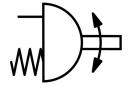
Quarter turn actuator DFPD-40-RP-90-RS60-F05-R3-C Part number: 8102804





General operating condition

Data sheet

Flange hole pattern FOS 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 16 mm Standard connection for valve ISO 5211 Mounting position Any Mode of operation Single-acting Structural design Gear rack/pinion Closing direction Clockwise closing Symbol 00991266 Valve connection nors to standard VDI/VDE 3845 size AA 1 Standard Safety device Safety function The safety function consists of the drive switching to the defined safety switching position when the compressed air is switched off and the spring force of the spring force of the spring assembly. Safety integrity level (SIL) Up to SIL 3 in a redundant architecture up to SIL 3 in a redundant architecture Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.4 MPa Operating pressure 0.4 MPa Operating pressure 0.4 MPa Operating pressure 0.4 MPa Operating pressure	Feature	Value
Swivel angle 90 deg End-position adjusting range at nominal swivel angle -5 deg 5 deg Depth shaft connection 16 mm Standard connection for valve ISO 5211 Mounting position Any Mode of operation Single-acting Structural design Gear rack/pinion Closing direction Clockwise closing Symbol 00991266 Valve connection ron 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 drive switching to the defined safety switching position when the compressed is switched off and the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switching movement is achieved by the spring chamber is exhausted. This switc	Size of valve actuator	40
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 16 mm Standard connection for valve ISO 5211 Mounting position Any Mode of operation Single-acting Structural design Gear rack/pinion Closing direction Clockwise closing Symbol 00991266 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 drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhaused. This switching movement is achieved by the spring force of the spring assembly. Safety integrity level (SIL) Up to SIL 2 low demand mode up to SIL 1 high demand mode Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pr	Flange hole pattern	F05
End-position adjusting range at nominal swivel angle 5 deg 5 deg Depth shaft connection 16 mm Standard connection for valve ISO 5211 Mounting position Any Mode of operation Single-acting Structural design Gear rack/pinion Closking direction Clockwise closing Symbol 00991266 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 drive switching to the defined safety synitching position when the compressed air is switched off and the spring chream doed up to SIL 2 in a redundant architecture up to SIL 1 in section 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 Operating pressure 0.2 MPa 0.8 MPa Operating pressure Operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure	Swivel angle	90 deg
Depth shaft connection 16 mm Standard connection for valve ISO 5211 Mounting position Any Mode of operation Single-acting Structural design Gear rack/pinion Closing direction Clockwise closing Symbol 00991266 Valve connection conforms to standard VDI/VDE 3845 size AA 1 Standard VDI/VDE 3845 size AA 1 Standard VDI/VDE 3845 size AA 1 Devices type according to VDMA 66413 Safety device Safety function The safety function consists of the drive switching nowement is achieved by 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 3 in a redundant architecture 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 3 in a redundant architecture Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure 6 bar	End-position adjusting range at 0°	-5 deg 5 deg
Standard connection for valve ISO 5211 Mounting position Any Mode of operation Single acting Structural design Gear rack/pinion Closing direction Clockwise closing Symbol 00991266 Valve connection conforms to standard VDI/VDE 3845 (NAMUR) Connection point for positioner and position sensor conforms to standard Safety device Devices type according to VDMA 66413 Safety device Safety function Safety device Safety function The safety function consists of the drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by the spring force of the spring assembly. Safety integrity level (SIL) 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 1 in a redundant architecture Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.6 MPa Nominal operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure 6 bar Nominal operatin	End-position adjusting range at nominal swivel angle	-5 deg 5 deg
Mounting position Any Mode of operation Single-acting Structural design Gear rack/pinion Closing direction Clockwise closing Symbol 00991266 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 drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by the spring force of the spring assembly. Safety integrity level (SIL) Up to SIL 2 low demand mode up to SIL 1 low 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 0.2 MPa 0.8 MPa Operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal opera	Depth shaft connection	16 mm
Mode of operation Single-acting Structural design Gear rack/plinion Closing direction Clockwise closing Symbol 00991266 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 drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by 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 ing hemand 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 0.2 MPa 0.8 MPa Operating pressure 2.9 ar 8 Bar Operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure 6 bar Nominal operating pressure 87 psi Maritime classification See certificate CE marking (see declaration of c	Standard connection for valve	ISO 5211
Structural design Gear rack/pinion Closing direction Clockwise closing Symbol 00991266 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 drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by 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 safety-related parts of control systems up to SIL 1, high demand up to SIL 3 in a redundant architecture Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.4 MPa Operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure 87 psi Maritime classification See certificate CE marking (see declaration of conformity) as per EU explosion protection directive (ATEX)	Mounting position	Any
Closing direction Clockwise closing Symbol 00991266 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 drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by the spring force of the spring assembly. Safety integrity level (SIL) 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 0.2 MPa 0.8 MPa Operating pressure 0.6 MPa Nominal operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure 87 psi Maintime classification See certificate CErt marking (see declaration of conformity) as per EU explosion protection directive (ATEX)	Mode of operation	Single-acting
Symbol 00991266 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 drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by the spring force of the spring assembly. Safety integrity level (SIL) Up to SIL 2 low demand mode up to SIL 2 low 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 up to SIL 3 in a redundant architecture Operating pressure 0.2 MPa 0.8 MPa Operating pressure 2 bar 8 bar Operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure 87 psi Maritime classification See certificate as per EU explosion protection directive (ATEX)	Structural design	Gear rack/pinion
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 drive switching to the defined safety switching position when the compressed air is switched off and the spring force of the spring accore of the spring force of the spring accore of the spring force of the spring accore of the spring accore of the spring accore of the spring accore of the spring force of the spring accore of the spring force of the spring force of the spring accore of the spring force of the spring accore of the spring force of the spring force of the spring accore of the spring force of the spring accore of the spring ac	Closing direction	Clockwise closing
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 drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by the spring force of the spring assembly. Safety integrity level (SIL) 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 2, low demand mode Operating pressure 0.2 MPa 0.8 MPa Operating pressure 0.4 MPa Operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure 87 psi Maritime classification See certificate CErt marking (see declaration of conformity) as per EU explosion protection directive (ATEX)	Symbol	00991266
standardSafety deviceDevices type according to VDMA 66413Safety deviceSafety functionThe safety function consists of the drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by 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 modeCertified 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 up to SIL 1 high demand up to SIL 3 in a redundant architectureOperating pressure0.2 MPa 0.8 MPaOperating pressure0.6 MPaNominal operating pressure0.6 MPaNominal operating pressure6 barNominal operating pressure87 psiMaritime classificationSee certificate as per EU explosion protection directive (ATEX)	Valve connection conforms to standard	VDI/VDE 3845 (NAMUR)
Safety functionThe safety function consists of the drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by the spring force of the spring assembly.Safety integrity level (SIL)Up to SIL 2 low demand mode up to SIL 1 high demand modeCertified 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 architectureOperating pressure0.2 MPa 0.8 MPaOperating pressure2 bar 8 barOperating pressure0.6 MPaNominal operating pressure6 barNominal operating pressure87 psiMaritime classificationSee certificate as per EU explosion protection directive (ATEX)	Connection point for positioner and position sensor conforms to standard	VDI/VDE 3845 size AA 1
switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by 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 modeCertified 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 architectureOperating pressure0.2 MPa 0.8 MPaOperating pressure2 bar 8 barOperating pressure0.6 MPaNominal operating pressure6 barNominal operating pressure87 psiMaritime classificationSee certificateCE marking (see declaration of conformity)as per EU explosion protection directive (ATEX)	Devices type according to VDMA 66413	Safety device
up to SIL 3 in a redundant architecture up to SIL 1 high demand modeCertified 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 architectureOperating pressure0.2 MPa 0.8 MPaOperating pressure2 bar 8 barOperating pressure0.6 MPaNominal operating pressure0.6 MPaNominal operating pressure6 barNominal operating pressure87 psiMaritime classificationSee certificate as per EU explosion protection directive (ATEX)	Safety function	switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by
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 architectureOperating pressure0.2 MPa 0.8 MPaOperating pressure2 bar 8 barOperating pressure29 psi 116 psiNominal operating pressure0.6 MPaNominal operating pressure6 barNominal operating pressure87 psiMaritime classificationSee certificateCE marking (see declaration of conformity)as per EU explosion protection directive (ATEX)	Safety integrity level (SIL)	up to SIL 3 in a redundant architecture
Operating pressure2 bar 8 barOperating pressure29 psi 116 psiNominal operating pressure0.6 MPaNominal operating pressure6 barNominal operating pressure87 psiMaritime classificationSee certificateCE marking (see declaration of conformity)as per EU explosion protection directive (ATEX)	Certified for safety function to ISO 13849 and IEC 61508 (SIL)	2, low demand Product can be used in safety-related parts of control systems up to SIL 1, high demand
Operating pressure 29 psi 116 psi Nominal operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure 87 psi Maritime classification See certificate CE marking (see declaration of conformity) as per EU explosion protection directive (ATEX)	Operating pressure	0.2 MPa 0.8 MPa
Nominal operating pressure 0.6 MPa Nominal operating pressure 6 bar Nominal operating pressure 87 psi Maritime classification See certificate CE marking (see declaration of conformity) as per EU explosion protection directive (ATEX)	Operating pressure	2 bar 8 bar
Nominal operating pressure6 barNominal operating pressure87 psiMaritime classificationSee certificateCE marking (see declaration of conformity)as per EU explosion protection directive (ATEX)	Operating pressure	29 psi 116 psi
Nominal operating pressure87 psiMaritime classificationSee certificateCE marking (see declaration of conformity)as per EU explosion protection directive (ATEX)	Nominal operating pressure	0.6 MPa
Maritime classification See certificate CE marking (see declaration of conformity) as per EU explosion protection directive (ATEX)	Nominal operating pressure	6 bar
CE marking (see declaration of conformity) as per EU explosion protection directive (ATEX)	Nominal operating pressure	87 psi
	Maritime classification	See certificate
UKCA marking (see declaration of conformity) acc. to UK EX instructions	CE marking (see declaration of conformity)	as per EU explosion protection directive (ATEX)
	UKCA marking (see declaration of conformity)	acc. to UK EX instructions

FESTO

Feature	Value
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	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)
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	28 Nm
Torque at nominal operating pressure and 90° swivel angle	14.5 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.
Spring return torque at 0° swivel angle	13.8 Nm
Spring return torque with 90° swivel angle	27.2 Nm
MTTFd	1126 years
PFH	1.01E-7
PFD	7.8E-4
Air consumption at 6 bar per cycle 0°-nominal swivel angle-0°	1.5 l
Product weight	2185 g
Shaft connection	T14
Pneumatic connection	G1/8
Note on materials	RoHS-compliant
Material of sub-base	Wrought aluminum alloy, anodized
Cover material	Wrought aluminum alloy, anodized
Seals material	NBR
Material of spring	Spring steel
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