

Schneider Electric LV432902

Schneider Electric Compact NSX630H Micrologic 5.3 A Circuit Breaker

Model: LV432902

1. INTRODUCTION

The Schneider Electric Compact NSX series circuit breakers and switch-disconnectors are designed for controlling and isolating electrical distribution circuits in both tertiary and industrial applications. The Compact NSX range offers high performance, a wide selection of trip units, and various display and communication modules to meet diverse system requirements.

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Compact NSX630H Micrologic 5.3 A Circuit Breaker (Model LV432902).

2. PRODUCT OVERVIEW

The Compact NSX630H Micrologic 5.3 A Circuit Breaker is a robust device featuring 4 poles, suitable for both fixed and withdrawable installations. It incorporates an electronic trip unit for precise protection.



Figure 2.1: Front view of the Schneider Electric Compact NSX630H Micrologic 5.3 A Circuit Breaker.

This image displays the main components of the circuit breaker, including the main body, the operating handle, the Micrologic 5.3 A trip unit with its display and control buttons, and the terminal connections. The "OFF" indicator is visible on the handle mechanism. Technical specifications such as voltage ratings (U_e , U_i , U_{imp}) and breaking capacities (I_{cu} , I_{cs} , HIC) are printed on the front label.

2.1 Key Components and Indicators

- **Operating Handle:** Used to manually switch the circuit breaker ON or OFF. Features a clear "OFF" indicator.
- **Micrologic 5.3 A Trip Unit:** An electronic trip unit providing advanced protection functions. It includes a digital display and control buttons for setting parameters.
- **Display Screen:** Shows current settings, measurements, and status information (e.g., "630 A" for rated current).
- **Control Buttons:** "Mode" and "OK" buttons for navigating menus and confirming settings on the Micrologic unit.
- **Trip Indicators:** Visual indicators for trip status (e.g., "Trip" LED).
- **Terminals:** Connections for electrical conductors, designed for secure and reliable wiring.
- **Rating Label:** Provides essential electrical specifications such as rated voltage (U_e , U_i), impulse withstand voltage (U_{imp}), and ultimate breaking capacity (I_{cu} , I_{cs}) at various voltages.

3. SETUP AND INSTALLATION

Installation of the Compact NSX630H circuit breaker should only be performed by qualified personnel in accordance with all local and national electrical codes and regulations. Ensure power is disconnected before beginning any installation work.

3.1 Mounting

The circuit breaker can be installed in either a fixed or withdrawable configuration. Refer to the specific mounting instructions provided with the mounting accessories for detailed steps.

3.2 Electrical Connections

- Connect the incoming and outgoing power cables to the designated terminals. Ensure proper torque is applied to all terminal screws to prevent loose connections and overheating.
- Verify that the voltage and frequency of the electrical system match the ratings of the circuit breaker (e.g., 50/60 Hz, up to 690V).
- Ensure correct phase sequence and neutral connection (indicated by 'N' on the breaker).

3.3 Trip Unit Configuration (Micrologic 5.3 A)

The Micrologic 5.3 A trip unit allows for precise adjustment of protection parameters. Use the "Mode" and "OK" buttons to navigate the display and set the following:

- **I_r (Long-time protection):** Adjustable rated current from 250A to 630A. This setting determines the overload protection threshold.
- **t_r (Long-time delay):** Time delay for long-time protection.
- **I_{sd} (Short-time protection):** Short-circuit protection threshold, adjustable as a multiple of I_r.
- **t_{sd} (Short-time delay):** Time delay for short-time protection.
- **I_{li} (Instantaneous protection):** Instantaneous short-circuit protection threshold.

Refer to the detailed Micrologic 5.3 A user guide for advanced programming and communication module (RS485 or Ethernet) setup, if applicable.

4. OPERATING INSTRUCTIONS

4.1 Switching ON/OFF

- To switch the circuit breaker **ON**, push the operating handle upwards until it latches.
- To switch the circuit breaker **OFF**, push the operating handle downwards until it latches. The "OFF" indicator will be visible.

4.2 Trip Indication and Reset

In the event of an overload or short-circuit, the circuit breaker will automatically trip, moving the operating handle to an intermediate position (between ON and OFF) and illuminating the "Trip" indicator (if present). To reset the breaker after a trip:

1. Identify and rectify the cause of the trip (e.g., overload, short-circuit).
2. Fully push the operating handle downwards to the OFF position.
3. Then, push the operating handle upwards to the ON position.

If the breaker trips immediately after resetting, do not attempt to re-engage it without further investigation of the

electrical circuit.

5. MAINTENANCE

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

- **Visual Inspection:** Periodically inspect the circuit breaker for any signs of physical damage, discoloration, loose connections, or excessive dust accumulation.
- **Cleaning:** Use a dry, lint-free cloth to gently clean the exterior of the circuit breaker. Do not use abrasive cleaners or solvents.
- **Terminal Check:** Annually check the tightness of all terminal connections. Loose connections can lead to overheating and potential failure.
- **Operational Check:** Periodically operate the circuit breaker manually (ON/OFF) to ensure smooth mechanical action.

For detailed maintenance procedures, consult the comprehensive technical documentation provided by Schneider Electric.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Circuit breaker trips frequently.	Overload, short-circuit, ground fault, incorrect trip unit settings.	<ul style="list-style-type: none">• Reduce load on the circuit.• Check for short-circuits or ground faults in the wiring.• Verify Micrologic 5.3 A trip unit settings (Ir, Isd, Ii) are appropriate for the circuit.• Consult a qualified electrician for diagnosis.
Circuit breaker does not reset.	Persistent fault, internal damage, or mechanical issue.	<ul style="list-style-type: none">• Ensure the handle is fully pushed to the OFF position before attempting to reset.• Confirm the fault condition has been cleared.• If the issue persists, the breaker may be damaged and require replacement. Contact Schneider Electric support.
Micrologic display is blank or unresponsive.	No power to the trip unit, internal fault.	<ul style="list-style-type: none">• Verify power supply to the circuit breaker.• If power is present and the display remains blank, the trip unit may be faulty.• Contact Schneider Electric support for assistance.

7. SPECIFICATIONS

Parameter	Value
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Parameter	Value
Model Number	LV432902
Brand	Schneider Electric
Number of Poles	4
Trip Unit Type	Micrologic 5.3 A (Electronic)
Rated Current (I _r)	630 A (Adjustable 250-630A)
Rated Insulation Voltage (U _i)	800 V
Rated Impulse Withstand Voltage (U _{imp})	8 kV
Rated Operational Frequency	50/60 Hz
Ultimate Breaking Capacity (I _{cu}) at 220/240V~	40 kA
Ultimate Breaking Capacity (I _{cu}) at 380/415V~	36 kA
Ultimate Breaking Capacity (I _{cu}) at 440V~	30 kA
Ultimate Breaking Capacity (I _{cu}) at 500V~	25 kA
Ultimate Breaking Capacity (I _{cu}) at 525V~	22 kA
Ultimate Breaking Capacity (I _{cu}) at 660/690V~	8 kA
Dimensions (L x W x H)	0.03 x 10 x 10 cm
Weight	1 kg
Standards	IEC/EN 60947-2, NEMA AB1

8. WARRANTY AND SUPPORT

Specific warranty information for the Schneider Electric Compact NSX630H Micrologic 5.3 A Circuit Breaker (Model LV432902) is not provided in the available product data. For detailed warranty terms and conditions, please refer to the official Schneider Electric website or contact their customer support directly.

Information regarding the availability of spare parts for this product is currently unavailable. For technical support, service, or inquiries about spare parts, please contact Schneider Electric customer service or your local authorized distributor.