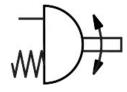
Semi-rotary drive DFPD-N-900-RP-90-RS60-F1012 Part number: 8084139

FESTO





Data sheet

Feature	Value
Size of valve actuator	900
Flange hole pattern	F1012
Swivel angle	90 deg
End-position adjustment range at 0°	-5 deg5 deg
End-position adjustment range at nominal swivel angle	-5 deg5 deg
Shaft connection depth	29 mm
Fitting connection conforms to standard	ISO 5211
Mounting position	optional
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 3
Device 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 realised by the spring force of the spring assembly.
Safety Integrity Level (SIL)	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 MPa0.8 MPa 2 bar8 bar 29 psi116 psi
Nominal operating pressure	0.6 MPa 6 bar 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

EPIL GIS (GB) Explosion protection Explosion protection Explosion protection Explosion protection Explosion protection Explosion protection Explosion grows a constant and a consta	Feature	Value
Zone 1 (JKEX) Zone 21 (ATEX) Zone 21 (ATEX) Zone 21 (ATEX) Zone 22 (MEX)	Explosion protection certification outside the EU	
German Technical Control Board (TÜV) Rheinland 968/V 1106.01/2023 ATEX category gas II 26 ATEX category dust II 20 Explosion ignition protection type for gas Ex h III CT 16 BX Explosion ignition protection type for dust Exh III CT 16 BX Explosion ignition protection type for dust Exh III CT 16 BX Explosion ignition protection type for dust Exh III CT 16 BX 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 Unbricated operation possible (in which case lubricated operation will always be required) LABS (PWIS) conformity VOMA2436-81/82-1 Storage temperature 10° C60° C Ambient temperature 10° C60° C Torque at nominal operating pressure and 0° swivel angle 10° Systing return torque at 0° swivel angle 10° Systing return torque at 0° swivel angle 10° Spring return torque at 0° swivel angle 10° Systing re	Explosion protection	Zone 1 (UKEX) Zone 2 (ATEX) Zone 21 (ATEX) Zone 21 (UKEX)
ATEX category dust Explosion ignition protection type for gas Explosion ignition protection type for gas Explosion ignition protection type for dust Explosion ignition ignition ignition protection type Explosion ignition ig	Certificate issuing authority	
Explosion ignition protection type for gas Explosion ignition protection type for dust Explosion ignition protection type for dust Explosion ignition protection type for dust Explosion ambient temperature 20 °C <= Ta <= +80 °C Opperating medium Compressed air to 150 8573-1:2010 [7:4:4] 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 VDMA2436-B1/82-L Storage temperature 20 °C60 °C Ambient temperature 20 °C80 °C Torque at nominal operating pressure and 0° swivel angle Sorior at nominal operating pressure and 90° swivel angle Note on torque The operating torque of the actuator must not be higher than the maximum permissible torque listed in 150 5211, with reference to the size of the mounting flange and of the coupling. Spring return torque at 0° swivel angle 325.1 Nm Spring return torque at 0° swivel angle 595 Nm Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight Shaft connection 177 Prenumatic connection 174 NPT Note on materials Material sub-base Anodised wrought aluminium alloy Material cover Material seats Material seats Material seats Material seats Material spring Material piston Material serves Material screws Materi	ATEX category gas	II 2G
Explosion ignition protection type for dust Explosion ignition protection type for dust Explosion ambient temperature -20 °C c – Ta c – +80 °C 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 °C60 °C Ambient temperature -20 °C60 °C Ambient temperature -20 °C60 °C Torque at nominal operating pressure and 0° swivel angle Spring return torque at one swivel angle -22 °C60 °C 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 325.1 Nm Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure on Demand (PFD) Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 30.395 g Shaft connection 1/4 NPT Note on materials Material sub-base Anodised wrought aluminium alloy Material sourhase Material sourhase Material sourhase Material sourhase Material sourhase Material sourhase Material piston Material piston Material piston Material piston Material piston Material piston Material sourhase Material screws Migh-alloy stainless steel	ATEX category dust	II 2D
Explosion ambient temperature	Explosion ignition protection type for gas	Ex h IIC T4 Gb X
Operating medium Compressed air to ISO 8573-1:2010 [7:4:4] Note on operating and pilot medium Unbricated operating and pilot medium Unbricated operation possible (in which case lubricated operation will always be required) LABS (PWIS) conformity VDMA24364-B1/B2-L Storage temperature 20 °C80 °C Ambient temperature 20 °C80 °C Torque at nominal operating pressure and 0° swivel angle 593.5 Nm Torque at nominal operating pressure and 90° swivel angle 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 595 Nm Mean time to dangerous failure (MTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) 3.1.5 I 3.3.9 S Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 30395 g Shaft connection 127 Preduratic connection 1/4 NPT Note on materials RoHS-compliant Material sub-base Material sub-base Material sub-base Material sub-base Material soals NBR Material spring Material spring Material spring Material posing Material posing Material posing Material bousing Material screws High-alloy stainless steel	Explosion ignition protection type for dust	Ex h IIIC T105°C Db X
Dew point at least 10 °C below the ambient temperature and temperature of the medium Lemperature of Lemperature of Lemperature of Lemperature of Lemperature very Lemperature	Explosion ambient temperature	-20 °C <= Ta <= +80 °C
Dew point at least 10 °C below the ambient temperature and temperature of the medium Lemperature of Lemperature of Lemperature of Lemperature of Lemperature very Lemperature	Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Storage temperature -20 °C60 °C Ambient temperature -20 °C60 °C Torque at nominal operating pressure and 0° swivel angle 593.5 Nm Torque at nominal operating pressure and 90° swivel angle 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 90° swivel angle 325.1 Nm Spring return torque at 90° swivel angle 595 Nm Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) 0.00078 Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 30395 g Shaft connection 1727 Preumatic connection 174 NPT Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material seals NBR Material spring Spring steel Material spring Spring steel Material bousing Material bousing Material bousing Material bearing POM Material bearing POM Material com Material com Material com Material com Material com Material com Material sears Material bearing POM Material com Material bearing Material com Material com Material com Material bearing Material com Material com Material bearing Material com Material com Material com Material bearing Material com Material bearing Material com Material com Material com Material seces Material com Material bearing Material com Mater	Note on operating and pilot medium	temperature of the medium Lubricated operation possible (in which case lubricated operation will
Ambient temperature -20 °C80 °C Torque at nominal operating pressure and 0° swivel angle Torque at nominal operating pressure and 90° swivel angle 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 Spring return torque at 90° swivel angle Spring return torque at 90° swivel angle Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of failure on Demand (PFD) 0.00078 Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle 0°- Product weight 30.395 g Shaft connection 127 Preumatic connection 1727 Preumatic connection Note on materials RoHS-compliant Material seals Material seals NBR Material seals NBR Material spring Spring steel Material housing Material piston Die-cast aluminium Material piston Die-cast aluminium Material carm Material searing Material screws High-alloy stainless steel	LABS (PWIS) conformity	VDMA24364-B1/B2-L
Torque at nominal operating pressure and 0° swivel angle Torque at nominal operating pressure and 90° swivel angle Note on torque 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 Spring return torque at 90° swivel angle Spring Fallure por Hour (PFH) 1.01E-07 Probability of Failure por Hour (PFH) 1.01E-07 Probability of Failure por Hour (PFH) 1.01E-07 Product weight 31.5 1 spring teven Spring teven Spring teven Spring to spring to spring to spring to spring to spring steel Material sub-base Anodised wrought aluminium alloy Material seals Material spring Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material bearing POM Material bearing High-alloy stainless steel	Storage temperature	-20 °C60 °C
Torque at nominal operating pressure and 90° swivel angle 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 90° swivel angle Spring return torque at 90° swivel angle Spring return torque at 90° swivel angle Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) 0.00078 Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 30395 g Shaft connection 1727 Pneumatic connection 1/4 NPT Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material seals Material seals Material spring Spring steel Material piston Die-cast aluminium, coated Material bearing Material bearing POM Material bearing Material core Material core Material bearing Material bearing Material bearing Material screws High-alloy stainless steel	Ambient temperature	-20 °C80 °C
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 9° swivel angle Spring return torque at 9°° swivel angle Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 30395 g Shaft connection T27 Preumatic connection 1/4 NPT Note on materials Material sub-base Anodised wrought aluminium alloy Material seals MBR Material spring Spring steel Material piston Material piston Material bearing Material bearing Material bearing Material bearing Material core Material spring Material bearing Material screws High-alloy stainless steel High-alloy stainless steel	Torque at nominal operating pressure and 0° swivel angle	593.5 Nm
maximum permissible torque listed in ISO 5211, with reference to the size of the mounting flange and of the coupling. Spring return torque at 9° swivel angle Spring return torque at 90° swivel angle Mean time to dangerous failure (MTTfd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 30395 g Shaft connection T27 Pneumatic connection Note on materials Material sub-base Anodised wrought aluminium alloy Material seals Material spring Material spring Material piston Material piston Material piston Material bearing Material cam Material screws Migh-alloy stainless steel	Torque at nominal operating pressure and 90° swivel angle	323.6 Nm
Spring return torque at 90° swivel angle Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight Shaft connection T27 Pneumatic connection 1/4 NPT Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material seals Material spring Material spring Material housing Material piston Material bearing Material com Material com Material com Material piston Material com Material com Material searing Material com Material piston Material searing Material com Material com Material searing Material searing Material searing Material searing Material screws High-alloy stainless steel	Note on torque	maximum permissible torque listed in ISO 5211, with reference to the
Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 0.00078 Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight Shaft connection T27 Preumatic connection Note on materials Material sub-base Material seals Material spring Material spring Material housing Material piston Material bearing Material cam Material cam Material screws	Spring return torque at 0° swivel angle	325.1 Nm
Probability of Failure per Hour (PFH) 1.01E-07 0.00078 Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight Shaft connection T27 Pneumatic connection Note on materials Material sub-base Material seals Material spring Material spring Material housing Material piston Material com Material com Material com Material bearing Material com Material com Material bearing Material com Material sears Material piston Material com Material com Material sears Material bearing Material bearing Material com Material sears Material spring Material piston Material bearing Material com Material com Material screws Material screws High-alloy stainless steel	Spring return torque at 90° swivel angle	595 Nm
Probability of Failure on Demand (PFD) Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight Shaft connection T27 Pneumatic connection Note on materials Material sub-base Anodised wrought aluminium alloy Material seals Material seals Material spring Material piston Material piston Material com Material com Material com Material com Material bearing Material com Material com Material sears Material sears Material piston Material bearing Material com Material com Material com Material com Material com Material sears Material sears Material sears Material bearing Material sears Material sea	Mean time to dangerous failure (MTTFd)	1126 years
Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight Shaft connection T27 Pneumatic connection Note on materials Material sub-base Anodised wrought aluminium alloy Material seals Material spring Material spring Material housing Material piston Material bearing Material com Material com Material com Material piston Material bearing Material com Material com Material sears Material piston Material bearing Material sears Material sears Material sears Material sears Material piston Material bearing Material sears Ma	Probability of Failure per Hour (PFH)	1.01E-07
angle-0° Product weight Shaft connection T27 Pneumatic connection 1/4 NPT Note on materials Material sub-base Anodised wrought aluminium alloy Material seals Material seals Material spring Material spring Material housing Material piston Material bearing Material cam Material cam Material screws High-alloy stainless steel	Probability of Failure on Demand (PFD)	0.00078
Shaft connection T27 Pneumatic connection 1/4 NPT Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material cover Die-cast aluminium, coated Material spring Spring steel Material housing Anodised wrought aluminium alloy Die-cast aluminium, coated Material spring Spring steel Material housing Anodised wrought aluminium alloy Die-cast aluminium Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°	31.5
Pneumatic connection 1/4 NPT Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material cover Die-cast aluminium, coated Material seals NBR Material spring Spring steel Material housing Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Product weight	30395 g
Note on materials Material sub-base Anodised wrought aluminium alloy Material cover Die-cast aluminium, coated Material seals MBR Material spring Spring steel Material housing Anodised wrought aluminium alloy Die-cast aluminium Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Shaft connection	
Material sub-base Anodised wrought aluminium alloy Material cover Die-cast aluminium, coated Material seals NBR Material spring Spring steel Material housing Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Pneumatic connection	1/4 NPT
Material cover Material seals MBR Material spring Spring steel Material housing Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Note on materials	RoHS-compliant
Material seals Material spring Spring steel Material housing Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Material sub-base	Anodised wrought aluminium alloy
Material seals Material spring Spring steel Material housing Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Material cover	Die-cast aluminium, coated
Material housing Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Material seals	
Material housing Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Material spring	Spring steel
Material piston Material bearing POM Material cam Material screws Die-cast aluminium POM Steel High-alloy stainless steel	Material housing	· -
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Material screws High-alloy stainless steel	Material cam	
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viaterial shart initially steet	Material shaft	Nickel-plated steel