

Modulating short stroke actuators for the motorisation of Cazzaniga and Siemens short stroke valves in HVAC systems

- Nominal stroke max. 5.5 mm
- Actuation force 500 N
- Nominal voltage AC/DC 24 V
- Control: Modulating



## Overview of types

Valve					Actuator
Manufacturer	Sort	Type	DN [mm]	$k_{vs}$ [m <sup>3</sup> /h]	Type
Cazzaniga	2-way	V02BM.. LN	15 ... 40	3.9 ... 14.5	NRDVX24-SR-T-CA
	3-way	V03BM.. LN	15 ... 40	3.9 ... 14.5	
Siemens	2-way	VVG44..	15 ... 40	0.25 ... 25	NRDVX24-SR-T-SI
	2-way	VVI52..	15	0.25 ... 2.5	
	3-way	VXG44..	15 ... 40	0.25 ... 25	

## Technical data

<b>Electrical data</b>	Nominal voltage	AC 24 V, 50/60 Hz / DC 24 V	
	Power supply range	AC 19.2 ... 28.8 V / DC 21.6 ... 28.8 V	
	Power consumption	In operation: 1.5 W at nominal torque For wire sizing: 2.5 VA	
<b>Functional data</b>	Connection	Terminals 4 mm <sup>2</sup> (cable Ø 6 ... 8 mm, three-core)	
	Parallel connection	Yes (Note performance data for supply!)	
	Actuation force	500 N	
	Control	Control signal Y: DC 0 ... 10 V, Input resistance 100 kΩ Operating range: DC 2 ... 10 V for 0 ... 90°↔ (can be switched to DC 0 ... 10 V)	
	Position response (measuring voltage U)	DC 2 ... 10 V, max. 1 mA, for 0 ... 90°↔ (can be switched to DC 0 ... 10 V)	
	Position accuracy	±5%	
	Manual override	Temporary and permanent disengagement of the gearing latch by means of the rotary knob on the housing	
	Nominal stroke	5.5 mm	
	Running time	140 s / 5.5 mm	
	Sound power level	Max. 35 dB (A)	
	Position indication	Scale plate 0 ... 1	
	<b>Safety</b>	Protection class	III Extra low voltage
		Degree of protection	IP40
EMC		CE according to 2004/108/EC	
Mode of operation		Type 1 (to EN 60730-1)	
Rated impulse voltage		0.8 kV (to EN 60730-1)	
Control pollution degree		3 (to EN 60730-1)	
Ambient temperature range		0 ... +50 °C	
Media temperature		+5 ... +100 °C (in valve)	
Non-operating temperature		-30 ... +80 °C	
Ambient humidity range		95% r.H., non-condensating (to EN 60730-1)	
Maintenance	Maintenance-free		
<b>Dimensions / Weight</b>	Dimensions	See «Dimensions» on page 2	
	Weight	Approx. 500 g	

## Safety notes



- The actuator has been designed for use in stationary heating, ventilation and air conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- It may only be installed by suitably trained personnel.
- All applicable legal or institutional installation regulations must be complied with.
- The device does not contain any parts that can be replaced or repaired by the user.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

## Product features

<b>Mode of operation</b>	The actuator is controlled with a standard signal of DC 0 ... 10 V and moves into the position defined by the control signal.
<b>Simple direct mounting</b>	Straightforward direct mounting on the valve with only one knurled nut.
<b>Manual operation</b>	Manual operation possible by lever (temporary disengagement of the gearing latch by pressing, permanent disengagement by means of the rotary knob on the housing).
<b>Functional reliability</b>	The actuator is overload-proof and automatically stops when the end stops are reached.

## Accessories

	Description
<b>Electrical accessories</b>	Auxiliary switch

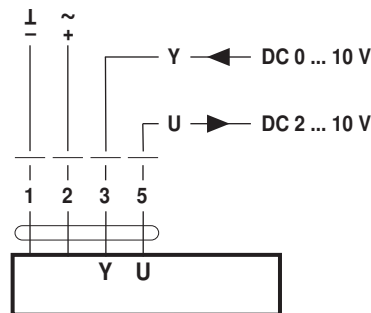
## Electrical installation

### Wiring diagram

### Standard

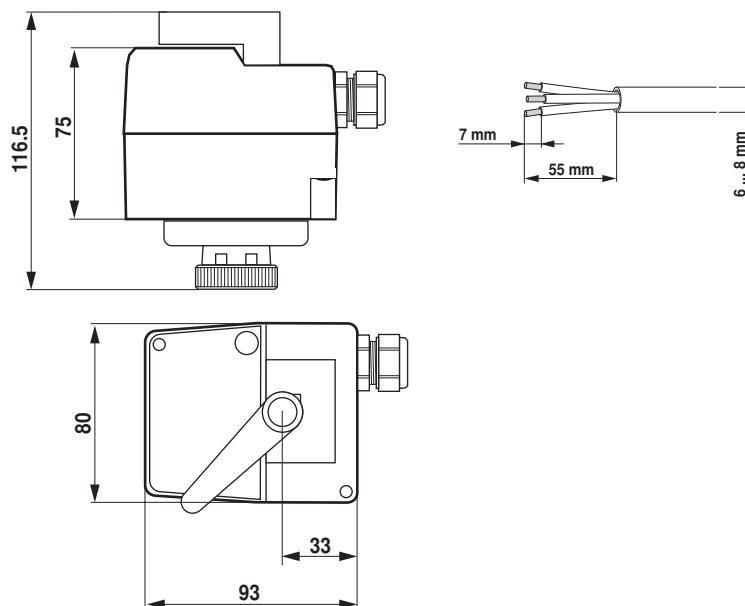
#### Notes

- Connect via safety isolation transformer.
- Parallel connection of several actuators possible. Power consumption must be observed!
- Factory setting: Operating range/Position feedback DC 2 ... 10 V (can be switched to DC 0 ... 10 V)



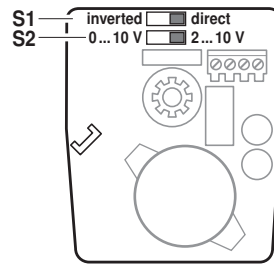
## Dimensions [mm]



### Dimensional diagrams

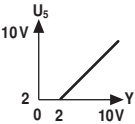
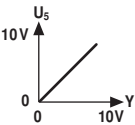


## Adjusting switch S1 and S2

The S1 and S2 switches for setting the direction of rotation and the operating range/position feedback are located underneath the housing cover.



Switch S1	Direction of rotation	
Signal direct *	 0	Y = 0%
Signal inverted	1 	Y = 0%

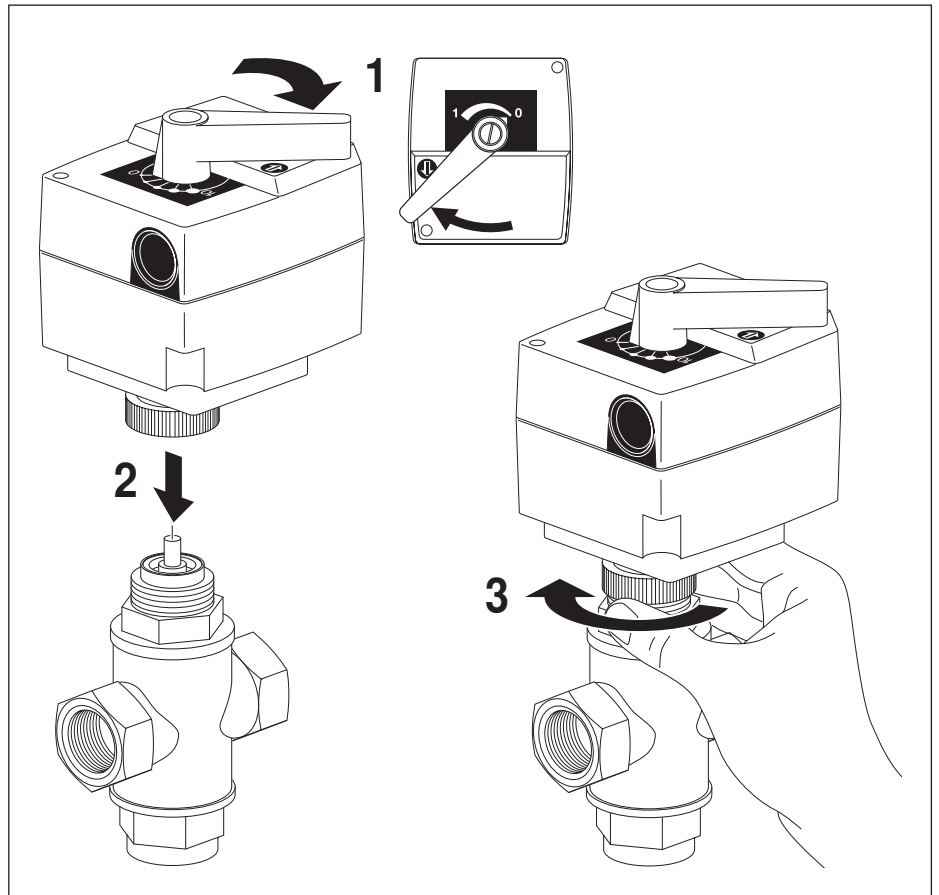
Switch S2	Operating range / Position feedback
2 ... 10 V *	
0 ... 10 V	

\* Factory setting

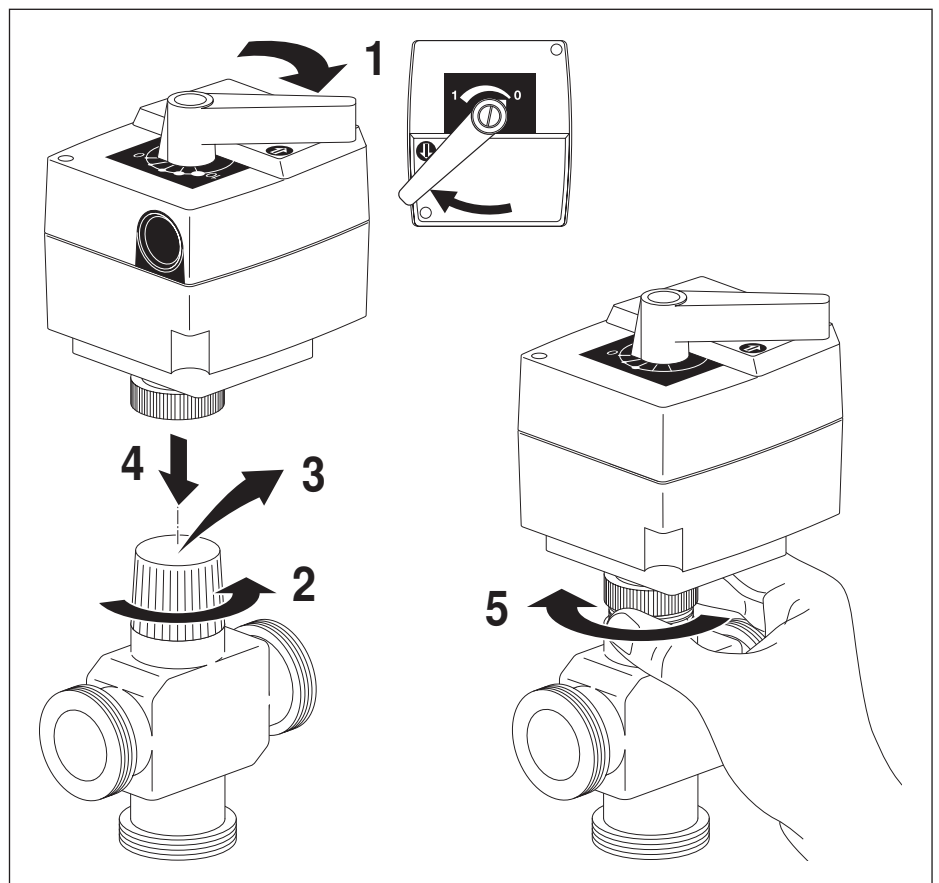
### Dismounting the housing cover

Loosen the central screw at the black lever and remove the two Phillips screws of the housing cover.

NRDVX..-CA + V02BM.. LN  
V03BM.. LN



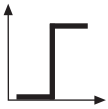
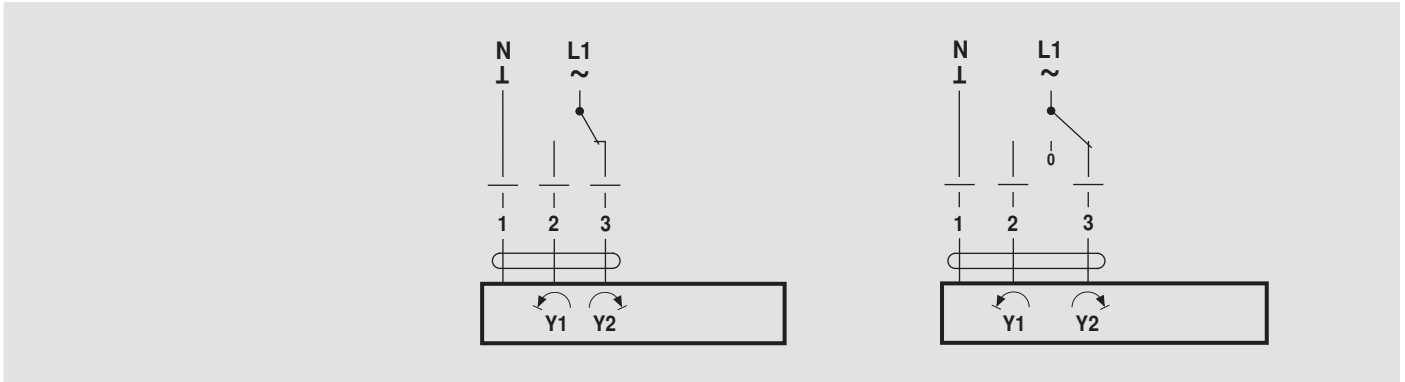
NRDVX..-SI + VVG44..  
VVI52..  
VXG44..



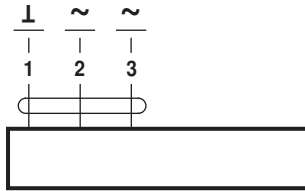
AC 230 V



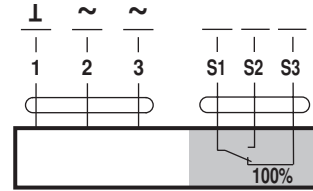
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AC 24 V

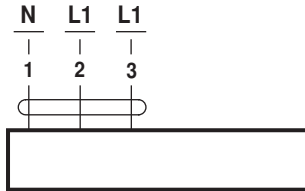


NRDVX24-3-T..

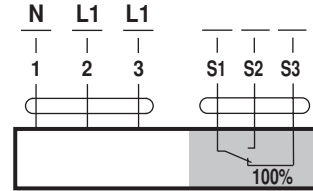


NRDVX24-3-T..

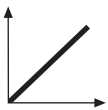
AC 230 V



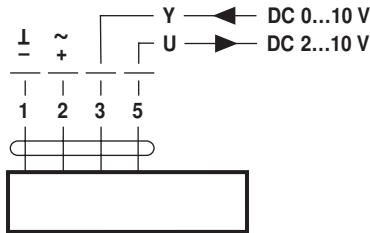
NRDVX230-3-T..



NRDVX230-3-T..



AC 24 V / DC 24 V



NRDVX24-SR-T..



AC 230 V



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