

## AL0102-24 SMALL LINEAR ACTUATORS FOR FLOATING CONTROL

PRODUCT DATA



### APPLICATION

The Trend AL0102-24 actuator provides floating control of Trend VS582, VS583, and VS584 Series small on/off valves. It is used in fan coil units, induction units, small re-heaters and recoolers and for zone control applications. It is employed in electronic temperature control systems using hot and/or cold water as controlled medium. The AL0102-24 actuator is suitable for Trend IQ controllers. These controllers track the precise valve position by counting the number of individual control pulses which move the valve from one position to another. For this reason, the actuators do not need end switches or a feedback potentiometer. The absence of these mechanical components ensures longtime reliability. The AL0102-24 actuator is also compatible with any controller providing intelligent position control and having a built-in shut-off function.

### FEATURES

- Suitable for three-position control without proportional feedback.
- Small size allows installation where space is limited.
- Low power consumption.
- Reliable long term operation because mechanical feed-back 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 M30 x 1,5 valve/actuator coupling – no tools required for mounting.
- Visual valve position indicator furnished with actuators.

## SPECIFICATIONS

Control type:	floating (3-pt)
Input voltage:	24 Vac $\pm$ 10%...-30%; 50/60 Hz
Power consumption:	0.7 VA
Stroke:	4 mm
Running time:	53 s at 50 Hz
Stem force:	90 N
Protection standard:	IP 43 in accordance with EN 60529
Insulation class:	II/III depending on type
Connection cable:	0.9 m (3.0 ft)
Ambient operating temperature limits:	0...60 °C (32...140°F)
Weight:	0.4 kg
Manual operation:	by valve protection cap only

## 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.

## VERSIONS

Type	Control type	Stem force	Cable length	Order number
AL0102	floating	90 N	0.9 m (3.0 ft)	AL0102-24

### MOUNTING POSITION

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

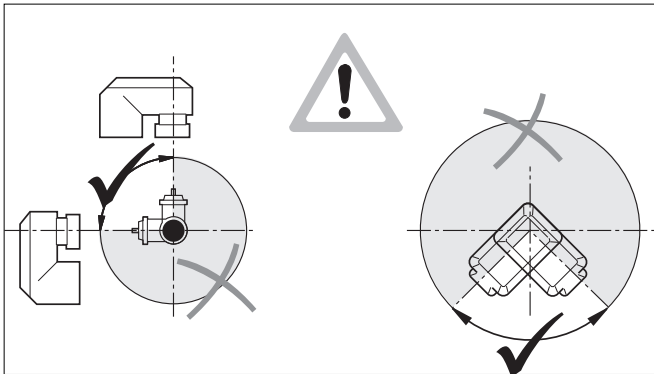


Fig. 1. Mounting positions

### 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.

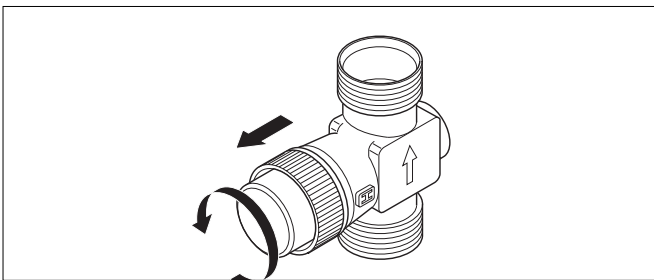


Fig. 2. Remove protection cap

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

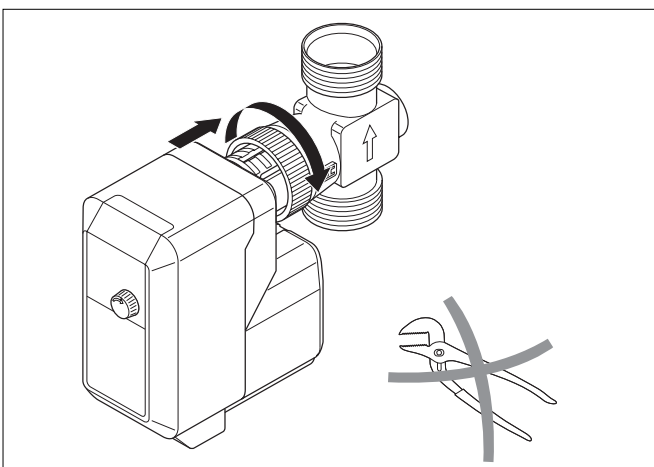
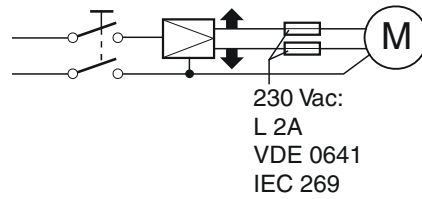


Fig. 3. Mounting the actuator

### ELECTRIC WIRING

A switch with a contact gap of at least 3 mm for each pole must be fitted with the fixed installation. The fuse rating is max. 2A. The electrical installation must comply with the wiring diagram shown in Fig. 4..



Cable colours for 24V type

COM		
WHITE	GREEN	BROWN

Fig. 4. Mounting positions

### COMMISSIONING ADVICE

A functional check of the valve actuator can be carried out by applying power to drive the actuator in either direction. The movement of the actuator stem (Fig. 5) indicates whether the valve is opening or closing.

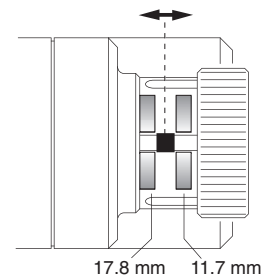


Fig. 5. Movement of the actuator stem

## DIMENSIONS (MM)

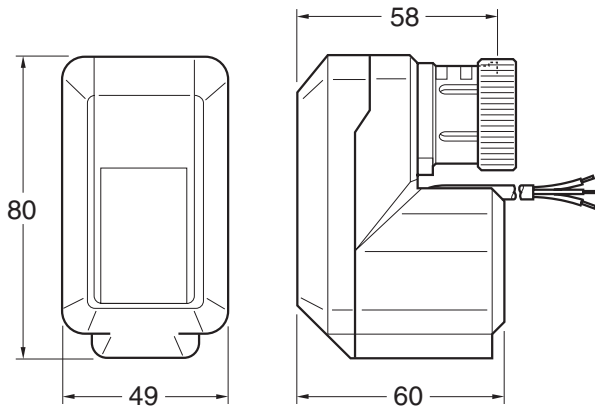
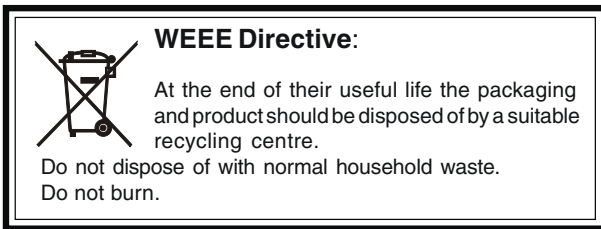


Fig. 6 Housing

## DISPOSAL



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