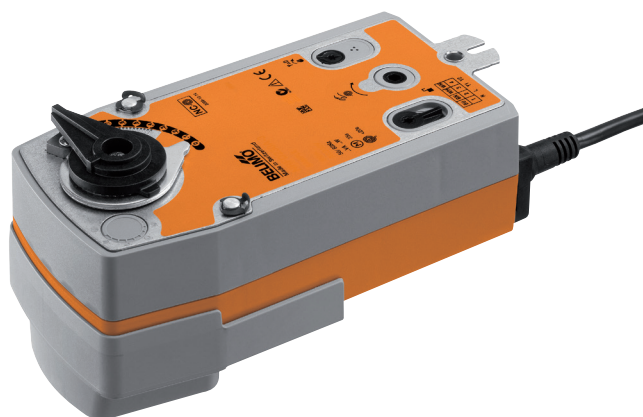


Modulating rotary actuator with fail-safe for ball valves and butterfly valves

- Torque motor 20 Nm
- Nominal voltage AC/DC 24 V
- Control modulating 2...10 V
- Position feedback 2...10 V
- Deenergised open (NO)
- Deenergised open (NO)


**Technical data**

<b>Electrical data</b>	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	5.5 W
	Power consumption in rest position	3 W
	Power consumption for wire sizing	8.5 VA
	Connection supply / control	Cable 1 m, 4 x 0.75 mm <sup>2</sup>
	Parallel operation	Yes (note the performance data)
	<b>Functional data</b>	Torque motor
Torque fail-safe		20 Nm
Operating range Y		2...10 V
Input Impedance		100 kΩ
Position feedback U		2...10 V
Position feedback U note		Max. 0.5 mA
Position accuracy		±5%
Direction of motion motor		Y = 0 (0 V = A – AB = 0%)
Direction of motion fail-safe		Deenergised NO, valve open (A – AB = 100%)
Manual override		by means of hand crank and locking switch
Running time motor		90 s / 90°
Running time fail-safe		<20 s / 90°
Sound power level, motor		45 dB(A)
Position indication		Mechanical
Service life	Min. 60'000 fail-safe positions	
<b>Safety</b>	Protection class IEC/EN	III Safety Extra-Low Voltage (SELV)
	Protection class UL	UL Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Enclosure	UL Enclosure Type 2
	EMC	CE according to 2014/30/EU
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Certification UL	cULus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1:02
	Certification UL note	The UL marking on the actuator depends on the production site, the device is UL-compliant in any case
	Mode of operation	Type 1.AA
	Rated impulse voltage supply / control	0.8 kV
	Control pollution degree	3
	Ambient temperature	-30...50°C
	Storage temperature	-40...80°C
Ambient humidity	Max. 95% r.H., non-condensing	
Servicing	maintenance-free	
<b>Mechanical data</b>	Connection flange	F05
	<b>Weight</b>	<b>Weight</b>
	Weight	2.3 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

<b>Mode of operation</b>	The actuator is connected with a standard modulating signal 0...10 V. The actuator moves the valve to the operating position at the same time as tensioning the return spring. The valve is turned back to the fail-safe position by spring force when the supply voltage is interrupted.
<b>Simple direct mounting</b>	Simple direct mounting on the rotary valve or butterfly valve with mounting flange. The mounting orientation in relation to the fitting can be selected in 90° steps.
<b>Manual override</b>	By using the hand crank the valve can be operated manually and engaged with the locking switch at any position. Unlocking is carried out manually or automatically by applying the operating voltage.
<b>Adjustable angle of rotation</b>	Adjustable angle of rotation with mechanical end stops.
<b>High functional reliability</b>	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

## Electrical installation

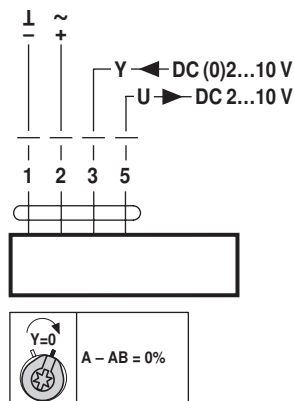


### Notes

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

## Wiring diagrams

AC/DC 24 V, modulating

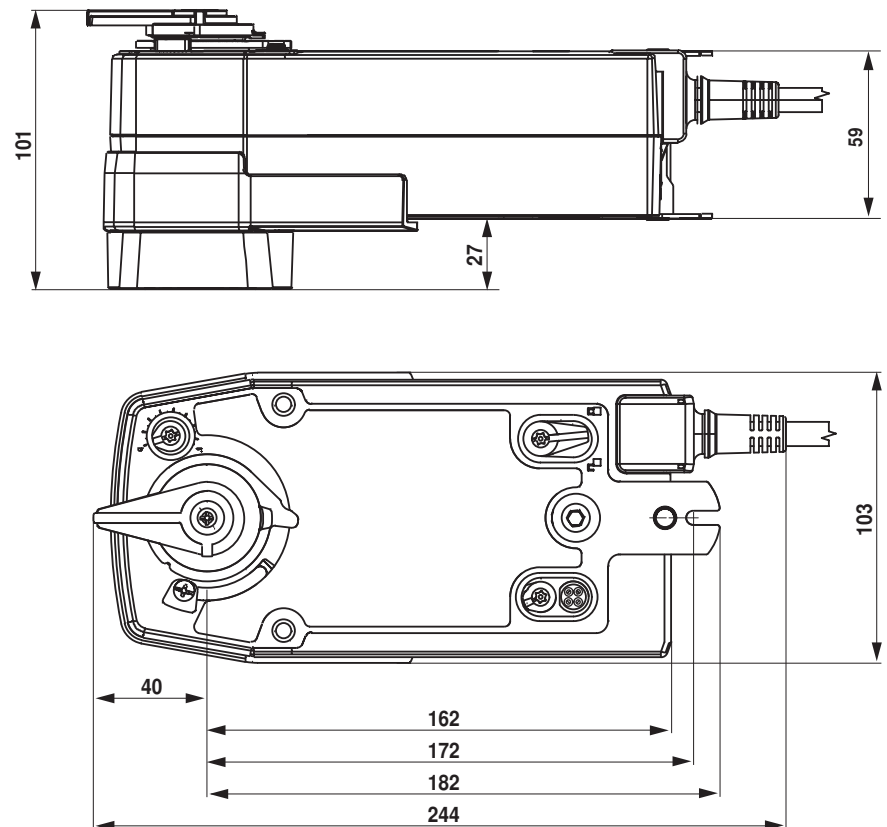


### Cable colours:

- 1 = black
- 2 = red
- 3 = white
- 5 = orange

## Dimensions [mm]

## Dimensional drawings



## Further documentation

- The complete product range for water applications
- Data sheets for rotary valves and butterfly valves
- Installation instructions for actuators and/or rotary valves and butterfly valves
- General notes for project planning