

WilTec SK-9 (Model 50766)

Wiltec SK-9 Pressure Switch User Manual

Model: SK-9 (50766)

INTRODUCTION

The Wiltec SK-9 pressure switch is an essential component for automatically regulating pressure in various water systems, including domestic water supplies, garden pumps, and well pumps. It is also suitable as a replacement part for common compressors. This device ensures consistent pressure and protects your hydraulic systems from premature wear by automatically starting and stopping pumps based on predefined pressure thresholds.

SAFETY INFORMATION

Please read all safety instructions carefully before installation and operation.

- Always disconnect power before installation, maintenance, or any adjustments.
- Installation should be performed by a qualified electrician in accordance with local electrical codes and regulations.
- Ensure proper grounding to prevent electrical shock hazards.
- Do not exceed the maximum operating pressure of 6 bar.
- Protect the device from freezing temperatures, which can cause damage.
- Keep out of reach of children and unauthorized personnel.

PRODUCT OVERVIEW

The Wiltec SK-9 pressure switch is a compact and robust device designed for reliable pressure control in demanding environments.

Components

- **Pressure Switch Unit:** The main housing containing the electrical contacts and pressure sensing mechanism.

- **Pressure Connection:** Standard threaded connection for integration into the water system.
- **Electrical Terminals:** Secure connections for power input and pump output.
- **Adjustment Screws:** For setting cut-in and differential pressures.

Product Views



Front view of the Wiltec SK-9 Pressure Switch, showing its compact black housing.



Side view of the pressure switch, highlighting the electrical cable glands and pressure connection.



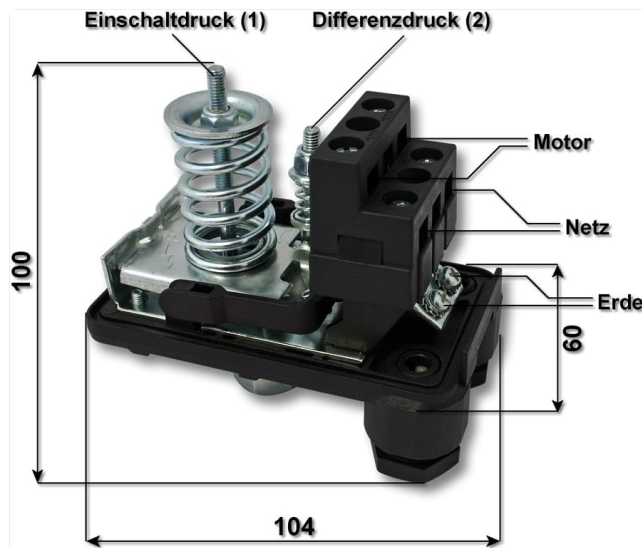
Bottom view of the pressure switch, showing the threaded pressure port and cable entries.

SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of the Wiltec SK-9 pressure switch. Always ensure power is disconnected before proceeding.

Electrical Connection

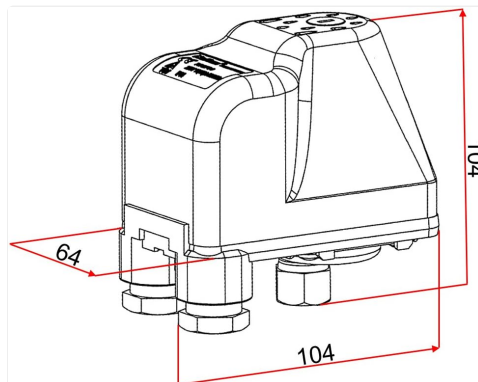
1. Ensure the main power supply to the pump system is completely disconnected and locked out before beginning any electrical work.
2. Carefully open the cover of the pressure switch to access the internal terminals.
3. Connect the incoming three-phase power supply (labeled 'Netz' in the diagram) to the designated input terminals.
4. Connect the pump motor wires (labeled 'Motor' in the diagram) to the corresponding output terminals.
5. Connect the ground wire (labeled 'Erde' in the diagram) to the designated ground terminal. This is critical for safety.
6. Secure all electrical connections firmly to prevent loose contacts and potential hazards.
7. Ensure all wires are properly routed and not pinched. Close the cover securely, ensuring a tight seal.



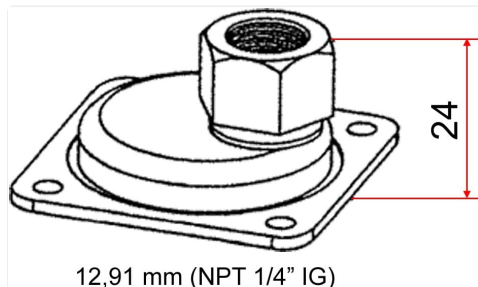
Internal view of the pressure switch showing electrical connections for Motor, Netz (Power), and Erde (Ground), along with adjustment screws for cut-in and differential pressure.

Mechanical Connection

1. Mount the pressure switch securely to a stable surface or directly onto the pump system using appropriate fasteners.
2. Connect the pressure switch to the water system's pressure line using the appropriate threaded fitting. The connection is NPT 1/4" IG (internal thread).
3. Ensure all mechanical connections are watertight and free from leaks. Use thread sealant tape if necessary.



Overall dimensions of the pressure switch: approximately 104mm length, 64mm width, and 104mm height.



Detail of the pressure connection, showing a 12.91 mm (NPT 1/4" IG) thread and 24mm height.

OPERATING INSTRUCTIONS

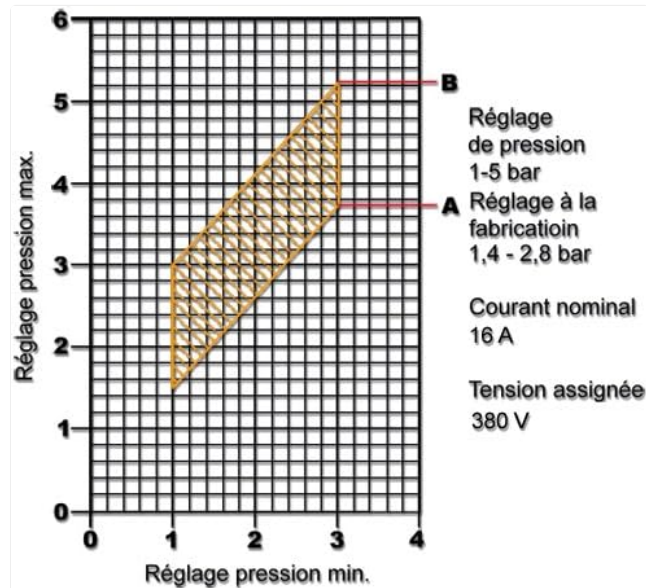
Pressure Adjustment

The Wiltec SK-9 allows for continuous adjustment of both the cut-in (start) pressure and the differential pressure (cut-out pressure relative to cut-in pressure).

1. The cut-in pressure is adjusted using the larger spring screw (labeled 'Einschaltdruck' in the diagram). Turning

this screw clockwise increases the cut-in pressure.

2. The differential pressure is adjusted using the smaller spring screw (labeled 'Differenzdruck' in the diagram). Turning this screw clockwise increases the differential pressure, resulting in a larger difference between the cut-in and cut-out pressures.
3. The factory setting for the adjustable range is typically between 1.4 and 2.8 bar. The overall adjustable pressure range is 1-5 bar.
4. After adjustment, observe the pump's behavior to ensure desired operation and make fine-tune adjustments as needed.



Pressure adjustment chart illustrating the relationship between minimum and maximum pressure settings. The nominal current is 10A and rated voltage is 380V.

Normal Operation

Once properly installed and adjusted, the pressure switch will automatically control the pump. When the system pressure drops below the set cut-in pressure, the switch will activate the pump. When the pressure reaches the cut-out pressure (which is the cut-in pressure plus the set differential pressure), the switch will deactivate the pump. This cycle maintains consistent pressure within your system.

MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your Wiltec SK-9 pressure switch.

- **Electrical Connections:** Periodically inspect all electrical connections for tightness and signs of corrosion. Tighten any loose connections.
- **Pressure Connections:** Check the pressure connections for any signs of leaks. Address any leaks immediately to prevent pressure loss and potential damage.
- **Cleaning:** Keep the exterior of the unit clean and free from dust, dirt, and debris. Use a soft, dry cloth for cleaning.
- **Mineral Buildup:** In areas with hard water, periodically check the pressure port for mineral buildup that could affect the accuracy of the pressure sensing. Clean carefully if necessary, ensuring no debris enters the mechanism.
- **Internal Components:** Do not attempt to disassemble the sealed pressure sensing mechanism or internal electrical components. This should only be done by qualified service personnel.

TROUBLESHOOTING

If you encounter issues with your Wiltec SK-9 pressure switch, refer to the common problems and solutions below.

Pump Does Not Start

- **No Power:** Check the main power supply to the pressure switch and pump. Ensure circuit breakers are not tripped.
- **Loose Connections:** Verify all electrical connections within the pressure switch and to the pump are secure.
- **Pressure Too High:** Ensure the system pressure has dropped below the set cut-in pressure.
- **Blockage:** Check for any blockages in the pressure line or pump intake.
- **Faulty Pump:** Test the pump directly to ensure it is operational.

Pump Does Not Stop

- **System Leaks:** Check for any leaks in the water system that prevent pressure from building up to the cut-out setting.
- **Incorrect Setting:** Verify the cut-out pressure setting is appropriate and achievable by the pump.
- **Pump Malfunction:** Inspect the pump for proper operation and its ability to build and maintain pressure.
- **Faulty Switch:** If all other checks pass, the pressure switch itself may be faulty and require replacement.

Erratic Pump Cycling (Frequent On/Off)

- **Differential Pressure Too Low:** Adjust the differential pressure setting to provide a wider operating range between cut-in and cut-out pressures.
- **Air in System:** Check for air trapped in the system or a faulty pressure tank (if applicable), which can cause rapid pressure fluctuations.
- **Minor Leaks:** Even small leaks can cause the pressure to drop quickly, leading to frequent cycling.

SPECIFICATIONS

Parameter	Value
Model	SK-9 (50766)
Manufacturer	WilTec
Dimensions (L x W x H)	10.5 x 6.4 x 10.3 cm
Weight	390 grams
Color	Black
Material	Stainless Steel
Power Type	3-Phase

Parameter	Value
Voltage	220-240V / 380V
Max Current	10 A
Max Operating Pressure	6 bar
Adjustable Pressure Range (Cut-in)	1.4 - 4.1 bar
Pressure Connection	NPT 1/4" IG (12.91 mm)
Country of Origin	China

WARRANTY AND SUPPORT

For warranty information and technical support regarding your Wiltec SK-9 pressure switch, please contact WilTec customer service directly. Refer to your purchase documentation for specific warranty terms and conditions.

You can find more information and contact details on the official WilTec website:www.wiltec.de
For additional resources and products, visit the WilTec brand store on Amazon:[WilTec Amazon Store](#)