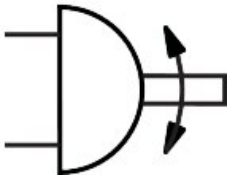
# Quarter turn actuator
# DFPD-20-RP-90-RD-F05

Part number: 8048011





## Data sheet

| Feature | Value |
|---|---|
| Size of valve actuator | 20 |
| Flange hole pattern | F05 |
| Swivel angle | 90 deg |
| End-position adjusting range at 0° | -5 deg...5 deg |
| End-position adjusting range at nominal swivel angle | -5 deg...5 deg |
| Depth shaft connection | 12 mm |
| Standard connection for valve | ISO 5211 |
| Mounting position | Any |
| Mode of operation | Double-acting |
| Structural design | Gear rack/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 |
| Devices type according to VDMA 66413 | Safety device |
| Safety function | The safety function consists of the actuator switching to the defined safety switching position. This switching movement is achieved by pressurizing the corresponding pressure chamber with compressed air. The value of the torque generated depends on the pressure difference between the two pressure chambers separated by the piston. |
| 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 safety-related parts of control systems up to SIL 2, low demand<br>Product can be used in safety-related parts of control systems 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 | 0.55 MPa<br>5.5 bar<br>79.75 psi |

| Feature | Value |
|---|---|
| Maritime classification | See certificate |
| CE marking (see declaration of conformity) | as per EU explosion protection directive (ATEX) |
| UKCA marking (see declaration of conformity) | acc. to UK EX instructions |
| Explosion protection certification outside the EU | EPL Db (GB)<br>EPL Gb (GB) |
| Explosion prevention and 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>TÜV Rheinland 968/V 1106.01/2023 |
| ATEX category gas | II 2G |
| ATEX category for dust | II 2D |
| Type of ignition protection for gas | Ex h IIC T4 Gb X |
| Type of (ignition) protection for dust | Ex h IIIC T105°C Db X |
| Explosive ambient temperature | -20°C <= Ta <= +80°C |
| Operating medium | Compressed air as per ISO 8573-1:2010 [7:4:4] |
| Information on operating and pilot media | Dew point min. 10 °C below the ambient temperature and temperature of medium<br>Operation with oil lubrication possible (required for further use) |
| 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 | 20.1 Nm |
| Torque at nominal operating pressure and 90° swivel angle | 20.1 Nm |
| Note about the torque | The actuator's operating torque must not be higher than the maximum permissible torque listed in ISO 5211, based on the size of the mounting flange and the coupling. |
| Air consumption at 6 bar per cycle 0°-nominal swivel angle-0° | 1.8 l |
| Product weight | 1275 g |
| Shaft connection | T11 |
| Pneumatic connection | G1/8 |
| Note on materials | RoHS compliant |
| Material of sub-base | Wrought aluminum alloy, anodized |
| Cover material | Die-cast aluminum, coated |
| Seals material | NBR |
| Housing material | Anodized aluminum |
| Material of piston | Die-cast aluminum |
| Material of bearing | POM |
| Cam material | high-alloy stainless steel |
| Material of screws | high-alloy stainless steel |
| Shaft material | Steel, nickel-plated |