

Rotary actuator for rotary valves and butterfly valves

- Torque motor 20 Nm
- Nominal voltage AC/DC 24 V
- Control modulating 2...10 V
- Position feedback 2...10 V
- Running time motor 35 s



Nominal voltage frequency Nominal voltage frequency Nominal voltage frequency So/60 Hz Nominal voltage frequency Power consumption in operation Power consumption in rest position 1.5 W Power consumption in rest position 1.5 W Power consumption for wire sizing 6 VA Connection supply / control Cable 1 m, 4 x 0.75 mm² Parallel operation Yes (note the performance data) Functional data Torque motor 20 Nm Operating range Y 210 V Input Impedance 100 kΩ Position feedback U note Max. 1 mA Position feedback U note Max. 1 mA Position accuracy ±5% Manual override With push-button, can be locked Running time motor 35 s / 90° Sound power level, motor So dB(A) Protection class IEC/EN III Safety Extra-Low Voltage (SELV) Protection class IEC/EN III Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP54 Degree of protection NEMA/UL NEMA 2 Enclosure UL Enclosure UL Enclosure Type 2 EMC Ceffication UL note The UL marking on the actuator depends on the production site, the device is UL-compliant in any case Mode of operation Parallel Mode of Operation Type 1 Rated impulse voltage supply / control 0.8 kV Control pollution degree 3 Ambient temperature -3050° C Storage temperature -4080° C Ambient humidity Max. 95% r.H., non-condensing maintenance-free			
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Nominal voltage range AC 19.228.8 V / DC 19.228.8 V	Electrical data	Nominal voltage	AC/DC 24 V
Nominal voltage range AC 19.228.8 V / DC 19.228.8 V		Nominal voltage frequency	50/60 Hz
Power consumption in operation Power consumption in rest position 1.5 W			AC 19.228.8 V / DC 19.228.8 V
Power consumption in rest position 1.5 W		Power consumption in operation	
Power consumption for wire sizing G VA Connection supply / control Cable 1 m, 4 x 0.75 mm² Parallel operation Yes (note the performance data) Functional data Torque motor 20 Nm Operating range Y 210 V Input Impedance 100 kQ Position feedback U 210 V Position feedback U 100 kQ Position feedback U 100 kQ Position feedback U 100 kQ Position accuracy 15% Manual override with push-button, can be locked Running time motor 35 s / 90° Sound power level, motor 55 dB(A) Position indication Mechanically, integrated, two-section Safety 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 IEC/EN IP54 Degree of protection IEC/EN IP54 Enclosure UL Enclosure Type 2 Enclosure UL Enclosure Type 2 Enclosure UL Enclosure Type 1 EIC/EN 60730-1:02 Certification IEC/EN EIC/EN 60730-1 and IEC/EN 60730-2-14 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 Rated impulse voltage supply / control 0.8 kV Control pollution degree 3 Ambient temperature -3050°C Storage temperature -4080°C Ambient humidity Max.95% LH., non-condensing maintenance-free		- · · · · · · · · · · · · · · · · · · ·	1.5 W
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Input Impedance 100 kΩ Position feedback U 210 V Position feedback U note Max. 1 mA Position accuracy ±5% Manual override with push-button, can be locked Running time motor 35 s / 90° Sound power level, motor 55 dB(A) Position indication Mechanically, integrated, two-section Safety 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 CEaccording 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 Rated impulse voltage supply / control 0.8 kV Control pollution degree 3 Ambient temperature -3050°C Storage temperature -4080°C Ambient humidity Max. 95% r.H., non-condensing maintenance-free Mechanical data Connection flange F05		Operating range Y	210 V
Position feedback U 210 V Position feedback U note Max. 1 mA Position accuracy ±5% Manual override with push-button, can be locked Running time motor 35 s / 90 ° Sound power level, motor 55 dB(A) Position indication Mechanically, integrated, two-section Safety 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 UL60730-1-02 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 Rated impulse voltage supply / control 0.8 kV Control pollution degree 3 Ambient temperature -3050 °C Storage temperature -4080 °C Ambient humidity Max. 95% r.H., non-condensing Servicing maintenance-free			100 kΩ
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Position indication Mechanically, integrated, two-section Safety 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 UL.60730-1A, UL.60730-2-14 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 Rated impulse voltage supply / control 0.8 kV Control pollution degree 3 Ambient temperature -3050 °C Storage temperature -4080 °C Ambient humidity Max. 95% r.H., non-condensing Servicing maintenance-free		Sound power level, motor	55 dB(A)
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EMC Certification IEC/EN IEC/EN 60730-1 and IEC/EN 60730-2-14 Certification UL Cultus 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 Rated impulse voltage supply / control Control pollution degree 3 Ambient temperature -3050 °C Storage temperature -4080 °C Ambient humidity Max. 95% r.H., non-condensing Servicing maintenance-free Mechanical data Connection flange F05		Degree of protection NEMA/UL	NEMA 2
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Rated impulse voltage supply / control 0.8 kV Control pollution degree 3 Ambient temperature -3050°C Storage temperature -4080°C Ambient humidity Max. 95% r.H., non-condensing maintenance-free Mechanical data Connection flange F05		Certification UL note	
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Control pollution degree 3 Ambient temperature -3050°C Storage temperature -4080°C Ambient humidity Max. 95% r.H., non-condensing Servicing maintenance-free Mechanical data Connection flange F05		Rated impulse voltage supply / control	0.8 kV
Storage temperature -4080 °C Ambient humidity Max. 95% r.H., non-condensing Servicing maintenance-free Mechanical data Connection flange F05		Control pollution degree	3
Ambient humidity Servicing Max. 95% r.H., non-condensing maintenance-free Mechanical data Connection flange F05		Ambient temperature	-3050°C
Ambient humidity Servicing Max. 95% r.H., non-condensing maintenance-free Mechanical data Connection flange F05		Storage temperature	-4080°C
Servicing maintenance-free Mechanical data Connection flange F05			Max. 95% r.H., non-condensing
	Mechanical data	Connection flange	F05
······································	Weight	Weight	1.2 kg

Rotary actuator, modulating, AC/DC 24 V, 20 Nm, Running time motor 35 s



Safety notes



- This device has been designed for use in stationary heating, ventilation and airconditioning 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 switch for changing the direction of rotation may only be operated by authorised specialists. The direction of rotation must not in particular be reversed in a frost protection circuit.
- 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...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

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.

Manual override

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

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.

Combination valve/actuator

For valves with the following mechanical specifications in accordance with ISO 5211

- Square stem head SW = 14 mm for form-fit coupling of the rotary actuator.
- Hole circle d = 50 mm

Accessories

Electrical accessories

Description	Туре
Auxiliary switch 1 x SPDT add-on	S1A
Auxiliary switch 2 x SPDT add-on	S2A
Feedback potentiometer 140 Ω add-on	P140A
Feedback potentiometer 200 Ω add-on	P200A
Feedback potentiometer 500 Ω add-on	P500A
Feedback potentiometer 1 k Ω add-on	P1000A
Feedback potentiometer 2.8 k Ω add-on	P2800A
Feedback potentiometer 5 k Ω add-on	P5000A
Feedback potentiometer 10 k Ω add-on	P10000A

Electrical installation



Notes

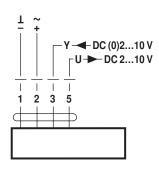
- · Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.
- Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.



Electrical installation

Wiring diagrams

AC/DC 24 V, modulating



Cable colours:

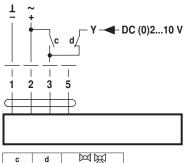
1 = black

2 = red

3 = white

5 = orange

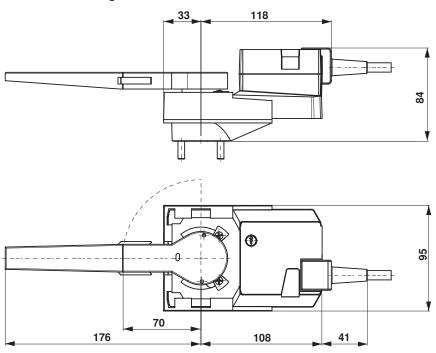
Override control (frost protection circuit)



С	d	MM
1	/_	A – AB = 100%
/-	/_	A – AB = 0%
/_	1	DC (0)210 V

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