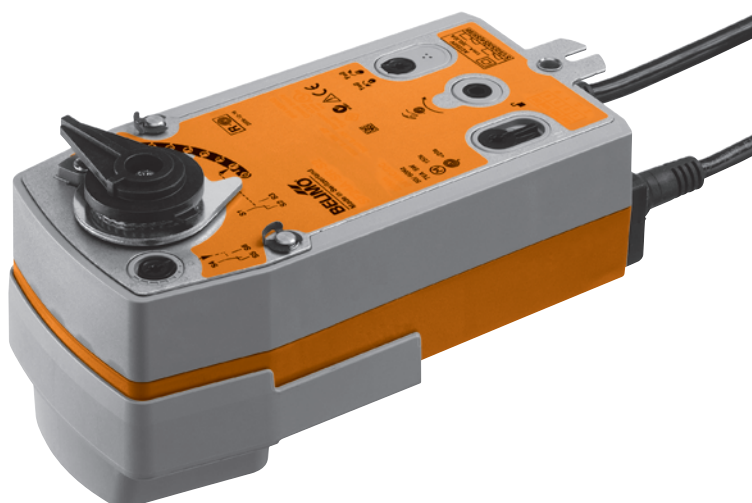


Rotary actuator with emergency function for 2- and 3-way ball valves

- Torque 10 Nm
- Nominal voltage AC 230 V
- Control: Open-close
- Two integrated auxiliary switches
- NRF230A-S2: Deenergised NC
- NRF230A-S2-O: Deenergised NO



Technical data

| | | | |
|----------------------------|---|---|--|
| Electrical data | Nominal voltage | AC 230 V, 50/60 Hz | |
| | Nominal voltage range | AC 195 ... 264 V | |
| | Power consumption | In operation | 6 W @ nominal torque |
| | | At rest | 2.5 W |
| | | For wire sizing | 9.5 VA |
| | Auxiliary switch | 2 x SPDT, 1 mA ... 3 (0.5) A, AC 250 V <input type="checkbox"/> (1 x fix 10% / 1 x adjustable 11 ... 100%) | |
| | Connection | Motor | Cable 1 m, 2 x 0.75 mm ² |
| Auxiliary switch | | Cable 1 m, 6 x 0.75 mm ² | |
| Parallel connection | Yes (Note performance data for supply!) | | |
| Functional data | Torque | Motor | Min. 10 Nm @ nominal voltage |
| | | Spring return | Min. 10 Nm |
| | Direction of rotation | Spring return | |
| | | - NRF230A-S2 - NRF230A-S2-O | Deenergised NC, ball valve closed (A – AB = 0%) Deenergised NO, ball valve open (A – AB = 100%) |
| | Manual override | With hand crank and interlocking switch | |
| | Angle of rotation | Max. 90° \leftrightarrow | |
| | Running time | Motor | ≤ 75 s / 90° \leftrightarrow |
| | | Spring return | ≤ 20 s @ -20 ... 50°C / max. 60 s @ -30°C |
| | Sound power level | Motor | ≤ 45 dB (A) |
| | | Spring return | ≤ 62 dB (A) |
| Position indication | Mechanical | | |
| Safety | Protection class | II totally insulated <input type="checkbox"/> | |
| | Degree of protection | IP54 | |
| | | NEMA 2, UL Enclosure Type 2 | |
| | EMC | CE according to 2004/108/EC | |
| | Low-voltage directive | CE according to 2006/95/EC | |
| | Certification | cULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1:02 | |
| | | Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14 | |
| | | Type 1.AA.B | |
| | Mode of operation | Type 1.AA.B | |
| | Rated impulse voltage | Actuator | 4 kV |
| Auxiliary switch | | 2.5 kV | |
| Control pollution degree | 3 | | |
| Ambient temperature | -30 ... +50°C | | |
| Media temperature | +5 ... +100°C (in ball valve) | | |
| | -10°C with stem heating upon request | | |
| Non-operating temperature | -40 ... +80°C | | |
| Ambient humidity | 95% r.h., non-condensating | | |
| Maintenance | Maintenance-free | | |
| Dimensions / Weight | Dimensions | See «Dimensions» on page 3 | |
| | Weight | Approx. 2.2 kg (without ball valve) | |

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.
- **Caution: Power supply voltage!**
- It may only be installed by suitably trained personnel.
All applicable legal or institutional installation regulations must be complied with.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- The cable must not be removed from the device.
- 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

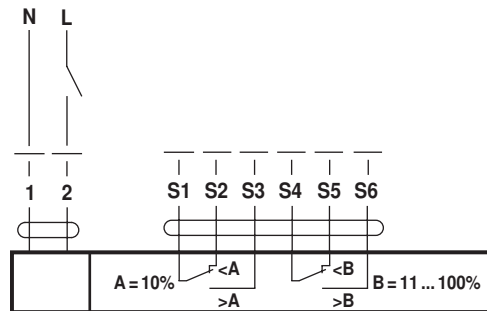
| | |
|-------------------------------------|--|
| Mode of operation | The actuator moves the ball valve to the operating position at the same time as tensioning the return spring. The ball valve is turned back to the safety position by spring force if the supply voltage is interrupted. |
| Simple direct mounting | Straightforward direct mounting on the ball valve with only one screw. The mounting position in relation to the ball valve can be selected in 90°-steps. |
| Manual override | Manual operation of the valve with the hand crank, locking in any position with the interlocking switch. Unlocking is manual or automatic by applying the operating voltage. |
| Adjustable angle of rotation | Adjustable angle of rotation with mechanical end stop. |
| High operational reliability | The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached. |
| Flexible signalization | The actuator has one auxiliary switch with a fixed setting and one adjustable auxiliary switch. They permit a 10% or 11 ... 100% angle of rotation to be signalled. |
| Combination valve actuators | Refer to the valve documentation for suitable valves, their permitted media temperatures and closing pressures. |

Electrical installation

Wiring diagram

Notes

- Caution: Power supply voltage!
- Parallel connection of other actuators possible.
Note the performance data.

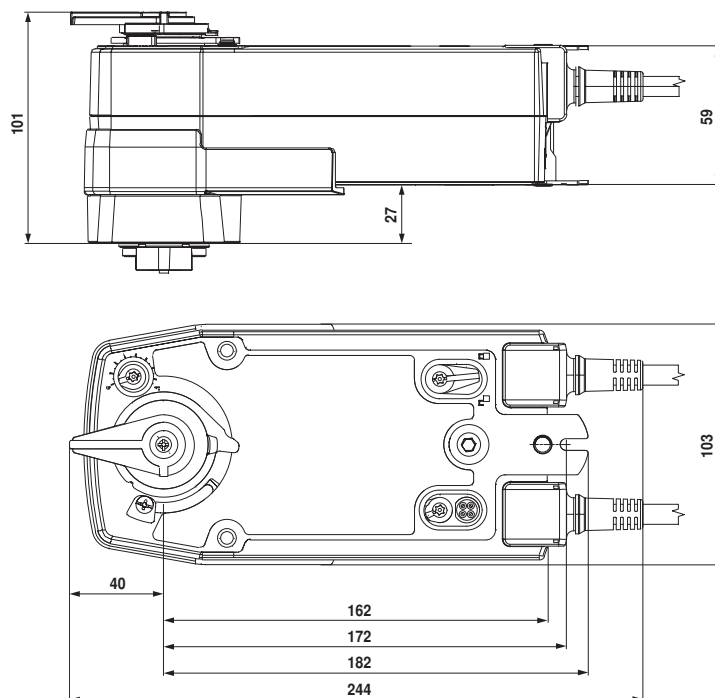


Cable colours:

- 1 = black
- 2 = red
- S1 = violet
- S2 = red
- S3 = white
- S4 = orange
- S5 = pink
- S6 = grey

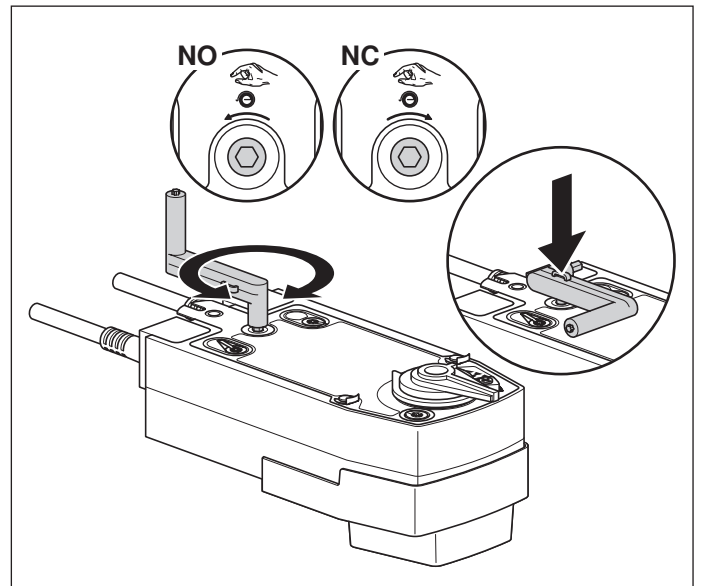
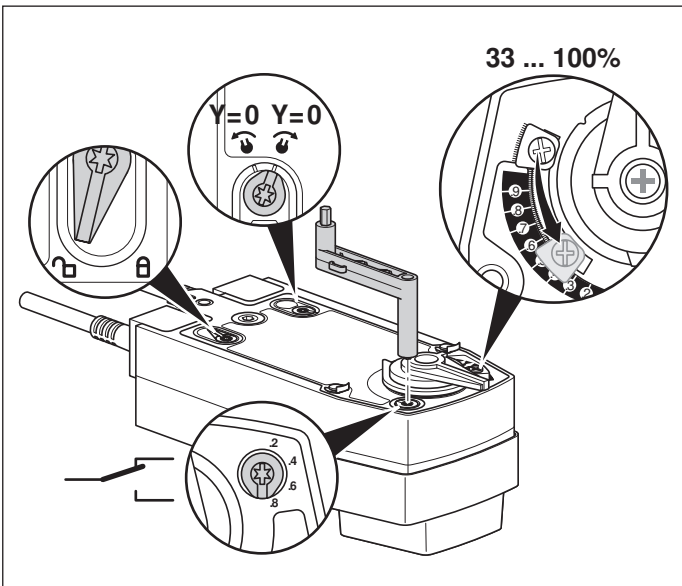
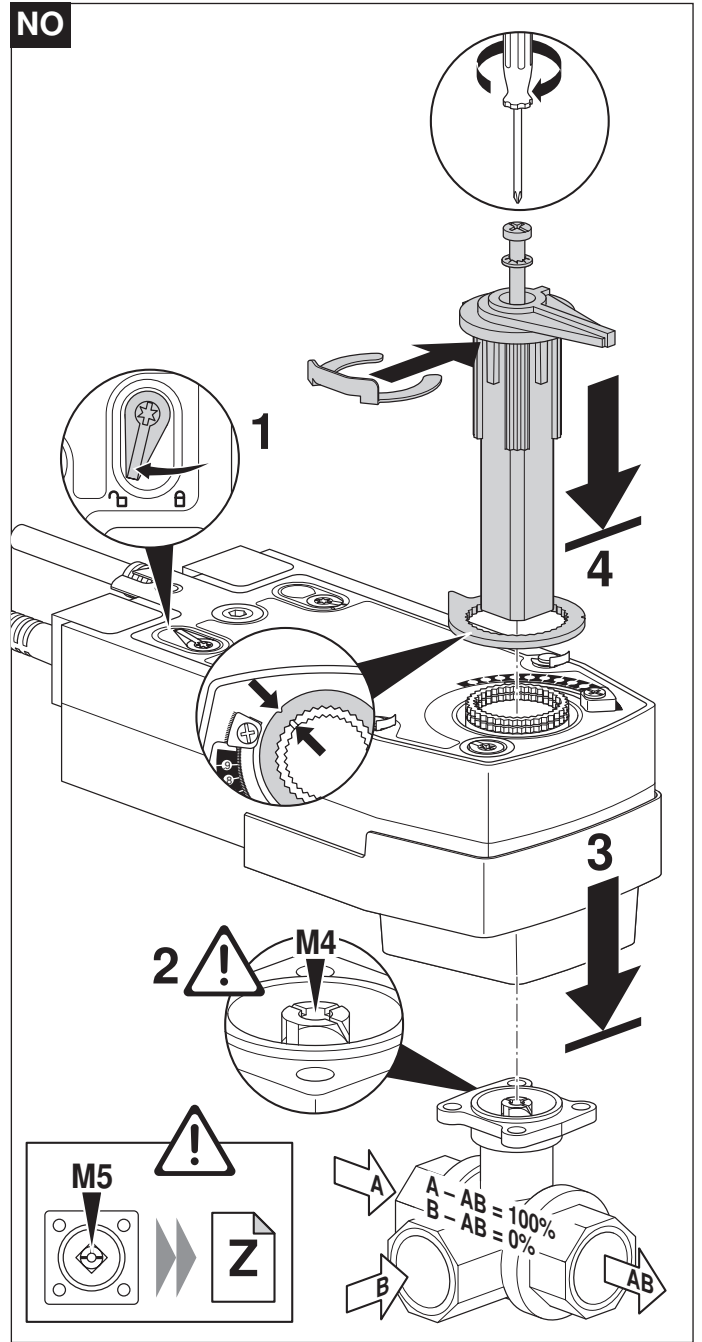
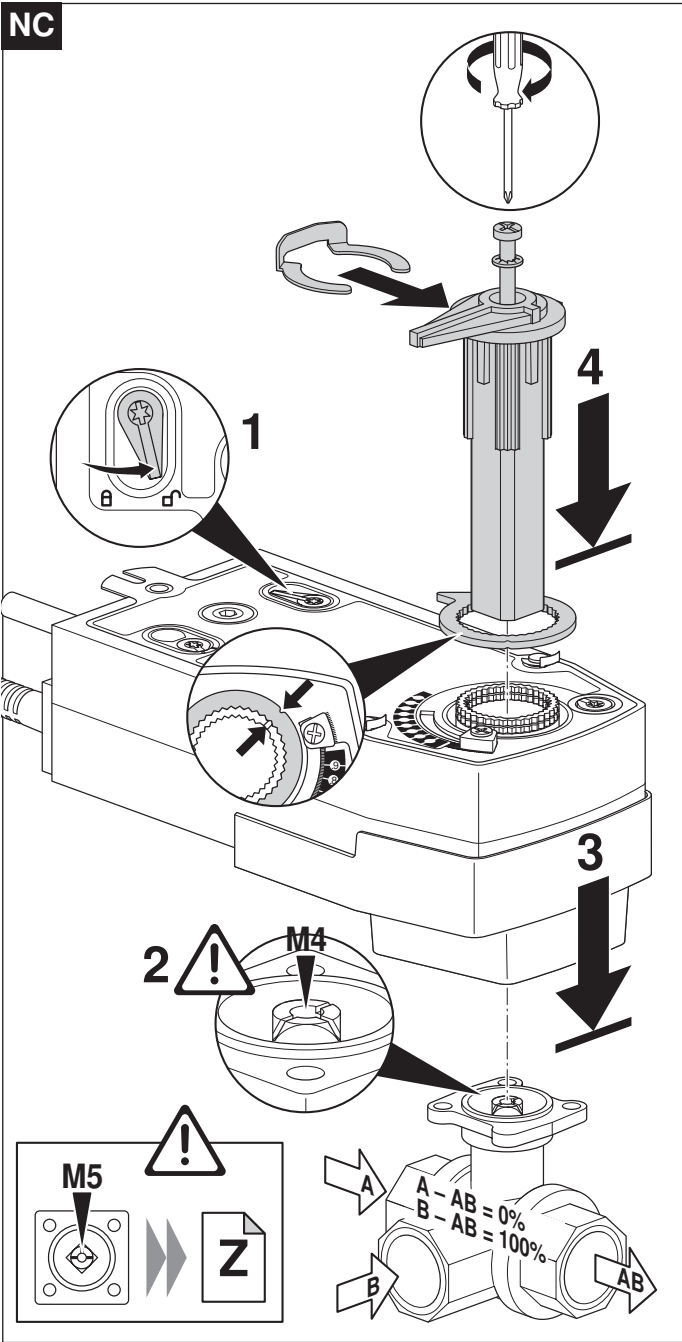
Dimensions [mm]

Dimensional drawings



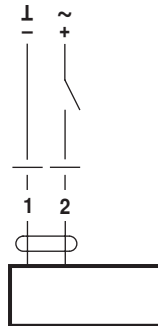
Further documentations

- Complete overview «The complete range of water solutions»
- Data sheets for ball valves
- Installation instructions for actuators and/or ball valves
- Notes for project planning (hydraulic characteristic curves and circuits, installation regulations, commissioning, maintenance etc.)

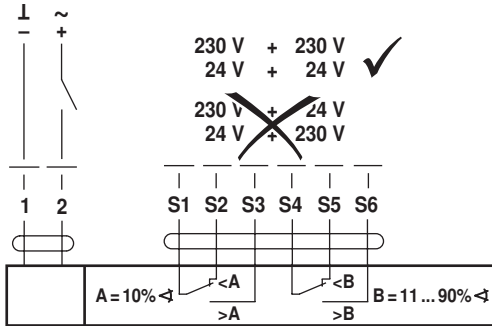




AC 24 V / DC 24 V

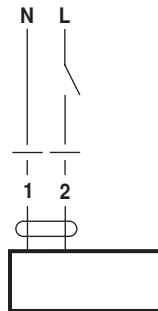


NRF24A(-O)
SRF24A(-O)

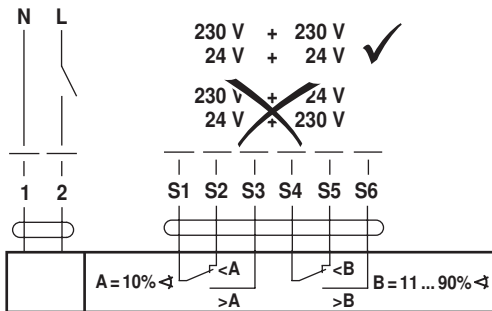


NRF24A-S2(-O)
SRF24A-S2(-O)

AC 230 V ⚠

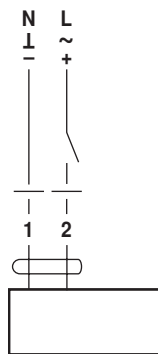


NRF230A(-O)
SRF230A(-O)

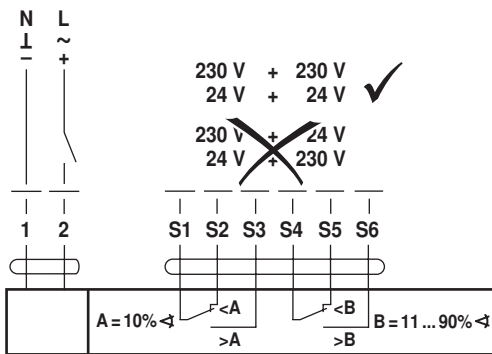


NRF230A-S2(-O)
SRF230A-S2(-O)

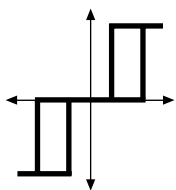
AC 24 ... 240 V / DC 24 ... 125 V ⚠



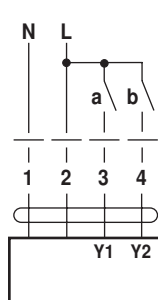
NRFA(-O)
SRFA(-O)



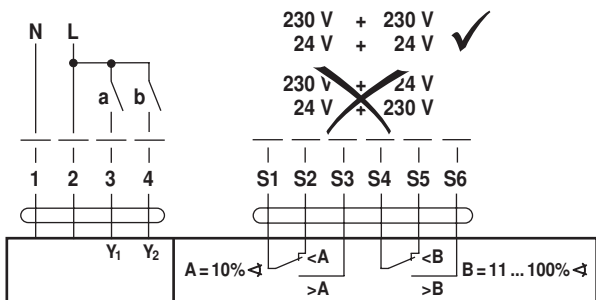
NRFA-S2(-O)
SRFA-S2(-O)



AC 230 V ⚠



NRF(D)230A-3(-O)
SRF230A-3(-O)



NRF(D)230A-3-S2(-O)
SRF230A-3-S2(-O)

| | | NO | NC | |
|--------|--------|------|------|---------------|
| a (Y1) | b (Y2) | | | |
| | | | | A - AB = 100% |
| | | stop | stop | |
| | | | | A - AB = 0% |

