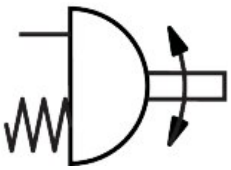
Quarter turn actuator
DFPD-N-20-RP-90-RS45-F05-R3-C

Part number: 8102800





Data sheet

Feature	Value
Size of valve actuator	20
Flange hole pattern	F05
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	12 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 Up to SIL 3 in a 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) Product can be used in SRP/CS up to SIL 1 (High Demand) Up to SIL 3 in a redundant architecture
Burst pressure	24 bar
Operating pressure	0.2 MPa...0.8 MPa 2 bar...8 bar 29 psi...116 psi
Nominal operating pressure	0.45 MPa 4.5 bar 65.25 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) EPL Gb (GB)
Explosion protection	Zone 1 (ATEX) Zone 1 (UKEX) Zone 2 (ATEX) Zone 21 (ATEX) Zone 21 (UKEX) Zone 22 (ATEX)
Certificate issuing authority	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 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 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	11 Nm
Torque at nominal operating pressure and 90° swivel angle	5.7 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	5.4 Nm
Spring return torque at 90° swivel angle	10.7 Nm
Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°	0.8 l
Product weight	1399 g
Shaft connection	T11
Pneumatic connection	1/8 NPT
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