GRUNER
SWITCH TO INNOVATIONS

Technical data sheet

UL-381-230-180
Spring return servomotor

Description

Spring return servomotor for adjusting dampers in HVAC installations

- Running time motor 150 s / 90°
- Running time spring 20 s / 90°
- Torque motor 180 in-lb [20 Nm]
- Torque spring 180 in-lb [20 Nm]
- Nominal voltage 230 VAC/DC
- Control 2-point
- Damper size up to approx. 32 ft² [3 m²]
- Shaft coupling clamp
  ◊ 0,35-0,63 in [9-16 mm]
  Ø 0,35-0,79 in [9-20 mm]

Technical data

Electrical data	Nominal voltage	230 VAC/DC, 50/60 Hz
	Voltage range	85...265 VAC/DC
	Power consumption motor (motion)	9,0 W
	Power consumption standby (end position)	2,5 W
	Wire sizing	14,0 VA
	Control	2-point
	Feedback signal	-
	Auxiliary switch	-
	Contact load	-
	Switching point	-
	Connection motor	cable 3,2 ft [1000 mm], 2 x AWG 18
	Connection feedback potentiometer	-
	Connection auxiliary switch	-
	Connection GUAC	-
Functional data	Torque motor	180 in-lb [20 Nm]

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Technical data

Functional data	Torque spring	180 in-lb [20 Nm]
	Damper size	up to approx. 32 ft² [3 m²]
	Synchronized speed	±5%
	Direction of rotation	selected by mounting
	Manual override	manual operation
	Angle of rotation	0°...max. 95° can be limited with adjustable mechanical end stops
	Running time motor	150 s / 90°
	Running time spring	20 s / 90°
	Sound power level motor	< 45 dB(A)
	Sound power level spring	< 65 dB(A)
	Shaft coupling	clamp ◊ 0,35-0,63 in [9-16 mm] Ø 0,35-0,79 in [9-20 mm]
	Position indication	mechanical with pointer
	Service life	> 60 000 cycles (0°...95°...0°)
Safety	Protection class	II (double insulation)
	Degree of protection	IP 54
	UL	UL 60730-1 UL 60730-2-14
	Mode of operation	Typ 1 (UL 60730-2-14)
	Rated impulse voltage supply / control	4 kV (UL 60730-1)
	Control pollution degree	3 (UL 60730-1)
	Ambient temperature normal operation	-22°F...+122°F [-30°C...+50°C]
	Storage temperature	-22°F...+176°F [-30°C...+80°C]
	Ambient humidity	5...95% r.H., non condensing (UL 60730-1)
	Maintenance	maintenance free
Dimensions / Weight	Dimensions	9,8 x 3,9 x 2,3 in [250 x 98 x 59 mm]
	Weight	5,29 lbs [2400 g]

Functionality / Properties

Operating mode

Connect power supply to wire 1+2, the servomotor drives to postion 1 while the pre-tensioned spring is wound up the same time. If the power supply is interrupt, the servomotor drives back to position 0 by spring power. The servomotor is still maintaining the minimum torque at the damper spindle.

The servomotor 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

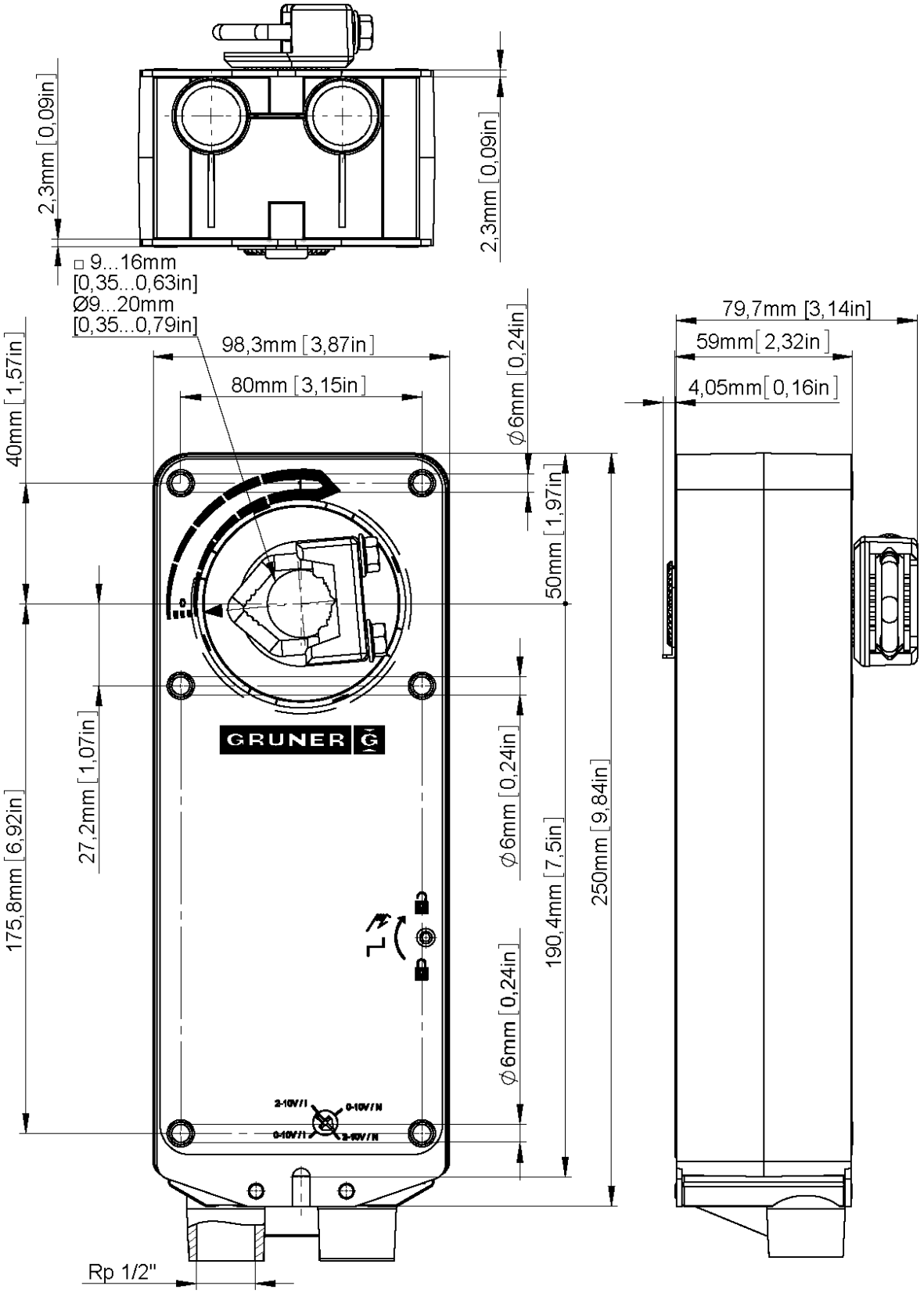
The servomotor can be operated only manually while the power supply is off. The supplied lever is to open and lock the damper position. The lock stays until the power supply is put on.

Connector / Security Note

Safety remarks

- Caution: power supply voltage!
- 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.

Technical Drawing



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