

Schneider Electric A9R60225

Schneider Electric A9R60225 Differential Switch

User Manual

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Schneider Electric A9R60225 Differential Switch. This device is designed to protect against electric shock by detecting earth leakage currents and rapidly disconnecting the circuit. It is a 2-pole, 25A, 30mA sensitivity, Class AC residual current device.

Key features include a rated current of 25 A, earth leakage sensitivity of 30 mA, and a conditional short-circuit current of 10 kA. It operates at a network frequency of 50/60 Hz with a rated operating voltage of 230/240 V AC. The rated insulation voltage is 500 V, and the rated impulse withstand voltage is 6 kV.

2. SAFETY INFORMATION

WARNING: Electrical installation and maintenance should only be performed by qualified and authorized personnel. Failure to follow these instructions can result in serious injury or death.

- Always disconnect power to the circuit before installing, servicing, or removing the device.
- Ensure all local and national electrical codes and regulations are strictly followed.
- Use appropriate personal protective equipment (PPE) when working with electrical systems.
- Verify correct wiring connections before restoring power.
- Do not use the device if it appears damaged.

3. PRODUCT OVERVIEW

The Schneider Electric A9R60225 is a compact differential switch designed for reliable protection in electrical installations. It features a test button for periodic verification of its functionality and clear terminal markings for straightforward wiring.





Figure 1: Front view of the Schneider Electric A9R60225 Differential Switch, showing the main body, terminals, and the test button.

4. SETUP AND INSTALLATION

The A9R60225 differential switch is designed for panel mounting. Ensure adequate space and ventilation within the electrical panel.

4.1. Mounting

1. Ensure the electrical panel is de-energized and locked out.
2. Mount the differential switch onto a DIN rail within the electrical panel. Ensure it is securely fastened.

4.2. Wiring

1. Connect the incoming phase (line) and neutral conductors to the designated input terminals (typically marked '1' and 'N' or similar, usually at the top).
2. Connect the outgoing phase (load) and neutral conductors to the designated output terminals (typically marked '2' and 'N' or similar, usually at the bottom).
3. Ensure all connections are tight and secure to prevent loose contacts and overheating.
4. Double-check all wiring against the circuit diagram and local regulations before restoring power.

5. OPERATING INSTRUCTIONS

5.1. Normal Operation

Once installed and wired correctly, the differential switch will automatically monitor the electrical circuit for earth leakage currents. In the event of a fault exceeding 30 mA, the device will trip, disconnecting the power supply to the protected circuit.

5.2. Testing the Device

It is recommended to test the differential switch regularly (e.g., monthly) to ensure proper functionality.

1. Ensure the circuit is energized.
2. Press the 'T' (Test) button on the front of the device.
3. The switch should immediately trip, moving to the 'OFF' position. This indicates the internal mechanism is working correctly.
4. To restore power, push the switch lever back to the 'ON' position.
5. If the device does not trip when the test button is pressed, it may be faulty and should be replaced immediately by a qualified electrician.

5.3. Resetting After a Trip

If the differential switch trips due to an earth leakage fault:

1. Identify and rectify the cause of the earth leakage fault (e.g., faulty appliance, damaged wiring).
2. Once the fault is cleared, push the switch lever back to the 'ON' position to restore power.
3. If the device trips again immediately, the fault has not been resolved, or there is another issue. Do not repeatedly attempt to reset the switch without addressing the underlying problem.

6. MAINTENANCE

The Schneider Electric A9R60225 Differential Switch requires minimal maintenance. Regular testing as described in Section 5.2 is the primary maintenance activity.

- Periodically inspect the device for any visible signs of damage, discoloration, or loose connections.
- Ensure the area around the device is clean and free from dust or debris that could impede ventilation.
- Do not attempt to open or repair the device. Refer any issues to a qualified electrician.

7. TROUBLESHOOTING

7.1. Device Trips Frequently

- **Earth Leakage Fault:** The most common reason for tripping. Inspect all connected appliances and wiring for insulation damage or moisture ingress. Disconnect appliances one by one to identify the faulty one.
- **Overload:** While primarily an earth leakage device, persistent overcurrents can sometimes cause nuisance tripping or damage. Ensure the circuit is not overloaded.
- **Faulty Device:** If no external fault is found and the device continues to trip, the differential switch itself might be faulty. It should be inspected and potentially replaced by a qualified electrician.

7.2. Device Does Not Trip When Test Button is Pressed

- **No Power:** Ensure the circuit is energized. The test button requires power to simulate a fault.
- **Faulty Device:** If the circuit is energized and the device still does not trip, the differential switch is faulty and must be replaced immediately. It cannot provide protection in this state.

8. SPECIFICATIONS

Feature	Specification
Manufacturer	Schneider Electric
Model Number	A9R60225
Poles	2P
Rated Current (In)	25 A
Earth Leakage Sensitivity	30 mA
Circuit Type	AC
Rated Operating Voltage	230/240 V AC 50/60 Hz
Rated Insulation Voltage	500 V
Rated Impulse Withstand Voltage	6 kV
Conditional Short-Circuit Current	10 kA
Mounting Type	Panel mounting (DIN rail)
Product Dimensions (L x W x H)	10 x 8.6 x 4.2 cm
Product Weight	49.9 g
Material	Alloy steel
Country of Origin	Spain

9. WARRANTY AND SUPPORT

For information regarding the product warranty, technical support, or service, please refer to the official Schneider Electric website or contact your local Schneider Electric representative. Keep your purchase receipt as proof of purchase for any warranty claims.

Schneider Electric Official Website: www.se.com