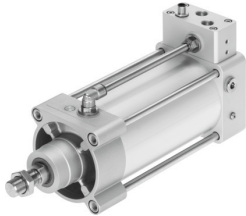


# Linear actuator DFPI-100- -

Part number: 5078949

**FESTO**



## Data sheet

| Feature                                      | Value                                                                                                  |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Size of valve actuator                       | 100                                                                                                    |
| Stroke                                       | 40 mm...990 mm                                                                                         |
| Piston diameter                              | 100 mm                                                                                                 |
| Based on norm                                | ISO 15552                                                                                              |
| Cushioning                                   | No cushioning                                                                                          |
| Mounting position                            | Any                                                                                                    |
| Mode of operation                            | Double-acting                                                                                          |
| Structural design                            | Piston<br>Piston rod<br>Tie rod 1<br>Cylinder barrel                                                   |
| Position sensing                             | With integrated linear potentiometer                                                                   |
| Measuring principle of linear potentiometer  | Potentiometer                                                                                          |
| Reverse polarity protection                  | Yes                                                                                                    |
| Operating pressure                           | 0.3 MPa...0.8 MPa<br>3 bar...8 bar<br>43.5 psi...116 psi                                               |
| Nominal operating pressure                   | 0.6 MPa<br>6 bar                                                                                       |
| Analog output                                | 4 - 20 mA                                                                                              |
| DC operating voltage range                   | 9 V...30 V                                                                                             |
| Recommended contact current                  | 0.1 µA                                                                                                 |
| Max. short-time slider current               | 10 mA                                                                                                  |
| Power supply                                 | Two-wire                                                                                               |
| Certification                                | RCM compliance mark                                                                                    |
| KC characters                                | KC-EMV                                                                                                 |
| CE marking (see declaration of conformity)   | As per EU EMC directive<br>as per EU explosion protection directive (ATEX)<br>As per EU RoHS directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>acc. to UK EX instructions<br>To UK RoHS instructions                    |
| Explosion prevention and protection          | Zone 1 (ATEX)<br>Zone 2 (ATEX)<br>Zone 21 (ATEX)                                                       |

| Feature                                             | Value                                                                                                                                                         |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                     | Zone 22 (ATEX)                                                                                                                                                |
| ATEX category gas                                   | II 2G                                                                                                                                                         |
| ATEX category for dust                              | II 2D                                                                                                                                                         |
| Type of ignition protection for gas                 | Ex h IIC T4 Gb                                                                                                                                                |
| Type of (ignition) protection for dust              | Ex h IIIC T120°C Db                                                                                                                                           |
| Explosive ambient temperature                       | -20°C ≤ Ta ≤ +60°C                                                                                                                                            |
| Operating medium                                    | Compressed air as per ISO 8573-1:2010 [7:4:4]                                                                                                                 |
| Information on operating and pilot media            | Operation with oil lubrication possible (required for further use)                                                                                            |
| Continuous shock resistance to DIN/IEC 68 Part 2-82 | Tested as per severity level 2                                                                                                                                |
| LABS (PWIS) conformity                              | VDMA24364 Zone III                                                                                                                                            |
| Storage temperature                                 | -20 °C...80 °C                                                                                                                                                |
| Relative air humidity                               | 5 - 100%<br>Condensating<br>Non-condensating                                                                                                                  |
| Degree of protection                                | IP65<br>IP67<br>IP69K<br>NEMA 4                                                                                                                               |
| Vibration resistance to DIN/IEC 68 Part 2-6         | Tested as per severity level 2                                                                                                                                |
| Ambient temperature                                 | -20 °C...80 °C                                                                                                                                                |
| Impact energy in the end positions                  | 1.3 J                                                                                                                                                         |
| Theoretical force at 6 bar, retracting              | 4417 N                                                                                                                                                        |
| Theoretical force at 6 bar, advancing               | 4712 N                                                                                                                                                        |
| Air consumption, retracting, per 10 mm stroke       | 0.515 l                                                                                                                                                       |
| Air consumption advancing per 10 mm stroke          | 0.549 l                                                                                                                                                       |
| Moving mass at 0 mm stroke                          | 1060 g                                                                                                                                                        |
| Additional moving mass per 10 mm stroke             | 28 g                                                                                                                                                          |
| Basic weight with 0 mm stroke                       | 4900 g                                                                                                                                                        |
| Additional weight per 10 mm stroke                  | 90 g                                                                                                                                                          |
| Hysteresis                                          | 0.4 mm                                                                                                                                                        |
| Independent linearity                               | ±0.05%                                                                                                                                                        |
| Repetition accuracy in ± %FS                        | 1 %FS                                                                                                                                                         |
| Repetition accuracy in ± mm                         | 0.7 mm                                                                                                                                                        |
| Electrical connection                               | 2-pin<br>3-pin<br>4-pin<br>5-pin<br>A-coded<br>Cable connector M16x1.5<br>M12x1<br>Straight plug/screw terminal<br>Straight plug<br>With specific accessories |
| Pneumatic connection                                | G3/8<br>G1/2<br>For pneumatic tubing outside diameter 8 mm<br>With specific accessories                                                                       |
| Note on materials                                   | RoHS compliant                                                                                                                                                |
| Material of end caps                                | Wrought aluminum alloy, coated                                                                                                                                |
| Lower cover material                                | Coated die-cast aluminum                                                                                                                                      |
| Electrical connection material                      | Brass, nickel-plated<br>high-alloy stainless steel                                                                                                            |
| Piston rod material                                 | high-alloy stainless steel                                                                                                                                    |
| Piston rod wiper material                           | TPE-U(PU)                                                                                                                                                     |
| Piping material                                     | high-alloy stainless steel                                                                                                                                    |
| Material of pneumatic tubing                        | Protective grounding                                                                                                                                          |
| Material of screws                                  | Coated steel<br>high-alloy stainless steel                                                                                                                    |

| Feature                       | Value                                              |
|-------------------------------|----------------------------------------------------|
| Static seal material          | NBR                                                |
| Material of pneumatic fitting | Brass, nickel-plated<br>high-alloy stainless steel |
| Tie rod material              | high-alloy stainless steel                         |
| Material of cylinder barrel   | Wrought aluminum alloy, smooth-anodized            |