

Drayton ZA5

Drayton ZA5 Actuator User Manual

Model: ZA5 (Part No. 27650)

Brand: Drayton

1. PRODUCT OVERVIEW

The Drayton ZA5 replacement actuator is designed for compatibility with the Drayton 22mm 2-port motorised valve, specifically part number 27100. This actuator is a critical component in central heating systems, responsible for controlling the flow of water to a specific heating zone by opening and closing the associated valve.



An image showing the Drayton ZA5 Zone Valve Actuator, a white rectangular unit with a label detailing its specifications, connected to a black cable with five colored wires (red, orange, green, blue, grey) at the end.

2. SAFETY INFORMATION

Always prioritize safety when working with electrical and heating systems. Failure to follow these instructions could result in electric shock, fire, or personal injury.

- **WARNING: DISCONNECT SUPPLY BEFORE REMOVING COVER.** Ensure the main electrical supply to the heating system is completely switched off at the consumer unit/fuse box before attempting any installation, maintenance, or removal of the actuator cover.
- Installation should only be performed by a qualified electrician or heating engineer.
- Do not operate the actuator if it appears damaged.
- Ensure all wiring connections are secure and comply with local electrical codes.
- Keep the actuator dry and away from excessive moisture.

3. KEY FEATURES

- Drayton Part Number: 27650
- 5-Wire configuration for comprehensive control.
- Direct replacement for the Drayton 27100 Motorised Valve actuator.
- Designed for zone valve applications in central heating systems.

4. TECHNICAL SPECIFICATIONS

Specification	Value
Brand	Drayton
Model Number	27650
Product Dimensions	9.5 x 6 x 6 cm
Item Weight	535 g
Voltage	230 Volts
Frequency	50 Hz
Power Consumption	6 Watts
Max. Ambient Temperature	52°C
Max. System Pressure	125 psi
Switch Rating	3(1)A

5. INSTALLATION GUIDE

This section provides general guidance for replacing a Drayton ZA5 actuator. Always refer to the specific wiring diagrams provided with your heating system and consult a qualified professional if unsure.

Tools Required:

- Screwdriver set
- Wire strippers/cutters

- Voltage tester

Installation Steps:

1. **Power Off:** Locate the main electrical supply to your central heating system and switch it off at the consumer unit/fuse box. Verify that power is off using a voltage tester.
2. **Access Actuator:** Identify the existing actuator on your 2-port motorised valve. It is typically secured by screws or clips.
3. **Disconnect Wiring:** Carefully note or photograph the existing wiring connections. Disconnect the five wires from the terminal block.
4. **Remove Old Actuator:** Unscrew or unclip the old actuator from the valve body. The valve body itself usually remains in place.
5. **Install New Actuator:** Position the new Drayton ZA5 actuator onto the valve body, ensuring it aligns correctly. Secure it with the provided screws or clips.
6. **Connect Wiring:** Connect the five wires of the new actuator to the terminal block, matching the connections noted in step 3. The typical wire colors and functions are:
 - Brown: Live (Switched Live from programmer/thermostat)
 - Blue: Neutral
 - Green/Yellow: Earth
 - Orange: Switched Live (to boiler/pump)
 - Grey: Return (from valve microswitch)
7. **Secure Cover:** Ensure all wires are neatly tucked away and secure the actuator cover.
8. **Restore Power:** Switch the main electrical supply back on.
9. **Test System:** Test the heating system to ensure the actuator operates correctly, opening and closing the zone valve as commanded by the thermostat or programmer.

6. OPERATING INSTRUCTIONS

The Drayton ZA5 actuator operates automatically as part of your central heating system. It does not require manual intervention for its primary function.

- When the thermostat calls for heat in the zone controlled by the valve, the actuator receives an electrical signal, causing it to open the valve.
- Once the thermostat's set temperature is reached, or the heating program ends, the electrical signal is removed, and the actuator closes the valve, typically via a spring return mechanism.
- A small lever or button may be present on the actuator for manual override or to check valve operation during installation. Refer to your heating system's overall manual for specific instructions on using this feature, if available.

7. MAINTENANCE

The Drayton ZA5 actuator is designed to be maintenance-free under normal operating conditions. No user-serviceable parts are inside the unit.

- Keep the exterior of the actuator clean and free from dust and debris. Use a dry cloth for cleaning.
- Do not attempt to lubricate any internal components.

- Periodically check the wiring connections for any signs of wear or looseness. Ensure power is off before inspecting connections.
- If the actuator shows signs of damage or malfunction, it should be replaced by a qualified professional.

8. TROUBLESHOOTING

If you experience issues with your heating system that you suspect are related to the zone valve actuator, consider the following common problems and solutions:

Problem	Possible Cause	Solution
No heat in zone	Actuator not opening valve; no power to actuator; faulty thermostat/programmer.	Check thermostat setting. Verify power to actuator (with power off, check wiring). Replace actuator if it does not respond to power.
Zone always hot (heating won't turn off)	Actuator stuck open; faulty microswitch in actuator; wiring fault.	Check if actuator returns to closed position when power is off. If not, replace actuator. Check wiring for shorts.
Actuator makes buzzing noise but doesn't move	Motor fault; obstruction in valve.	Replace actuator. Check valve for mechanical obstruction (requires draining system).
Actuator feels hot to touch	Normal operation (slight warmth); internal fault (excessive heat).	Slight warmth is normal. If excessively hot, disconnect power and replace actuator.

For persistent issues, it is recommended to contact a qualified heating engineer.



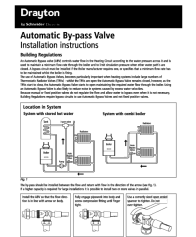
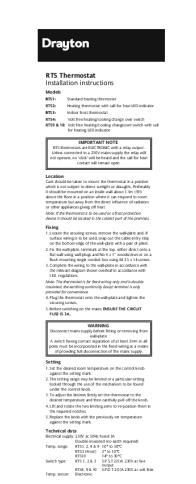

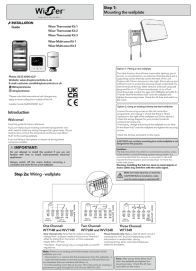
9. WARRANTY AND SUPPORT

For information regarding the warranty period and terms for your Drayton ZA5 Actuator, please refer to the documentation provided at the time of purchase or contact your retailer. Drayton products are typically covered by a manufacturer's warranty against defects in materials and workmanship.

For technical support or further assistance, please contact Drayton customer service or visit their official website. Ensure you have your product model number (ZA5) and part number (27650) ready when seeking support.

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This manual is for informational purposes only. Specifications are subject to change without notice.

	<p>Drayton Installer Handbook: Comprehensive Guide to Heating Controls</p> <p>The Drayton Installer Handbook provides detailed product information, specifications, and wiring diagrams for a wide range of Drayton heating controls, including thermostats, timeswitches, programmers, and valves, essential for professional installers.</p>
	<p>Drayton Automatic Balancing TRV Installation and Operating Instructions</p> <p>Comprehensive guide to installing and operating Drayton's two-pipe thermostatic radiator valves with automatic balancing, ensuring efficient home heating and improved boiler efficiency.</p>
	<p>Drayton Automatic By-pass Valve Installation Guide</p> <p>Official installation guide for the Drayton Automatic By-pass Valve (ABV). Learn about building regulations, system integration, setting procedures, features, and technical specifications for efficient heating system operation.</p>
	<p>Drayton RTS Thermostat Installation Guide and Technical Specifications</p> <p>Comprehensive installation instructions, technical data, and wiring diagrams for the Drayton RTS range of thermostats (RTS1, RTS2, RTS3, RTS4, RTS9, RTS10). Includes model details, location advice, fixing steps, and compatibility information.</p>
	<p>Drayton Wiser Smart Heating System Installation Guide</p> <p>Comprehensive installation guide for Drayton Wiser smart thermostats and heating control systems, covering wiring, mounting, and setup for various kits.</p>
	<p>Wiser Smart Thermostat System Installation Guide Drayton by Schneider Electric</p> <p>Comprehensive installation guide for Drayton Wiser smart heating and hot water control systems, including Wiser Thermostat Kits and Multi-zone Kits. Covers wiring, mounting, app setup, and technical specifications.</p>

