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› [DEWIN TZ-8111 Self-Resetting Direct-Pressure Piston Limit Switch User Manual](#)

DEWIN TZ-8111

DEWIN TZ-8111 Self-Resetting Direct-Pressure Piston Limit Switch User Manual

Model: TZ-8111 | Brand: DEWIN

1. PRODUCT OVERVIEW

The DEWIN TZ-8111 is a self-resetting direct-pressure piston limit switch designed for reliable operation in various industrial control applications. It features a compact size, robust construction, and high electrical conductivity, ensuring a long mechanical life.



Figure 1: Two DEWIN TZ-8111 self-resetting limit switches, highlighting their compact design and robust build.

2. KEY FEATURES

- **High-Quality Components:** Features a small size, double-spring structure, strong conductivity, and solid construction for extended mechanical life.
- **Durable Materials:** Constructed from strong plastic and high-quality metal, making it waterproof, oil-resistant, dustproof, electricity-resistant, compact, strong, and corrosion-resistant.
- **Sensitive Detection:** The direct pressure on the piston triggers a rapid change in the switch state, enabling real-time signal transmission.
- **Stable Performance:** Optimized tail design, improved sealing, and a convenient conduit design facilitate easier wiring, ensuring stable performance and sensitive induction.



Reinforced rubber interface

Reinforced rubber Insulated dust-proof wiring port, waterproof and oil-proof IP65, high protection level.

Zinc alloy base

Using zinc alloy base, the structure is sturdy and durable

working principle

The internal micro switch has a double reed structure, the contacts are all pure silver contacts, and the mechanical life is long.

Figure 2: Detailed view of the TZ-8111 limit switch, illustrating its reinforced rubber interface, zinc alloy base, and internal working principle.



Figure 3: The TZ-8111 limit switch shown with water splashes, demonstrating its IP65 waterproof and dustproof protection.

3. SETUP AND INSTALLATION

Installation should be performed by qualified personnel in accordance with local electrical codes and safety regulations. Ensure the power supply is disconnected before installation or maintenance.

Mount the switch securely in the desired location, ensuring the piston mechanism is aligned to be actuated by the moving object. The switch can be mounted using appropriate screws through the designated mounting holes.

Connect the electrical wiring to the terminals. The switch provides Normally Open (NO) and Normally Closed (NC) contacts. Refer to the wiring diagram for correct connections based on your application requirements.

Good electrical conductivity

Using silver contacts, real materials, good conductivity and stability

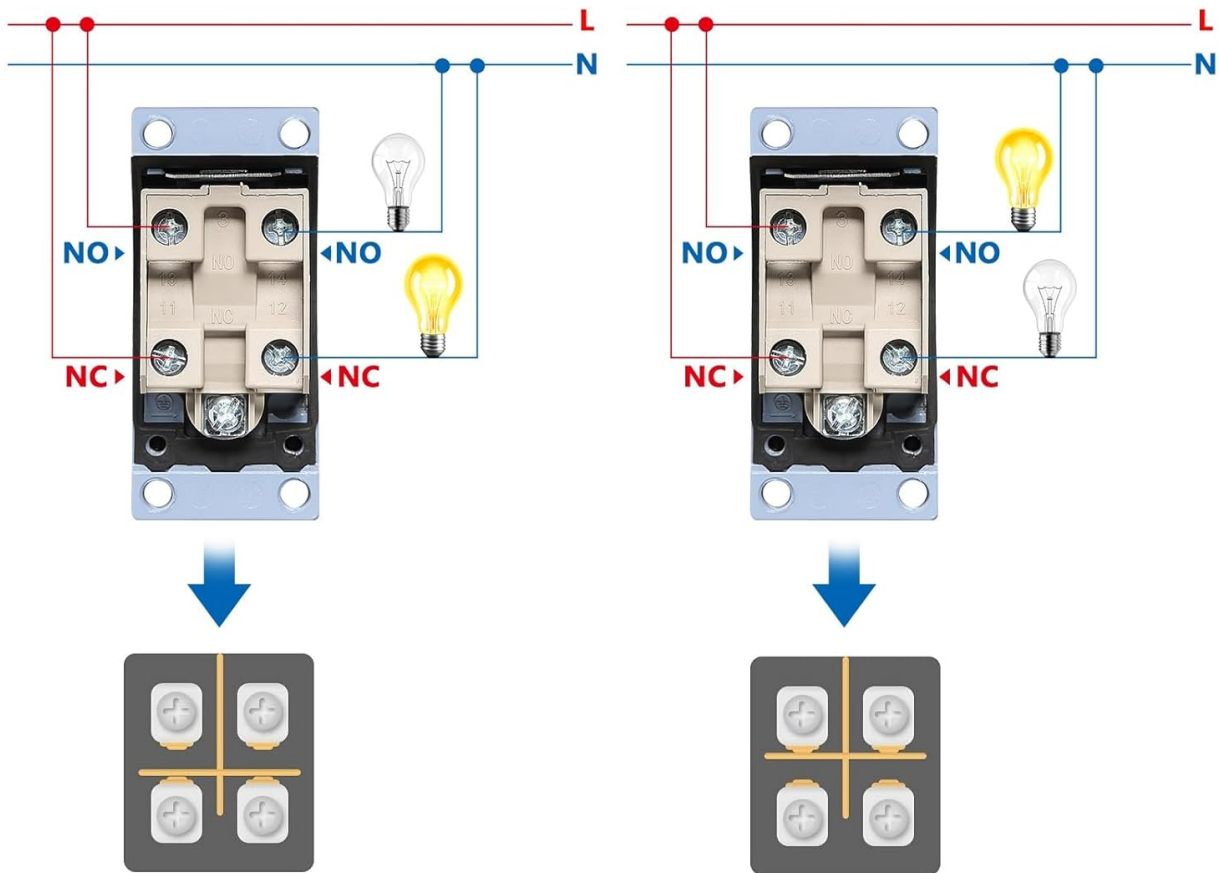


Figure 4: Wiring diagram illustrating typical connections for the TZ-8111 limit switch, showing both Normally Open (NO) and Normally Closed (NC) configurations.

4. OPERATING PRINCIPLES

The TZ-8111 operates on a direct-pressure piston mechanism. When an external object makes contact with and applies sufficient pressure to the piston, the internal contacts of the switch change state. For example, a Normally Open (NO) contact will close, and a Normally Closed (NC) contact will open.

As a self-resetting switch, once the pressure on the piston is removed, the piston automatically returns to its original position, and the electrical contacts revert to their initial state. This makes it suitable for applications requiring momentary detection or position sensing.

5. MAINTENANCE

To ensure optimal performance and longevity of the DEWIN TZ-8111 limit switch, regular maintenance is recommended:

- **Inspection:** Periodically inspect the switch for any signs of physical damage, wear on the piston, or loose mounting.
 - **Cleaning:** Keep the switch clean and free from excessive dust, oil, and moisture. While the switch has an IP65 rating, maintaining a clean environment helps prevent premature wear.
 - **Connections:** Verify that all electrical connections are secure and free from corrosion.
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6. TROUBLESHOOTING

If you encounter issues with your TZ-8111 limit switch, consider the following troubleshooting steps:

- **Switch Not Actuating:**
 - Check for proper alignment of the activating object with the piston.
 - Ensure the piston is not obstructed or jammed.
 - **Intermittent Operation:**
 - Verify all wiring connections are secure and properly insulated.
 - Inspect the switch body and piston for any damage or excessive wear.
 - **No Electrical Signal:**
 - Confirm the power supply to the circuit is active.
 - Use a multimeter to check the continuity of the switch contacts when actuated and unactuated to confirm internal functionality.
 - **Environmental Factors:**
 - Ensure the operating environment is within the specified temperature and humidity ranges. Extreme conditions can affect performance.
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7. SPECIFICATIONS

IP65 waterproof

Waterproof, oil-proof, dustproof, electricity-proof, durable, compact strong and corrosion-resistant



Figure 5: Technical specifications and dimensions of the DEWIN TZ-8111 limit switch.

Characteristic	Value
Product Name	Limit Switch
Materials	Plastic and Metal
Color	Blue Black
Rated Voltage	6A 250VAC / 0.3A 220VDC
Heating Current	10A
Action Type	Self-resetting, Direct Pressure Piston
Operating Speed	5mm to 0.5m/s
Contact Resistance	$\leq 25 \text{ M}\Omega$ (initial phase)
Insulation Resistance	$> 100 \text{ M}\Omega$ (at 500 VDC)
Electrical Life	$> 500,000$ times

Characteristic	Value
Protection Structure	IP65
Package Dimensions	13.6 x 5.1 x 3.1 cm
Weight	120 grams

8. APPLICATIONS

The DEWIN TZ-8111 limit switch is versatile and can be adapted to a variety of scenarios:

- Electrical control switches in garage doors.
- Vending machines for position sensing.
- General machinery for automation and safety.
- Used to activate warning lights or alarms.



Figure 6: Examples of typical applications for the TZ-8111 limit switch, including garage doors, vending machines, and

9. WARRANTY INFORMATION

Warranty information for the DEWIN TZ-8111 limit switch is not explicitly provided in the product details. For specific warranty terms and conditions, please refer to the manufacturer's official website or contact your point of purchase.

10. SUPPORT

For technical support, product inquiries, or further assistance with your DEWIN TZ-8111 limit switch, please contact DEWIN customer service directly or consult the official DEWIN website for resources and contact information.