

AL0206-P-K, AL0306-P-K

SMALL MODULATING LINEAR VALVE ACTUATORS

PRODUCT DATA



APPLICATION

The Trend AL0206-P-K actuator is specifically designed to provide modulating control together with the V582, V583, and V584 series of small linear valves; the AL0306-P-K is for use with SV162X, SV163X series of small linear valves.

The AL0206-P-K and AL0306-P-K are used in fan coil units, induction units, small reheaters and recoolers, and for zone control applications. They are employed in electronic temperature control systems with hot and/or cold water as the controlled medium. These actuators are fully compatible with all controllers providing 0...10 V or 2...10 V output signals.

The AL0206-P-K and AL0306-P-K actuators are designed for applications where space is limited and minimum power consumption is required. A microprocessor-based, high-performance positioner guarantees accurate control.

Reliable longtime operation is ensured due to the fact that no mechanical feedback potentiometer and no mechanical end-switches are needed. Due to an automatic synchronization function, the close-off point is self-adjusting.

Based on a running time of 150 s, valve positioning and flow adjustment is very exact. Manual positioning is provided. The actuator is both attractive and robust in design.

FEATURES

- **Microprocessor-based positioner ensures precise stem positioning**
- **Small size allows installation where space is limited**
- **Low power consumption**
- **Suitable for 0...10 V and 2...10 V controller output signal (adjustable on site)**
- **Easy-to-operate direct/reverse acting switch**
- **Simple input signal override (e.g. for frost protection function)**
- **Reliable longtime operation because mechanical feedback potentiometers and mechanical end switches are not required**
- **Magnetic coupling for stem force limitation and self-adjustment of the close-off-point**
- **Supplied with pre-wired connection cable**
- **Simple, standardized valve/actuator coupling. No tools required for mounting**
- **Visual valve position indicator furnished with actuator**
- **Manual operation provided by the valve adjustment cap, extra knob, or with a hexagon key**

SPECIFICATIONS

Motor

Input voltage:	24 Vac \pm 15%; 50/60 Hz
Power consumption:	1.4 VA
Input signal:	modulating 0...10 V, 2...10 V (adjustable); <0.1 mA
Operation:	direct/reverse (adjustable)
Stroke:	6.5 mm
Running time:	150 s at 50 Hz 120 s at 60 Hz
Stem force:	depending on version (see table)
Protection standard:	IP 42 in accordance with EN 60529
Insulation class:	III in accordance with EN 60730
Connection cable:	1.5 m
Ambient operating temperature limits:	0...55 °C
Weight:	AL0206: 0.2kg, AL0306:0.3 kg
Manual operation:	see table

OPERATION

The movement of the electric actuator is produced by a screw spindle which is driven in both directions by a synchronous motor through a set of gears. A magnetic clutch limits the torque of the gear assembly and the driving force of the actuator. The actuator is fixed to the valve body by means of a coupling ring requiring no tools for mounting. The actuator is maintenance-free and supplied completely with a ready-to-wire connecting cable.

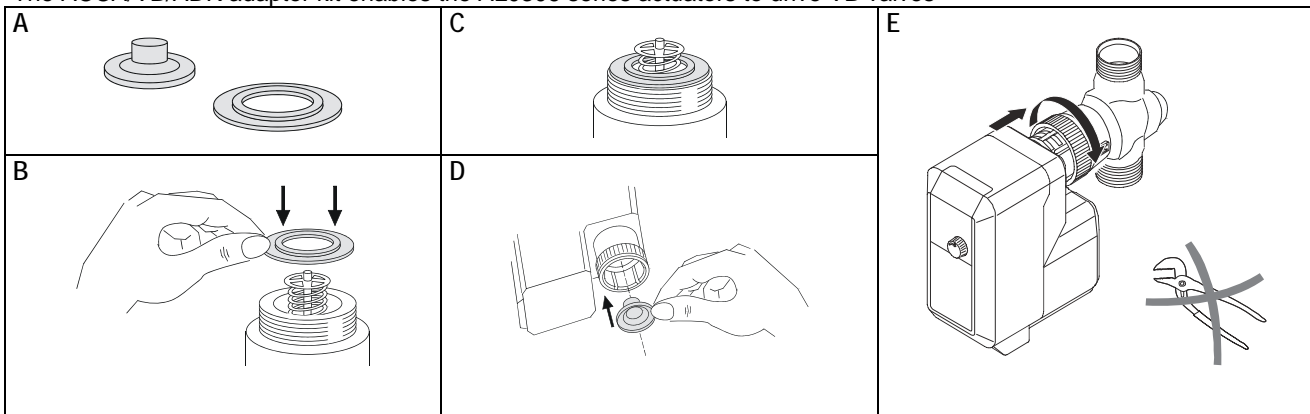
A microprocessor-based high-performance positioner guarantees accurate control. The close-off position is self-adjusting by means of an automatic synchronization function. Synchronization is performed when the applied control signal is 0 V or 10 V. The actuator then drives every minute for 5 seconds into the end position in order to ensure close-off even after manual operation.

VERSIONS

	Manual operation	Stem force	Aux. switch S1	Aux. switch S2	Order number
With manual operation	Integrated	180 N	-	-	AL0206-P-K
		300 N	-	-	AL0306-P-K

ADAPTOR KIT (ACCA/VB/ADK):

The ACCA/VB/ADK adaptor kit enables the AL0306 series actuators to drive VB valves



MOUNTING POSITION

The actuator may only be mounted beside or above the valve. Adjust the valve in the correct position before mounting the actuator.

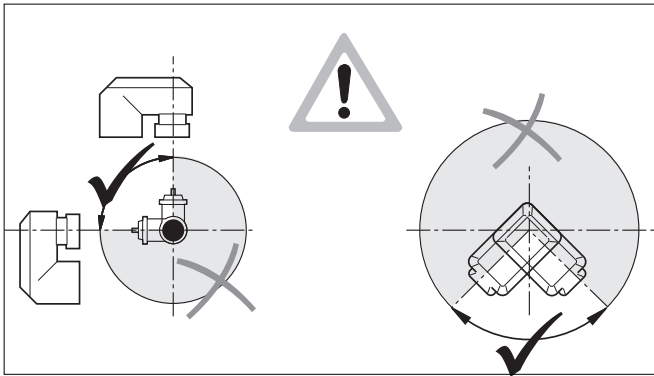


Fig. 1. Mounting positions

MOUNTING

Before the actuator is fixed to the valve, the adjustment cap must be removed (Fig. 2). Make sure that the actuator is in the open position (factory-supplied position) before fixing the actuator to the valve body.

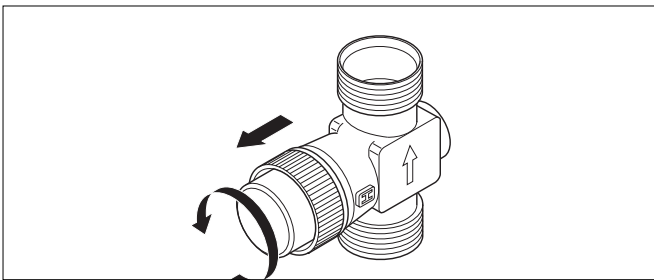


Fig. 2. Remove protection cap

The actuator must be mounted by hand. Do not use tools or additional force insofar as this may damage the actuator and valve.

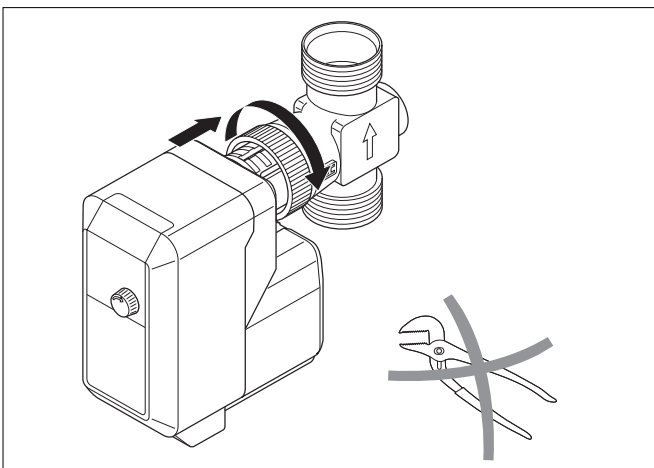


Fig. 3. Mounting the actuator

SWITCH SELECTION

The built-in selector switches must be set according to the valve type (2-way or 3-way), valve size, and the controller output signal (0...10 V or 2...10 V), see Fig. 4.

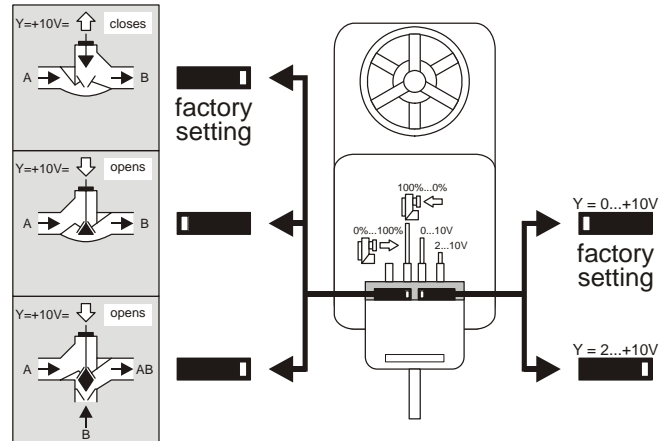


Fig. 4. Selecting valve type and output signal

ELECTRIC WIRING

The electrical installation must comply with Fig. 5.

INPUT SIGNAL OVERRIDE

To override the controller output signal, the input signal must be connected to COM (0 %) or 24 V (100 %) using an external switch (see Fig. 5).

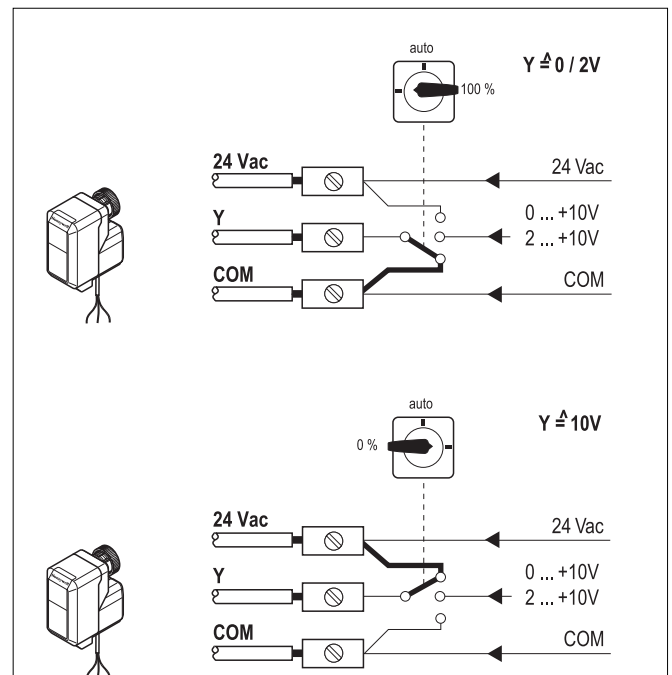


Fig. 5. Connection of input switch

MANUAL OPERATION

The AL0206-P-K, AL0306-P-K actuators feature a hexagonal key hole for manual operation. For more comfort, an additional knob for manual adjustment is packed separately. To prevent valve damage, operation is permitted only when there is no power applied to the motor.

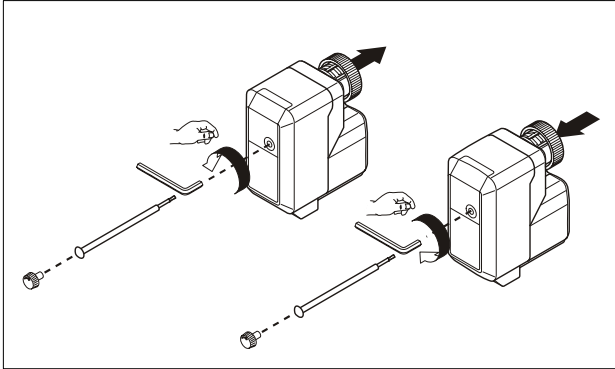


Fig. 6. Manual operation

COMMISSIONING ADVICE

A functional check of the valve actuator can be carried out by changing the Y input signal. The movement of the actuator stem (Fig. 7) indicates whether the valve is opening or closing. If the direction of travel is not correct, the direct/reverse-switch must be reset.

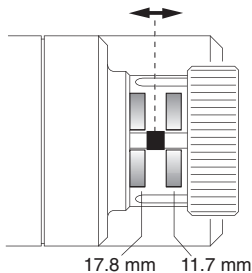


Fig. 7. Movement of the actuator stem

DIMENSIONS (MM)

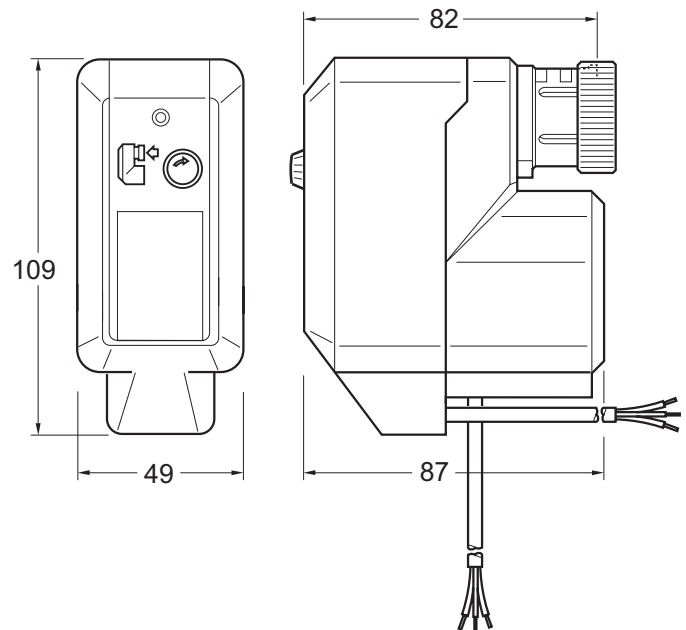
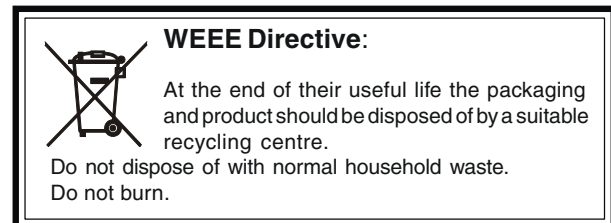


Fig. 8. Housing

DISPOSAL



Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Ecublens, Route du Bois 37, Switzerland by its Authorized Representative.

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Trend Control Systems Limited

P.O. Box 34 Horsham, West Sussex, RH12 2YF, UK. Tel: +44 (0)1403 211888, Fax: +44 (0)1403 241608, www.trend-controls.com