ACTUATORS
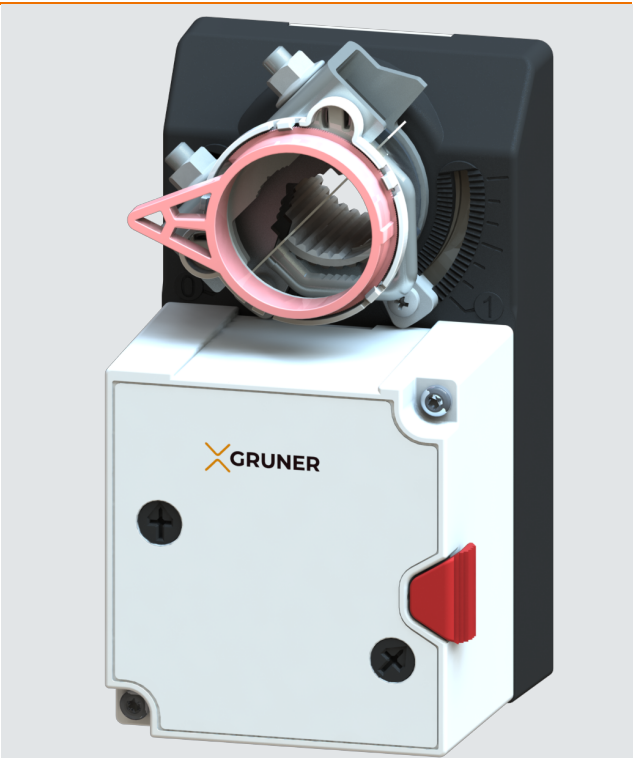

GRUNER
SWITCH TO INNOVATIONS

Technical data sheet

227-024-05-S1
Rotary actuator

Description

Rotary actuator for adjusting dampers in HVAC installations

- Running time   100 s / 90°
- Torque   5 Nm
- Nominal voltage   24 VAC/DC
- Control   2-/3-point
- Auxiliary switch   1x freely adjustable
- Damper size   up to approx. 1 m²
- Shaft coupling   clamp
                        ◊ 8-15 mm / Ø 8-20 mm

Technical data

Electrical data	Nominal voltage	24 VAC/DC, 50/60 Hz
	Nominal voltage range	19...29 VAC/DC
	Power consumption motor (motion)	2,0 W
	Power consumption standby (end position)	1,0 W
	Wire sizing	4,0 VA
	Control	2-/3-point
	Feedback signal	-
	Auxiliary switch	1x SPDT (Ag)
	Contact load	5 (2,5) A, 250 VAC
	Switching point	0...95°
	Connection motor	cable 1000 mm, 3 x 0,75 mm² (halogen free)
	Connection feedback potentiometer	-
	Connection auxiliary switch	cable 1000 mm, 3 x 0,75 mm² (halogen free)
	Connection GUAC	-
Functional data	Torque	5 Nm

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Technical data

Functional data	Damper size	up to approx. 1 m²
	Synchronized speed	±5%
	Direction of rotation	selected by switch
	Manual override	gearing latch disengaged with pushbutton, self-resetting
	Angle of rotation	0°...max. 95° can be limited with adjustable mechanical end stops
	Running time	100 s / 90°
	Sound power level	< 35 dB(A)
	Shaft coupling	clamp ◊ 8-15 mm / Ø 8-20 mm
	Position indication	mechanical with pointer
	Service life	> 100 000 cycles (0°...95°...0°)
Safety	Protection class	III (safety extra-low voltage)
	Protection class auxiliary switch	II (double insulation)
	Degree of protection	IP 54 (cable downwards)
	EMC	CE (2014/30/EU)
	LVD	CE (2014/35/EU)
	RoHS	CE (2011/65/EU - 2015/863/EU - 2017/2102/EU)
	Mode of operation	Typ 1 (EN 60730-1)
	Rated impulse voltage supply / control	0,8 kV (EN 60730-1)
	Rated impulse voltage auxiliary switch	4 kV (EN 60730-1)
	Control pollution degree	3 (EN 60730-1)
	Ambient temperature normal operation	-30°C...+50°C
	Storage temperature	-30°C...+80°C
	Ambient humidity	5...95% r.H., non condensing (EN 60730-1)
	Maintenance	maintenance free
Dimensions / Weight	Dimensions	117 x 67 x 66 mm
	Weight	510 g

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Functionality / Properties

Operating mode

2 point:
Connect power supply to wire 1+2, actuator drives to position 1. Is also wire 3 connected to the power supply, actuator drives to position 0.

3 point:
Connect power supply to wire 1+2, actuator drives to position 1. Is wire 1+3 connected to the power supply, actuator drives to position 0.

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

Direct mounting

Simple direct mounting on the damper shaft with a clamp, protection against rotating with enclosed anti-rotation lock or rather at intended attachment points.

Manual override

Manual override with self-resetting pushbutton possible (the gear is disengaged as long as the button is pressed).
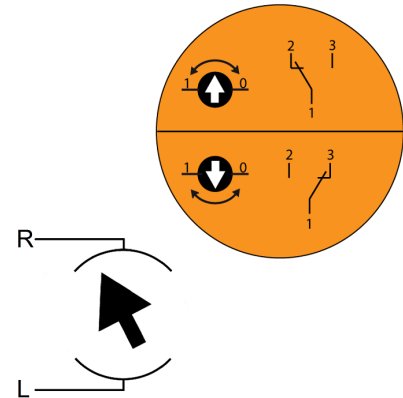
Signaling

The integrated auxiliary switch is freely adjustable in the angle of 0 - 95°. There is activated corresponding to the adjusted angle. The damper position can be checked by the mechanicel pointer.
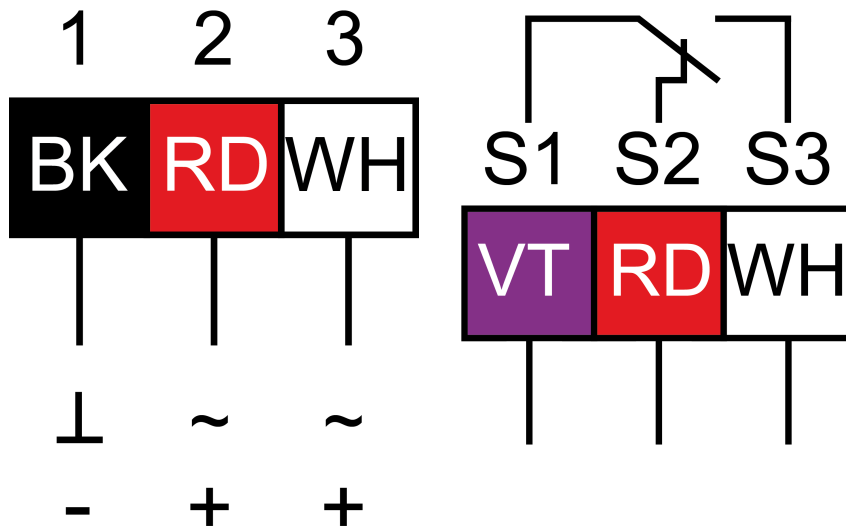
Mode switch

Mode switch with two positions at the housing:

R: rotary rotation right / clockwise
L: rotary rotation left / counter clockwise

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Connector / Security Note

1	2	3
BK	**RD**	**WH**

⊥   ~   ~

−   +   +

S1	S2	S3
VT	**RD**	**WH**

Safety remarks

- Connect via safety isolation transformer!
- The device is not allowed to be used outside the specified field of application, especially in airplanes.
- It may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
- The device may only be opened at the manufacturer´s site.
- The device is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.
- When calculating the required torque, the specifications supplied by the damper manufacturer´s (cross-section, design, installation site), and the air flow conditions must be observed.

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Technical Drawing

mm [in]

15[0,59]
1,5[0,06]
10,2[0,40]

52,9[2,08]
43,2[1,70]
33,5[1,32]
22,7[0,89]

67[2,64]

24[0,94]
117[4,60]

81,8[3,22]

66[2,60]

6[0,24]

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