

Jectse Jectsemgrbxow015-02

Jectse Modular AC Contactor User Manual

Model: Jectsemgrbxow015-02

1. PRODUCT OVERVIEW

The Jectse Modular AC Contactor (Model Jectsemgrbxow015-02) is an electrical control device designed for various applications, including home and industrial electrical systems. It features a 2P/2NO contact configuration and a 100A rated current, available with 24V AC or 230V AC control voltage options. This contactor is engineered for reliability, quiet operation, and energy efficiency.

Key Features:

- **Extra Long Life:** Engineered to withstand 100,000 full load switching cycles under AC-7a load type, ensuring extended operational reliability.
- **Ultra-Silent Operation:** Designed to minimize audible impact sound during engagement and eliminate low-frequency buzzing during operation, making it suitable for noise-sensitive environments.
- **Energy-Saving Design:** Optimized to significantly reduce power consumption required to maintain coil suction in the working state.
- **Operating Frequency:** Rated for an operating frequency of 30 times per hour with a 40% load factor.
- **Reliable Performance:** Ensures reliable closing within an ambient air temperature range of -5°C to +60°C when the rated control power supply voltage (Us) is applied to the attraction coil.

2. SPECIFICATIONS

Parameter	Value
Rated Current (AC-7a)	100A
Conventional Heating Current (Ith)	63A
Rated Control Power Supply Voltage (Us)	24V AC; 230V AC (Optional)
Rated Insulation Voltage (Ui)	500V AC
Rated Operating Voltage (Ue)	250V AC
Number of Main Contacts	2P, 2NO
Electrical Life	100,000 cycles
Mechanical Life	1,000,000 cycles
Maximum Switching Times	1h/30
Material	Copper
Item Weight	11.6 ounces
Model Number	Jectsemgrbxow015-02

3. SAFETY INFORMATION

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

- **Disconnect Power:** Always ensure that all power sources are disconnected and locked out before performing any installation, wiring, or maintenance on the contactor.
- **Qualified Personnel:** Installation and servicing should only be performed by qualified and authorized electrical personnel.
- **Proper Grounding:** Ensure the electrical system is properly grounded according to local and national electrical codes.
- **Rated Values:** Do not exceed the specified rated voltage, current, or operating frequency of the contactor. Overloading can lead to damage or hazardous conditions.
- **Environmental Conditions:** Operate the contactor within the specified ambient temperature and humidity ranges.
- **Personal Protective Equipment (PPE):** Always wear appropriate PPE, such as insulated gloves and safety glasses, when working with electrical equipment.
- **Wiring Integrity:** Ensure all wiring connections are secure and properly insulated to prevent short circuits or loose contacts.

4. INSTALLATION AND SETUP

The Jectse Modular AC Contactor is designed for DIN rail mounting, allowing for easy integration into standard electrical enclosures.

Installation Steps:

1. **Power Disconnection:** Before beginning installation, ensure all power to the circuit is turned off at the main breaker and verified with a voltage tester.
2. **Mounting:** Securely attach the contactor to a standard DIN rail within an appropriate electrical enclosure. Ensure it is firmly seated and cannot move.
3. **Wiring the Control Circuit:** Connect the control voltage (24V AC or 230V AC, depending on the model) to the A1 and A2 terminals of the contactor coil. Refer to the wiring diagram on the product label for correct polarity and connections.
4. **Wiring the Main Circuit:** Connect the main power supply to the input terminals (e.g., 1 and 3) and the load to the output terminals (e.g., 2 and 4) of the contactor. Ensure all connections are tight and use appropriate wire gauges for the 100A rated current.
5. **Verification:** Double-check all wiring connections for correctness, tightness, and proper insulation. Ensure no bare wires are exposed.
6. **Enclosure Closure:** Close the electrical enclosure securely before restoring power.



Figure 1: Front view of the Jectse Modular AC Contactor, showing terminals and specifications. This image helps identify the connection points for installation.



Figure 2: Angled view of the contactor, providing a clearer perspective of the main power and control terminals for wiring.



Figure 3: Rear view of the contactor, illustrating the DIN rail mounting clip for secure installation.

5. OPERATION

The AC contactor operates as an electrically controlled switch, allowing or interrupting the flow of current to a connected load.

- **Engagement:** When the rated control voltage (24V AC or 230V AC) is applied to the A1 and A2 terminals of the contactor coil, an electromagnetic field is generated. This field pulls the armature, causing the main contacts (2P/2NO) to close. With the contacts closed, power flows from the input terminals to the output terminals, energizing the connected load.
- **Disengagement:** When the control voltage is removed from the A1 and A2 terminals, the electromagnetic field collapses. A spring mechanism then forces the armature back to its original position, opening the main contacts. This action disconnects power from the load, turning it off.



**Low power
consumption**

Figure 4: The contactor in operation, highlighting its low power consumption design.



**Extra long life,
withstand 100,000
full load switching
under AC-7a load type**

Figure 5: The contactor, emphasizing its extra long life capability under full load switching.

6. MAINTENANCE

The Jectse Modular AC Contactor is designed for minimal maintenance. Regular inspections can help ensure its continued reliable operation.

- **Visual Inspection:** Periodically inspect the contactor for any signs of physical damage, discoloration, or overheating. Check for loose connections or frayed wires.
- **Cleanliness:** Keep the contactor free from dust, dirt, and moisture. Use a dry, soft cloth to clean the exterior. Do not use liquids or abrasive cleaners.
- **Contact Check:** If accessible and safe to do so (with power disconnected), visually inspect the contacts for excessive wear or pitting. If contacts are severely worn, the contactor may need replacement.
- **Tighten Connections:** Over time, vibrations can loosen electrical connections. Periodically check and tighten all terminal screws to ensure good electrical contact.

Note: Always disconnect power before performing any maintenance tasks.

7. TROUBLESHOOTING

This section provides guidance for common issues encountered with the AC contactor. For problems not listed here, contact qualified service personnel.

Problem	Possible Cause	Solution
Contactor does not engage (contacts do not close)	No control voltage; Incorrect control voltage; Open circuit in control wiring; Damaged coil; Mechanical obstruction.	Verify control voltage at A1/A2 terminals; Check control circuit wiring for breaks or loose connections; Test coil resistance (if safe and qualified); Inspect for foreign objects.
Contactor does not disengage (contacts remain closed)	Control voltage not removed; Contacts welded shut; Mechanical fault.	Ensure control voltage is properly removed; If contacts are welded, replace the contactor; Inspect for mechanical issues.
Contactor overheats	Overload current; Poor ventilation; Loose connections; Incorrect voltage.	Check load current against contactor rating; Ensure adequate airflow around the contactor; Tighten all power connections; Verify correct control and main voltages.
Audible buzzing during operation	Loose laminations; Dirt on pole faces; Incorrect voltage.	Ensure mounting screws are tight; Clean pole faces (with power off); Verify control voltage is stable and correct.

8. PRODUCT VIDEO

Watch the official product video for a visual demonstration of the Jectse Modular AC Contactor.

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Official product video demonstrating the Jectse Modular AC Contactor (Model Jectsemgrbxow015-02) from various angles.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries regarding your Jectse Modular AC Contactor, please refer to the manufacturer's official website or contact Jectse customer service directly. Keep your purchase receipt for warranty claims.

For further assistance, you may visit the [Jectse Store on Amazon](#).