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WilTec SKD-1 (50610)

Wiltec SKD-1 Automatic Pump Control User Manual

Model: SKD-1 (50610)

1. INTRODUCTION

The Wiltec SKD-1 Automatic Pump Control is designed to automatically start and stop your water pump based on user demand (opening and closing of water outlets). This ensures a constant pressure within your domestic water supply system. It features a dry-run protection device that stops the pump if water is absent, and it effectively eliminates water hammer effects.

The SKD-1 pump control consists of both hydraulic and electronic components. The electronic component is replaceable and available as a spare part.



Figure 1: Front view of the Wiltec SKD-1 Automatic Pump Control unit.

2. COMPONENTS

The SKD-1 unit integrates several key components for reliable operation:

2.1 Hydraulic Component

- **Stop Valve:** Controls water flow.
- **Flow-sensitive Valve:** Detects changes in water flow to initiate pump operation.
- **Reinforced Plastic Body:** Durable and molded plastic housing.
- **Pressure-sensitive Diaphragm and Spring:** Responds to pressure changes in the system.
- **Safety Valve:** Prevents water leakage if the diaphragm is damaged.

2.2 Electronic Component

- **Waterproof, Self-extinguishing Plastic Casing:** Protects internal electronics.
- **Tested and Controlled Electronic Board:** Features conductive tracks covered with insulating material.
- **Relay:** With a switching capacity of approximately 100,000 cycles for uninterrupted operation with a maximum load of 1.1 kW.

- **Varistor:** Protects against voltage spikes.

Technische Daten	
Typ	SKD-1A
Maße	230 x 170 x 170 mm
Spannung (einphasig)	230 Volt 50/60Hz
zulässige Spannungsschwankung	+/- 10%
Stromstärke max. f. angeschlossene Pumpen	10A (Pumpen bis ca. 1,1kW Nennleistung)
Schutzart	IP65
max. Betriebsdruck	1 MPa = 10bar
max. Betriebstemperatur	0° - 60°C
Anschlüsse	1" Außengewinde (32,89-33,25mm)
Startdruck	1,5 bis 2,2 bar / 0,15 bis 0,22 MPa
Material	Kunststoff
Farbe	blau / grau
Gewicht	1,130 kg

Figure 2: Internal view of the electronic components within the SKD-1 unit.

3. TECHNICAL SPECIFICATIONS

Table 1: Wiltec SKD-1 Technical Data

Feature	Value
Model Type	SKD-1A
Dimensions (L x W x H)	17.4 x 16.8 x 22.8 cm
Weight	1.1 kg
Voltage (Single Phase)	230 V 50/60 Hz
Permissible Voltage Fluctuation	+/- 10%
Max. Current for Connected Pump	10 A (Pumps up to approx. 1.1 kW rated power)
Protection Type	IP65
Max. Operating Pressure	1 MPa = 10 bar
Max. Operating Temperature	0° - 60°C
Connections	1" External thread (32.89-33.25mm)
Start Pressure	1.5 to 2.2 bar / 0.15 to 0.22 MPa
Material	Plastic
Color	Blue / Grey



Figure 3: Technical drawing showing dimensions and connection points of the SKD-1.

4. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your Wiltec SKD-1 pump control. Please follow these guidelines carefully:

4.1 General Installation Notes

- Ensure the unit is installed in a dry, protected area, away from direct sunlight and freezing temperatures.
- The unit should be installed vertically with the water flow direction indicated by arrows on the device.
- Use appropriate sealing tape or compound on all threaded connections to prevent leaks.
- Ensure all electrical connections are made by a qualified electrician and comply with local regulations.

4.2 Electrical Connection

The SKD-1 is designed for single-phase pumps up to 1.1 kW. If your pump exceeds 1.1 kW, you must install a standard power contactor or a corresponding power relay in series with the SKD-1 unit. For 380V three-phase pumps, a 380V power contactor can be used to control 380/400V three-phase pumps.

1. Disconnect power to the pump system before beginning any electrical work.
2. Connect the power supply cable to the designated input terminals on the SKD-1 unit.
3. Connect the pump's power cable to the designated output terminals on the SKD-1 unit.
4. Ensure all connections are secure and the wiring is properly insulated within the waterproof casing.



Figure 4: Side view of the SKD-1 unit, highlighting the water inlet and outlet connections.

5. OPERATING INSTRUCTIONS

The Wiltec SKD-1 operates automatically once properly installed and powered. It monitors both pressure and flow to manage pump operation.

5.1 Automatic Operation

- When a water outlet (e.g., tap, shower) is opened, the pressure in the system drops, and the SKD-1 detects water flow. The unit will automatically start the pump.
- When all water outlets are closed, the pressure in the system rises, and the flow stops. The SKD-1 will automatically stop the pump.
- The unit maintains a constant pressure in the domestic water network during operation.

5.2 Dry-Run Protection

The SKD-1 includes an integrated dry-run protection feature. If the water supply to the pump runs out, the unit will detect the absence of flow and automatically shut down the pump to prevent damage. The "Failure" indicator light will illuminate.

5.3 Restarting the Pump

After a dry-run shutdown or power interruption, the pump can be restarted:

1. Ensure the water supply to the pump has been restored.
2. Press the **"Restart"** button on the front panel of the unit. The pump should resume normal operation.

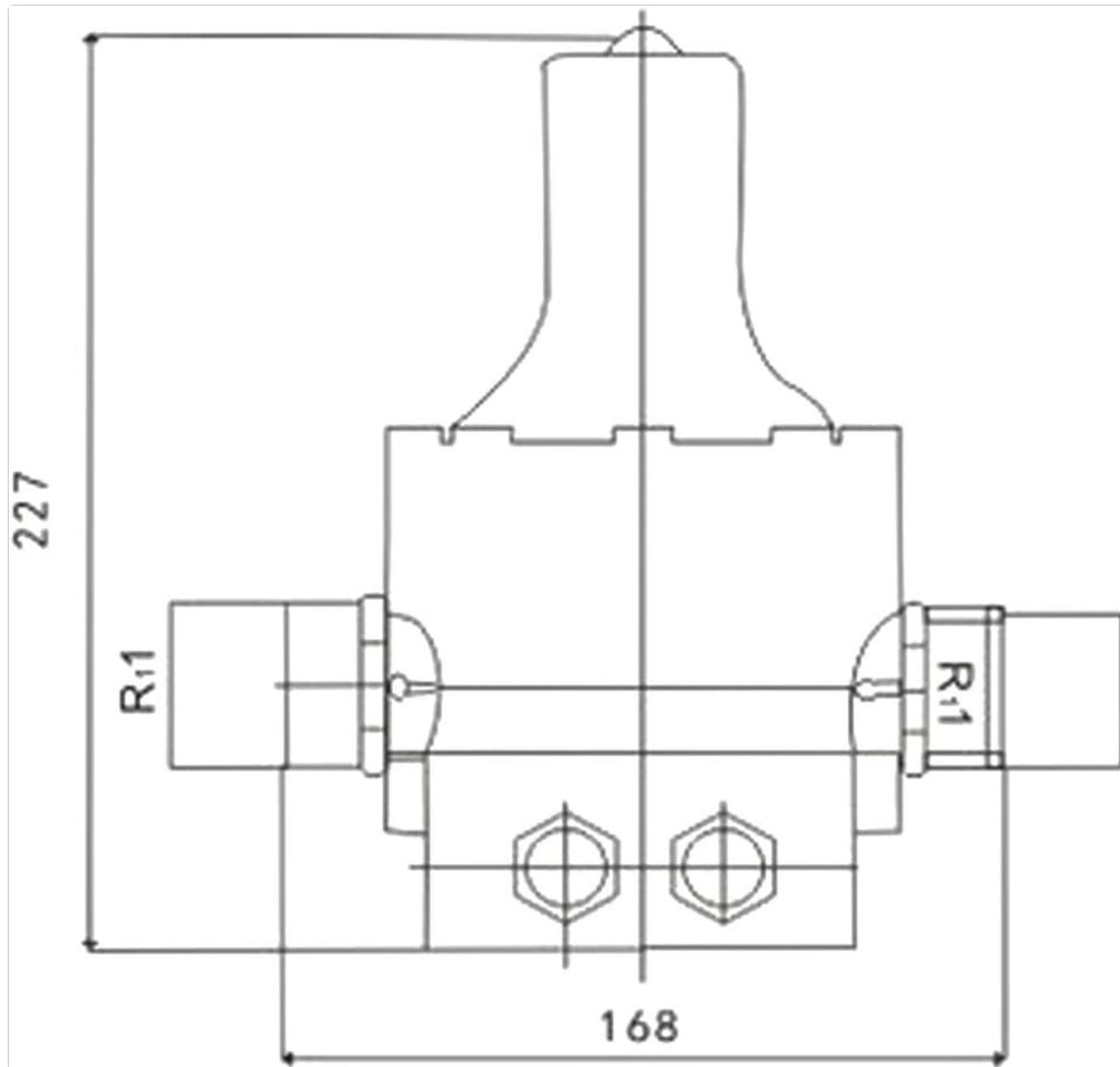


Figure 5: Top view of the SKD-1 unit, showing the indicator lights and the "Restart" button.

6. MAINTENANCE

The Wiltec SKD-1 is designed for low maintenance. However, regular checks can ensure its continued reliable operation.

- **Regular Inspection:** Periodically check the unit for any visible signs of damage, leaks, or corrosion.

- **Cleaning:** Keep the exterior of the unit clean and free from dust and debris. Do not use abrasive cleaners.
- **Winterization:** If the unit is installed in an area subject to freezing temperatures, ensure it is drained and protected from frost during winter months to prevent damage to hydraulic components.
- **Diaphragm Check:** While the safety valve is designed to prevent leaks if the diaphragm is damaged, it is advisable to periodically check for any unusual pressure fluctuations or persistent leaks that might indicate diaphragm wear.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your Wiltec SKD-1 pump control.

Table 2: Troubleshooting Guide

Problem	Possible Cause	Solution
Pump does not start when water outlet is opened.	No power to the unit. No water supply to the pump (dry-run protection activated). Blocked inlet/outlet.	Check power supply and connections. Ensure water supply is available and press "Restart" button. Inspect and clear any blockages.
Pump runs continuously even when all outlets are closed.	Leak in the system (e.g., dripping tap, leaky pipe). Faulty flow sensor.	Check for and repair any leaks in the water system. Contact qualified service personnel.
"Failure" indicator light is on.	Dry-run condition (no water). Overload or electrical fault.	Restore water supply and press "Restart" button. Check pump for issues; if problem persists, consult an electrician.
Pump cycles on and off rapidly (short cycling).	Small leak in the system. Insufficient water flow.	Identify and fix small leaks. Ensure adequate water supply and flow rate.

8. WARRANTY AND SUPPORT

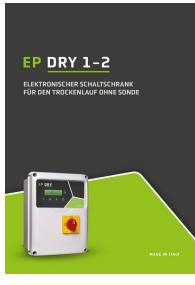
For technical support, spare parts, or warranty inquiries regarding your Wiltec SKD-1 Automatic Pump Control, please contact WilTec customer service. While specific spare parts availability information is not provided, the electronic component is designed to be replaceable.

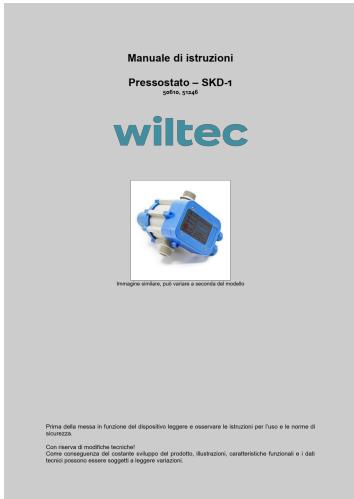
For contact information, please visit the official WilTec website or refer to your purchase documentation.

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Related Documents - SKD-1 (50610)

 <p>SWITCHMATIC 1 / 1 plus SWITCHMATIC 2 / 2 plus SWITCHMATIC 3 / 3 plus EN</p> <p>ADVANCED SETTINGS</p> <p>CE</p>	<p>COELBO SWITCHMATIC 1, 2, 3 Electronic Pressure Switch User Manual</p> <p>Comprehensive user manual for COELBO SWITCHMATIC 1, 2, and 3 electronic pressure switches, detailing installation, operation, advanced settings, calibration, and troubleshooting for pump control systems.</p>
 <p>EP BASIC 1-2 GUARDI ELETTRONICO PER IL CONTROLLO DI 1 O 2 POMPE MONOFASE O TRIFASE</p> <p>MADE IN ITALY</p>	<p>EP BASIC 1-2 Electronic Control Panel for 1 or 2 Single-Phase or Three-Phase Pumps</p> <p>The EP BASIC 1-2 is an electronic control panel designed for managing one or two single-phase or three-phase pumps. It offers features like anti-seizing, dry-run protection, and overload protection, with options for remote control and advanced accessories. Suitable for clean and wastewater applications.</p>
 <p>Smart SN ELEKTRONISCHE SCHALTSTATION PUMPSCHALTER</p> <p>ALLGEMEINES MATERIAL TECHNISCHE DATEN</p> <p>CE</p>	<p>Honeywell FEMA Smart SN Electronic Pressure Transmitter Datasheet</p> <p>Comprehensive datasheet for the Honeywell FEMA Smart SN Electronic Pressure Transmitter, detailing technical specifications, features, installation, and performance data for pressure measurement applications.</p>
 <p>EP DRY 1-2 ELEKTRONISCHER SCHALTSCHrank FÜR DEN DÖRKENLAUF OHNE SONDE</p> <p>MADE IN ITALY</p>	<p>EP DRY 1-2 Electronic Dry Running Protection Control Panel</p> <p>The EP DRY 1-2 is an electronic control panel designed to protect electric pumps from dry running using integrated Cos-fi control. It features a multi-language LCD display for parameter programming and monitoring, programmable restart times, and various safety features. The panel is available in single-phase and three-phase versions and offers optional accessories for enhanced functionality.</p>
 <p>Smart SN ELEKTRONISCHE SCHALTSTATION PUMPSCHALTER</p> <p>ALLGEMEINES MATERIAL TECHNISCHE DATEN</p> <p>CE</p>	<p>Honeywell FEMA Smart SN Electronic Pressure Transmitter Product Data</p> <p>Detailed product data sheet for the Honeywell FEMA Smart SN series of electronic pressure transmitters, covering features, technical specifications, mounting, and electrical wiring.</p>
 <p>EP BASIC 1-2 ELECTRONIC CONTROL PANEL FOR 1 OR 2 SINGLE-PHASE OR THREE-PHASE PUMPS</p> <p>MADE IN ITALY</p>	<p>EP BASIC 1-2 Electronic Control Panel for Pumps</p> <p>EP BASIC 1-2 is an electronic control panel designed for 1 or 2 single-phase or three-phase pumps. It offers features like anti-seizure, maximum control, and easy installation, making it suitable for clean water and wastewater systems. The panel includes various protections and optional accessories for enhanced functionality.</p>

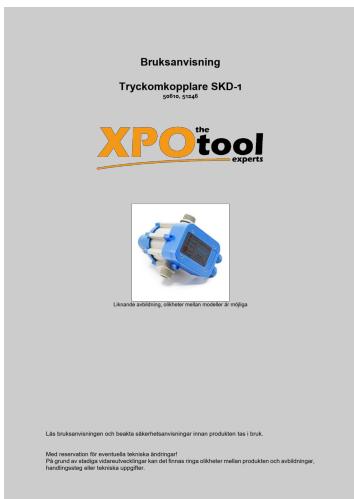


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