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NENEN Circuit Breaker NSX630 N TMD 630A 4-Pole 50kA User Manual

Model: NSX630 N TMD 630A 4-Pole 50kA

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the NENEN NSX630 N TMD 630A 4-Pole 50kA Circuit Breaker. Please read this manual thoroughly before attempting any installation or operation to ensure proper function and prevent potential hazards.

The NENEN NSX630 N TMD 630A 4-Pole 50kA Circuit Breaker is designed to provide reliable protection against overload and short circuits in industrial control electrical systems. Its robust construction ensures long-lasting performance.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Only qualified personnel should install, operate, or service this equipment. Failure to follow these instructions can result in serious injury or death.

- Always disconnect power before working on the circuit breaker or associated wiring.
- Use appropriate personal protective equipment (PPE) such as insulated gloves and safety glasses.
- Ensure all wiring connections are secure and comply with local and national electrical codes.
- Do not operate the circuit breaker if it appears damaged.
- Refer to the wiring diagrams provided with your specific installation for correct connections.

3. PRODUCT OVERVIEW

The NENEN NSX630 N TMD 630A 4-Pole 50kA Circuit Breaker is a robust device designed for industrial applications. It features a thermal-magnetic trip unit (TMD) for comprehensive protection.



Figure 3.1: Front view of the NENEN NSX630 N TMD 630A 4-Pole 50kA Circuit Breaker, showing the main operating handle and terminal connections.

Key Features:

- **Reliable Protection:** Provides dependable protection against overload and short circuit for electrical systems.
- **Durable Construction:** Built with high-quality materials for long-lasting performance and reliable operation.
- **Easy Installation:** Compact design and standard mounting make setup quick and convenient.
- **Wide Application:** Suitable for residential, commercial, and industrial electrical circuits.
- **Resettable Design:** Can be easily reset after tripping, reducing downtime and maintenance costs.

4. SETUP AND INSTALLATION

Before installation, ensure that the power supply to the installation area is completely disconnected and locked out. Verify that the circuit breaker's specifications match the requirements of your electrical system.

Installation Steps:

1. **Mounting:** Securely mount the circuit breaker in the designated enclosure or panel using appropriate fasteners. Ensure adequate ventilation around the device.
2. **Wiring Connections:**
 - Connect the incoming power lines (LINE) to the upper terminals of the circuit breaker.
 - Connect the outgoing load lines (LOAD) to the lower terminals of the circuit breaker.
 - Ensure all connections are tight and free from loose strands. Refer to the product's terminal markings for correct phase sequence.
3. **Torque Specifications:** Tighten terminal screws to the manufacturer's specified torque values to prevent overheating and ensure proper electrical contact.
4. **Verification:** After wiring, visually inspect all connections for correctness and security.

Note: Professional installation by a certified electrician is highly recommended to ensure compliance with all safety standards and regulations.

5. OPERATING INSTRUCTIONS

The NENEN NSX630 N TMD 630A Circuit Breaker is designed for straightforward operation.

Turning On the Circuit Breaker:

1. Ensure all downstream loads are in a safe state (e.g., turned off or disconnected if necessary).
2. Move the operating handle to the "ON" position. The handle should latch firmly in place.
3. Restore power to the main circuit.

Turning Off the Circuit Breaker:

1. Move the operating handle to the "OFF" position.
2. Verify that power to the protected circuit is disconnected before performing any work.

Resetting a Tripped Circuit Breaker:

If an overload or short circuit occurs, the circuit breaker will automatically trip to the "TRIPPED" position (often indicated by an intermediate handle position or a visual indicator).

1. **Identify and Rectify Fault:** Determine the cause of the trip (e.g., overloaded circuit, short circuit) and correct the issue.
2. **Reset Handle:** Fully push the operating handle to the "OFF" position first, then move it to the "ON" position. This resets the internal tripping mechanism.
3. If the circuit breaker trips immediately again, do not attempt to reset it repeatedly. Consult a qualified electrician to diagnose the underlying electrical fault.

6. MAINTENANCE

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

- **Visual Inspection (Annually):**

- Check for any signs of physical damage, discoloration, or overheating on the circuit breaker body and terminals.
- Ensure all terminal connections are tight. Retighten if necessary, adhering to specified torque values.

- Clean any dust or debris from the circuit breaker's exterior using a dry, non-abrasive cloth.
- **Functional Test (Periodically):**
 - If equipped with a test button, press it to verify the tripping mechanism is functional. The breaker should trip.
 - Reset the breaker after testing.
- Do not attempt to open or repair the internal components of the circuit breaker. Refer all internal servicing to qualified personnel.

7. TROUBLESHOOTING

This section provides guidance for common issues. For complex problems, consult a qualified electrician.

| Problem | Possible Cause | Solution |
|-----------------------------------|--|--|
| Circuit breaker trips frequently. | Overload on the circuit, short circuit, or ground fault. | <ul style="list-style-type: none"> • Reduce the load on the circuit. • Inspect wiring and connected devices for short circuits or ground faults. • If the problem persists, consult an electrician. |
| Circuit breaker does not reset. | Persistent fault on the circuit, internal damage to the breaker. | <ul style="list-style-type: none"> • Ensure the handle is fully pushed to "OFF" before attempting to reset to "ON". • Verify that the fault has been cleared. • If unable to reset, the breaker may be damaged and require replacement by a qualified professional. |
| Breaker feels hot to the touch. | Overload, loose connections, or internal fault. | <ul style="list-style-type: none"> • Immediately disconnect power. • Check for overload conditions. • Inspect and tighten all terminal connections. • If heating persists, replace the breaker. |

8. SPECIFICATIONS

The following are the technical specifications for the NENEN NSX630 N TMD 630A 4-Pole 50kA Circuit Breaker:

- **Model:** NSX630 N TMD
- **Rated Current:** 630A
- **Number of Poles:** 4-Pole
- **Interrupting Capacity:** 50kA
- **Manufacturer:** NENEN
- **Item Weight:** 18.74 pounds (approximately 8.5 kg)
- **Package Dimensions:** 0.39 x 0.39 x 0.39 inches (approximately 1 x 1 x 1 cm) *-Note: These dimensions appear to be placeholder values and may not reflect the actual product size.*
- **Batteries Required:** No

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your NENEN Circuit Breaker, please refer to the documentation provided at the point of purchase or contact your authorized NENEN distributor. Keep your purchase receipt as proof of purchase for warranty claims.

