

Retrofit rotary actuator for rotary valves and butterfly valves

- Nominal torque 20 Nm
- Nominal voltage AC/DC 24 V
- Control Open-close
- with 2 integrated auxiliary switches



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	5 W
	Power consumption in rest position	2.5 W
	Power consumption for wire sizing	7.5 VA
	Auxiliary switch	2 x SPDT, 1 x 10% / 1 x 11...90%
	Switching capacity auxiliary switch	1 mA...3 (0.5) A, AC 250 V
	Connection supply / control	Cable 1 m, 2 x 0.75 mm ²
	Connection auxiliary switch	Cable 1 m, 6 x 0.75 mm ²
	Parallel operation	Yes (note the performance data)
	Functional data	Torque motor
Torque spring return		Min. 20 Nm
Direction of rotation spring-return		selectable: Deenergised NC, valve closed (A - AB = 0%) Deenergised NO, valve open (A - AB = 100%)
Manual override		By means of hand crank and locking switch
Angle of rotation		90°
Running time motor		75 s / 90°
Running time emergency setting position		<20 s / 90°
Sound power level motor max.		45 dB(A)
Position indication		Mechanical
Service life		Min. 60,000 emergency positions
Safety		Protection class IEC/EN
	Protection class UL	UL Class 2 Supply
	Protection class auxiliary switch IEC/EN	II Protective insulated
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC
	Low voltage directive	CE according to 2006/95/EC
	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
	Mode of operation	Type 1.AA.B
	Rated impulse voltage supply / control	0.8 kV
	Rated impulse voltage auxiliary switch	2.5 kV
	Control pollution degree	3
	Ambient temperature	0...50°C
Non-operating temperature	-40...80°C	
Ambient humidity	95% r.h., non-condensing	
Maintenance	Maintenance-free	
Mechanical data	Connection flange	F03/F04/F05
Weight	Weight approx.	2.4 kg

Safety notes



- This device has been designed for use in stationary heating, ventilation and air conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- 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 is not allowed to 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 emergency position by spring force when the supply voltage is interrupted.

Application For rotary valves and butterfly valves with the following mechanical specifications:
– ISO 5211: F03, F04, F05 (hole circle diameter on the flange for mounting the fitting)
– ISO 5211: quadratic, flat head or wedge-shaped stem head geometry

ZSFV-..

Type	s [mm]
ZSFV-08	8
ZSFV-09	9
ZSFV-10	10
ZSFV-11	11
ZSFV-12	12
ZSFV-14	14

ZSFF-..

Type	s [mm]	d ₈ [mm]
ZSFF-08	8	10
ZSFF-09	9	12
ZSFF-10	10	14
ZSFF-11	11	14
ZSFF-14	14	18

ZSFK-..

Type	d ₇ [mm]
ZSFK-12	12
ZSFK-14	14

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 actuation of the valve with manual elevator crank, engagement with the locking switch at any position. Unlocking is manual or automatic by applying the operating voltage.

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

Adjustable angle of rotation Adjustable angle of rotation with mechanical end stop.

Flexible signalization The actuator has one auxiliary switch with a fixed setting and one adjustable auxiliary switch. They permit a 10% or 11...90% angle of rotation to be signaled.

Accessories

	Description	Type
Mechanical accessories	Form fit insert SRF, 8x8x55 mm	ZSFV-08
	Form fit insert SRF, 9x9x55 mm	ZSFV-09
	Form fit insert SRF, 10x10x55 mm	ZSFV-10
	Form fit insert SRF, 11x11x55 mm	ZSFV-11
	Form fit insert SRF, 12x12x55 mm	ZSFV-12
	Form fit insert SRF, 14x14x55 mm	ZSFV-14
	Form fit insert SRF, 8xØ17x55 mm	ZSFF-08
	Form fit insert SRF, 9xØ12x55 mm	ZSFF-09
	Form fit insert SRF, 10xØ17x55 mm	ZSFF-10
	Form fit insert SRF, 11xØ14x55 mm	ZSFF-11
	Form fit insert SRF, 14xØ18x55 mm	ZSFF-14

Accessories

Description	Type
Form fit insert SRF, Ø12x4x55	ZSFK-12
Form fit insert SRF, Ø14x5x55	ZSFK-14

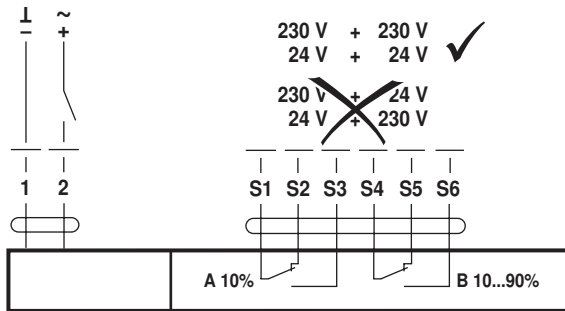
Electrical installation

Notes

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

Wiring diagrams

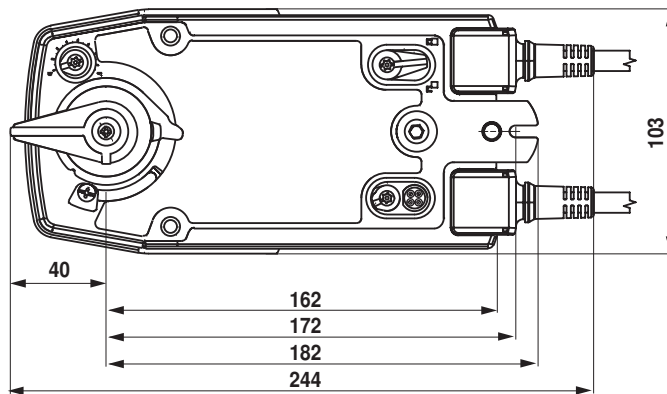
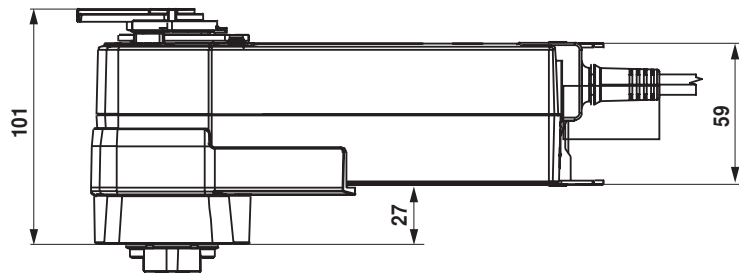
AC/DC 24 V, open-close



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

Dimensions [mm]

Dimensional drawings



F03	∅ 36	2 x M5
F04	∅ 42	2 x M5
F05	∅ 50	2 x M6

Further documentation

- General notes for project planning