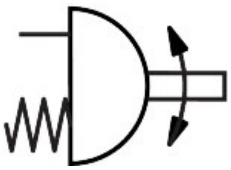
# Quarter turn actuator
# DFPD-120-RP-90-RS60-F07-R3-C

Part number: 8102820





## Data sheet

| Feature | Value |
|---|---|
| Size of valve actuator | 120 |
| Flange hole pattern | F07 |
| Swivel angle | 90 deg |
| End-position adjustment range at 0° | -5 deg...5 deg |
| End-position adjustment range at nominal swivel angle | -5 deg...5 deg |
| Shaft connection depth | 19 mm |
| Fitting connection conforms to standard | ISO 5211 |
| Mounting position | Any |
| Mode of operation | Single-acting |
| Design | Rack and pinion |
| Closing direction | Closes to the right |
| Valve connection conforms to standard | VDI/VDE 3845 (NAMUR) |
| Connection point for positioner and position sensor conforms to standard | VDI/VDE 3845 size AA 1 |
| Device type according to VDMA 66413 | Safety device |
| Safety function | The safety function consists of the actuator switching to the specified safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved through the spring force of the spring assembly. |
| Safety Integrity Level (SIL) | up to SIL 2 Low Demand mode<br>Up to SIL 3 in a redundant architecture<br>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)<br>Product can be used in SRP/CS up to SIL 1 (High Demand)<br>Up to SIL 3 in a redundant architecture |
| Burst pressure | 24 bar |
| Operating pressure | 0.2 MPa...0.8 MPa<br>2 bar...8 bar<br>29 psi...116 psi |
| Nominal operating pressure | 0.6 MPa<br>6 bar<br>87 psi |
| Maritime classification | See certificate |
| CE mark (see declaration of conformity) | To EU Explosion Protection Directive (ATEX) |
| UKCA marking (see declaration of conformity) | To UK EX instructions |

| Feature | Value |
|---|---|
| Explosion protection certification outside the EU | EPL Db (GB)<br>EPL Gb (GB) |
| Explosion protection | Zone 1 (ATEX)<br>Zone 1 (UKEX)<br>Zone 2 (ATEX)<br>Zone 21 (ATEX)<br>Zone 21 (UKEX)<br>Zone 22 (ATEX) |
| Certificate issuing authority | DNV TAP00001CE<br>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 for gas | Ex h IIC T4 Gb X |
| Explosion ignition protection type for dust | Ex h IIIC T105°C Db X |
| Explosion ambient temperature | -20°C <= Ta <= +80°C |
| Operating medium | Compressed air to ISO 8573-1:2010 [7:4:4] |
| Note on operating and pilot medium | Dew point at least 10 °C below the ambient temperature and temperature of the medium<br>Lubricated operation possible (in which case lubricated operation will always be required) |
| LABS (PWIS) conformity | VDMA24364-B1/B2-L |
| Storage temperature | -20 °C...60 °C |
| Ambient temperature | -20 °C...80 °C |
| Torque at nominal operating pressure and 0° swivel angle | 86 Nm |
| Torque at nominal operating pressure and 90° swivel angle | 44.8 Nm |
| Note on 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 at 0° swivel angle | 42.1 Nm |
| Spring return torque at 90° swivel angle | 83.3 Nm |
| Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° | 4.3 l |
| Product weight | 5747 g |
| Shaft connection | T17 |
| Pneumatic connection | G1/4 |
| Note on materials | RoHS compliant |
| Material sub-base | Anodised wrought aluminium alloy |
| Material cover | Anodised die-cast aluminium |
| Material seals | NBR |
| Material spring | Spring steel |
| Material housing | Anodised aluminium |
| Material piston | Die-cast aluminium |
| Material bearing | POM |
| Material cam | High-alloy stainless steel |
| Material screws | High-alloy stainless steel |
| Material shaft | High-alloy stainless steel |