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

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

## Overview of types

| Valve | | | | | Actuator |
|---|---|---|---|---|---|
| **Manufacturer** | **Sort** | **Type** | **DN** [mm] | **$k_{vs}$** [$m^3/h$] | **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

| | | | |
|---|---|---|---|
| **Electrical data** | 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 |
| | Connection | | Terminals 4 $mm^2$ (cable Ø 6 ... 8 mm, three-core) |
| | Parallel connection | | Yes (Note performance data for supply!) |
| **Functional data** | 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°∢<br>(can be switched to DC 0 ... 10 V) |
| | Position response (measuring voltage U) | | DC 2 ... 10 V, max. 1 mA, for 0 ... 90°∢)<br>(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 |
| **Safety** | Protection class | | **III** Extra low voltage |
| | Degree of protection | | IP40 |
| | EMC | | CE according to 89/336/EEC |
| | 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 |
| **Dimensions / Weight** | 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

**Mode of operation** The actuator is controlled with a standard signal of DC 0 ... 10 V and moves into the position defined by the control signal.

**Simple direct mounting** Straightforward direct mounting on the valve with only one knurled nut.

**Manual operation** Manual operation possible by lever (temporary disengagement of the gearing latch by pressing, permanent disengagement by means of the rotary knob on the housing).

**Functional reliability** The actuator is overload-proof and automatically stops when the end stops are reached.

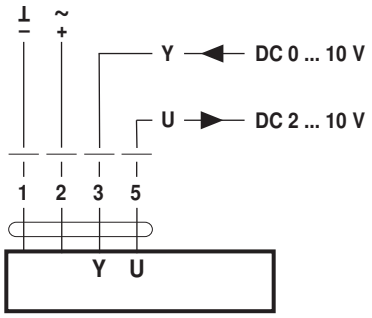
## Accessories

| | Description | Data sheet |
|---|---|---|
| **Electrical accessories** | Auxiliary switch | T5-Z-NR.. |

## Electrical installation

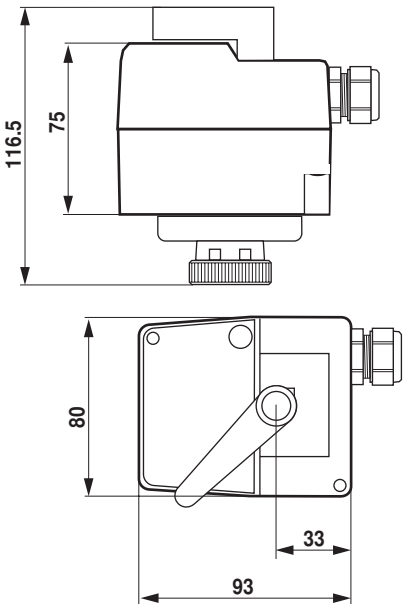
**Wiring diagram**

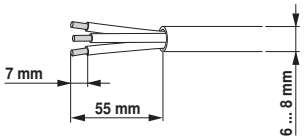
**Notes**
- Connect via safety isolation transformer.
- Parallel connection of several actuators possible. Power consumption must be observed!
- Factory setting: Operating range/Position feedback DC 2 ... 10 V (can be switched to DC 0 ... 10 V)




## Dimensions [mm]

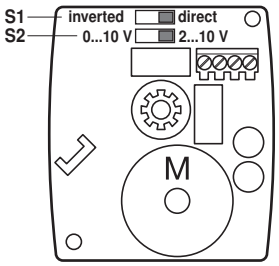
**Dimensional diagrams**



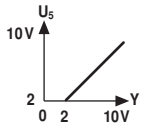
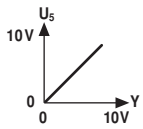



## Adjusting switch S1 and S2

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.

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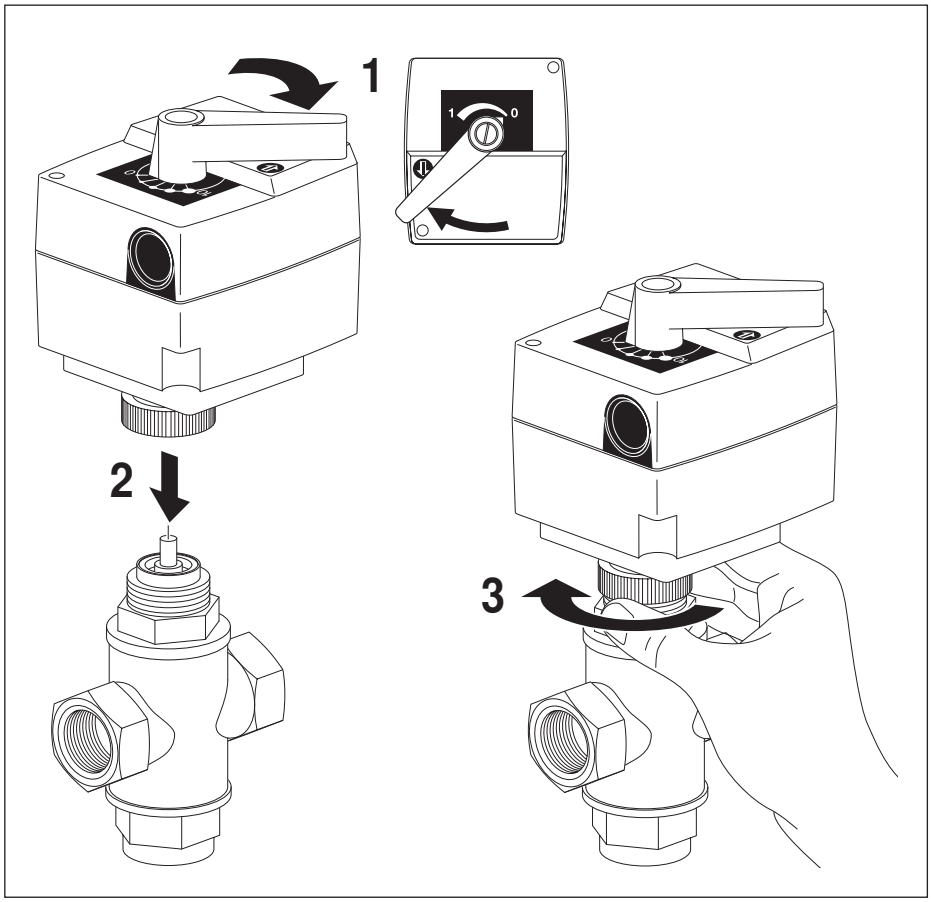
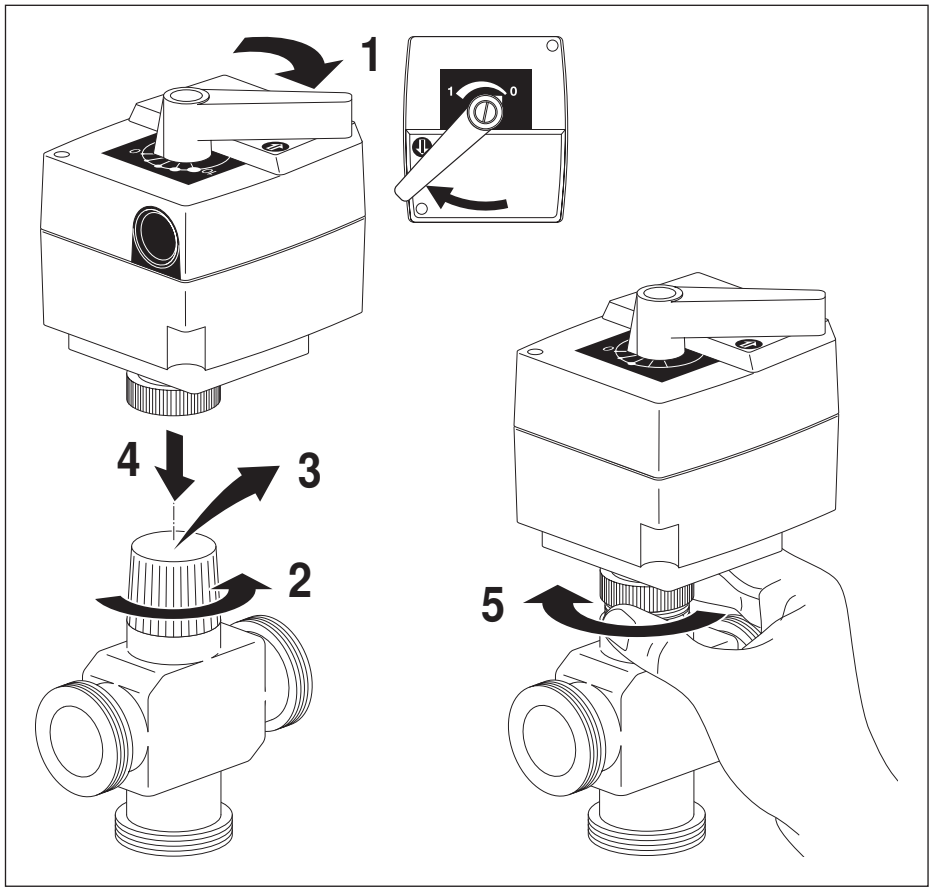
**NRDVX..-CA + V02BM.. LN**
**V03BM.. LN**




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




**AC 230 V**

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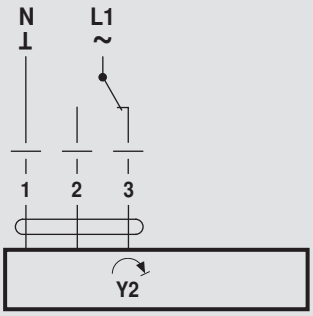
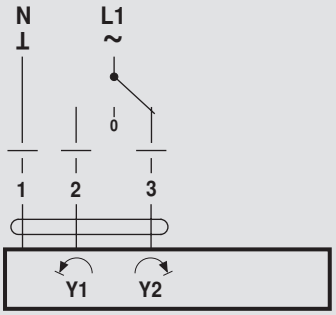
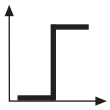
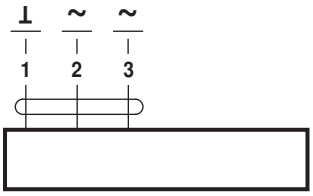


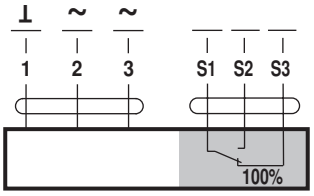



**AC 24 V**

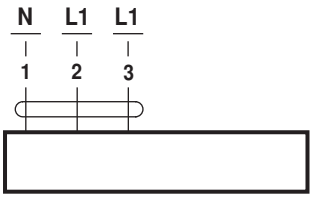



NRDVX24-3-T-..




NRDVX24-3-T-..

**AC 230 V** ⚠

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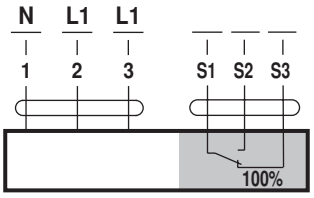


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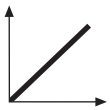
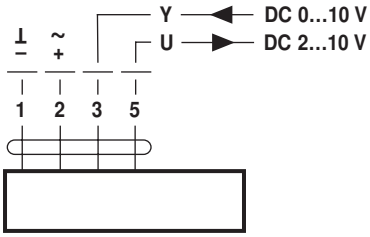


**AC 24 V / DC 24 V**




NRDVX24-SR-T-..

**AC 230 V**

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