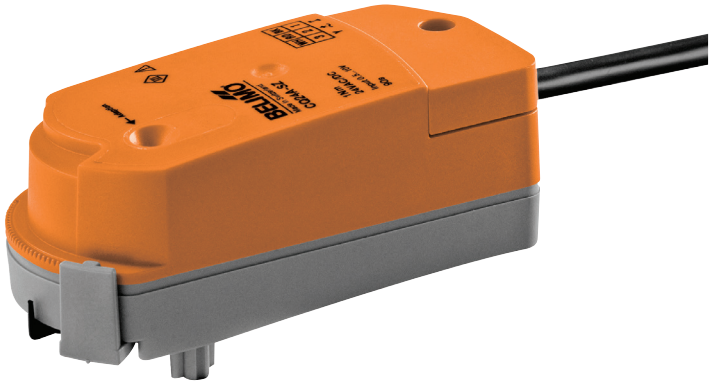
Technical data sheet CQ24A-SR

Rotary actuator for zone valves
- **Torque motor 1 Nm**
- **Nominal voltage AC/DC 24 V**
- **Control modulating 2...10 V**
- **Position feedback 2...10 V**
- **Snap-assembly of the actuator**
- **Flow setting variable**



Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 21.6...28.8 V
	Power consumption in operation	0.4 W
	Power consumption in rest position	0.3 W
	Power consumption for wire sizing	0.9 VA
	Connection supply / control	Cable 1 m, 4 x 0.34 mm²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	1 Nm
	Operating range Y	2...10 V
	Input Impedance	100 kΩ
	Position feedback U	2...10 V
	Manual override	with actuator (clicked out)
	Running time motor	75 s / 90°
	Sound power level, motor	35 dB(A)
	Position indication	Mechanical
	Flow setting	see product features
Safety	Protection class IEC/EN	III Safety Extra-Low Voltage (SELV)
	Degree of protection IEC/EN	IP40
	EMC	CE according to 2014/30/EU
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1
	Rated impulse voltage supply / control	0.8 kV
	Control pollution degree	2
	Ambient temperature	5...40°C
	Storage temperature	-40...80°C
	Ambient humidity	Max. 95% r.H., non-condensing
	Servicing	maintenance-free
Weight	Weight	0.21 kg

Safety notes

- This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Outdoor application: only possible in case that no (sea) water, snow, ice, insolation or aggressive gases interfere directly with the actuator and that is ensured that the ambient conditions remain at any time within the thresholds according to the data sheet.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- Cables must not be removed from the device.
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

Mode of operation
The actuator is connected with a standard modulating signal of 0.5...10 V and drives to the position defined by the positioning signal. Measuring voltage U serves for the electrical display of the valve position 0.5...100% and as slave control signal for other actuators.

Simple direct mounting
Tool-free snap assembly.
The actuator can be plugged on the valve by hand (Caution! Just vertical movements). Pins must match the holes on the flange.
The mounting orientation in relation to the valve can be selected in 180° increments. (Possible two times)

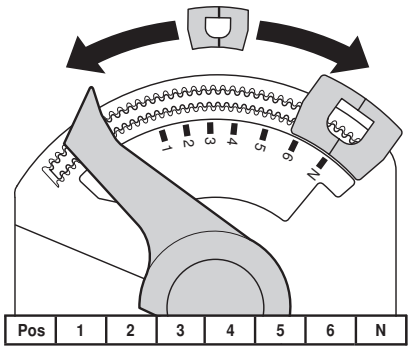
Manual override
Click out the actuator and rotate the valve stem with the help of the actuator.

Adjustable angle of rotation
The angle of rotation of the actuator can be changed by clip in 2.5° increments. This is used to set the maximum flow rate of the valve.

High functional reliability
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Flow setting
Adjustable kv-values (C2..Q-.., C4..Q-..) / V'max-values (C2..QP(T)-..) are given in the respective zone valve data sheets.

2-way valve: Remove end stop clip and place at desired position.
3-way valve: Remove end stop clip (change-over application).
6-way valve: Remove end stop clip (cooling and heating application).
After every change of the flow setting by means of end stop clip, an adaptation must be triggered on the modulating actuators.



Accessories

	Description	Type
Mechanical accessories	Spindle extension CQ for cooling applications only	ZCQ-E
	Housing cover CQ, Colour: RAL-white	ZCQ-W

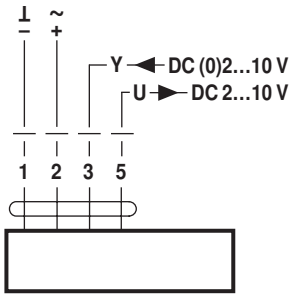
Electrical installation

Notes

- Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.

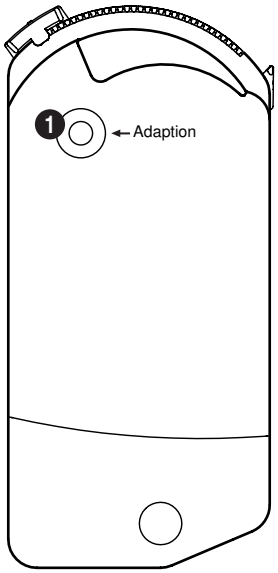
Wiring diagrams

AC/DC 24 V, modulating



Cable colours:
1 = black
2 = red
3 = white
5 = orange

Operating controls and indicators



1 Push-button

Press button: Triggers angle of rotation adaptation, followed by standard mode

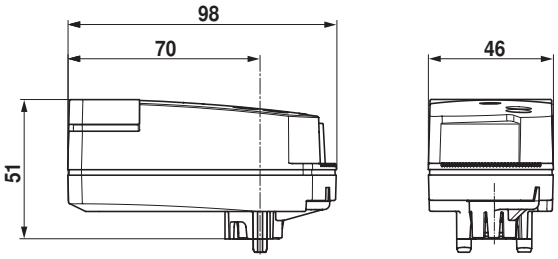
Installation notes

Servicing

Ball valves and rotary actuators are maintenance-free.
Before any service work on the final controlling device is carried out, it is essential to isolate the rotary actuator from the power supply (by unplugging the electrical cable if necessary). Any pumps in the part of the piping system concerned must also be switched off and the appropriate slide valves closed (allow all components to cool down first if necessary and always reduce the system pressure to ambient pressure level).
The system must not be returned to service until the ball valve and the rotary actuator have been correctly reassembled in accordance with the instructions and the pipeline has been refilled by professionally trained personnel.

Dimensions [mm]

Dimensional drawings



Further documentation

- The complete product range for water applications
- Data sheet for zone valves
- Installation instruction for zone valves and actuators
- General notes for project planning