

# ACTUATORS FOR DAMPERS (max. 1 m<sup>2</sup> - 5 Nm)

## CSL 13.. – CSL 104

- **Power supply:**
  - CSL ..8 (230 V~) - CSL ..4 (24 V~/~)
- **Electric control:**
  - SPST or SPDT(On-Off/modulating)
  - progressivo 2...10 V– (CSL 104)
- **Rotation:**
  - max. angle 95°
  - time - 150 s.
- **Installation:**
  - directly on damper shaft



CSL 1...



CSL 13../C



### 1. APPLICATION

CSL... actuators are suitable for the operation, with linear rotary movement, of dampers in ventilating and air conditioning zones.  
The available torque (5 Nm) permits operating dampers up to 1 m<sup>2</sup> on condition that these have a very well-balanced movement.

### 2. MODELS

Code	Power supply & consumption	Max. rotation angle	Rotation time	Applied torque	Control	Auxiliary switching supplied
<b>CSL 138</b>	230 V~ ± 10% (4 VA)	95°	150 s	5 Nm	On-Off SPST/SPDT	—
<b>CSL 138/C</b>	230 V~ ± 10% (4 VA)	95°	150 s	5 Nm	On-Off SPST/SPDT	1 SPDT
<b>CSL 134</b>	24 V~/~ ± 20% (2 VA)	95°	150 s	5 Nm	On-Off SPST/SPDT	—
<b>CSL 134/C</b>	24 V~/~ ± 20% (2 VA)	95°	150 s	5 Nm	On-Off SPST/SPDT	1 SPDT
<b>CSL 104</b>	24 V~/~ ± 20% (2 VA)	95°	150 s	5 Nm	2...10 V–	—

### 3. ACCESSORIES (optional)

Code	Description
<b>FCS 123</b> <b>FCS 223</b> <b>PCS 104</b>	1 SPDT auxiliary switch, with <b>0.5 A</b> current; 1m, 3 x 0.75 mm <sup>2</sup> cable included.; 2 auxiliary SPDT switches, with <b>0.5 A</b> current; 1m, 6 x 0.75 mm <sup>2</sup> Built-in manual positioner 0...100% (only for CSL 104 actuators).

### 4. TECHNICAL DATA

Power supply:		Type of control	see "Models"
– CSL ..8	230 V~ ± 10%	Electrical connections: (pre-set)	
– CSL ..4	24 V~/~ ± 20%	– CSL 13.. (1 cable: control)	1m, 3 x 0.75 mm <sup>2</sup>
Frequency	50...60 Hz	– CSL 13../C (2 cables: control & auxiliary switches)	1m, 3 x 0.75 mm <sup>2</sup>
Consumption:		– CSL 104 (1 cable: power & control)	1m, 4 x 0.75 mm <sup>2</sup>
– CSL ..8	4 VA (1.5 W)	Room temperature:	
– CSL ..4	2 VA (1 W)	– operation	– 30...+50 °C
Torque	5 Nm	– transport & storage	– 40...+80 °C
Run Time	see "Models"	Room humidity	95% (EN 60730-1)
Direction of rotation	reversible	Protection	IP 54
Rotation angle	max.95°(adjustable)	Weight:	about 500g

### 5. INSTALLATION

Before attaching the actuator to the damper, make some preliminary checks in order to avoid any difficulties at the moment of installation.

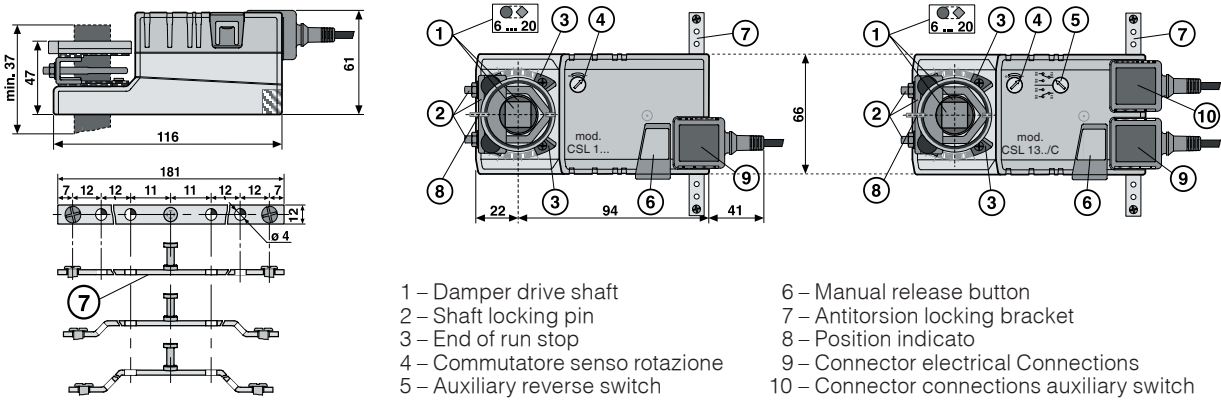
Check:

- that there is sufficient space available for installing the actuator between the damper shaft and any walls, channels or pipework in the immediate vicinity.
- the dimensions of the damper, max. 1 m<sup>2</sup>; and that it is well- balanced on the shaft.
- that the actuator has all its parts necessary for its correct installation.

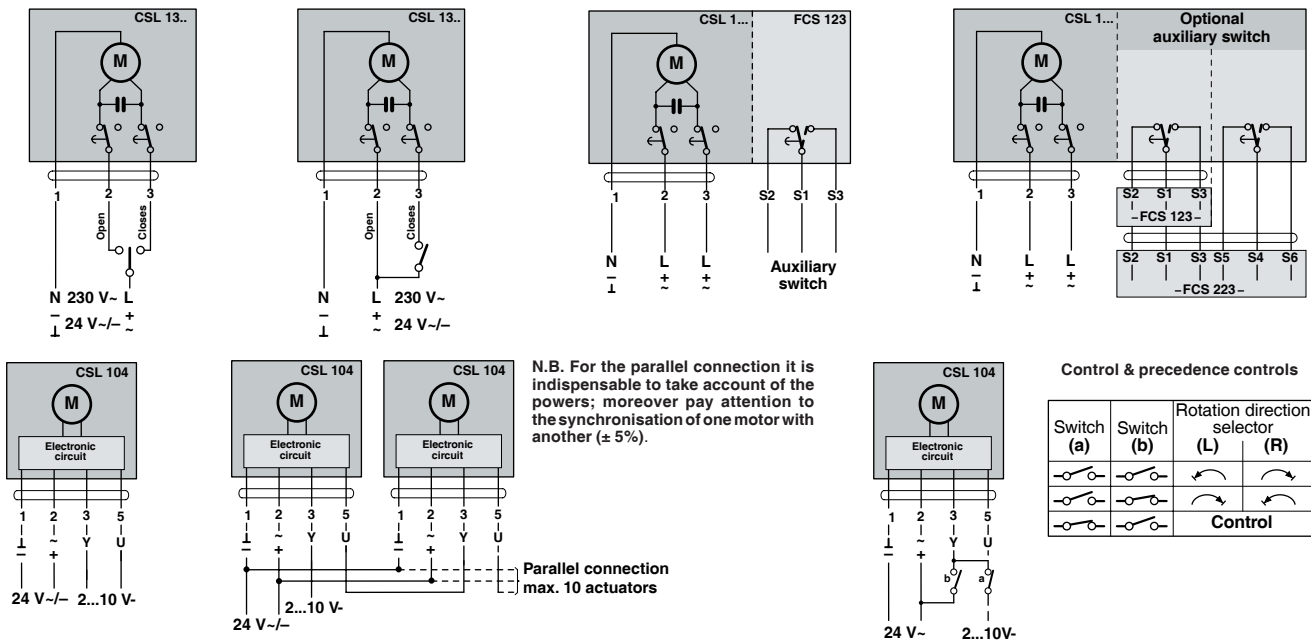
The actuator must be installed directly on the damper shaft (Ø 6...20 mm); with a minimum projection of 37 mm. Position the damper at about half run, insert the actuator on the shaft and, using the anti-torsion bracket supplied, secure it; secure also the shaft by means of the assembled actuator unit.

Make the electrical connections using the cable already attached and observing the safety regulations in force.  
 NB: If necessary, it is possible to connect several actuators in parallel, taking into account their technical features (these must be the same).  
 To lengthen the cables supplied do NOT use telephone or similar cables..

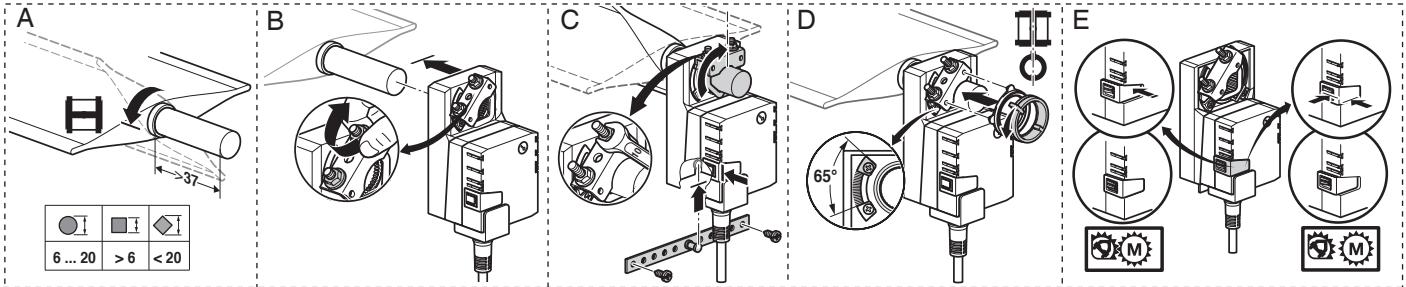
**6. OVERALL DIMENSIONS – DESCRIPTION**



**7. WIRING DIAGRAMS**



**8. INSTALLATION SEQUENCE**



**Amendments to data sheet**

Date	Revision No.	Page	Section	Amendment description
12.10.05 MC	-	Tutte	General	Composition Data Sheet
22.03.06 MC	-	1-2	General	Arrangement data & page layout.
		2	7. Wiring diagrams	Added: diagram parallel connection & precedence controls with descriptive table.
24.06.08 MC	01	1	3. Accessories	Eliminated accessories: KH8, KH10 & KH-AM (not used with this type of actuator).
12.01.09 MC	02	2	8. Installation sequence	All designs replaced.



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