

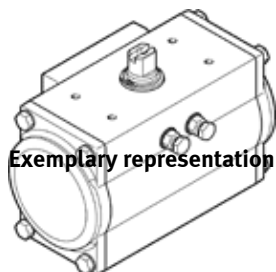
Semi-rotary actuator

DFPD-20-

Part number: 8042185

FESTO

rack and pinion design, connection pattern according to NAMUR VDI/VDE 3845 for mounting solenoid valves, position sensors and positioners, standard connection to fitting ISO 5211.



Data sheet

Overall data sheet – Individual values depend upon your configuration.

| Feature | Value |
|--|---|
| Size of actuator | 20 |
| Flange hole pattern | F03 F04 F05 |
| Swivel angle | 90 ... 180 deg |
| End-position adjustment range at 0° | -5 ... 5 deg |
| End-position adjusting range at nominal swivel angle | -5 ... 5 deg |
| Shaft connection depth | 10 ... 12 mm |
| Fitting connection conforms to standard | ISO 5211 |
| Assembly position | Any |
| Mode of operation | double-acting single-acting |
| Design structure | Rack and pinion |
| Closing direction | right-closing Closes to the left |
| Valve connection conforms to standard | VDI/VDE 3845 (NAMUR) |
| Connection for positioner and position sensor conforms to standard | VDI/VDE 3845 size AA 1 |
| Safety Integrity Level (SIL) | Product can be used in SRP/CS up to SIL 2 low demand Up to SIL 3 in redundant architecture up to SIL 1 high demand mode |
| Certified for safety function to ISO 13849 and IEC 61508 (SIL) | Product can be used in SRP/CS up to SIL 2 low demand up to SIL 1 high demand mode Up to SIL 3 in redundant architecture |
| Operating pressure MPa | 0.2 ... 0.8 MPa |
| Working pressure | 2 ... 8 bar |
| Operating pressure | 29 ... 116 psi |
| Nominal working pressure | 2 ... 6 bar |
| Maritime classification | see certificate |
| CE symbol (see declaration of conformity) | according to EU-Ex protection guideline (ATEX) |
| UKCA marking (see declaration of conformity) | To UK EX instructions |
| Explosion protection certification outside the EU | EPL Db (GB) EPL Gb (GB) |
| Certificate issuing department | DNV TAP00001CE German Technical Control Board (TÜV) Rheinland 968/V 1106.01/2023 |
| ATEX category Gas | II 2G |
| ATEX category Dust | II 2D |
| Explosion ignition protection type Gas | Ex h IIC T3 Gb X Ex h IIC T4 Gb X Ex h IIC T6 Gb X |
| Explosion ignition protection type Dust | Ex h IIIC T105°C Db X Ex h IIIC T175°C Db X |

| Feature | Value |
|---|--|
| Explosion-proof ambient temperature | Ex h IIIC T85°C Db X -20°C ≤ Ta ≤ +80°C -50°C ≤ Ta ≤ +60°C 0°C ≤ Ta ≤ +150°C |
| Operating medium | Compressed air in accordance with ISO8573-1:2010 [7:4:4] |
| Note on operating and pilot medium | Pressure dew point 10°C below ambient temperature/temperature of medium Lubricated operation possible (subsequently required for further operation) |
| Corrosion resistance classification CRC | 1 - Low corrosion stress |
| PWIS conformity | VDMA24364-B1/B2-L VDMA24364 zone III |
| Storage temperature | -20 ... 60 °C |
| Ambient temperature | -50 ... 150 °C |
| Torque at rated working pressure and 0° rotation angle | 4.9 ... 20.1 Nm |
| Torque at nominal operating pressure with 90° swivel angle | 2.5 ... 20.1 Nm |
| Note about the torque | The operating torque of the actuator must not be higher than the maximum permissible torque listed in ISO 5211, with reference to the size of the mounting flange and of the coupling. |
| Spring return torque with 0° swivel angle | 2.4 ... 7.2 Nm |
| Spring return torque at 90° | 4.8 ... 14.3 Nm |
| Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° | 0.8 ... 1.8 l |
| Product weight | 1,355 ... 1,423 g |
| Shaft connection | T9 T11 |
| Pneumatic connection | G1/8 1/8 NPT |
| Materials note | Conforms to RoHS |
| Material of connecting plate | Anodised wrought aluminium alloy |
| Material cover | Coated die-cast aluminium |
| Material seals | FPM FVMQ NBR |
| Material spring | Spring steel |
| Material housing | Anodised wrought aluminium alloy |
| Material piston | Aluminum die cast |
| Material bearing | POM PPS-reinforced |
| Material cam | Steel High alloy steel, non-corrosive |
| Material screws | High alloy steel, non-corrosive |
| Material shaft | Steel, nickel-plated High alloy steel, non-corrosive |