Rotary actuator with emergency control function for butterfly valves

- Torque 15 Nm
- Nominal voltage AC/DC 24 V
- Control: Open/close
- 2 auxiliary switches
- ARF24-S-5: Deenergised NC
  ARF24-S-5-O: Deenergised NO

Technical data

### Electrical data

<table>
<thead>
<tr>
<th>Specification</th>
<th>AC 24 V, 50/60 Hz</th>
<th>DC 24 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply range</td>
<td>AC 19.2 ... 28.8 V</td>
<td>DC 21.6 ... 28.8 V</td>
</tr>
<tr>
<td>Power consumption</td>
<td>Spring return</td>
<td>6.5 W at nominal torque</td>
</tr>
<tr>
<td></td>
<td>Holding position</td>
<td>2.5 W</td>
</tr>
<tr>
<td></td>
<td>For wire sizing</td>
<td>11 VA</td>
</tr>
<tr>
<td>Auxiliary switch</td>
<td>2 x SPDT, 6 (3) A, AC 250 V II</td>
<td></td>
</tr>
<tr>
<td>Switching points</td>
<td>10% fixed, 28 ... 94% adjustable</td>
<td></td>
</tr>
<tr>
<td>Connection</td>
<td>Motor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Auxiliary switch</td>
<td></td>
</tr>
<tr>
<td>Cable</td>
<td>1 m, 2 x 0.75 mm²</td>
<td></td>
</tr>
<tr>
<td>Cable</td>
<td>1 m, 6 x 0.75 mm²</td>
<td></td>
</tr>
<tr>
<td>Parallel connection</td>
<td>Yes (Note performance data for supply!)</td>
<td></td>
</tr>
</tbody>
</table>

### Functional data

- Torque (nominal torque): Min. 15 Nm at nominal voltage
- Direction of rotation: ARF24-S-5, Deenergised NC, butterfly valve closed (A – AB = 0%)
- ARF24-S-5-O, Deenergised NO, butterfly valve open (A – AB = 100%)
- Manual override: With hand crank, can be fixed in any position
- Angle of rotation: 95° ≤
- Running time: Motor 150 s, Spring return ~16 s at –20 ... 50 °C / max. 60 s at –30 °C
- Noise level: Motor Max. 45 dB (A), Spring return ~62 dB (A)
- Service life: Min. 60'000 emergency settings
- Position indication: Mechanical

### Safety

- Protection class: III Extra low voltage
- Degree of protection: IP54
- EMC: CE according to 89/336/EEC
- Low voltage directive: CE according to 2006/95/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: –30 ... +50 °C
- Media temperature: +5 ... +100 °C (in butterfly valve)
- Non-operating temperature: –40 ... +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. 2.7 kg (without butterfly 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. 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.
PRODUCT INTRODUCTION

The rotary actuator ARF24-S-5(-O) is a device designed for use in emergency control and includes two auxiliary switches, suitable for AC/DC 24 V systems. It is characterized by a torque of 4 Nm and features a simple direct mounting system.

**Product Features**

- **Mode of Operation**: The actuator operates the butterfly valve to its normal working position while tensioning the return spring simultaneously. In case of power failure, the energy stored in the spring moves the butterfly valve back to the safe position.
- **Simple Direct Mounting**: The actuator can be easily mounted directly onto the butterfly valve using two screws. The mounting position is adjustable in 90° increments.
- **Manual Override**: The butterfly valve can be manually operated and locked in any position using a hand crank. The locking mechanism can be released manually or automatically by applying supply voltage.
- **High Functional Reliability**: The actuator is designed to withstand overloads and does not require limit switches. It automatically stops when the end stop is reached.
- **Signaling**: The actuator includes an adjustable auxiliary switch, ideal for signaling a 10%–94% angle rotation. Additionally, a fixed auxiliary switch is available.
- **Combination Butterfly Valves**: Refer to the butterfly valve documentation for suitable butterfly valves, their permitted media temperatures, and closing pressures.

**Further Documentations**

- Complete overview of actuators for water solutions
- Data sheets for butterfly valves
- Installation instructions for actuators and/or butterfly valves
- Notes for project planning (hydraulic characteristic curves, installation regulations, commissioning, maintenance, etc.)

**Electrical Installation**

- **Wiring Diagram**: The diagram shows the connections for the actuator, including the auxiliary switches and他们的符号.
- **Note**: Connect via safety isolation transformer. Parallel connection of other actuators possible.

**Dimensions [mm]**

- 57
- 99
- 124

**Safety Notes**

- 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.

**Products No Longer Available**

- Beware of outdated products.