# Rotary actuator for butterfly valves

- Torque motor Max. 90 Nm
- Nominal voltage AC/DC 24 V
- Control Open/close



Technical data sheet

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Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.228.8 V / DC 19.228.8 V
	Power consumption in operation	4 W
	Power consumption in rest position	2 W
	Power consumption for wire sizing	6 VA
	Connection supply / control	Cable 1 m, 3 x 0.75 mm <sup>2</sup>
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Max. 90 Nm (not constant)
	Manual override	with push-button, can be locked
	Running time motor	150 s / 90°
	Sound power level, motor	45 dB(A)
	Position indication	Mechanical, integrated
Safety data	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Power source 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
	UL Approval	cULus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1 The UL marking on the actuator depends on the production site, the device is UL-compliant
		in any case
	Type of action	Type 1
	Rated impulse voltage supply / control	0.8 kV
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-3050°C [-22122°F]
	Storage temperature	-4080°C [-40176°F]
	Servicing	maintenance-free
Mechanical data	Connection flange	F05
Weight	Weight	3.7 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 device and that it is ensured that the ambient
  conditions remain within the thresholds according to the data sheet at any time.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The switch for changing the direction of rotation may not be adjusted.
- The angle of rotation is not permitted to be subjected to mechanical limitation. It is forbidden to alter the mechanical end stops.
- 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.
- Because of its non-constant torque, the actuator is neither suitable nor released for
  motorisation with valves from other manufacturers. No legal entitlement can be claimed, even
  after extensive testing. Belimo will not be held liable and will provide no warranty.

#### **Product features**

Simple direct mounting

Simple direct mounting on the butterfly valve. The mounting orientation in relation to the butterfly valve can be selected in 90° (angle) increments.

Manual override

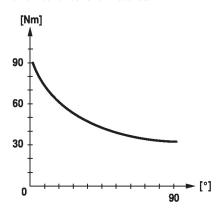
Manual override with push-button possible (the gear train is disengaged for as long as the button is pressed or remains locked).

High functional reliability

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

Torque not constant

Due to the non-linear torque characteristic the actuator can only be used for butterfly valves and not for other armatures.



# Accessories

#### **Electrical accessories**

Auxiliary switch 1 x SPDT add-onS1AAuxiliary switch 2 x SPDT add-onS2AFeedback potentiometer 140 $\Omega$ add-onP140AFeedback potentiometer 200 $\Omega$ add-onP200AFeedback potentiometer 500 $\Omega$ add-onP500A
Feedback potentiometer 140 $\Omega$ add-on P140A Feedback potentiometer 200 $\Omega$ add-on P200A
Feedback potentiometer 200 $\Omega$ add-on P200A
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Feedback potentiometer 500 $\Omega$ add-on P500A
Feedback potentiometer 1 k $\Omega$ add-on P1000A
Feedback potentiometer $2.8 \text{ k}\Omega$ add-on P2800A
Feedback potentiometer 5 k $\Omega$ add-on P5000A
Feedback potentiometer 10 $k\Omega$ add-on P10000A



## **Electrical installation**



## Supply from isolating transformer.

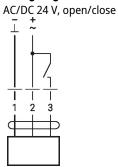
#### Wire colours:

1 = black

2 = red

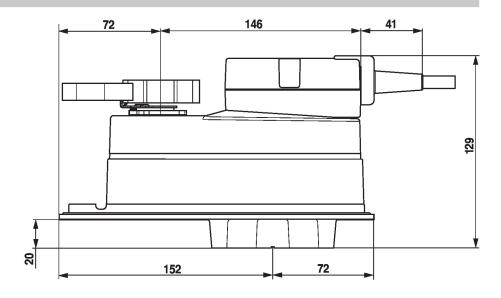
3 = white

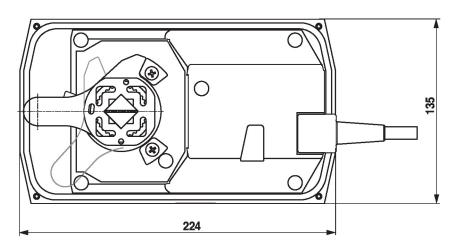
#### Wiring diagrams



	1	2	3	MM
ŀ		_~	_/_	A - AB = 0%
Γ.		_~		A - AB = 100%

## **Dimensions**







## **Further documentation**

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