

Rotary actuator with fail-safe for ball valves

- Torque motor 10 Nm
- Nominal voltage AC/DC 24 V
- Control Open/close
- Deenergised open (NO)
- with 2 integrated auxiliary switches





Technical data

Nominal voltage frequency50/60 HzNominal voltage rangeAC 19.228.8 V / DC 21.628.8 VPower consumption in operation6 WPower consumption in rest position2.5 WPower consumption for wire sizing8.5 VAAuxiliary switch2 x SPDT, 1 x 10% / 1 x 11100%Switching capacity auxiliary switch1 mA3 A (0.5 A inductive), DC 5 VAC 250 VConnection supply / controlCable 1 m, 2 x 0.75 mm²Connection auxiliary switchCable 1 m, 6 x 0.75 mm²Parallel operationYes (note the performance data)Functional dataTorque motor10 Nm	Electrical data	Nominal voltage	AC/DC 24 V		
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Auxiliary switch2 x SPDT, 1 x 10% / 1 x 11100%Switching capacity auxiliary switch1 mA3 A (0.5 A inductive), DC 5 VAC 250 VConnection supply / controlCable 1 m, 2 x 0.75 mm²Connection auxiliary switchCable 1 m, 6 x 0.75 mm²Parallel operationYes (note the performance data)Functional dataTorque motor10 Nm		Power consumption in rest position	2.5 W		
Switching capacity auxiliary switch 1 mA3 A (0.5 A inductive), DC 5 VAC 250 V Connection supply / control Cable 1 m, 2 x 0.75 mm² Connection auxiliary switch Cable 1 m, 6 x 0.75 mm² Parallel operation Yes (note the performance data) Functional data Torque motor 10 Nm		Power consumption for wire sizing	8.5 VA		
Connection supply / controlCable 1 m, 2 x 0.75 mm²Connection auxiliary switchCable 1 m, 6 x 0.75 mm²Parallel operationYes (note the performance data)Functional dataTorque motor10 Nm		Auxiliary switch	2 x SPDT, 1 x 10% / 1 x 11100%		
Connection auxiliary switch Cable 1 m, 6 x 0.75 mm ² Parallel operation Yes (note the performance data) Functional data Torque motor 10 Nm		Switching capacity auxiliary switch	1 mA3 A (0.5 A inductive), DC 5 VAC 250 V		
Parallel operation Yes (note the performance data) Functional data Torque motor 10 Nm		Connection supply / control	Cable 1 m, 2 x 0.75 mm ²		
Functional data Torque motor 10 Nm		Connection auxiliary switch	Cable 1 m, 6 x 0.75 mm ²		
		Parallel operation	Yes (note the performance data)		
	Functional data	· ·	10 Nm		
		Torque fail-safe	10 Nm		
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 75 s / 90°					
Running time fail-safe <20 s @ -2050°C / <60 s @ -30°C					
Sound power level, motor 45 dB(A)					
Position indication Mechanical					
Service life Min. 60'000 fail-safe positions		Service life	Min. 60'000 fail-safe positions		
Safety data Protection class IEC/EN III, Safety Extra-Low Voltage (SELV)	Safety data	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)		
Power source UL Class 2 Supply		Power source UL	Class 2 Supply		
Protection class auxiliary switch IEC/EN II, reinforced insulation		Protection class auxiliary switch IEC/EN	II, reinforced insulation		
Degree of protection IEC/EN IP54		Degree of protection IEC/EN	IP54		
Degree of protection NEMA/UL NEMA 2		Degree of protection NEMA/UL	NEMA 2		
Enclosure UL Enclosure Type 2		Enclosure	UL Enclosure Type 2		
EMC CE according to 2014/30/EU		EMC	CE according to 2014/30/EU		
Low voltage directive CE according to 2014/35/EU			CE according to 2014/35/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		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			the production site, the device is UL-compliant		
Type of action Type 1.AA.B		Type of action	Type 1.AA.B		
Rated impulse voltage supply / control 0.8 kV		Rated impulse voltage supply / control	0.8 kV		
Rated impulse voltage auxiliary switch 2.5 kV		Rated impulse voltage auxiliary switch	2.5 kV		
Pollution degree 3		Pollution degree	3		
Ambient humidity Max. 95% RH, non-condensing		Ambient humidity	Max. 95% RH, non-condensing		
Ambient temperature -3050°C [-22122°F]		Ambient temperature	-3050°C [-22122°F]		



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Safety data	data Storage temperature -4080°C [-40176°F]	
	Servicing	maintenance-free
Weight	Weight	2.1 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 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.
- The two switches integrated in the actuator are to be operated either on power supply voltage or at safety extra-low voltage. The combination power supply voltage/safety extra-low voltage is not permitted.

Product features

Mode of operation	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.
Simple direct mounting	Simple direct mounting on the ball valve with only one screw. The mounting orientation in relation to the ball valve can be selected in 90° steps.
Manual override	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.
Adjustable angle of rotation	Adjustable angle of rotation with mechanical end stops.
High functional reliability	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
Flexible signalling	The actuator has one auxiliary switch with a fixed setting and one adjustable auxiliary switch. They permit a 10% or 11100% angle of rotation to be signaled.

Parallel connection of other actuators possible. Observe the performance data.

Electrical installation



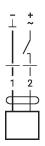
Supply from isolating transformer.

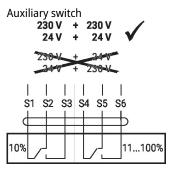
Wire colours:

- 1 = black
- 2 = red S1 = violet
- S2 = red
- S3 = white
- S4 = orange
- S5 = pink
- S6 = grey

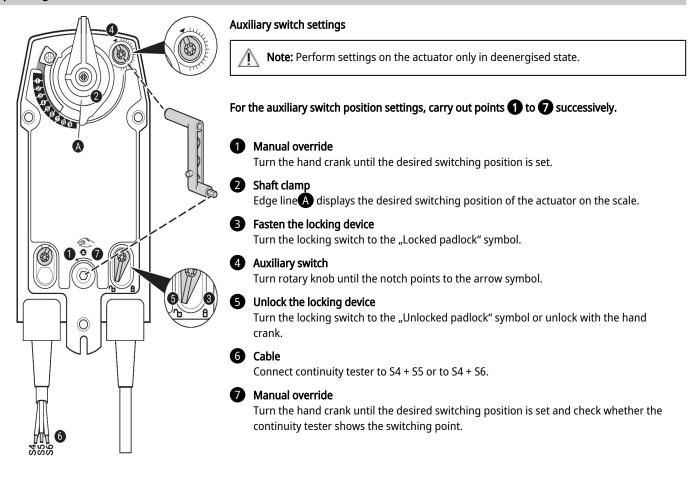


Wiring diagrams AC/DC 24 V, open/close

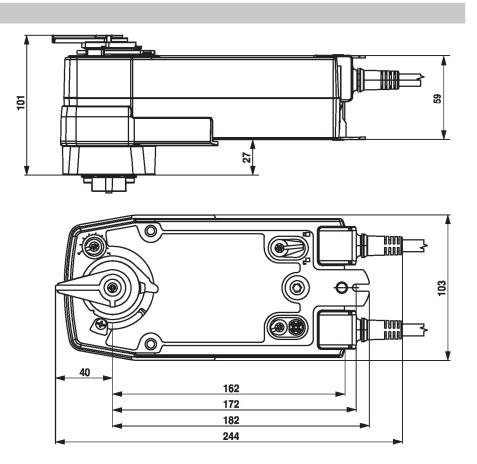




Operating controls and indicators







Further documentation

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