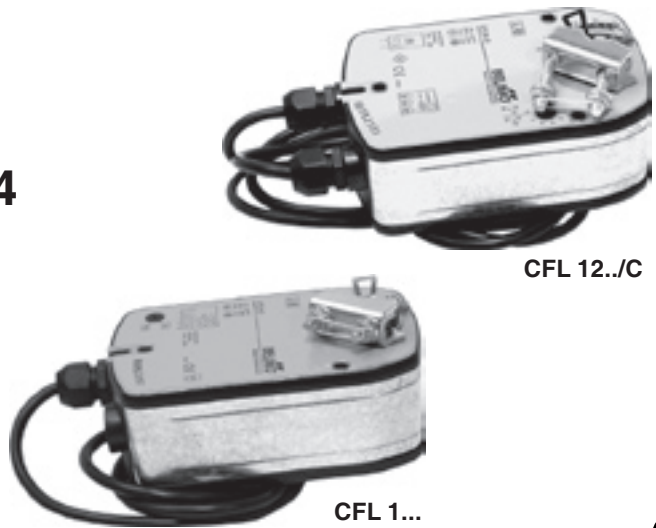


# ACTUATOR FOR DAMPERS WITH SPRING RETURN (max. 0.8 m<sup>2</sup> - 4 Nm)

## CFL 12.. – CFL 134 – CFL 104

- **Power supply:**
  - CFL ..8 (230 V~) - CFL ..4 (24 V~/-)
- **Electric control:**
  - SPST (CFL 12..)
  - SPDT (CFL 134)
  - progressive 2...10 V- (CFL 104)
- **Rotation:**
  - angle max. 95°
  - run time 75 s (150 s- CFL 134/104)
  - time to emergency 20 s
- **Installation:**
  - directly on damper shaft



### 1. APPLICATION

CFL ... actuators are designed for the operation, with linear rotary movement, of dampers in ventilating and air-conditioning sites. Their available torque (4 Nm) permits operating dampers up to 0.8 m<sup>2</sup> provided that these have a very well-balanced movement.

### 2. MODELS

Code	Power supply & consumption	Max angle	Run time	Emergency time	Torque	Control	Auxiliary switch supplied
<b>CFL 128</b>	230 V~ ± 10% (7 VA)	95°	75 s	20 s	4 Nm	SPST	—
<b>CFL 128/C</b>	230 V~ ± 10% (7 VA)	95°	75 s	20 s	4 Nm	SPST	1 SPDT
<b>CFL 124</b>	24 V~/- ± 20% (7 VA)	95°	75 s	20 s	4 Nm	SPST	—
<b>CFL 124/C</b>	24 V~/- ± 20% (7 VA)	95°	75 s	20 s	4 Nm	SPST	1 SPDT
<b>CFL 134</b>	24 V~/- ± 20% (5 VA)	95°	150 s	20 s	4 Nm	SPDT	—
<b>CFL 104</b>	24 V~/- ± 20% (5 VA)	95°	150 s	20 s	4 Nm	2...10 V-	—

### 3. ACCESSORIES (optional)

Code	Description
<b>PCS 104</b>	Built-in manual positioner 0 ... 100% ( <b>only for actuators with 2 ... 10 V- control</b> )
<b>KH 8</b>	Universal crank arm for damper shafts; (ø 10 ... 18 mm. - □ 10 ... 14 mm.).
<b>KH-LF</b>	Actuator arm (specific for CFL actuators).
<b>KG 10</b>	Ball joint for connection (for rods with ø 10 mm. max.).
<b>ZG-LF1</b>	Kit for mounting actuators on a flat surface (specific for CFL actuators)..

### 4. TECHNICAL DATA

Power supply:		Type of control	see "Models"
– CFL ..8	230 V~ ± 10%	Electrical connections	
– CFL ..4	24 V~/- ± 20%	– CFL 12.. (1cable: control)	1m, 2 x 0.75 mm <sup>2</sup>
Frequency	50...60 Hz	– CFL 12../C (2 cables: control & auxiliary control)	1m, 3 x 0.75 mm <sup>2</sup>
Consumption:		– CFL 134/104 (1cable power 6 control)	1m, 4 x 0.75 mm <sup>2</sup>
– CFL 128/124	7 VA (5 W)	Ambient temperature:	
– CFL 134/104	5 VA (2.5 W)	– operation	– 30...+50 °C
Torque	4 Nm	– transport & storage	– 40...+80 °C
Run time / Emergency	see "Models"	Humidity	conforms to EN 60335-1
Direction of rotation	according to installation	Protection	IP 54
Rotation angle	max.95°(adjustable)	Weight:	about 1.5 Kg

### 5. INSTALLATION

Before attaching the actuator to the damper, carry out the following preliminary checks in order to avoid any difficulties at the moment of installation.

Check:

- that there is sufficient space available for installing the actuator; plenty of room is essential
- the dimensions of the dampers (max. 0.8 m<sup>2</sup>) and their balance on the shaft.
- that the actuator has all the parts necessary for its correct installation.

The actuator must be installed directly on the damper shaft (for measurements see section 8).

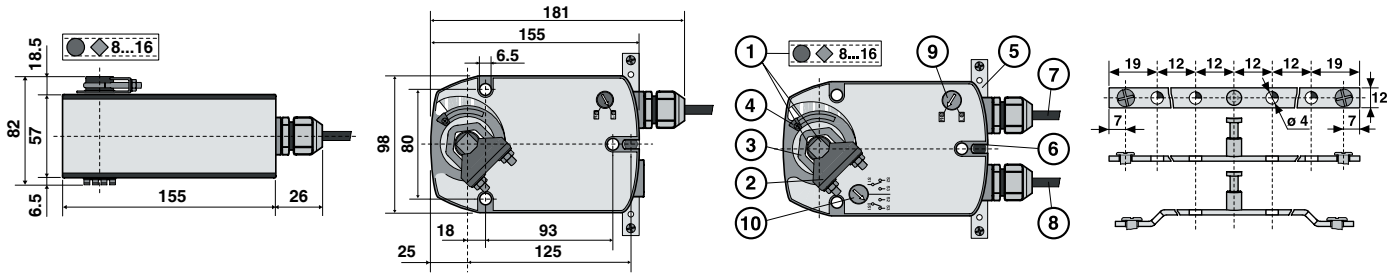
Position the damper at about half run, insert the actuator on the shaft and, using the anti-torsion adjustable bracket supplied, secure it; secure also the shaft by means of the assembled motor block.

Make the electrical connections observing the safety regulations in force.

**N.B. To lengthen the cables supplied do NOT – repeat NOT - use telephone or similar cables.**

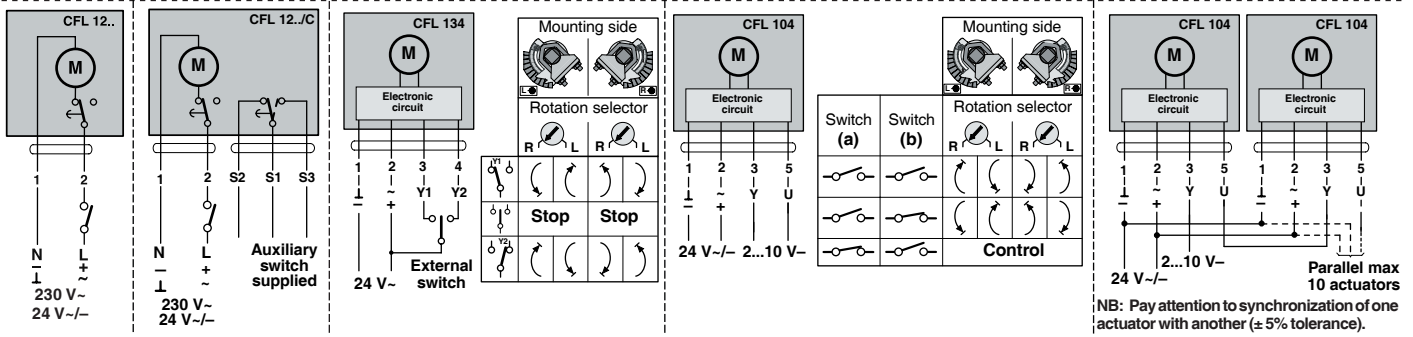
**It is possible to connect several actuators in parallel, but attention must be paid to their technical features.**

**6. OVERALL DIMENSIONS**

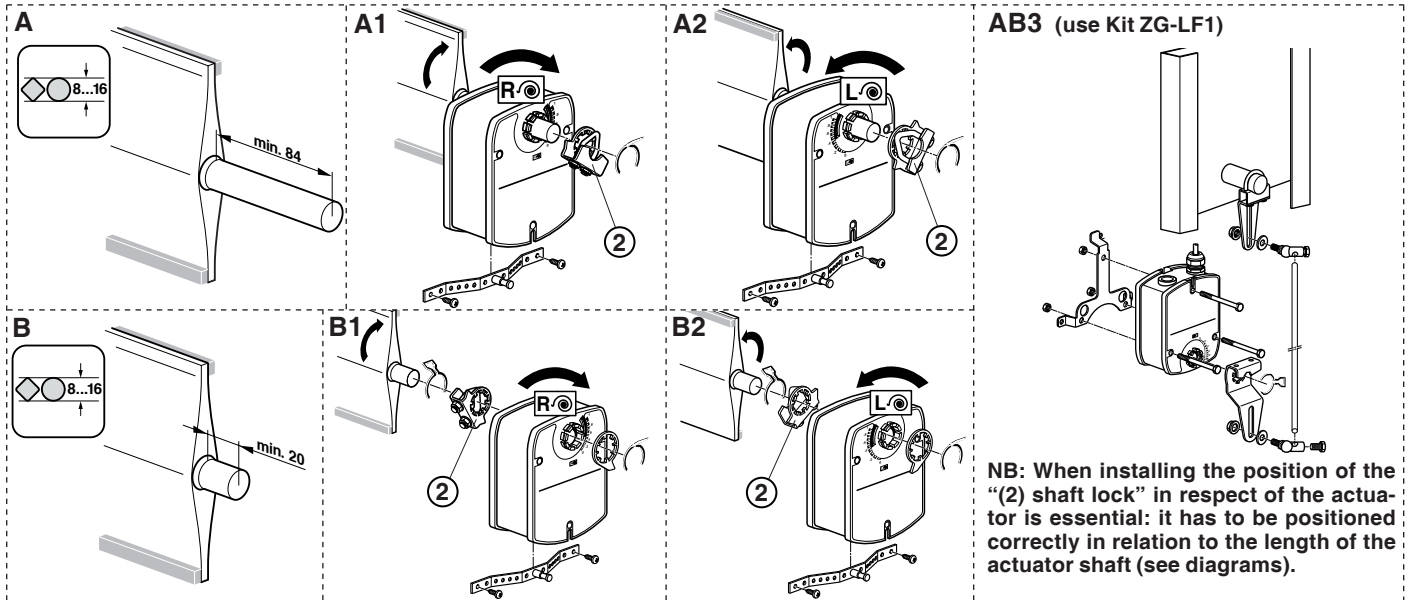


- 1 – Damper shaft
- 2 – Shaft clamp
- 3 – Shaft securing clamp
- 4 – End-of-run stop
- 5 – Anti-torsion bracket
- 6 – Housing blocking shaft
- 7 – Electric connecting cable
- 8 – Auxiliary switch connecting cable
- 9 – Direction of rotation switch (only CFL 134)
- 10 – Control auxiliary switch (only CFL 12../C)

**7. WIRING DIAGRAMS**



**8. INSTALLATION SEQUENCE**



**Ammdments to data sheet**

Date	Revision No.	Page	Section	Amendment description
07.11.05 MC	-	-	General	Layout Data Sheet.
07.04.06 MC	-	1-2	General - 7. Wiring diagrams	Arrangement data & page layout. Added: diagrams & descriptive tables.
16.12.08 MC	<b>01</b>	1	3. Accessories	Added: specific accessories for installing actuator, (KH-LF, ZG-LF1).
		2	8. Installation sequence	Replaced all the drawings and table at foot of page



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