

Type 228

Actuator with rotation drive

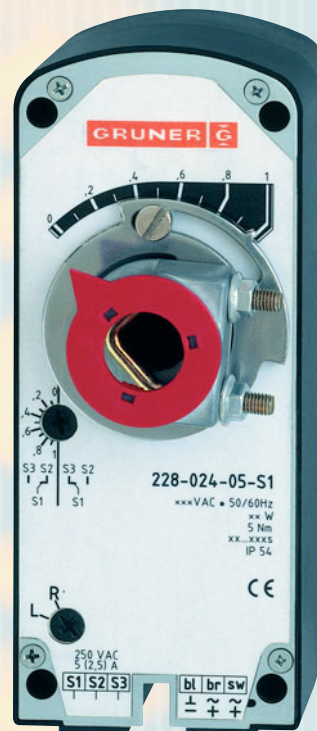
5 Nm

For the application with

Room ventilation techniques

VAV

Valves








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3	Summary 228, 5 Nm
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GRUNER - the friendly alternative

	without spring return			with spring return		
● = Standard ○ = Optional						
Type	227	232	231	228	238	
Torque	5 Nm (ca.1 m ²) 8 Nm (ca.1.6 m ²)	15 Nm (ca.3 m ²)	20 Nm (ca.4 m ²) 30 Nm (ca.6 m ²)	5 Nm (ca.1 m ²)	15 Nm (ca.3 m ²)	
Control						
Tri-state	●	●	●	●	●	
On/Off	●	●	●	●	●	
Continuous (0) 2...10VDC or (0) 4...20mA with 500Ω	●	●	●	●	●	
Power Supply						
24 VAC/DC	●	●	●	●	●	
230 VAC	●	●	●	●	●	
Options						
Potentiometer	○	○	○			
Auxiliary switch(es)	○	○	○	○	○	
LON Interface			○			
VAV Interface	○	○	○	○	○	
Universal locking clamp	●	●	●	●	●	
Form locking	○			○	○	

Applications

Motorised control of dampers, ball and butterfly valves. Application in mixed air and shut-off damper control. For primary HVAC air-handling and zone units.

Smoke and air isolation shut-off damper control for ventilation systems Ball valve control for domestic and drinking water, condensation water, air (i.e. zone units).

The actuator 231L has digital communication capabilities and can be networked with a LON-Bus system. All actuators correspond to the UL, CSA & DIN-VDE standards, CE guidelines.

● = Standard
○ = Optional

Type	228-024-05	228-024-05-S1	228-230-05	228-230-05-S1
Torque	5 Nm	5 Nm	5 Nm	5 Nm
Control				
Tri-state				
On/Off	●	●	●	●
Continuous control				
(0) 2...10 VDC or				
(0) 4...20 mA with 500Ω				
Power supply				
24 VAC/DC	●	●		
230 VAC			●	●
Options				
Zusatzschalter		●		●
Seite	4	4	6	6

Actuators according to US standards available upon demand.





Applications

To regulate dampers, valves or other regulatory functions:

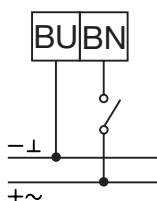
- sturdy drive
- maintenance-free
- torque 5 Nm / 4 Nm
- position indication
- direction of rotation changeable from outside
- auxiliary switch adjustable from outside
- electromagnetic compatibility controlled

Technical characteristics

Control	On/Off
Connecting voltage	24 VAC (50/60 Hz) / DC ± 20%
Power consumption	Motion: 5.0 W / Power safe mode: 3.0 W
Transformer sizing	6.5 VA
Angle of rotation	100° (-5 ...+95°), adjustable from outside
Direction of rotation	changeable from outside
Running time (90°)	Actuator: < 40...75 s / Spring: < 20 s
Torque	Actuator: 5 Nm / Spring: 4 Nm
Auxiliary switch	1, adjustable from outside
Switching power auxiliary switch	250 VAC / 5.0 (2.5) A, change-over switch
Connection	Cable 900 mm / 0.75 mm ²
Safety class	III
Protection	IP54 (cable downwards)
Dimensions	158 x 66 x 61 mm
Ambient temperature	-30°C...+50°C
Maintenance	maintenance-free
CE	73/23/EWG, 89/336/EWG
Weight	1,100 g

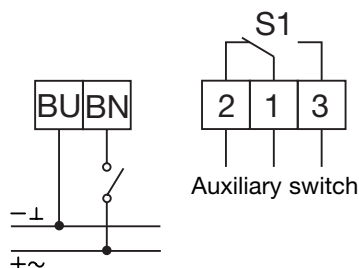
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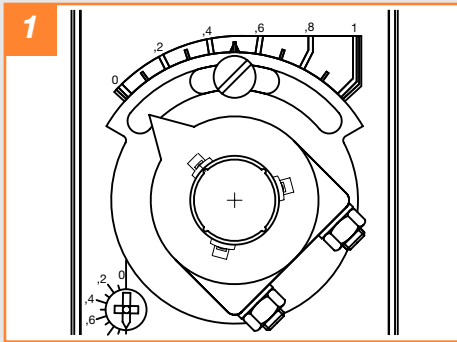
Connection scheme
(On/Off)



228-024-05-S1

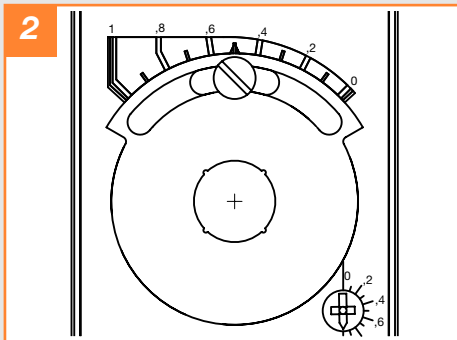
Connection scheme
(On/Off)





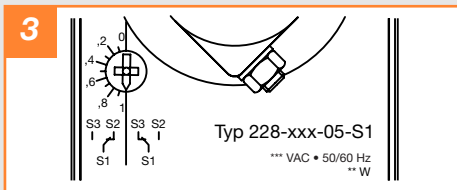
Fixing of the shaft (fig. 1)

by locking clamp to the damper shaft: □ 8...12 mm
 ∅ 8...16 mm



Selection of the direction of rotation (fig. 1 + 2)

The direction of rotation can be selected by back to front mounting.

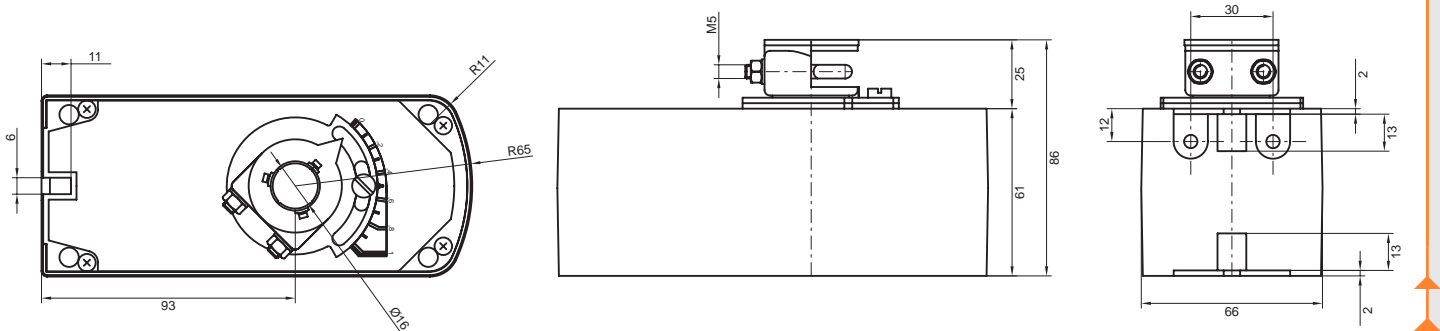


Adjustment of the auxiliary switch (fig. 3)

The scale at the adjusting knob corresponds to a percentage graduation, related to 0° to 90°. Choose the requested switching position by turning the knob to the right or left respectively, i.e. ".2" = 20%. The switches can be adjusted regardless of the momentarily angle of rotation.

Technical drawing

228-024-05





Applications

To regulate dampers, valves or other regulatory functions:

- sturdy drive
- maintenance-free
- torque 5 Nm / 4 Nm
- position indication

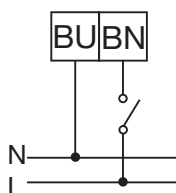
- direction of rotation changeable from outside
- auxiliary switch adjustable from outside
- electromagnetic compatibility controlled

Technical characteristics

Control	On/Off
Connecting voltage	230 VAC (50/60 Hz) ± 15%
Power consumption	Motion: 5.0 W / Power safe mode: 2.5 W
Transformer sizing	5.5 VA
Angle of rotation	100° (-5 ...+95°), adjustable from outside
Direction of rotation	changeable from outside
Running time (90°)	Actuator: < 40...75 s / Spring: < 20 s
Torque	Actuator: 5 Nm / Spring: 4 Nm
Auxiliary switch	1, adjustable from outside
Switching power auxiliary switch	250 VAC / 5.0 (2.5) A, change-over switch
Connection	Cable 900 mm / 0.75 mm ²
Safety class	II
Protection	IP54 (cable downwards)
Dimensions	158 x 66 x 61 mm
Ambient temperature	-30°C...+50°C
Maintenance	maintenance-free
CE	73/23/EWG, 89/336/EWG
Weight	1,100 g

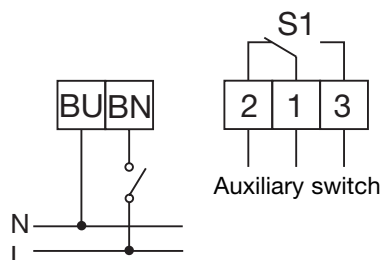
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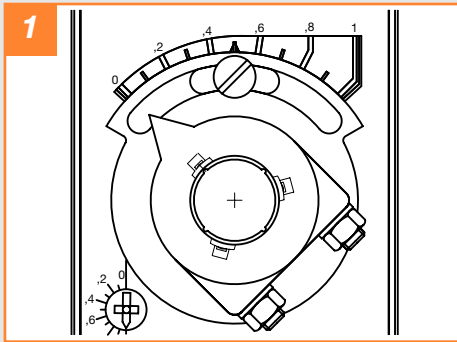
Connection scheme
(On/Off)



228-230-05-S1

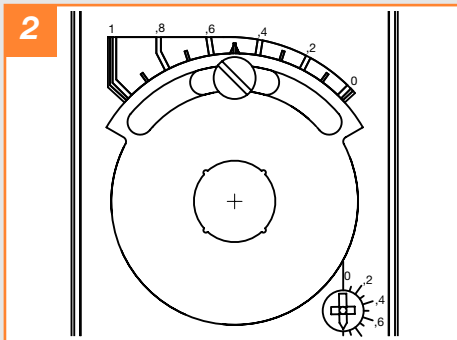
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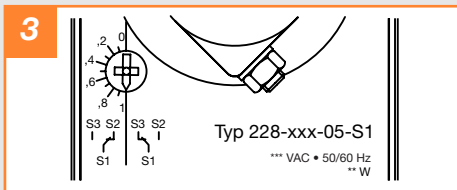
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Selection of the direction of rotation (fig. 1 + 2)

The direction of rotation can be selected by back to front mounting.

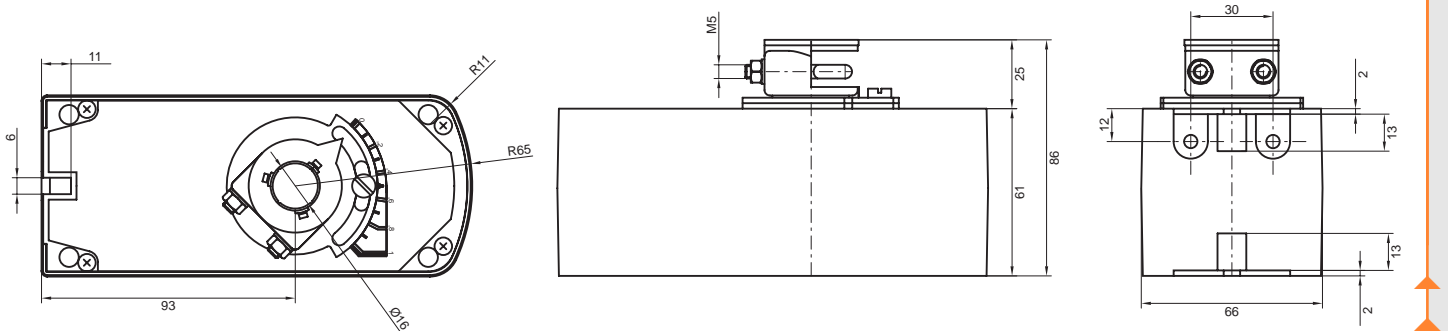


Adjustment of the auxiliary switch (fig. 3)

The scale at the adjusting knob corresponds to a percentage graduation, related to 0° to 90°. Choose the requested switching position by turning the knob to the right or left respectively, i.e. ".2" = 20%. The switches can be adjusted regardless of the momentarily angle of rotation.

Technical drawing

228-230-05



▶ ▶ ▶ YOUR WAY TO GRUNER

