

# REVERSIBLE LINEAR ACTUATOR FOR VRG - VRB - VL - VF VALVES

## CLF Eng.



- **Power supply : 230 - 24 V~; IP 54 protection.**
- **Three-wire electric control.**
- **Maximum run: 15 mm. ; Run times : 11 s/mm - 3s/mm.**
- **Direct fitting to valve without calibration.**
- **Manual operation.**



### 1. APPLICATION

CLF actuator is designed for operating, with linear movement, VRG - VRB - VL and VF seat valves up to DN 50 used in heating and air-handling installations with fluid temperatures 0 ... 200 °C.

### 2. OPERATION

These actuators can be operated by an On-Off device (thermostat, teleswitch, manual switch) or by a modulating controller. The three-wire electric signal (common - opens - closes) powers a reversible synchronous electric motor with double windings, the rotary movement of which is converted into linear movement by an eccentric mechanism which allows a maximum run of 15 mm. The run is limited by two microswitches operated automatically by means of springs when the valve plug strikes one of its seats. This system ensures that the actuator is always able to exert its nominal force on the valve spindle thereby permitting installation without the need to calibrate the run.

On the actuator facia is a handwheel and a push-button switch; by pressing the latter the transmission mechanism is released and the valve can be operated manually by the handwheel.

### 3. MODELS

Model	Power supply V~ (VA)	Run mm.	Time s/mm.	Time s/15 mm.	Force Nm	Valves (up to DN) VRG - VRB - VL - VF
<b>CLF 168</b>	230 (2.15)	15	11	165	1000	50
<b>CLF 164</b>	24 (2.15)	15	11	165	1000	50
<b>CLF 048</b>	230 (7)	15	3	45	600	50
<b>CLF 044</b>	24 (7)	15	3	45	600	50

### 4. ACCESSORIES

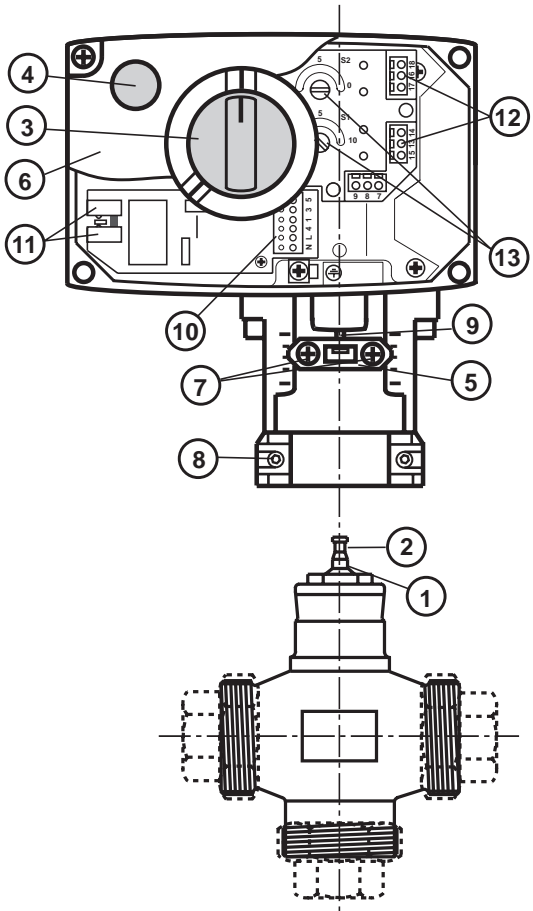
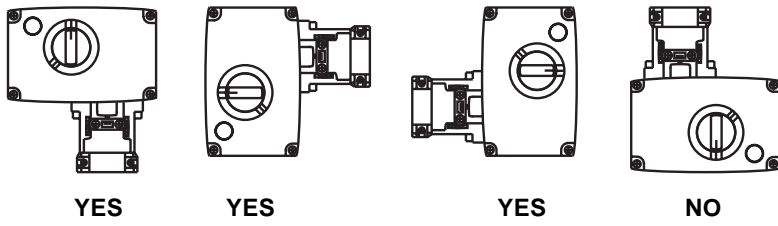
Model	Description
<b>FCF 002</b>	Two SPDT auxiliary microswitches

### 5. TECHNICAL DATA

Power supply :		Force :	
- CLF .8	230 V~ ±10%	- CLF 16.	1,000 Nm
- CLF .4	24 V~ ±10%	- CLF 04.	600 Nm
Frequency	50 ... 60 Hz	Capacity end-of-run contacts	6 (2) A
Consumption :		Valve fluid temperature	0 ... 200 °C
- CLF 16.	2.15 VA	Ambient temperature:	
- CLF 04.	7 VA	- operating	0 ... 55 °C
Maximum run	15 mm.	- storage & transport	- 40 ... 70 °C
Times 15 mm. run :		Protection	IP 54
- CLF 16.	165 s	Weight	1.55 kg
- CLF 04.	45 s		

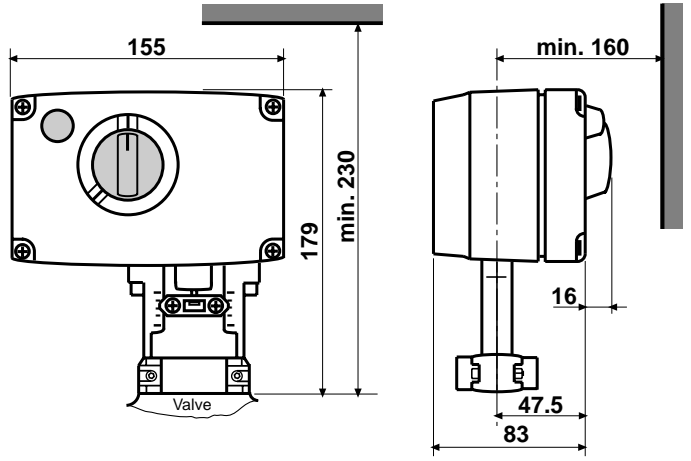
**6. INSTALLATION**

- Loosen the valve spindle locking screws on the coupling block (6.7).
- Loosen the actuator locking screws (6.8) and withdraw the entire length of the valve spindle (6.1)
- Place the actuator on the valve so that the spindle fits into the coupling block and tighten up the locking screws (6.7).
- Press the actuator until it rests on the top of the valve.
- Tighten the actuator locking screws and check correct installation by making a complete run of the valve by hand (6.3).
- Make the electrical connections according to the wiring diagram (8) and in observance of the safety regulations in force.

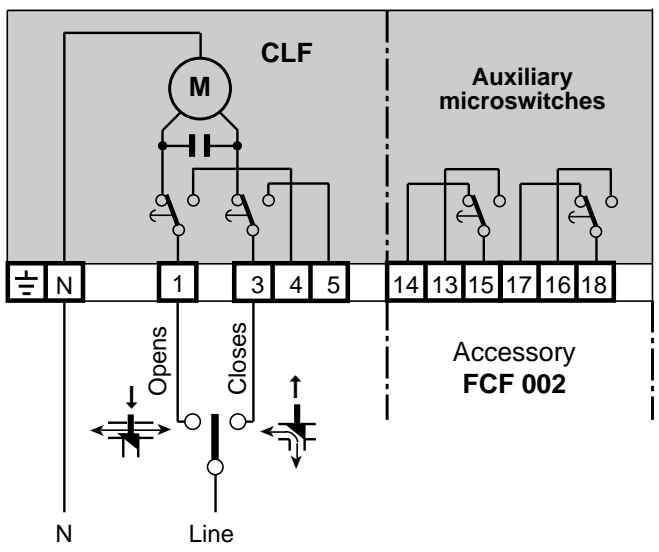


- 1 - valve spindle
- 2 - spindle locking recess
- 3 - manual operation wheel
- 4 - manual operation push-button
- 5 - coupling block
- 6 - protective cover
- 7 - valve spindle locking screws
- 8 - actuator locking screws
- 9 - actuator spindle
- 10 - terminal block
- 11 - end-of-run microswitches
- 12 - auxiliary microswitches terminal block
- 13 - control auxiliary microswitches

**7. OVERALL DIMENSIONS**



**8. WIRING DIAGRAM**



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