

# **Technical data sheet**

# Rotary actuator for butterfly valves

- Torque motor Max. 90 Nm (not constant)
- Nominal voltage AC 230 V
- Control Open/close
- Running time motor 35 s

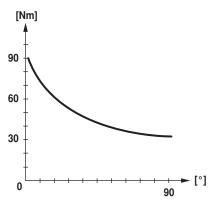


# **Technical data**

| Electrical data | Nominal voltage                        | AC 230 V                             |
|-----------------|--|--------------------------------------|
|                 | Nominal voltage frequency              | 50/60 Hz                             |
|                 | Nominal voltage range                  | AC 85265 V                           |
|                 | Power consumption in operation         | 6 W                                  |
|                 | Power consumption in rest position     | 2 W                                  |
|                 | Power consumption for wire sizing      | 11 VA                                |
|                 | Connection supply / control            | Cable 1 m, 3 x 0.75 mm <sup>2</sup>  |
|                 | Parallel operation                     | Yes (note the performance data)      |
| Functional data | Torque motor                           | Max. 90 Nm (not constant)            |
|                 | Manual override                        | with push-button, can be locked      |
|                 | Running time motor                     | 35 s / 90°                           |
|                 | Sound power level, motor               | 60 dB(A)                             |
|                 | Position indication                    | Mechanically (integrated)            |
| Safety          | Protection class IEC/EN                | Il reinforced insulation             |
|                 | Degree of protection IEC/EN            | IP54                                 |
|                 | EMC                                    | CE according to 2014/30/EU           |
|                 | Low voltage directive                  | CE according to 2014/35/EU           |
|                 | Certification IEC/EN                   | IEC/EN 60730-1 and IEC/EN 60730-2-14 |
|                 | Mode of operation                      | Type 1                               |
|                 | Rated impulse voltage supply / control | 2.5 kV                               |
|                 | Control pollution degree               | 3                                    |
|                 | Ambient temperature                    | -3050°C                              |
|                 | Storage temperature                    | -4080°C                              |
|                 | Ambient humidity                       | Max. 95% r.H., non-condensing        |
|                 | Servicing                              | maintenance-free                     |
| Mechanical data | Connection flange                      | F07                                  |
| Weight          | Weight                                 | 4.1 kg                               |



| Safaty patao                |  |
|-----------------------------|--|
| Safety notes                | <ul> <li>This device has been designed for use in stationary heating, ventilation and air-<br/>conditioning systems and must not be used outside the specified field of application<br/>especially in aircraft or in any other airborne means of transport.</li> </ul>                   |
|                             | <ul> <li>Outdoor application: only possible in case that no (sea) water, snow, ice, insolation or aggressive gases interfere directly with the actuator and that is ensured that the ambient conditions remain at any time within the thresholds according to the data sheet.</li> </ul> |
|                             | Caution: Power supply voltage!   |
|                             | <ul> <li>Only authorised specialists may carry out installation. All applicable legal or<br/>institutional installation regulations must be complied during installation.</li> </ul>   |
|                             | <ul> <li>The switch for changing the direction of rotation may not be adjusted.</li> </ul>   |
|                             | • The angle of rotation is not permitted to be subjected to mechanical limitation. It is forbidden to alter the mechanical end stops.  |
|                             | • 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.  |
|                             | Cables must not be removed from the device.  |
|                             | <ul> <li>The device contains electrical and electronic components and must not be dispose of as household refuse. All locally valid regulations and requirements must be observed.</li> </ul>  |
|                             | • Because of its non-constant torque, the actuator is neither suitable nor released for motorisation with valves from other manufacturers. No legal entitlement can be claimed, even after extensive testing. Belimo will not be held liable and will provide no warranty.               |
| Product features            |  |
| Simple direct mounting      | Simple direct mounting on the butterfly valve. The mounting orientation in relation to the butterfly valve can be selected in 90° (angle) increments.  |
| Manual override             | Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).   |
| High functional reliability | The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.   |
| Combination valve/actuator  | For valves with the following mechanical specifications in accordance with ISO 5211<br>F07:<br>- Square stem head SW = 17 mm for form-fit coupling of the rotary actuator.<br>- Hole circle d = 70 mm  |
| Torque not constant         | Due to the non-linear torque characteristic the actuator can only be used for butterfly valves and not for other armatures.  |
|                             |  |





# Accessories

|                        | Description                                 | Туре    |
|------------------------|---|---------|
| Electrical accessories | Auxiliary switch 1 x SPDT add-on            | S1A     |
|                        | Auxiliary switch 2 x SPDT add-on            | S2A     |
|                        | Feedback potentiometer 140 Ω add-on         | P140A   |
|                        | Feedback potentiometer 200 $\Omega$ add-on  | P200A   |
|                        | Feedback potentiometer 500 $\Omega$ add-on  | P500A   |
|                        | Feedback potentiometer 1 kΩ add-on          | P1000A  |
|                        | Feedback potentiometer 2.8 kΩ add-on        | P2800A  |
|                        | Feedback potentiometer 5 k $\Omega$ add-on  | P5000A  |
|                        | Feedback potentiometer 10 k $\Omega$ add-on | P10000A |

## **Electrical installation**

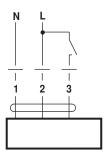


Notes

Caution: Power supply voltage!

#### Wiring diagrams

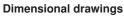
#### AC 230 V, open/close

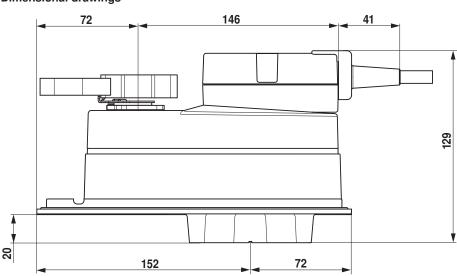


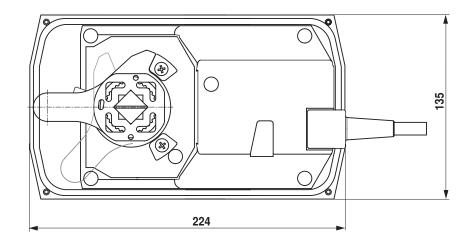
**Cable colours:** 1 = blue 2 = brown 3 = white



## **Dimensions** [mm]







### **Further documentation**

- The complete product range for water applications
- Data sheets for butterfly valves
- · Installation instructions for actuators and/or butterfly valves
- · General notes for project planning