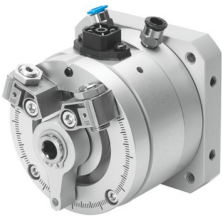


# Rotary actuator DSMI-40-270-A-B

Part number: 561691

**FESTO**



## Data sheet

| Feature                                            | Value                                                            |
|----------------------------------------------------|------------------------------------------------------------------|
| Adjustment range of swivel angle                   | 0 deg...270 deg                                                  |
| Stroke reduction in the end positions              | 5°                                                               |
| Shortest positioning stroke                        | 5° when positioning<br>15° for Soft Stop                         |
| Piston diameter                                    | 40 mm                                                            |
| Swivel angle                                       | 0 deg...272 deg                                                  |
| Cushioning                                         | Elastic cushioning rings/pads at both ends                       |
| Mounting position, positioning                     | Any                                                              |
| Mounting position, Soft Stop                       | Horizontal                                                       |
| Measuring principle of linear potentiometer        | Analog                                                           |
| Structural design                                  | Drive shaft on ball bearings<br>Rotary vane                      |
| Position sensing                                   | Via proximity switch<br>With integrated angle measurement system |
| Operating pressure                                 | 0.2 MPa...1 MPa                                                  |
| Operating pressure for positioning/soft stop       | 4 bar...8 bar                                                    |
| Max. swivel frequency at 6 bar                     | 2 Hz                                                             |
| Max. travel speed                                  | 2000 deg/s                                                       |
| Min. travel speed                                  | 50 deg/s                                                         |
| Typical positioning time, short-stroke, horizontal | 0.25/0.25 s                                                      |
| Typical positioning time, long stroke, horizontal  | 0.30/0.55 s                                                      |
| Connection resistance                              | 5 kOhm                                                           |
| Recommended contact current                        | 1 µA                                                             |
| Mode of operation                                  | Double-acting                                                    |
| Max. operating voltage DC                          | 42 V                                                             |
| Max. short-time slider current                     | 10 mA                                                            |
| Max. current consumption                           | 4 mA                                                             |
| Nominal operating voltage DC                       | 10 V                                                             |
| Connection resistance tolerance                    | 20 %                                                             |
| Permissible voltage fluctuations                   | <1%                                                              |
| CE marking (see declaration of conformity)         | As per EU EMC directive<br>As per EU RoHS directive              |
| UKCA marking (see declaration of conformity)       | To UK instructions for EMC                                       |

| Feature                                              | Value                                         |
|------------------------------------------------------|-----------------------------------------------|
|                                                      | To UK RoHS instructions                       |
| Operating medium                                     | Compressed air as per ISO 8573-1:2010 [6:4:4] |
| Information on operating and pilot media             | Operation with oil lubrication not possible   |
| Continuous shock resistance to DIN/IEC 68 Part 2-82  | Tested as per severity level 2                |
| Corrosion resistance class (CRC)                     | 0 - No corrosion stress                       |
| LABS (PWIS) conformity                               | VDMA24364-B2-L                                |
| Degree of protection                                 | IP65<br>As per IEC 60529                      |
| Vibration resistance to DIN/IEC 68 Part 2-6          | Tested as per severity level 2                |
| Ambient temperature                                  | -10 °C...60 °C                                |
| Impact energy in the end positions                   | 0.1 Nm                                        |
| Max. axial force                                     | 120 N                                         |
| Max. mass moment of inertia, horizontal              | 0.12 kgm <sup>2</sup>                         |
| Max. mass moment of inertia, vertical                | 0.12 kgm <sup>2</sup>                         |
| Max. radial force                                    | 350 N                                         |
| Min. mass moment of inertia, horizontal              | 0.006 kgm <sup>2</sup>                        |
| Min. mass moment of inertia, vertical                | 0.006 kgm <sup>2</sup>                        |
| Theoretical torque at 6 bar                          | 20 Nm                                         |
| Product weight                                       | 3950 g                                        |
| Angular resolution                                   | 0.1 deg                                       |
| Output signal                                        | Analog                                        |
| Independent linearity                                | 0.0025                                        |
| Positioning repetition accuracy                      | +/- 0.3 deg                                   |
| Soft Stop end position repetition accuracy           | < 0.2 deg                                     |
| Repetition accuracy, Soft Stop intermediate position | +/- 2 deg                                     |
| Linear potentiometer electrical connection           | 4-pin                                         |
| Cable length                                         | 30 m                                          |
| Type of mounting                                     | With internal thread                          |
| Pneumatic connection                                 | G1/8                                          |
| Material of measuring system housing                 | Wrought aluminum alloy<br>Anodized            |
| Stop lever material                                  | Wrought aluminum alloy<br>Anodized            |
| Drive shaft material                                 | Steel, nickel-plated                          |
| (Fixed) stop material                                | Steel                                         |
| Housing material                                     | Wrought aluminum alloy<br>Anodized            |
| Measuring system coupling material                   | TPE-U(PU)                                     |
| Feather key material                                 | Steel                                         |
| Vane material                                        | Reinforced PET                                |
| Material of plug housing                             | PA-reinforced                                 |
| Material of cylinder barrel                          | Wrought aluminum alloy                        |