

# Electric actuator ESBF-LS-40-300-3P

Part number: 8022587

FESTO



 General operating condition

## Data sheet

| Feature                                       | Value                                     |
|---|---|
| Size  | 40  |
| Stroke  | 300 mm                                    |
| Piston rod thread                             | M12x1.25                                  |
| Reversing backlash                            | 100 µm                                    |
| Screw diameter                                | 16 mm                                     |
| Spindle pitch                                 | 3 mm/U                                    |
| Max. angle of rotation of the piston rod +/-  | 0.2 deg                                   |
| Based on norm                                 | ISO 15552                                 |
| Mounting position                             | Any                                       |
| Piston rod end                                | External thread                           |
| Motor type                                    | Stepper motor<br>Servo motor              |
| Position sensing                              | For proximity sensor                      |
| Structural design                             | Electric actuator with lead screw spindle |
| Spindle type                                  | Lead screw                                |
| Symbol  | 00991941                                  |
| Protection against torsion/guide              | With plain-bearing guide                  |
| Max. acceleration                             | 2.5 m/s <sup>2</sup>                      |
| Max. speed                                    | 0.15 m/s                                  |
| Repetition accuracy                           | ±0.05 mm                                  |
| Duty cycle                                    | 100%                                      |
| Corrosion resistance class (CRC)              | 2 - Moderate corrosion stress             |
| LABS (PWIS) conformity                        | VDMA24364 zone III                        |
| Storage temperature                           | -20 °C ... 60 °C                          |
| For use in the food industry                  | See supplementary material information    |
| Relative air humidity                         | 0 - 95 %                                  |
| Degree of protection                          | IP40                                      |
| Ambient temperature                           | 0 °C ... 50 °C                            |
| Max. driving torque                           | 2.4 Nm                                    |
| Max. radial force on actuator shaft           | 130 N                                     |
| Max. feed force Fx                            | 1000 N                                    |
| No-load driving torque                        | 0.2 Nm                                    |
| Guide value for payload, horizontal           | 100 kg                                    |
| Guide value for payload, vertical             | 100 kg                                    |
| Mass moment of inertia JH per meter of stroke | 1.0187 kgcm <sup>2</sup>                  |
| Mass moment of inertia JL per kg of payload   | 0.0063 kgcm <sup>2</sup>                  |

| Feature                                 | Value                                   |
|---|---|
| Mass moment of inertia JO               | 0.1453 kgcm <sup>2</sup>                |
| Moving mass at 0 mm stroke              | 317 g                                   |
| Additional moving mass per 10 mm stroke | 11 g                                    |
| Basic weight with 0 mm stroke           | 1079 g                                  |
| Additional weight per 10 mm stroke      | 48 g                                    |
| Type of mounting                        | With internal thread<br>or accessory    |
| Interface code, actuator                | D40                                     |
| Note on materials                       | RoHS-compliant                          |
| Cover material                          | Wrought aluminum alloy, smooth-anodized |
| Piston rod material                     | High-alloy stainless steel              |
| Material of screws                      | Steel, galvanized                       |
| Spindle nut material                    | Roller bearing steel                    |
| Spindle material                        | Roller bearing steel                    |
| Material of cylinder barrel             | Wrought aluminum alloy, smooth-anodized |