

# ACTUATORS FOR DAMPERS (max. 2 m<sup>2</sup>- 10 Nm)

## CSN 23.. – CSN 204 Eng.

- **Power supply:**
  - CSN ..8 (230 V~) - CSN ..4 (24 V~/-)
- **Electric control:**
  - SPST or SPDT (On-Off/modulating)
  - progressive 2...10 V (CSN 204)
- **Rotation:**
  - max. angle 95°
  - time - 150 seconds
- **Installation:**
  - directly on damper shaft



### 1. APPLICATION

CSN... actuators are suitable for the operation, with linear rotary movement, of dampers in ventilating and air conditioning zones.  
The available torque (10 Nm) permits operating dampers off up to 2 m<sup>2</sup> on condition that these have a very well-balanced movement..

### 2. MODELS

Code	Power supplied & consumption	Max. rotation angle	Rotation time	Applied torque	Control	Auxiliary switch supplied
<b>CSN 238</b>	230 V~ ±10% (6 VA)	95°	150 s	10 Nm	On-Off 2/3 punti	—
<b>CSN 238/C</b>	230 V~ ±10% (6 VA)	95°	150 s	10 Nm	On-Off 2/3 punti	1 SPDT
<b>CSN 234</b>	24 V~/– ± 20% (4VA)	95°	150 s	10 Nm	On-Off 2/3 punti	—
<b>CSN 234/C</b>	24 V~/– ± 20% (4VA)	95°	150 s	10 Nm	On-Off 2/3 punti	1 SPDT
<b>CSN 204</b>	24 V~/– ± 20% (4VA)	95°	150 s	10 Nm	2...10 V–	—

### 3. ACCESSORIES (optional)

Code	Description
<b>FCS 123</b>	1 SPDT auxiliary switch, with <b>(0.5 A)</b> current; 1m of 3 x 0.75 mm <sup>2</sup> cable included.
<b>FCS 223</b>	2 auxiliary SPDT switches, with : <b>(0.5 A)</b> current; 1m of 6 x 0.75 mm <sup>2</sup> cable included
<b>PCS 104</b>	Built-in 0...100% manual positioner ( <b>only for CSN 204 actuators</b> ).
<b>KH 8</b>	Universal crank arm for damper drive shafts; (∅ 10 ÷ 18 mm.- □ 10 ÷ 14 mm.).
<b>AH 25</b>	Release lever for actuators.
<b>KG 10</b>	Connection ball joint (for shafts with ∅ 10 mm. max.).
<b>ZG-NMA</b>	Kit for installing actuators on the flat.

### 4. TECHNICAL DATA

Power supply:		Type of control	see "Models"
– CSN ..8	230 V~ ± 10%	Electrical connections (pre-set)	
– CSN ..4	24 V~/– ± 20%	– CSN 23.. (1 cable control)	1m, 3 x 0.75 mm <sup>2</sup>
Frequency	50...60 Hz	– CSN 23../C (2 cables: control & auxiliary switch)	1m, 3 x 0.75 mm <sup>2</sup>
Consumption:		– CSN 204 (1 cable: power & control)	1m, 4 x 0.75 mm <sup>2</sup>
– CSN ..8	6 VA (2.5 W)	Room temperature:	
– CSN ..4	4 VA (1.5W)	– operation	– 30...+50 °C
Torque	10 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 800 g

### 5. INSTALLATION

Before carrying out the attachment of the actuator to the damper, make a few preliminary checks in order to avoid any difficulties at the moment of installing..

Check :

- that there is sufficient space available for installing the actuator between the damper shaft and any walls, channels or pipework which may be present in the immediate vicinity.
- the dimensions of the dampers (max. 2 m<sup>2</sup>) and their balance on the shaft..
- that the motor has all the parts necessary for its correct installation.

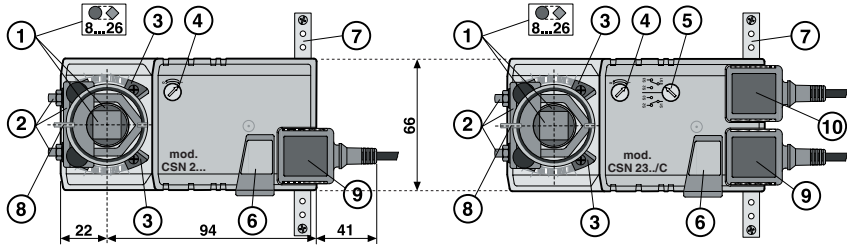
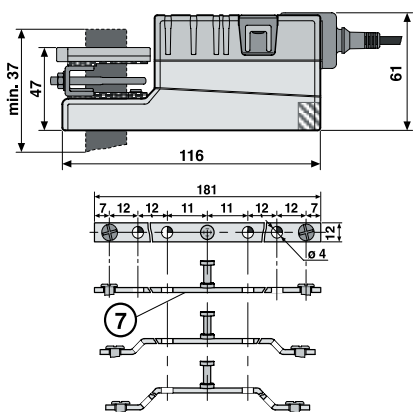
The actuator must be mounted directly on the damper shaft; (∅ 8...26 mm) with a minimum projection of 40 mm.

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 using the cable already attached, observing the safety regulations in force.

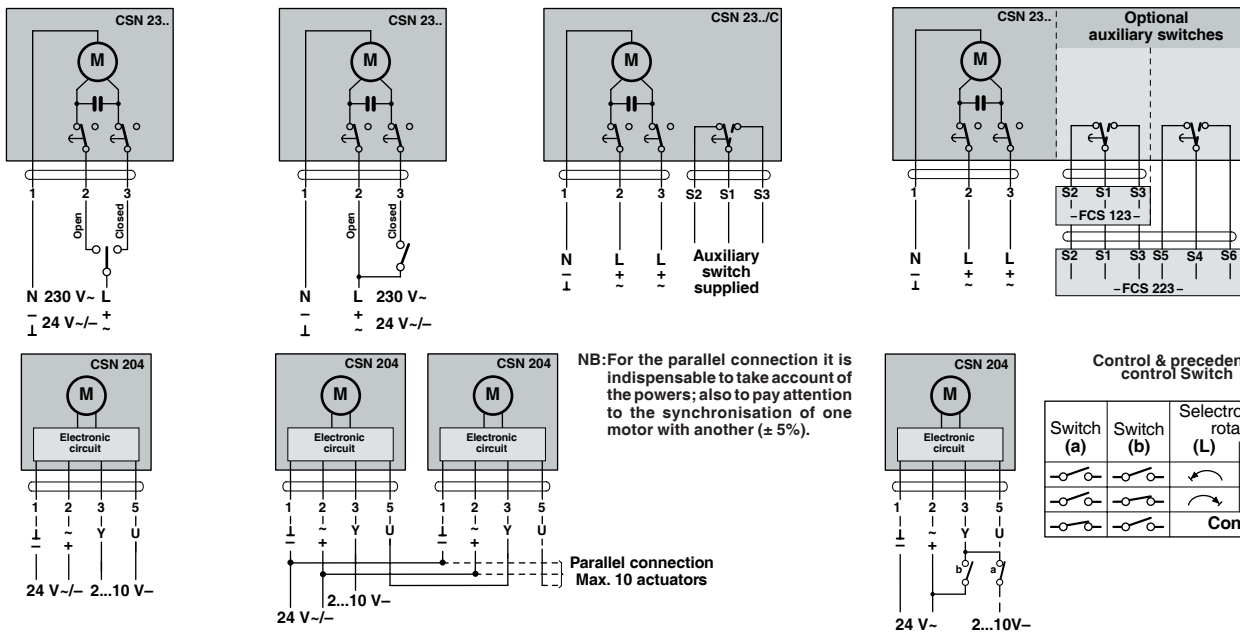
**N.B. If necessary, it is possible to connect several actuators in parallel, taking into account their technical features (these must be the same). To extend the cables supplied do NOT use telephone or similar cables.**

**6. OVERALL DIMENSIONS – DESCRIPTION**

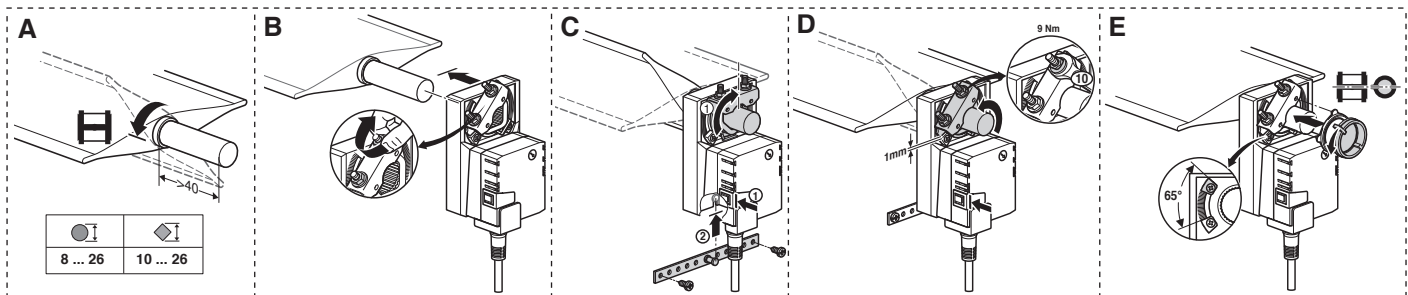


- 1 – Damper drive shaft
- 2 – Shaft locking pin
- 3 – End of run stop
- 4 – Rotation direction switch
- 5 – Auxiliary reverse switch
- 6 – Manual release button
- 7 – Anti-torsion locking bracket
- 8 – Position indicator
- 9 – Connector electrical connections
- 10 – Connector connections auxiliary switch

**7. WIRING DIAGRAMS**



**8. INSTALLATION SEQUENCE**



**Amendments to data sheet**

Data	Revision No.	Page	Section	Amendment description
19.10.05 MC	-	-	General	Composition Data Sheet Arrangement data & page layout. Added: diagram parallel connections & precedence controls with descriptive table. Added: specific accessories for motor type (AH-25, ZG-NMA). All diagrams replaced (since unclear).
23.03.06 MC	-	1-2	General	
27.11.08 MC	<b>01</b>	2	7. Wiring diagram	
		1	3. Accessories	
		2	8. Installation sequence	



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