GRUNER
Schalten und Bewegen

Technical data sheet

Description

Actuator for Volumetric flow and pressure control.

- **Torque Motor** **5 Nm**
- **Nominal Voltage** **24 VAC/DC**
- **Control** **0(2)..10 V**
- **Pressure sensor** **0...250 Pa**
- **Communication** **PP-Bus**
- **Damper coupling** **Clamp**
  ◊ 8-15 mm / Ø 4-20 mm

Technical data

Electrical data

Nominal voltage	24 VAC/DC
Nominal voltage range	19...29 VAC/DC
Power consumption motor (motion)	2,5 W
Power consumption standby (end position)	1,0 W
Wire sizing	4,0 VA
Control	0(2)...10 VDC / Ri > 50 kΩ 0(4)...20 mA / Rext.= 500 Ω
Feedback signal	0(2)...10 VDC, max 0,5 mA
Communication	PP-Bus, 1200 Baud, max. 15 VDC
Priority control	closed / Vmin / Vmax / open
Connection Motor	Cable 1000mm, 4 x 0,75 mm² (halogen free)
Connection GUIV	Feedback signal U / PP

Functional data

Engine	
Torque	> 5 Nm
Synchronised speed	±5%
Running time	adjustable 15...120 s / 90°
Direction of rotation	adjustable
Sound power level	< 35 dB(A)
Angle of rotation	0°... max. 95° Can be limited with adjustable mechanical end stop min 20°
Damper coupling	clamp ◊ 8-15 mm/ Ø 4-20 mm
Position indication	mechanical with pointer

Technical data

Service life	> 60'000 cycles (0° - 95° - 0°)
Manual override	Gearing latch disengaged with pushbutton, self-resetting

Functional data

Volume flow regulation	
Vnom	OEM-specific value, suitably VAV box type
Vmax	0...100% of Vnom
Vmin	0...100% of Vnom
Vconst	0...100% of Vnom
Differential pressure sensor	
Operating pressure	0...250 Pa
Burst pressure	1 bar
Media	0...70°C / 5...95% relative humidity, non condensing
Characteristic	OEM-specific value and pressure transducer adapted
Mounting position	independent of position
Material	Ultem 2200
Pressure connection	Tube clip inside Ø 4-6 mm

Safety

Protection class	III (safety extra-low voltage)
Degree of protection	IP 42
EMC	CE (2004/108/EG)
LVD	CE (2006/95/EG)
RoHS	CE (2011/65/EU)
Mode of operation	Typ 1 (EN 60730-1)
Rated impulse voltage	0,8 kV (EN 60730-1)
Control pollution degree	3 (EN 60730-1)
Ambient temperature normal operation	0°C...+50°C
Storage temperature	-20°C...+80°C
Ambient humidity	5...95% relative humidity, non condensing (EN 60730-1)
Maintenance	maintenance free

Dimensions/ Weight

Dimensions	115 x 65 x 66 mm
Weight	ca. 435 g

Operating mode / Properties

Operating mode

Applying the power supply to BU+BN (1+2) and a reference signal Y to BK (3) in the range of 0(2)…10 VDC, the actuator regulates to the specified set point. The current flow in % of Vnom is provided as a feedback signal U on GY (4). It can either be used as analogue slave control signal or can be communicated via PP-Bus. In the latter case the connection U serves as communication interface an analogue feedback signal is no longer supplied/ provided.

CAV modes/ override controls:
-AC/ DC signal to terminal BK (3)

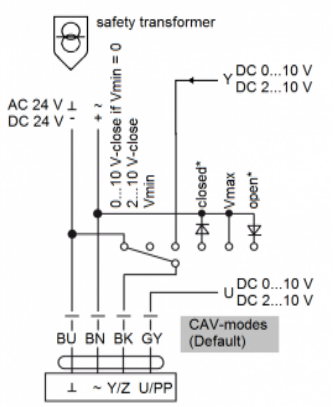
The actuator is overload-proof, requires no limit switches and stops automatically when the end position is reached.

Direct mounting

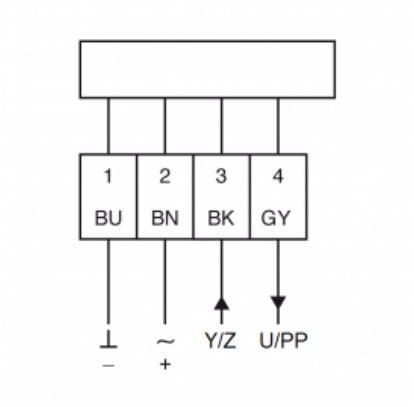
Simple direct mounting on the damper spindle with a universal spindle clamp, supplied with an anti-rotation strap to prevent the actuator from rotating.

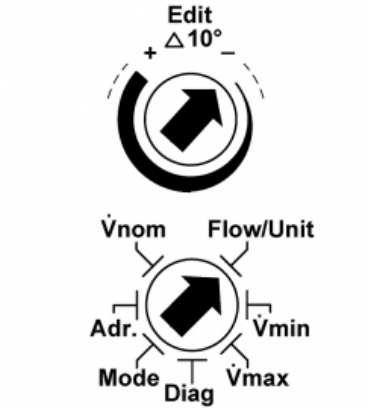
Manual override

Manual override is possible with the self-resetting pushbutton (the gearing latch remains disengaged as long as the pushbutton is pressed)



Connection / Safety remarks





Edit
The value selector allows the changing of values. The position of the arrow shows the value set.
The changes are displayed as soon as the selector is moved ±10° from its position.

Flow / Unit
Setting the desired actual volume flow unit in m³/h and l/s

Vmin
Adjust the desired flow Vmin
(setpoint Y = 0V / 2V)

Vmax
Adjust the desired flow Vmax
(setpoint Y = 10V)

Mode
Setting the direction of rotation :
0-n...0-10 V normal
2-n...2-10 V normal
0-i ...0-10 V invers
2-i ...2-10 V invers

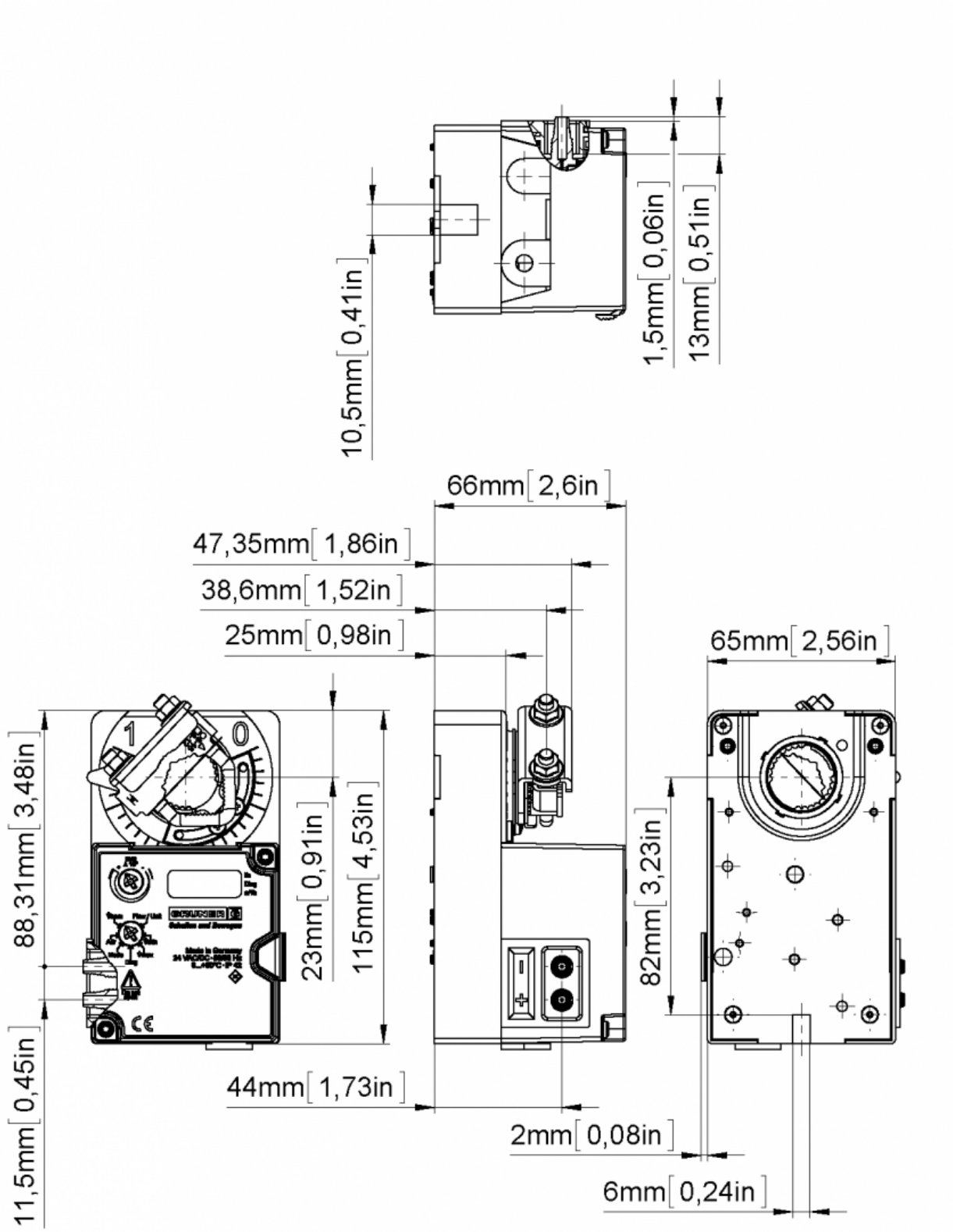
Diag
Diagnostic Menu :
oP - opens the flap
cL - closes the flap
Hi - activated Vmax
Lo - activated Vmin
on - Diagnostic Mode is on, engine off
oFF - Diagnostic mode is off,
display Y target

Vnom
Setting the flow rate depending on the VAV box

Safety remarks

-Connect via safety isolation transformer
-The actuator 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.
-When calculating the required torque, the specifications supplied by the damper manufacturers (cross- section, design, installation site), and the air flow conditions must be observed.
-The actuator is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Technical drawing



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