC   | Frequency:50/60Hz                    |
| Insulation voltage(Ui):500VAC                                     | Electrical:100,000 cycles            |
| Storage temperature:-40°Cto+70°C                                  | Operating temperature:-5°Cto+60°C    |
| Pollution degree:2  | Degree of protection(IEC 60529):IP20 |
| Rated impulse withstand voltage(Uimp):2.5kV(4 kV for 12/24/48VAC) |                                      |

Figure 3.2: Dimensions of the EACT-4P-100 AC Contactor (110mm x 87mm x 69mm) and a table of key product parameters.

## 4. SPECIFICATIONS

| Parameter                              | Value                                  |
|--|--|
| Model Number                           | EACT-4P-100                            |
| Current Rating                         | 100A                                   |
| Main Circuit Rating Voltage            | 230V AC (also supports 220V AC, DC24V) |
| Voltage Rating (Ue)                    | 400VAC                                 |
| Insulation Voltage (Ui)                | 500VAC                                 |
| Frequency                              | 50/60Hz                                |
| Utilization Category                   | AC-1, AC-7a, AC-7b                     |
| Standard                               | IEC / EN 61095                         |
| Electrical Endurance                   | 100,000 cycles                         |
| Operating Temperature                  | -5°C to +60°C                          |
| Storage Temperature                    | -40°C to +70°C                         |
| Pollution Degree                       | 2                                      |
| Degree of Protection                   | IP20 (IEC 60529)                       |
| Rated Impulse Withstand Voltage (Uimp) | 2.5kV (4 kV for 12/24/48VAC)           |
| Contact Configurations                 | 4NO, 4NC, 2NO2NC, 3NO1NC               |
| Item Weight                            | 1.76 ounces                            |
| Package Dimensions                     | 0.39 x 0.39 x 0.39 inches              |

## 5. INSTALLATION AND WIRING

The EACT-4P-100 contactor is designed for DIN rail mounting. Ensure the mounting surface is stable and free from vibrations. Follow the wiring diagrams carefully for correct installation.

### 5.1 General Wiring Principles

- Connect the control voltage to terminals A1 and A2 to energize the coil.
- The main circuit connections are made to terminals R1-R8, depending on the contact configuration.
- Always use appropriate wire gauges for the current rating to prevent overheating.
- Ensure all connections are tight and secure.

### 5.2 2NO Wiring Schematic

This diagram illustrates the wiring for a 2 Normally Open (2NO) contactor configuration. When coils A1 and A2 are energized, the load connected to the NO contacts is also energized.

## 2NO Wiring Schematic

**N** When coils A1 and A2 are energized, the load is also energized.

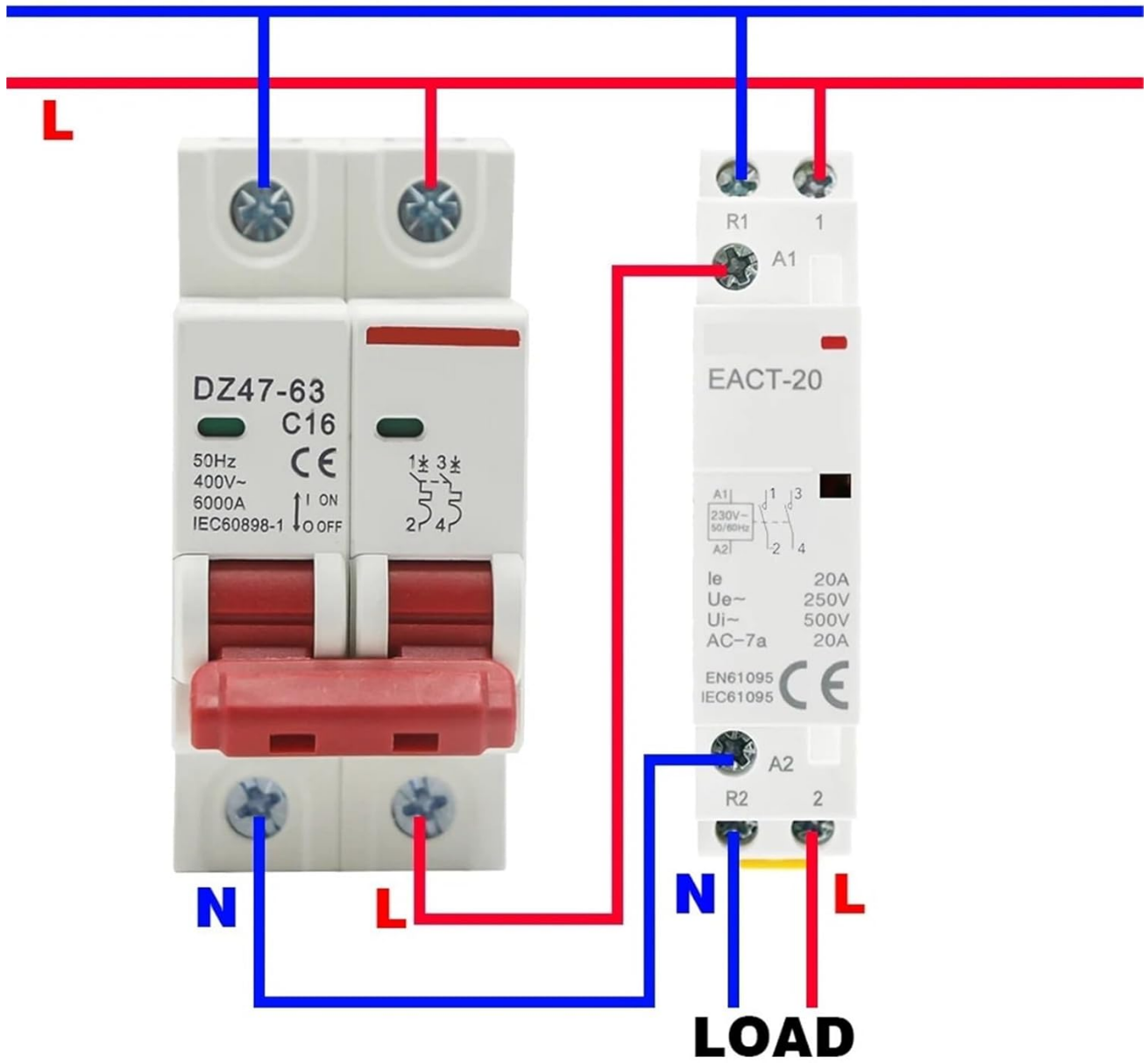


Figure 5.1: Wiring diagram for a 2NO contactor configuration, showing connections from a circuit breaker (DZ47-63 C16) to the EACT-20 (example model) contactor's A1/A2 coil and R1/R2 load terminals.

### 5.3 1NO1NC Wiring Schematic

This diagram shows the wiring for a 1 Normally Open (1NO) and 1 Normally Closed (1NC) contactor configuration. When coils A1 and A2 are energized, Load 1 (connected to NO) is energized, and Load 2 (connected to NC) is de-energized.

## 1NO1NC wiring schematic

**N** Coils A1 and A2 energized, load 1 energized, load 2 de-energized

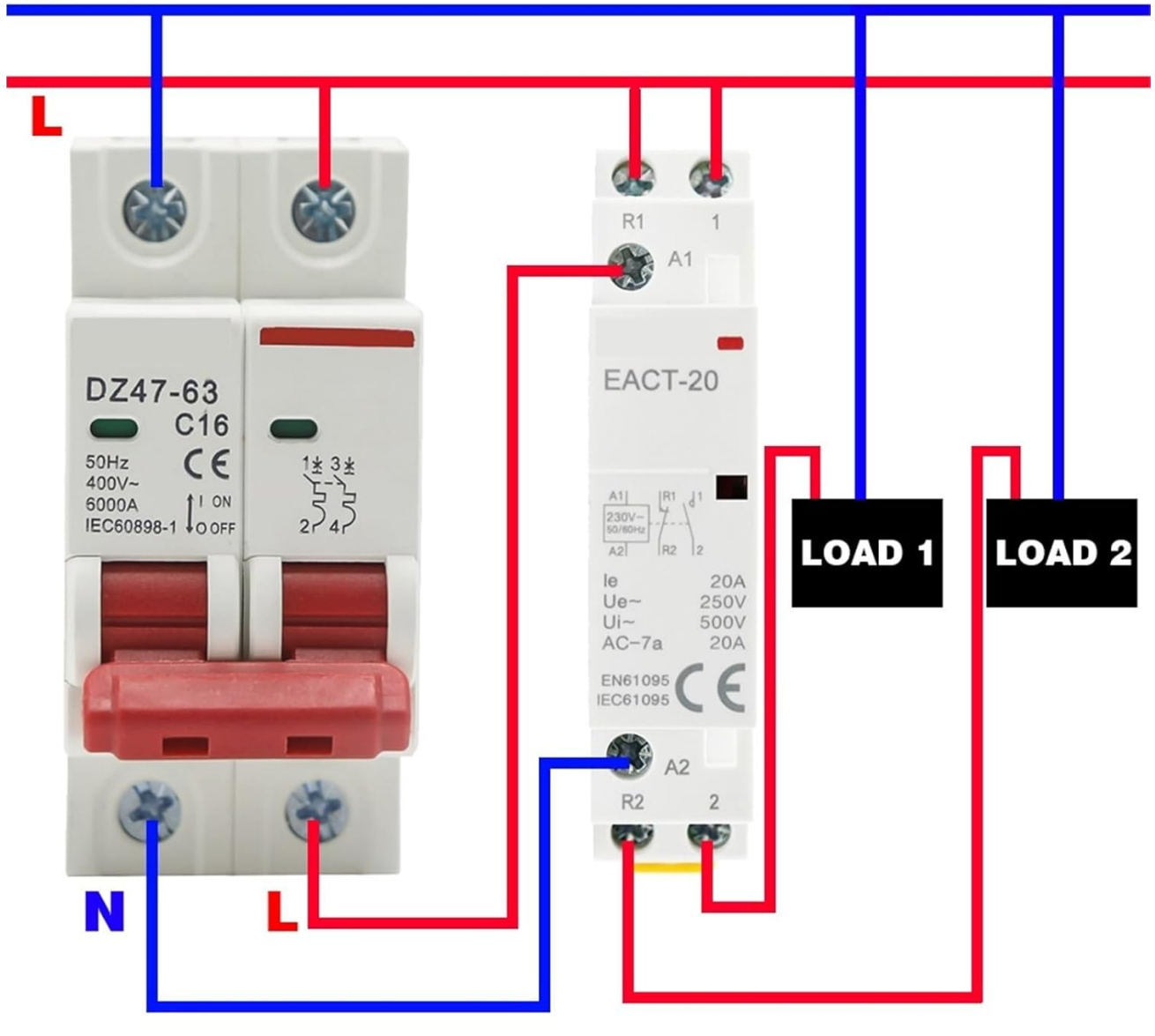


Figure 5.2: Wiring diagram for a 1NO1NC contactor configuration, illustrating connections from a circuit breaker to the contactor's coil and separate loads for NO and NC contacts.

## 6. OPERATION

The EACT-4P-100 AC Contactor operates by energizing its coil (A1-A2 terminals). When the coil is energized with the specified control voltage (e.g., 24V DC, 110V AC, 220V AC), the magnetic field generated pulls the armature, causing the main contacts to change state. Normally Open (NO) contacts will close, and Normally Closed (NC) contacts will open, thereby controlling the connected electrical load.

- **Energizing the Coil:** Apply the rated control voltage to terminals A1 and A2. The contactor will audibly click as the contacts engage.
- **De-energizing the Coil:** Remove the control voltage from A1 and A2. The contactor will disengage, and the contacts will return to their original state.
- **Indicator:** Some models may include a visual indicator to show the contactor's state (energized/de-energized).

## 7. MAINTENANCE

The EACT-4P-100 contactor is designed for long-term, reliable operation with minimal maintenance. However, periodic checks can help 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 screws are securely tightened to prevent overheating due to poor contact.
- **Cleanliness:** Ensure the contactor is free from dust, dirt, and moisture. Use a dry, soft cloth for cleaning. Do not use solvents.
- **Operational Check:** If possible and safe to do so, periodically test the contactor's switching action to ensure it engages and disengages smoothly.

## 8. TROUBLESHOOTING

If you encounter issues with your EACT-4P-100 AC Contactor, refer to the following troubleshooting guide. Always disconnect power before attempting any inspection or repair.

| Problem   | Possible Cause   | Solution   |
|---|--|--|
| Contactor does not energize (no click)              | <ul style="list-style-type: none"> <li>◦ No control voltage to A1-A2.</li> <li>◦ Incorrect control voltage.</li> <li>◦ Loose wiring connections.</li> <li>◦ Damaged coil.</li> </ul>                           | <ul style="list-style-type: none"> <li>◦ Check control circuit power supply.</li> <li>◦ Verify control voltage matches contactor rating.</li> <li>◦ Tighten A1-A2 terminals.</li> <li>◦ Replace contactor if coil is damaged.</li> </ul> |
| Contactor energizes but load does not receive power | <ul style="list-style-type: none"> <li>◦ No main circuit power.</li> <li>◦ Loose main circuit wiring.</li> <li>◦ Damaged main contacts.</li> <li>◦ Incorrect wiring (e.g., using NC instead of NO).</li> </ul> | <ul style="list-style-type: none"> <li>◦ Check main power supply and circuit breaker.</li> <li>◦ Tighten R1-R8 terminals.</li> <li>◦ Replace contactor.</li> <li>◦ Review wiring diagram and correct connections.</li> </ul>             |
| Contactor hums loudly or chatters                   | <ul style="list-style-type: none"> <li>◦ Low control voltage.</li> <li>◦ Mechanical obstruction.</li> <li>◦ Damaged shading coil (AC contactors).</li> </ul>   | <ul style="list-style-type: none"> <li>◦ Verify control voltage is stable and correct.</li> <li>◦ Inspect for foreign objects.</li> <li>◦ Replace contactor.</li> </ul>  |

## 9. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the product packaging or contact your retailer. Keep your purchase receipt as proof of purchase. For any questions regarding installation or operation not covered in this manual, please reach out to OLZFJAJE customer service or a qualified electrician.

