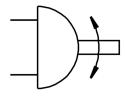
Quarter turn actuator DFPD-20-RP-90-RD-F04-R3-EP Part number: 8047618







Data sheet

Flange hole pattern Found in the properties of the drive switching to the defined safety switching position. This switching movement is achieved by the piston. Safety integrity level (SIL) Safety integrity level (SIL) Certified for safety function to ISO 13849 and IEC 61508 (SIL) Diversity in the properties of the drive switch in give and in product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure Ozonman operating pressure	Feature	Value
Swivel angle End-position adjusting range at 0° -5 deg5 deg -6 deg5 deg5 deg -6 deg5 deg5 deg -6 deg5 deg5 deg -6 deg5 deg5 deg5 deg -6 deg5 deg5 deg5 deg -6 deg5 deg5 deg5 deg5 deg5 deg -6 deg5 deg5 deg5 deg5 deg5 deg5 deg5 deg	Size of valve actuator	20
End-position adjusting range at 0° End-position adjusting range at nominal swivel angle Depth shaft connection Standard connection 12 mm Standard connection for valve ISO 5211 Mounting position Mounting position Mounting position Mounting position Closing direction Closing direction Closing direction Closing direction Closing direction Connection conforms to standard VDI/VDE 3845 (NAMUR) Connection point for positioner and position sensor conforms to standard Devices type according to VDMA 66413 Safety function The safety function consists of the drive 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. Up to SIL 2 low demand mode 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 1, high demand mode Product can be used in safety-related parts of control systems up to SIL 1, high demand mode Product can be used in safety-related parts of control systems up to SIL 1, high demand mode Product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture	Flange hole pattern	F04
End-position adjusting range at nominal swivel angle Depth shaft connection 12 mm Standard connection for valve Mounting position Any Mode of operation Double-acting Gear rack/pinion Closkwise closing Valve connection conforms to standard VDI/VDE 3845 (NAMUR) Connection point for positioner and position sensor conforms to standard Devices type according to VDMA 66413 Safety function Safety function The safety function consists of the drive 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 up to SIL 3 in a redundant architecture up to SIL 1, high demand mode Up to SIL 1 lingh demand mode Up to SIL 3 in a redundant architecture up to SIL 2, low demand Product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Up to SIL 5 in a redundant architecture	Swivel angle	90 deg
Depth shaft connection 12 mm ISO 5211	End-position adjusting range at 0°	-5 deg5 deg
Standard connection for valve Mounting position Any Mode of operation Double-acting Gear rack/pinion Closking direction Clockwise closing VDI/VDE 3845 (NAMUR) Connection point for positioner and position sensor conforms to standard Oevices type according to VDMA 66413 Safety device The safety function consists of the drive 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. Up to SIL 2 low demand mode 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 safety-related parts of control systems up to SIL 1, high demand Product can be used in safety-related parts of control systems up to SIL 1, high demand Up to SIL 3 in a redundant architecture Up to SIL 5 in a redundant architecture	End-position adjusting range at nominal swivel angle	-5 deg5 deg
Mounting position Any Mode of operation Double-acting Gear rack/pinion Closing direction Closkwise closing VDI/VDE 3845 (NAMUR) Connection point for positioner and position sensor conforms to standard Devices type according to VDMA 66413 Safety function Safety function The safety function consists of the drive 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. 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) Operating pressure Operating pressure Operating pressure Oz. MPa0.8 MPa 2 bar8 bar 29 psi116 psi Nominal operating pressure O.55 MPa 5.5 bar 79.75 psi	Depth shaft connection	12 mm
Mode of operation Double-acting Gear rack/pinion Clockwise closing Voll/VDE 3845 (NAMUR) Connection point for positioner and position sensor conforms to standard Devices type according to VDMA 66413 Safety device Safety function The safety function consists of the drive 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 up to SIL 3 in a redundant architecture up to SIL 1 high demand mode Product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Up to SIL 3 in a redundant architecture Up to SIL 3 in a redundant architecture up to SIL 1, high demand up to SIL 3 in a redundant architecture	Standard connection for valve	ISO 5211
Structural design Closking direction Clockwise closing Valve connection conforms to standard VDI/VDE 3845 (NAMUR) Connection point for positioner and position sensor conforms to standard Devices type according to VDMA 66413 Safety function Safety function The safety function consists of the drive 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 up to SIL 3 in a redundant architecture up to SIL 1 high demand mode Product can be used in safety-related parts of control systems up to SIL 2, low demand Product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture	Mounting position	Any
Closkwise closing Valve connection conforms to standard VDI/VDE 3845 (NAMUR) Connection point for positioner and position sensor conforms to standard Devices type according to VDMA 66413 Safety device The safety function consists of the drive 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. Up to SIL 2 low demand mode 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 1, high demand up to SIL 3 in a redundant architecture Operating pressure Operating pressure Operating pressure Operating pressure Ostandard Clockwise closing VDI/VDE 3845 (NAMUR) VDI/V	Mode of operation	Double-acting Double-acting
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Connection point for positioner and position sensor conforms to standard Devices type according to VDMA 66413 Safety function The safety function consists of the drive 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. 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 safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Operating pressure Oz. MPaOs. MPa 2 bar8 bar 29 psi116 psi Nominal operating pressure O.55 MPa 5.5 bar 79.75 psi	Closing direction	Clockwise closing
Devices type according to VDMA 66413 Safety device The safety function consists of the drive 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 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 safety-related parts of control systems up to SIL 2, low demand Product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Operating pressure 0.2 MPa0.8 MPa 2 bar8 bar 29 psi116 psi Nominal operating pressure 0.55 MPa 5.5 bar 79.75 psi	Valve connection conforms to standard	VDI/VDE 3845 (NAMUR)
The safety function consists of the drive 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 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 safety-related parts of control systems up to SIL 2, low demand Product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Operating pressure Operating pressure O.2 MPaO.8 MPa 2 bar8 bar 29 psi116 psi Nominal operating pressure O.55 MPa 5.5 bar 79.75 psi	Connection point for positioner and position sensor conforms to standard	VDI/VDE 3845 size AA 1
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 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 safety-related parts of control systems up to SIL 2, low demand Product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Operating pressure 0.2 MPa0.8 MPa 2 bar8 bar 29 psi116 psi Nominal operating pressure 0.55 MPa 5.5 bar 79.75 psi	Devices type according to VDMA 66413	Safety device
up to SIL 3 in a redundant architecture up to SIL 1 high demand mode Product can be used in safety-related parts of control systems up to SIL 2, low demand Product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Operating pressure O.2 MPa0.8 MPa 2 bar8 bar 29 psi116 psi Nominal operating pressure 0.55 MPa 5.5 bar 79.75 psi	Safety function	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
2, low demand Product can be used in safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Operating pressure 0.2 MPa0.8 MPa 2 bar8 bar 29 psi116 psi Nominal operating pressure 0.55 MPa 5.5 bar 79.75 psi	Safety integrity level (SIL)	up to SIL 3 in a redundant architecture
2 bar8 bar 29 psi116 psi Nominal operating pressure 0.55 MPa 5.5 bar 79.75 psi	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 1, high demand
5.5 bar 79.75 psi	Operating pressure	2 bar8 bar
Maritime classification See certificate	Nominal operating pressure	5.5 bar
	Maritime classification	See certificate

Feature	Value
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) EPL Gb (GB)
Explosion prevention and 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 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 Operation with oil lubrication possible (required for further use)
Corrosion resistance class (CRC)	1 - Low corrosion stress
LABS (PWIS) conformity	VDMA24364-B1/B2-L
Storage temperature	-20 °C60 °C
Ambient temperature	-20 °C80 °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.
MTTFd	1126 years
PFH	0.00000101
PFD	0.00142
Air consumption at 6 bar per cycle 0°-nominal swivel angle-0°	1.81
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	Wrought aluminum alloy, anodized
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	High-alloy stainless steel