KATSU Tools 151019

KATSU Automatic Water Pump Pressure Control Switch - Model 151019 User Manual

Model: 151019 | Brand: KATSU Tools

1. Introduction

Thank you for choosing the KATSU Automatic Water Pump Pressure Control Switch, Model 151019. This device is designed to automate the operation of your water pump, providing consistent water pressure and protecting the pump from dry running. It is suitable for most common water pumps, including submersible well pumps, with power ratings between 0.3 HP and 3 HP (or less than 2 kW).
This manual provides essential information for the safe and efficient installation, operation, and maintenance of your pressure control switch. Please read it thoroughly before use and retain it for future reference.

2. Safety Information

Always observe basic safety precautions to reduce the risk of fire, electric shock, and personal injury. This device operates with 220-240V electricity and should only be installed by a qualified electrician or competent person.

- **Electrical Safety:** Ensure the main power supply is disconnected before installation, maintenance, or any adjustments. All wiring must comply with local electrical codes and regulations.
- **Water Protection:** The unit has an IP65 protection rating, meaning it is protected against dust ingress and low-pressure water jets from any direction. However, avoid submerging the unit.
- **Operating Environment:** Do not operate the unit in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- **Children and Unauthorized Personnel:** Keep children and unauthorized persons away from the operating area.
- **Proper Use:** Use this product only for its intended purpose as described in this manual. Do not modify the unit.

3. Product Overview

The KATSU Automatic Water Pump Pressure Control Switch is designed for reliable and efficient pump management. Key features include:

- Automatic pump start/stop based on water demand.

- Integrated dry-run protection to prevent pump damage.
- Adjustable start pressure (1.5 bar - 3.0 bar).
- High-quality construction for long service life.
- IP65 protection rating.

Components



Figure 3.1: Front View with Pressure Gauge

This image shows the front of the control switch, highlighting the integrated pressure gauge for monitoring system pressure. The blue top housing is visible.



Figure 3.2: Angled View

An angled perspective of the unit, illustrating the G1 inch threaded inlet and outlet connections on the sides, the pressure gauge, and the electrical connection housing.



Figure 3.3: Control Panel Details

This image provides a detailed view of the control panel, including the KATSU brand logo, model number (JB-2.1, SKU: 151019), CE mark, the 'Reset' button, and LED indicators for 'Power', 'Failure', and 'On' status.



Figure 3.4: Side View with Connections

A side view emphasizing the robust G1 inch threaded inlet and outlet ports, designed for secure plumbing connections.

4. Specifications

Feature	Specification
Model Number	151019
Voltage	220V - 240V
Frequency	50/60 Hz
Max Current	10 Amp
Protection Rating	IP65
Max Operating Temperature	60°C
Start Pressure (Adjustable)	1.5 bar - 3.0 bar
Max Working Pressure	10 bar
Inlet/Outlet Connections	G1 inch
Compatible Pump Power	0.3 HP - 3 HP (or < 2 kW)
Material	High-quality materials (Stainless Steel components)
Item Weight	1.31 kg
Dimensions (Shipping)	27.6 x 16.7 x 13.9 cm
Specific Uses	Garden irrigation, efficient pump control, domestic water supply

5. Setup and Installation

Proper installation is crucial for the safe and effective operation of the pressure control switch. If you are unsure about any steps, consult a qualified professional.

5.1 Mechanical Installation

1. **Mounting:** Mount the control unit vertically on a stable surface, ensuring the pressure gauge is easily visible. The unit should be installed between the pump outlet and the first water tap.
2. **Water Connections:** Connect the pump outlet to the inlet of the control unit (G1 inch thread) and the water supply line to the outlet of the control unit (G1 inch thread). Use appropriate sealing tape (e.g., PTFE tape) on all threaded connections to prevent leaks.
3. **Check for Leaks:** After connecting, slowly open the water supply to check for any leaks. Tighten connections as necessary.

5.2 Electrical Installation

WARNING: Ensure the main power supply is OFF before proceeding with electrical connections.

1. **Access Wiring Terminal:** Remove the four screws on the front panel to access the internal wiring terminals.

2. **Mains Supply Connection:** Connect the 220-240V mains power supply to the top three terminals. Typically, these are:
    - **L (Live):** Brown wire (or L1)
    - **N (Neutral):** Blue wire
    - **Earth:** Green/Yellow wire
3. **Pump Connection:** Connect your water pump's power cable to the bottom three terminals. Typically, these are:
    - **Earth:** Green/Yellow wire
    - **U (Live to Pump):** Brown wire
    - **V (Neutral to Pump):** Blue wire

    Note: The Neutral (N) terminal for the mains supply is internally connected to the Neutral (V) terminal for the pump. The device switches power to the 'U' terminal for pump operation.
4. **Secure Wiring:** Ensure all wires are securely fastened in their respective terminals and that no bare wires are exposed.
5. **Close Unit:** Replace the front panel and secure it with the four screws.

6. Operating Instructions

6.1 Initial Start-up

1. **Prime the Pump:** Ensure your water pump is properly primed according to its own manual. The control unit requires water flow to operate correctly.
2. **Restore Power:** Turn on the main power supply to the control unit. The 'Power' indicator light should illuminate.
3. **Automatic Start:** The pump should start automatically and run until it reaches the maximum system pressure or the water flow stops. The 'On' indicator light will be illuminated when the pump is running.
4. **Check for Operation:** Open a tap in your system. The pump should start. Close the tap, and the pump should stop after a few seconds once pressure is restored.

6.2 Adjusting Start Pressure

The start pressure is adjustable between 1.5 bar and 3.0 bar. This is the pressure at which the pump will activate when a tap is opened and the system pressure drops.

1. **Locate Adjustment Screw:** The adjustment screw is typically located under a cap on the top or side of the unit. Refer to Figure 3.1 for general location.
2. **Adjust Pressure:** Use a screwdriver to turn the adjustment screw. Turning clockwise increases the start pressure, and counter-clockwise decreases it.
3. **Test Setting:** After adjustment, test the pump's behavior by opening and closing a tap to ensure it starts and stops at your desired pressure levels.

6.3 Dry-Run Protection

This unit features automatic dry-run protection. If the pump runs without water, the control unit will detect the lack of flow/pressure and automatically shut off the pump to prevent damage. The 'Failure' indicator light may illuminate.
To reset after a dry-run event:

1. **Identify and Resolve Cause:** Determine why the pump ran dry (e.g., empty well, closed valve). Rectify the issue.
2. **Press Reset Button:** Once the water supply is restored, press the 'Reset' button on the control panel (refer to Figure 3.3). The pump should restart.

7. Maintenance

The KATSU Automatic Water Pump Pressure Control Switch is designed for minimal maintenance. However, regular checks can ensure its longevity and optimal performance.

- **Visual Inspection:** Periodically inspect the unit for any signs of damage, wear, or leaks. Check electrical connections for corrosion or loose wiring (ensure power is off before inspecting electrical components).
- **Cleanliness:** Keep the unit clean and free from dust and debris. Use a soft, damp cloth for cleaning. Do not use harsh chemicals or abrasive cleaners.
- **Winterization:** In areas prone to freezing temperatures, ensure the unit and connected plumbing are drained or protected from frost to prevent damage.
- **Pressure Gauge Check:** Occasionally verify the pressure gauge is functioning correctly by comparing its reading with another known pressure source if available.

8. Troubleshooting

Before attempting any repairs, ensure the power supply is disconnected. Consult a qualified technician for complex issues.

Problem	Possible Cause	Solution
Pump does not start.	No power supply. Dry-run protection activated. Faulty wiring. Pump issue.	Check power connection and circuit breaker. Press 'Reset' button after ensuring water supply. Inspect wiring (power off). Check pump operation independently.
Pump runs continuously.	Leak in the system. Start pressure set too low. Faulty pressure sensor.	Check all plumbing for leaks. Adjust start pressure higher (see Section 6.2). Contact support.
Pump cycles on/off rapidly (short cycling).	Small leak in the system. Insufficient water supply. Pressure tank (if used) issue.	Check for minor leaks. Ensure adequate water source. Check pressure tank air charge.
'Failure' light is on.	Dry-run condition. Overcurrent/Overload.	Restore water supply and press 'Reset'. Check pump for blockage or damage; ensure it's within 10A limit.
Inaccurate pressure reading.	Faulty gauge. Air in the system.	Compare with another gauge; replace if necessary. Bleed air from the system.

9. Warranty Information

KATSU Tools products are manufactured to high-quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or contact KATSU Tools customer service. Keep your purchase receipt as proof of purchase.
This product is generally covered by a standard manufacturer's warranty against defects in materials and workmanship under normal use. Damage resulting from improper installation, misuse, neglect, or unauthorized modifications is not covered.

10. Support

If you encounter any issues or have questions regarding your KATSU Automatic Water Pump Pressure Control Switch that are not addressed in this manual, please contact KATSU Tools customer support.

- **Online Resources:** Visit the official KATSU Tools website for additional product information, FAQs, and support resources. www.katsutools.com
- **Contact Information:** Refer to your product packaging or the KATSU Tools website for the most current customer service contact details (phone, email).

When contacting support, please have your product model number (151019) and purchase date available.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question