

## 227C-024-08I\_VNB(-S1\_VNB) Modulating Actuator for Ball Valve

### Description

Modulating Actuator for Ball Valve.

- Running time 100 s / 90°
- Torque 8 Nm
- Nominal voltage 24 VAC/DC
- Control continuous control (0)2...10 VDC



### Technical data

#### Electrical data

<b>Nominal voltage</b>	24 VAC/DC, 50/60Hz
<b>Nominal voltage range</b>	19...29 VAC/DC
<b>Power consumption motor (motion)</b>	3.0 W
<b>Power consumption standby (end position)</b>	1.0 W
<b>Wire sizing</b>	5.0 VA
<b>Control</b>	Continuous control (0)2...10 VDC / Ri > (100 kΩ) 50 kΩ (0)4...20 mA / Rext. = 500 Ω
<b>Connection motor</b>	Cable 1000 mm, 3 x 0.75 mm <sup>2</sup> (halogen free)
<b>Connection feedback potentiometer</b>	-
<b>Connection GUAC</b>	-
<b>Feedback signal</b>	(0)2...10 VDC, max. 5 mA
<b>227C-024-08I-SI_VNB</b>	
<b>Auxiliary switch</b>	- 1 x SPDT (ag)
<b>Contact load</b>	- 5 (2.5) A, 250 VAC
<b>Switching point</b>	- 0...95°
<b>Connection auxiliary switch</b>	Cable 1000 mm, 3 x 0.75 mm <sup>2</sup> (halogen free)

### Functional data

<b>Torque</b>	8 Nm
<b>Synchronized speed</b>	+/-5%
<b>Direction of rotation</b>	Selected by switch
<b>Manual override</b>	Gearing latch disengaged with pushbutton, self-resetting
<b>Angle of rotation</b>	0°...max. 95° can be limited with adjustable mechanical end stops
<b>Running Time</b>	100 s / 90°
<b>Sound power level</b>	< 35 dB(A)
<b>Position indication</b>	Mechanical with pointer
<b>Service life</b>	> 1,00,000 cycles (0°...95°...0°) > 1,500,000 partial cycles (max. ±5°)

### Safety

<b>Protection class</b>	III (safety extra-low voltage)
<b>Degree of protection</b>	IP 54 (cable downwards)
<b>EMC</b>	CE (2014/30/EU)
<b>LVD</b>	CE (2014/35/EU)
<b>RoHS</b>	CE (2011/65/EU - 2015/863/EU - 2017/2102/EU)
<b>Mode of operation</b>	Typ 1 (EN 60730-1)
<b>Rated impulse voltage supply / control</b>	0.8 kV (EN 60730-1)
<b>Control pollution degree</b>	3 (EN 60730-1)
<b>Ambient temperature normal operation</b>	-30°C...+50°C
<b>Storage temperature</b>	-30°C...+80°C
<b>Ambient humidity</b>	5...95% r.H., non-condensing (EN 60730-1)
<b>Maintenance</b>	Maintenance free

### Dimensions/Weight

<b>Dimensions</b>	117 x 67 x 66 mm
<b>Weight</b>	460 g
<b>Weight (S1)</b>	510 g

## Functionality / Properties

### Operating mode

Connect power supply to wire 1+2 and a reference signal Y to wire 3 in range of (0)2...10 VDC, actuator drives to its specified position. The actual damper position (0...100%) is a feedback signal U on wire 4 for example to share with other actuators. The actuator is overload-proof, requires no limit switches and automatically stops, when the end stop is reached.

### Direct Mounting

With one screw the actuator can be securely mounted on the ball valves. The mounting orientation in relation to the ball valve can be selected in 90° steps.

### Manual override

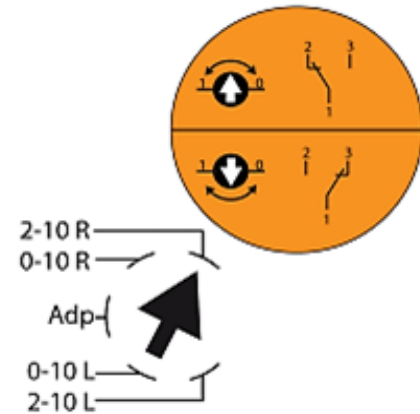
Manual override with self resetting push button possible (the gear is disengaged as long as the button is pressed).

### Mode switch

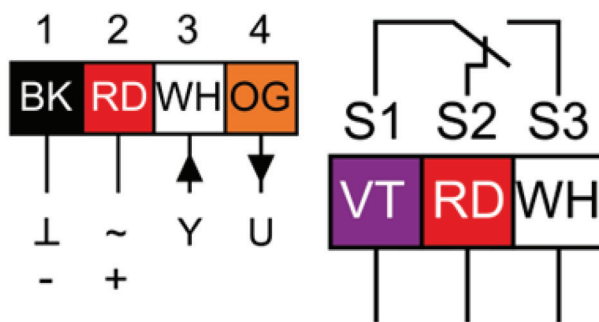
Mode switch with five positions at the housing:  
 2-10 R: rotary direction right 2-10 VDC  
 0-10 R: rotary direction right 0-10 VDC  
 Adp: adaption  
 0-10 L: rotary direction left 0-10 VDC  
 2-10 L: rotary direction left 2-10 VDC

### Adaption drive

- Actuator power off
- Setting the mechanical end stops
- Actuator power on
- Adaption enable
- Actuator drive to position 0
- Actuator drive to position 1
- Adaption disable, if desired angular range reached or rather if actuator reached end stop
- "Y" refers to the measured angular range



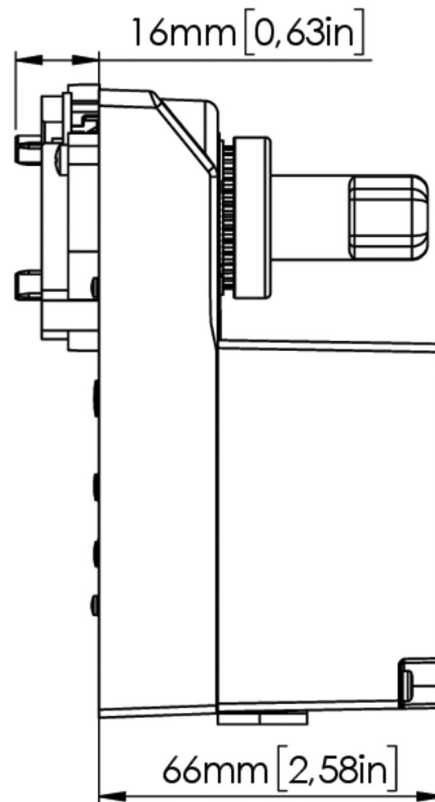
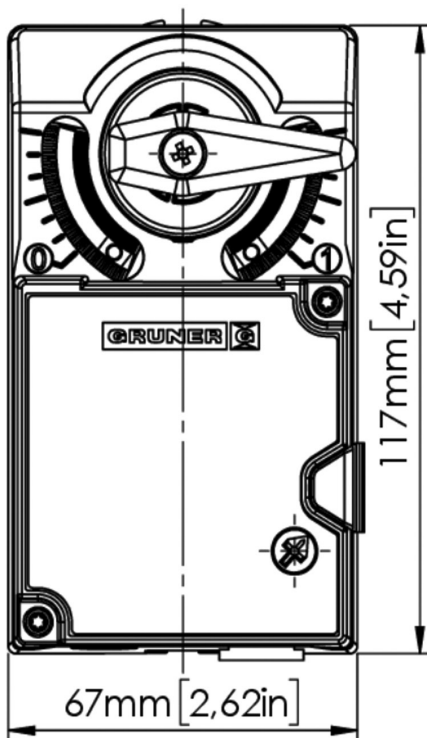
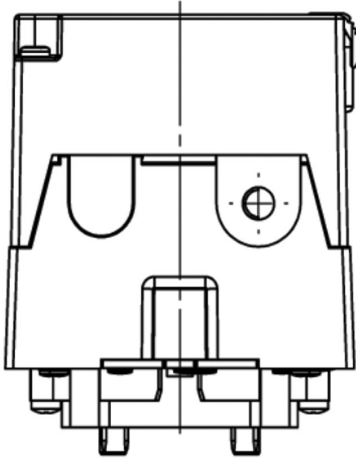
## Connector / Security Note



### 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.

Technical Drawing



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