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Möhlenhoff Alpha-5 VA80

Alpha-5 Actuator for Underfloor Heating 24V (AC/DC) - NO Type VA80

Brand: Möhlenhoff

PRODUCT OVERVIEW

The Alpha 5 is a thermoelectric actuator designed to open and close small valves and flaps on heating circuit distributors for surface heating and cooling systems. It enables energy-efficient individual room control in home automation systems.

Thanks to its innovative and patented valve adapter concept, the Alpha 5 actuator can be perfectly adapted to most heating circuit distributors and valve lower parts. It is intended for the automatic control of return valves on the heating circuit distributor via a room thermostat.

Key Features:

- Operating power: Only 1 W, ensuring high efficiency.
- Supplied with a 1-meter connection cable (non-removable).
- Normally Open (NO) operation: Opens without power.
- 360° mounting position for flexible installation.
- First-Open function for initial system setup.
- Function display for operational status.
- TÜV certified for quality and safety.
- Stroke: 4 mm.



Image: The Alpha-5 Actuator, showing the main unit, the included connection cable, and the valve adapter.



Image: A display of various valve adapters, illustrating the universal applicability of the Alpha-5 actuator with different heating circuit distributors.

SETUP AND INSTALLATION

The Alpha-5 actuator is designed for straightforward installation on heating circuit distributors. The following steps outline the general installation process. Always ensure power is disconnected before beginning installation.

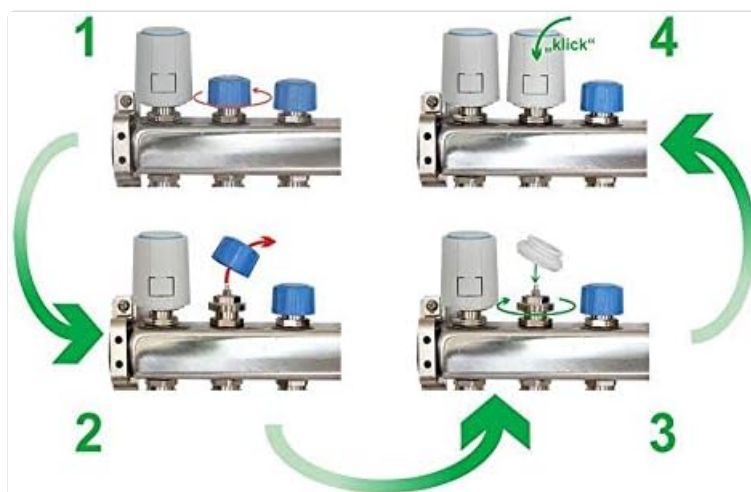


Image: Step-by-step visual guide for installing the Alpha-5 actuator on a heating manifold.

- Step 1: Prepare the Valve.** Ensure the valve on the heating circuit distributor is ready for actuator attachment. If an existing cap or manual control knob is present, remove it.

2. **Step 2: Attach the Adapter.** The Alpha-5 actuator comes with a suitable valve adapter. Screw this adapter onto the valve thread of the heating circuit distributor. Ensure it is securely fastened but do not overtighten.
3. **Step 3: Position the Actuator.** Align the Alpha-5 actuator with the adapter. The actuator is designed for a 360° mounting position, offering flexibility.
4. **Step 4: Secure the Actuator.** Gently push the actuator onto the adapter until it clicks into place. This "click" indicates a secure connection.
5. **Step 5: Electrical Connection.** Connect the 1-meter cable of the actuator to the appropriate 24V (AC/DC) control circuit, typically managed by a room thermostat. Ensure wiring is done according to local electrical codes and safety standards.

After installation, restore power to the system. The actuator's function display will indicate its operational status. The First-Open function facilitates initial system startup.

OPERATING INSTRUCTIONS

The Alpha-5 actuator operates automatically in conjunction with a room thermostat. It is a Normally Open (NO) type actuator, meaning the valve is open when no power is supplied to the actuator. When power is applied, the actuator closes the valve.

- **Automatic Control:** The actuator receives signals from a connected room thermostat. When the thermostat calls for heat (or cooling, depending on system configuration), it will either supply or cut power to the actuator to open or close the associated valve, regulating the flow of heating/cooling medium to the specific zone.
- **Function Display:** The actuator features a visual function display (often a small indicator pin or window) that shows its current state (open or closed). Refer to the manufacturer's specific instructions for interpreting the display.
- **First-Open Function:** This feature allows the valve to remain open during initial system filling or commissioning, even without electrical connection, simplifying the startup process.

No manual intervention is typically required for daily operation once the system is properly installed and configured with a room thermostat.

MAINTENANCE

The Alpha-5 actuator is designed to be maintenance-free under normal operating conditions. No routine user maintenance, lubrication, or cleaning is required.

- **Cleaning:** If necessary, the exterior of the actuator can be wiped with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Inspection:** Periodically inspect the actuator and its connections for any visible damage or loose wiring.

For any issues beyond simple visual inspection, it is recommended to contact a qualified HVAC technician.

TROUBLESHOOTING

This section provides basic troubleshooting tips for common issues. For complex problems, always consult a qualified professional.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Actuator not responding to thermostat	No power supply; Loose wiring; Faulty thermostat; Actuator malfunction.	<p>Check power supply to the thermostat and actuator. Verify all electrical connections are secure. Test the thermostat's functionality. If issues persist, the actuator may need replacement.</p>
Valve remains open/closed constantly	Continuous power supply/no power supply; Actuator stuck; Valve stuck.	<p>Check the thermostat settings and wiring to ensure correct power delivery. Inspect the actuator for any physical obstruction. If the valve itself is stuck, professional intervention may be required.</p>

Problem	Possible Cause	Solution
Unusual noises from actuator	Internal mechanical issue; Incorrect installation.	Ensure the actuator is securely mounted and not vibrating against other components. If the noise persists, it may indicate an internal fault, and the actuator might need to be replaced.

If these steps do not resolve the issue, it is recommended to seek assistance from a certified HVAC technician.

SPECIFICATIONS

Attribute	Detail
Manufacturer	Möhlenhoff
Product Type	Thermoelectric Actuator
Model	Alpha-5 VA80
Voltage	24 V (AC/DC)
Operation Type	Normally Open (NO)
Operating Power	1 W
Connection Cable Length	1 m (1000 mm)
Stroke	4 mm
Mounting Position	360°
Certifications	TÜV certified
Package Dimensions	9 x 7.8 x 4.8 cm
Item Weight	120 grams

WARRANTY AND SUPPORT

Specific warranty details for the Alpha-5 actuator are not provided in this manual. Please refer to the manufacturer's

official website or your point of purchase for comprehensive warranty information.

For technical support, product inquiries, or service requests, please contact Möhlenhoff customer service or an authorized distributor. Contact information can typically be found on the manufacturer's official website.

Note: Availability of spare parts information is currently unavailable.

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