

Modulating rotary actuator
for 2-way and 3-way ball valves

- Torque 2 Nm
- Nominal voltage AC/DC 24 V
- Control: modulating DC 2 ... 10 V
- Position feedback DC 2 ... 10 V
- k_{vs} setting (angle of rotation limiting)



Technical data


| | | |
|----------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Electrical data | Nominal voltage | AC 24 V, 50/60 Hz / DC 24 V |
| | Nominal voltage range | AC 19.2 ... 28.8 V / DC 21.6 ... 28.8 V |
| | Power consumption | In operation 1 W @ nominal torque |
| | | At rest 0.5 W |
| | | For wire sizing 2 VA |
| | Connection | Cable 1 m, 4 x 0.75 mm ² |
| Functional data | Parallel operation | Possible, note the performance data |
| | Torque (nominal torque) | Min. 2 Nm @ nominal voltage |
| | Control | Control signal Y |
| | | Operating range DC 2 ... 10 V |
| | Position feedback (measuring voltage U) | DC 2 ... 10 V, max. 1 mA |
| | Position accuracy | ±5% |
| | Manual override | Gear disengagement with magnet |
| | k_{vs} setting | Angle of rotation limiting Starting at 90°↱ (A – AB = 100%) in 2.5°↱ steps Scale: 25 ... 100% of k_{vs} |
| | Running time | 75 s / 90°↱ |
| | Sound power level | Max. 35 dB (A) (without ball valve) |
| | Position indication | Mechanical, pluggable |
| Safety | Protection class | III Safety extra-low voltage / UL Class 2 Supply |
| | Degree of protection | IP54 in any mounting position NEMA 2, UL Enclosure Type 2 |
| | EMC | CE according to 2004/108/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 |
| | Mode of operation | Type 1 |
| | Rated impulse voltage | 0.8 kV |
| | Control pollution degree | 3 |
| | Ambient temperature | –30 ... +50 °C |
| | Medium temperature | +5 ... +80 °C in the ball valve |
| | Non-operating temperature | –40 ... +80 °C |
| Dimensions / Weight | Ambient humidity | 95% r.h., non-condensating |
| | Maintenance | Maintenance-free |
| | Dimensions | See «Dimensions» on page 2 |
| | Weight | Approx. 220 g (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.
- 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. It 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 modulating signal DC 2 ... 10 V and travels to the position defined by the control signal. Measuring voltage U serves for the electrical display of the valve position 0 ... 100% and as slave control signal for other actuators. |
| 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 override with magnet possible (the gear is disengaged as long as the magnet adheres to the symbol ). The magnet for gearing latch is included as an accessory in the scope of supply. |
| Adjustable angle of rotation | The rotary actuator can be adjusted beginning with 90° (A – AB = 100%) in 2.5° steps. The scale corresponds to 25 ... 100% of the k_{VS} value. |
| High functional reliability | The actuator is overload-proof, requires no limit switches in intermediate positions and automatically stops when the end stop is reached (at rest). |

Accessories

| | Description |
|-------------------------------|-----------------------------------------------------------------------------------------------------------|
| Mechanical accessories | Magnet for gearing latch Z-MA, packaging unit 20 pcs. (1 pc. in the scope of delivery of the actuator) |

Electrical installation

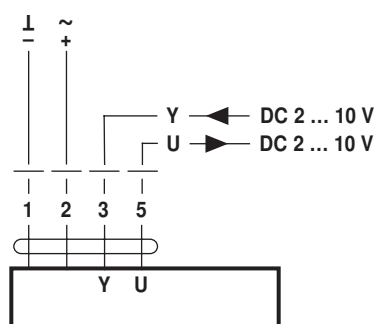
Wiring diagrams

Notes

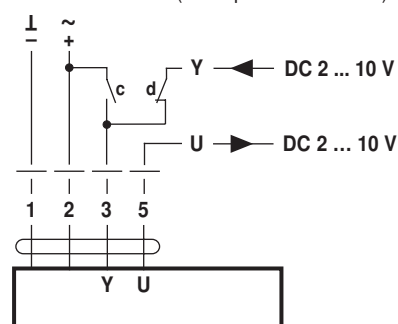
- Connect via safety isolation transformer.
- Parallel connection of other actuators possible.
Note performance data for supply.









Standard



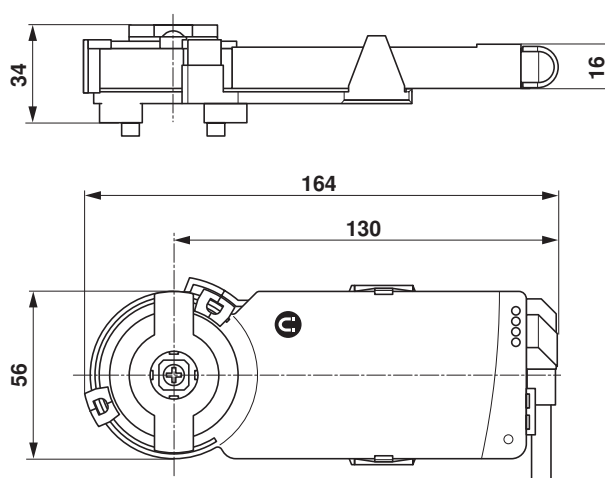
Override control (Frost protection circuit)



| c | d | Actuator | Valve |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------|---------------|
|  |  | y1 | A – AB = 100% |
|  |  | y2 | A – AB = 0% |
|  |  | Modulating operation | |

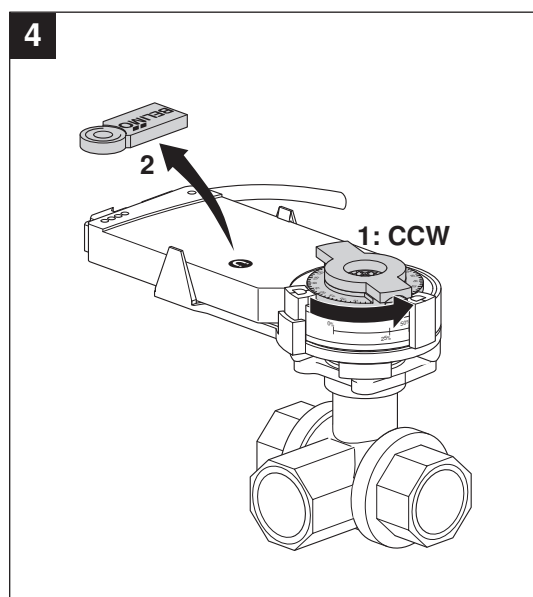
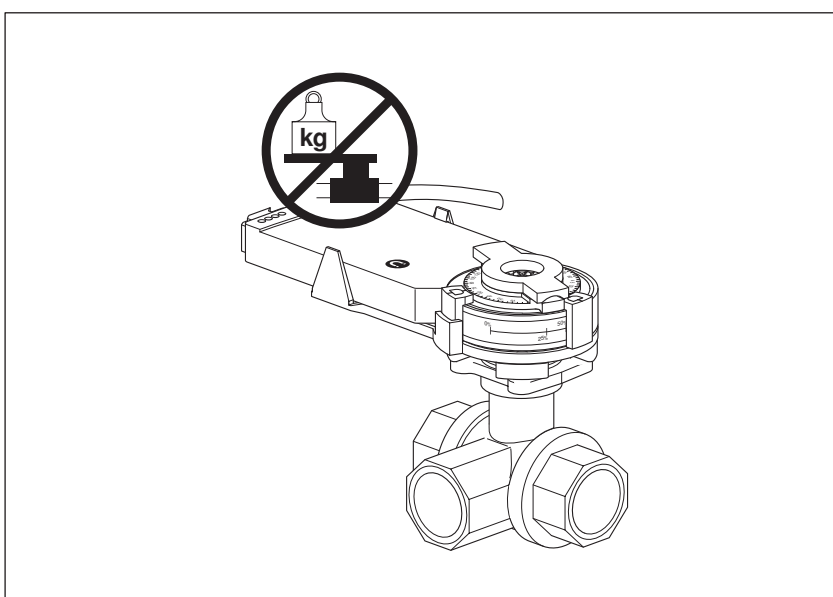
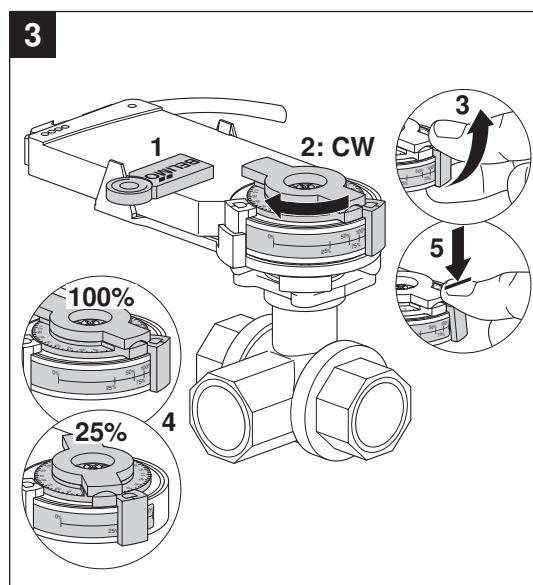
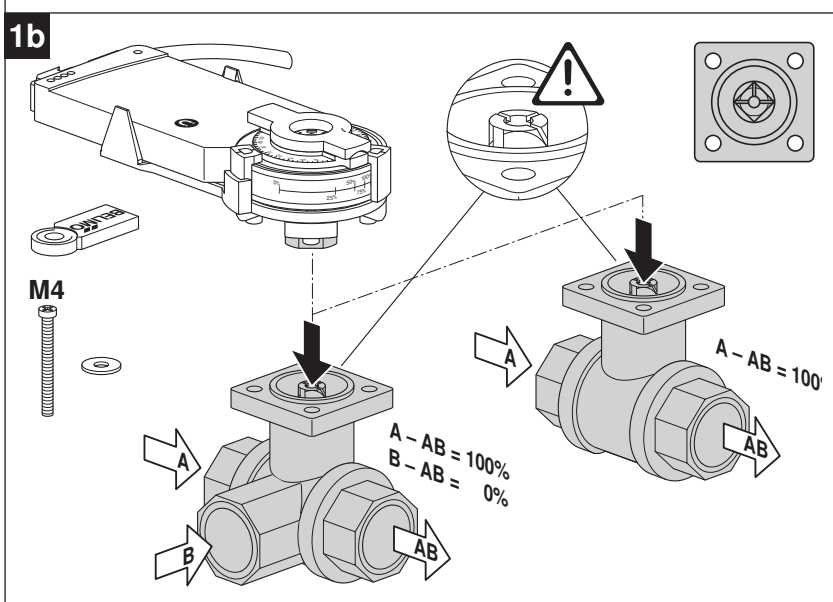
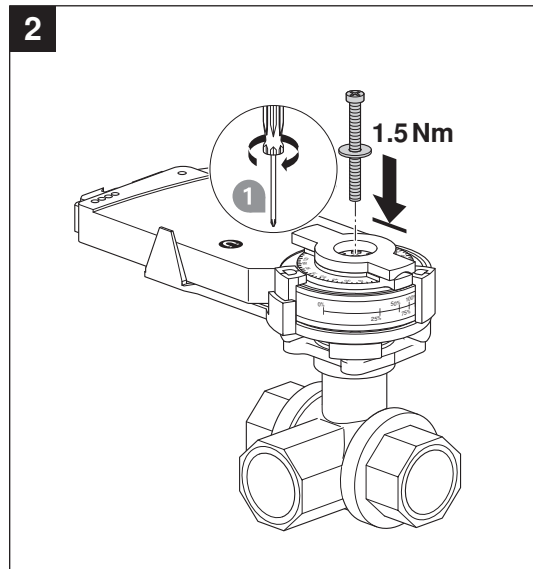
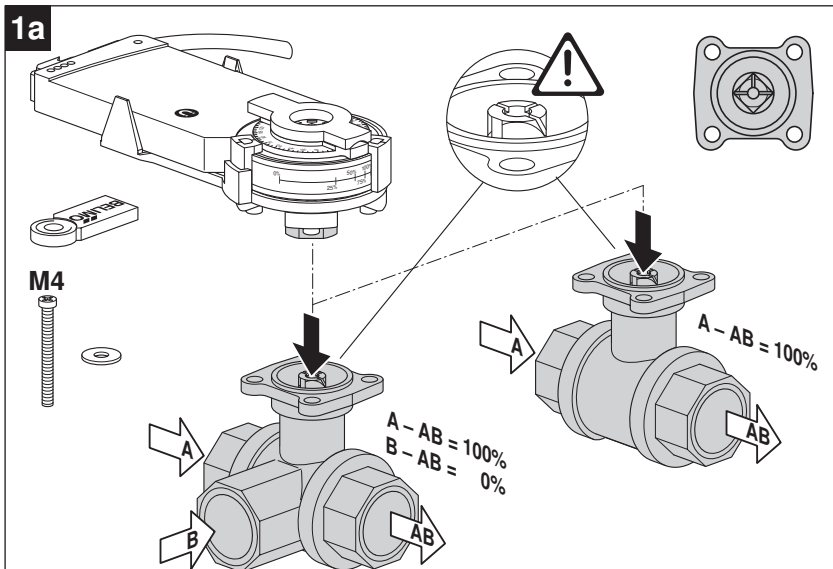
Dimensions [mm]

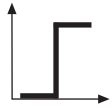
Dimensional drawings



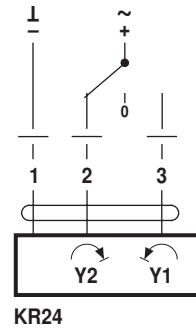
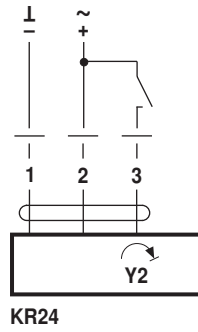
Further documentation

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

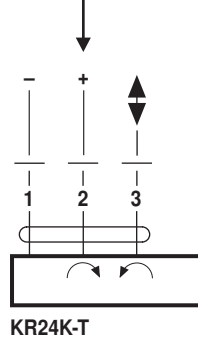




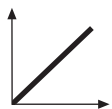
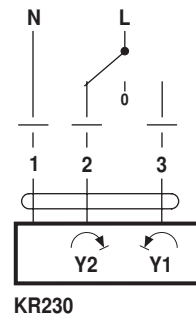
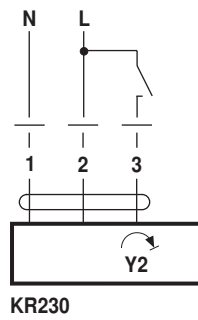
AC 24 V / DC 24 V

DC 24 V
(SKM230..)

SKM230..



AC 100 ... 240 V ⚠



AC 24 V / DC 24 V

