LINEAR MOTORIZED VALVES

ACTUATOR
SERIES ALFxx1

ESBE series ALF is specially designed for applications which require a high resolution and quick reaction.

ALF131   ALF261, ALF361, ALF461

OPERATION

ESBE series ALF is either controlled by a 3-point floating signal or by a modulating/proportional (ex 0..10 V, 2..10 V, 4-20mA) signal. Modulating/proportional control signal gives a fast actuator.

When modulating/proportional operation mode is used the working range of the actuator is automatically adjusted to 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
  When controlled with modulating/proportional control signal the full stroke has a resolution of 500 steps which enables a precise flow control together with ESBE linear valves.

– Manual operation
  There is a manual operation handle on the actuator. When it is lowered, the motor stops. The actuator can then be operated manually if the handle is turned.

– Position feedback
  (only available in modulating/proportional control mode) The actuator is equipped with a 2–10 VDC position feedback signal.

– Diagnostic
  The actuator is equipped with a self-diagnostic algorithm. The diagnostic information is communicated with a red/green blinking LED on the PCB under the cover.

– Sequence control
  Actuators (modulating/proportional control signal) are able to be controlled in sequence.

LINKAGE KITS

The actuator is easy to mount and connect. It can be mounted directly onto ESBEs control valves, without any linkage 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, VJF, VSF 15–50, VZF, 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(only applicable in modulating/proportional control mode).
Art. No.
26201100 _____ ALF801 End position contacts
26201200 _____ ALF802 Stem heater, 24 V

TECHNICAL DATA

Supply voltage: _____ 230 VAC ±10%, 50/60 Hz
Power consumption:_____ see table
Stroke:_____5..30 / 5..60 mm
Force: _____ 600 – 2200 N
Duty cycle:_____ max. 50%/h
Ambient temperature: _____ –10°C – +50°C *
Ambient humidity:_____ max. 90% RH
Enclosure rating:_____ IP 54
Feedback signal, "U": _____ 2 – 10 VDC (0 – 100%)
Modulating / proportional control signal, "Y":
_____ 0 – 10 VDC, 2 – 10 VDC
_____ 0 – 5 VDC, 5 – 10 VDC
_____ 2 – 6 VDC, 6 – 10 VDC
_____ 4 – 20mA

Running time by modulating/proportional signal
  600, 1000, 1500 N version:
    Valve with stroke between   5 - 15 mm:_____15 s
    Valve with stroke between 16 - 25 mm:_____20 s
    Valve with stroke between 26 - 60 mm:_____30 s
  2200 N version:
    Valve with stroke between   5 - 60 mm: _____60 s
3-point floating operating voltage: _____ 230 VAC
Running time by floating control signal:_____60 s
Weight: _____ 1.5 kg

Material
Cover: _____ 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.

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

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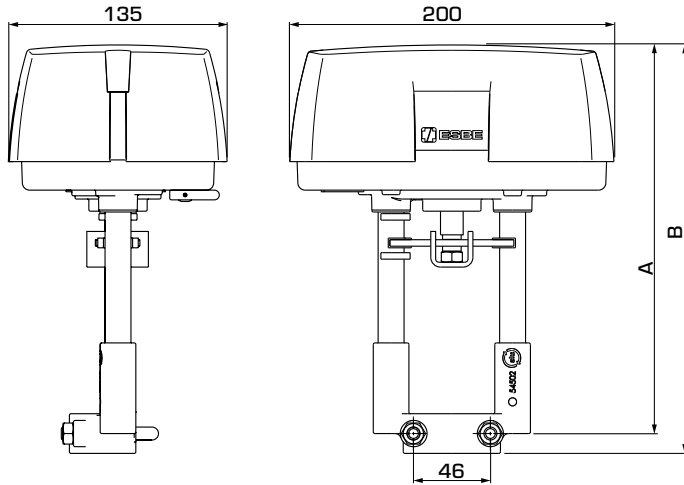
SERIES ALFxx1 MODULATING/PROPORTIONAL OR 3-POINT CONTROL SIGNAL, POWER SUPPLY 230 VAC

| Art. No.	Reference	Supply voltage [VAC, 50Hz]	Force [N]	Stroke [mm]	Power consump, Running	Power consump, Holding	A	B	Note
22200100	ALF131	230	600	30	13VA/6W	11VA/5W	216	228	
22200200	ALF261		1000	60	18VA/8W	11VA/5W	240	252	
22200300	ALF361		1500		21VA/11W	13VA/7W			
22200400	ALF461		2200		25VA/10W	25VA/4W			

ASSEMBLY

Mounting positions:

A = Allowed mounting position with fluid temperature between –20ºC to +120ºC.

B = Allowed mounting position with fluid temperature between 0ºC to +150ºC.
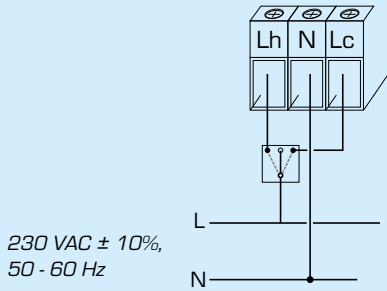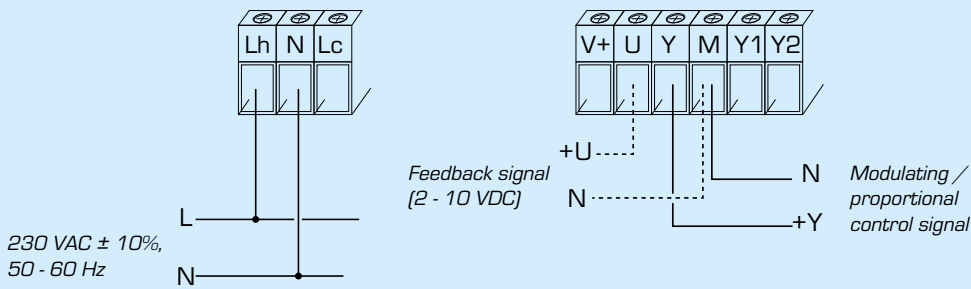
C = Not allowed mounting position.
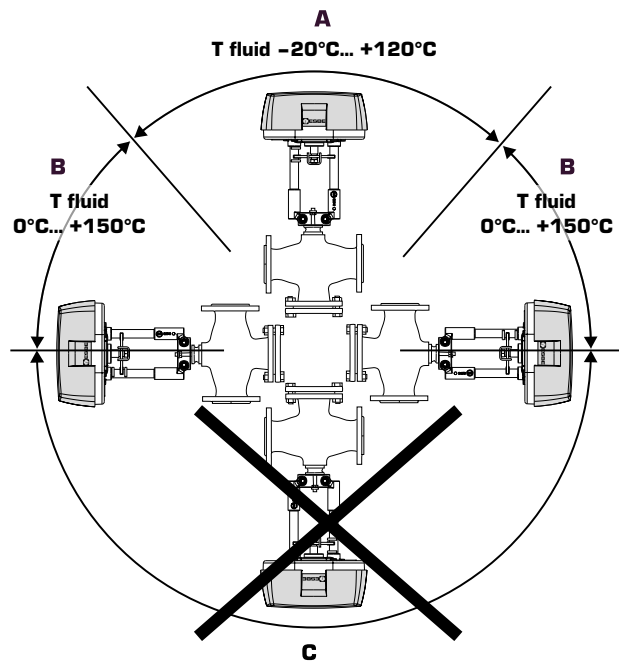
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ELECTRICAL WIRING

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

Lh N Lc

*230 VAC ± 10%,
50 - 60 Hz*

L

N

3-point floating control mode

Lh N Lc

V+ U Y M Y1 Y2

*230 VAC ± 10%,
50 - 60 Hz*

L

N

+U

Feedback signal
(2 - 10 VDC)

N

N

+Y

*Modulating /
proportional
control signal*

Modulating / proportional control mode

SEQUENCE CONTROL

Modulating/proportional control mode with sequence control,
example with 2 - 10 V DC control signal.

Actuator 1
2 - 6 VDC

Lh N Lc   V+ U Y M Y1 Y2

L
+
N
N

Actuator 2
6 - 10 VDC

Lh N Lc   V+ U Y M Y1 Y2

L
+
N
N

+Y   N

Controller
modulating/proportional
control signal
2 - 10 VDC

DIP Setting, Actuator 1		DIP Setting, Actuator 2	
1	OFF/ON	1	OFF/ON
2	OFF	2	OFF
3	ON	3	ON
4	ON	4	ON
5	OFF	5	ON
6	OFF	6	OFF
7	OFF	7	OFF