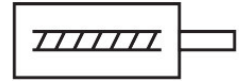


# Electric drive ESBF-LS-50-300-4P

Part number: 8022603

FESTO



 General operating condition

## Data sheet

| Feature                                          | Value                                     |
|--------------------------------------------------|-------------------------------------------|
| Size                                             | 50                                        |
| Stroke                                           | 300 mm                                    |
| Piston rod thread                                | M16x1.5                                   |
| Reversing backlash theoretical                   | 100 µm                                    |
| Spindle diameter                                 | 20 mm                                     |
| Spindle pitch                                    | 4 mm/U                                    |
| Torsional backlash at piston rod +/-             | 0.15 deg                                  |
| Based on standard                                | ISO 15552                                 |
| Mounting position                                | optional                                  |
| Piston-rod end                                   | Male thread                               |
| Type of motor                                    | Stepper motor<br>Servo motor              |
| Position detection                               | Via proximity switch                      |
| Design                                           | Electric cylinder with lead screw spindle |
| Spindle type                                     | Lead screw                                |
| Symbol                                           | 00991941                                  |
| Protection against torque/guide                  | With plain-bearing guide                  |
| Max. acceleration                                | 2.5 m/s <sup>2</sup>                      |
| Max. speed                                       | 0.2 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                          |
| Suitable for use with food                       | See supplementary material information    |
| Relative air humidity                            | 0 - 95%                                   |
| Degree of protection                             | IP40                                      |
| Ambient temperature                              | 0 °C ... 50 °C                            |
| Max. drive torque                                | 4.8 Nm                                    |
| Max. radial force at drive shaft                 | 300 N                                     |
| Max. feed force Fx                               | 1600 N                                    |
| Frictional torque independent of load            | 0.3 Nm                                    |
| Reference value effective load, horizontal       | 160 kg                                    |
| Reference value effective load, vertical         | 160 kg                                    |
| Mass moment of inertia JH per metre of stroke    | 1.2382 kgcm <sup>2</sup>                  |
| Mass moment of inertia JL per kg of working load | 0.004 kgcm <sup>2</sup>                   |

| Feature                                 | Value                                    |
|-----------------------------------------|------------------------------------------|
| Mass moment of inertia JO               | 0.1407 kgcm <sup>2</sup>                 |
| Moving mass for 0 mm stroke             | 532 g                                    |
| Additional moving mass per 10 mm stroke | 13 g                                     |
| Basic weight for 0 mm stroke            | 1716 g                                   |
| Additional weight per 10 mm stroke      | 67 g                                     |
| Type of mounting                        | Via female thread<br>Or accessories      |
| Interface code, actuator                | D50                                      |
| Note on materials                       | RoHS-compliant                           |
| Material cover                          | Wrought aluminium alloy, smooth anodised |
| Material piston rod                     | High-alloy stainless steel               |
| Material screws                         | Galvanised steel                         |
| Material spindle nut                    | Rolled steel                             |
| Material spindle                        | Rolled steel                             |
| Material cylinder barrel                | Smooth-anodised wrought aluminium alloy  |