

# ACTUATOR SERIES ALHx00

ESBE series ALHx00 is specially designed for applications which require a safety function with spring return.



ALH100, ALH200

## OPERATION

ESBE series ALHx00 is either controlled by a 3-point floating signal (extend/retract) or by a modulating/proportional (ex 0..10V, 2..10V) signal. Modulating/proportional control signal gives a fast actuator.

The electronic circuitry of the actuator ensures that the running time is the same, regardless of the stroke of the valve in question.

The working range of the actuator is adjusted automatically depending on the stroke of the valve. The electronic circuitry of the actuator then takes care of the adjustment of the valve end positions.

## FUNCTION

- **The actuator**  
The actuator receives a control signal from a controller. The screw transmits a linear movement which moves the stem of the valve.
- **Spring return**  
Upon power failure, the mechanical spring return mechanism drives the motor in turn generating power to the electronic circuitry to control the spring return braking speed, avoiding mechanical stress and system water hammer.
- **Manual operation**  
The manual override feature allows the actuator to be positioned independent of any external control signal. The action of the manual operation is always against the spring tension.
- **Position feedback**  
The actuator is equipped with a 2-10 or 0-5V DC position feedback signal, where 0/2V always corresponds to the closed position and 5/10V to the open position of the valve.
- **Sequence control**  
Actuators (modulating/proportional control signal) are able to be controlled in sequence.

## ADAPTOR KITS

The actuator is easy to mount and connect. It can be mounted directly onto ESBE's control valves, without any adaptor kit.

Adaptor kits for other valves are available as follows:

Art. No.

26000200 \_\_\_ Siemens VVF 31, VXF 31, VVG 41, VXG 41, VVF 52, VVF 61, VXF 61, VVF 45, VVF 51, VXF 11, VVG 11, VFG 34

26000800 \_\_\_ Satchwell VZ, VJE, VSF 15-50, VZE, MZF 65-150

## OPTIONS

End position contacts ALF801 are available as accessory.

These contacts could be used as end position indication or relay control of additional equipment.

Art. No.

26201200 \_\_\_\_\_ ALF802 Stem heater, 24 V

## TECHNICAL DATA

Supply voltage: \_\_\_\_\_ 24V AC  $\pm$  20%, 50/60 Hz

Power consumption: \_\_\_\_\_ see table

Transformer size: \_\_\_\_\_ 50 VA

Stroke: \_\_\_\_\_ 9-30 mm

Force: \_\_\_\_\_ 900 N

Duty cycle -

full load, high ambient temperature: max. 20%/60 minutes

half load, room temperature: \_\_\_\_\_ 80%/60 minutes

Output Y, Voltage: \_\_\_\_\_ 2-10 or 0-5V DC (0-100%)

- Load 2 mA

Ambient temperature: \_\_\_\_\_ -10°C - +50°C \*

Ambient humidity: \_\_\_\_\_ max. 90% RH

Enclosure rating: \_\_\_\_\_ IP 54

Modulating control signal: \_\_\_\_\_ 0-10V DC, 2-10V DC

\_\_\_\_\_ 0-5V DC, 5-10V DC

\_\_\_\_\_ 2-6V DC, 6-10V DC

Running time by modulating/proportional signal,

Valve with stroke 9-25 mm: \_\_\_\_\_ 15 s

Valve with stroke 26-30mm: \_\_\_\_\_ 20 s

Running time by 3-point floating control signal: \_\_\_ 60 s/300 s

Running time spring return,

Valve with stroke 9-25 mm: \_\_\_\_\_ 13 s

Valve with stroke 26-30 mm: \_\_\_\_\_ 18 s

Weight: \_\_\_\_\_ 2,8 kg

Material

Cover: \_\_\_\_\_ ABS Plastic

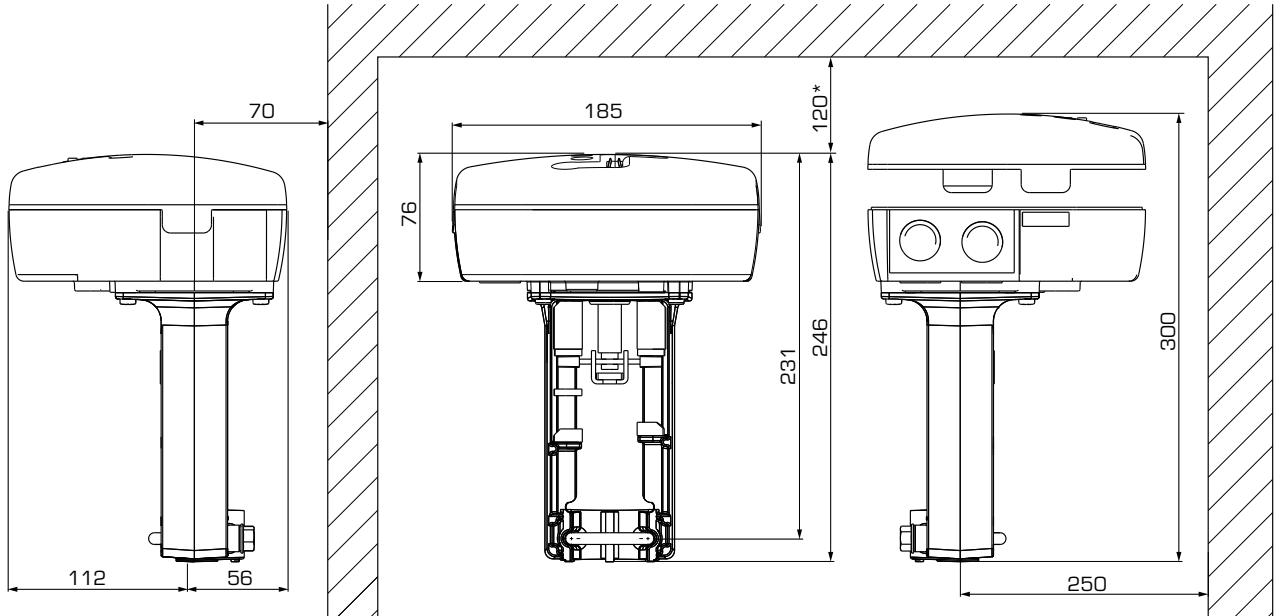
Housing: \_\_\_\_\_ Aluminum

\* If the actuator is used in applications with media temperatures below 0°C, the valve should be equipped with a stem heater ALF802.



LVD 2014/35/EU  
EMC 2014/30/EU  
RoHS 2011/65/EU

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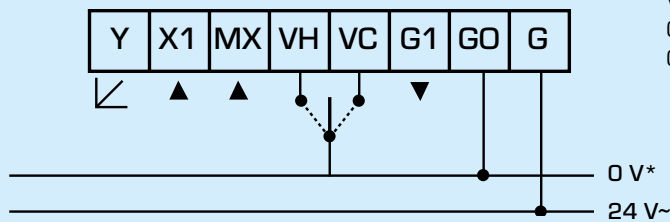
\* Minimum distance needed for manual override operation.

## SERIES ALHx00

Art. No.	Reference	Supply voltage	Force [N]	Stroke [mm]	Power consumption,		Note
					Running [W]	Holding [W]	
22220100	ALH134	24V AC, 50/60Hz	900	30	21	7	Spring return stem direction up
22221100	ALH234						Spring return stem direction down

### ELECTRICAL WIRING

The motor should be preceded by a multi-pole contact breaker in the fixed wiring.



Y = Feedback signal  
 X1 = Control signal  
 MX = Input neutral  
 VH/VC = Increase/Decrease (3-point)  
 G1 = External supply  
 GO/G = Supply voltage

\*Should not be connected in parallel with any electrical equipment other than additional actuators.