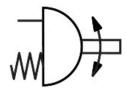
Semi-rotary drive DFPD-300-RP-90-RS60-F0710-R3-EP Part number: 8048150

FESTO





Data sheet

Feature	Value
Size of valve actuator	300
Flange hole pattern	F0710
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	24 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 2
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

Explosion protection Explosion grows a control of the protection of the prote	Feature	Value
Zone 1 (UKEX) Zone 21 (ATEX) Zone 21 (ATEX) Zone 22 (ATEX) Zone 24 (TEX) Zone 22 (ATEX) Zone 22	Explosion protection certification outside the EU	
German Technical Control Board (TÜV) Rheinland 968/V 1106.01/2023 ATEX category dust II 2G Explosion ignition protection type for gas Ex h IIC T4 Gb X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection type for dust Ex h IIC T105°C Db X Explosion ignition protection Ex h IIC T105°C Db X Explosion ignition protection Ex h IIC T105°C Db X Explosion ignition protection Ex h IIC T105°C Db X Explosion ignition protection Ex h IIC T105°C Db X Explosion ignition protection Ex h IIC T105°C Db X Explosion ignition protection Ex h IIC T105°C Db X Explosion ignition protection Ex h IIC T105°C Db X Explosion ignition	Explosion protection	Zone 1 (UKEX) Zone 2 (ATEX) Zone 21 (ATEX) Zone 21 (UKEX)
ATEX category dust Explosion ignition protection type for gas Ex h IIC T1 65 X Explosion ignition protection type for dust Explosion ignition protection for use # III III III III III III III III III	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 Operating medium Compressed air to ISO 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 VDMA24364-B1/B2-L Storage temperature -20 °C80 °C Ambient temperature -20 °C80 °C Torque at nominal operating pressure and 9° swivel angle 115.3 Nm 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 108.4 Nm Spring return torque at 90° swivel angle 214.1 Nm Mean time to dangerous fallure (MTTFd) 1126 years Probability of Fallure per Hour (PFH) 1.01E-07 Probability of Fallure on Demand (PFD) Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°- Product weight Material sub-base Material sourbase Material fourting Material piston Material piston Material bearing Material piston Material sourbase Material sourba	ATEX category gas	II 2G
Explosion ignition protection type for dust Explosion ignition protection type for dust 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 possible (in which case lubricated operation possible (in which case lubricated operation will always be required) LABS (PWIS) conformity VDMA24;364-81/B-2-L Storage temperature 20 °C80 °C Operating pressure and 0° swivel angle 221 km Oroque at nominal operating pressure and 9° swivel angle 115.3 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 9° swivel angle 214.1 Nm Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure on Demand (PFD) 1.01E-07 Probability of Failure on Demand (PFD) 1.01E-07 Probability of Failure on Demand (PFD) 1.028 Operating torque on the size of the mounting flange and of the coupling. Product weight 12880 g Shaft consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 12880 g Shaft connection 172 Premumatic connection 172 Premumatic connection 174 Note on materials Material sub-base Die-cast aluminium, coated Material seals Material seals Material seals Material seals Material piston Material boxing Material piston Material boxing Material piston Material boxing Material piston Material boxing Material piston Material seals Material seals Material piston Material seals Materia	ATEX category dust	II 2D
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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 VDMA2;464-B1/B2-L Storage temperature -20 °C60 °C Ambient temperature -20 °C60 °C Torque at nominal operating pressure and 0° swivel angle 221 Nm Torque at nominal operating pressure and 90° swivel angle 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 214.1 Nm 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 Preduct weight Shaft connection T22 Preduct weight Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material sub-base Material sub-base Material sover Material spring Material spring Material spring Material spring Material piston Material spring Material bousing Material bousing Material bousing Material bousing Material screws High-alloy stainless steel	Explosion ignition protection type for dust	Ex h IIIC T105°C Db X
Note on operating and pilot medium Dew point at least 10 °C below the ambient temperature and temperature of the medium ubricated 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 °C80 °C Torque at nominal operating pressure and 0° swivel angle 221 Nm Torque at nominal operating pressure and 90° swivel angle 115.3 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 214.1 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 or permissible tongue is the coupling of the cou	Explosion ambient temperature	-20 °C <= Ta <= +80 °C
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 Torque at nominal operating pressure and 0° swivel angle Torque at nominal operating pressure and 90° swivel angle Torque at nominal operating pressure and 90° swivel angle 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 9° swivel angle 214.1 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 T22 Pneumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material spring Material spring Material housing Die-cast aluminium, coated Material piston Material boaring Material boaring Material boaring Material boaring Material boaring Material searing	Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Storage temperature -20 °C60 °C Ambient temperature -20 °C80 °C Torque at nominal operating pressure and 0° swivel angle 115.3 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 108.4 Nm Spring return torque at 90° swivel angle 214.1 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 12880 g Shaft connection 122 Prenumatic connection 172 Prenumatic connection 174 Material sub-base Die-cast aluminium, coated Material seals Material spring Material spring Material spring Material spring Material piston Die-cast aluminium Material piston Die-cast aluminium Material piston Material piston Material piston Material com Material searing Material com Material piston Material piston Material searing Material searing Material screws High-alloy stainless steel	Note on operating and pilot medium	temperature of the medium Lubricated operation possible (in which case lubricated operation will
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Torque at nominal operating pressure and 0° swivel angle Torque at nominal operating pressure and 90° 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 90° swivel angle 108.4 Nm Spring return torque at 90° swivel angle 214.1 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 12880 g Shaft connection 722 Pneumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material seals NBR Material seals NBR Material spring Spring steel Material piston Die-cast aluminium, coated Material bousing Die-cast aluminium, coated Material bousing Die-cast aluminium, coated 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 108.4 Nm Spring return torque at 90° swivel angle 214.1 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 12880 g Shaft connection 722 Pneumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material seals Material seals Material spring Material piston Material piston Material bearing POM Material core Material care Material care Material care 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 (MTFd) 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 12880 g Shaft connection T22 Preumatic connection G1/4 Note on materials Material sub-base Die-cast aluminium, coated Material spring Material spring Material spring Material piston Material piston Material bearing Material bearing Material carm Material carm Material carm Material carm Material screws High-alloy stainless steel	Torque at nominal operating pressure and 0° swivel angle	221 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 0° swivel angle 108.4 Nm 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 12880 g Shaft connection 722 Preumatic connection G1/4 Note on materials Material sub-base Die-cast aluminium, coated Material seals Material spring Material spring Material housing Material piston Material bearing Material bearing Material cam Material screws High-alloy stainless steel Migh-alloy stainless steel	Torque at nominal operating pressure and 90° swivel angle	115.3 Nm
Spring return torque at 90° swivel angle Mean time to dangerous failure (MTTFd) 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 12880 g Shaft connection T22 Pneumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material seals Material spring Material spring Material housing Material piston Material bearing Material cam Material cam Material screws High-alloy stainless steel Materials screws	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 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 11 l 12880 g Product weight 12880 g Preumatic connection 722 Preumatic connection Note on materials Material sub-base Die-cast aluminium, coated Material seals Material seals Material spring Material spring Material housing Material piston Material bearing Material com Material com Material bearing Material bearing Material bearing Material com Material sears Material bearing Material bearing Material bearing Material com Material screws High-alloy stainless steel	Spring return torque at 0° swivel angle	108.4 Nm
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 12880 g Product weight 12880 g Product weight Shaft connection 722 Preumatic connection Gol/4 Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material seals NBR Material spring Material spring Material housing Die-cast aluminium, coated Material piston Die-cast aluminium, coated Material bearing Material bearing POM Material core Material screws High-alloy stainless steel	Spring return torque at 90° swivel angle	214.1 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 12880 g Shaft connection T22 Pneumatic connection G1/4 Note on materials Material sub-base Die-cast aluminium, coated Material seals MBR Material seals MBR Material spring Spring steel Material housing Material piston Material bearing Material cam Material cam Material screws Migh-alloy stainless steel Migh-alloy stainless steel	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 T22 Pneumatic connection Mote on materials Material sub-base Die-cast aluminium, coated Material seals MBR Material spring Material piston Material piston Material bearing Material com Material com Material com Material piston Material bearing Material com Material com Material sears Material sears Material piston Material bearing Material sears Material sears Material sears Material sears Material piston Material bearing Material sears Mater	Probability of Failure per Hour (PFH)	1.01E-07
angle-0° Product weight 12880 g Shaft connection T22 Pneumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material seals NBR Material spring Spring steel Material housing Die-cast aluminium, coated Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Probability of Failure on Demand (PFD)	0.00078
Shaft connection T22 Pneumatic connection G1/4 Note on materials Material sub-base Die-cast aluminium, coated Material seals Material spring Material spring Spring steel Material housing Die-cast aluminium, coated Material piston Die-cast aluminium, coated Material bearing Material bearing Material searing Mate	Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°	11
Pneumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material seals Material spring Material spring Material housing Die-cast aluminium, coated Die-cast aluminium, coated Die-cast aluminium, coated Die-cast aluminium, coated Material housing Die-cast aluminium, coated Material piston Die-cast aluminium Material bearing POM Material cam Material screws High-alloy stainless steel	Product weight	12880 g
Note on materials Material sub-base Die-cast aluminium, coated Material cover Die-cast aluminium, coated Material seals NBR Material spring Spring steel Material housing Die-cast aluminium, coated Material piston Die-cast aluminium Material bearing POM Material cam Material screws High-alloy stainless steel	Shaft connection	T22
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Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Material housing	Die-cast aluminium, coated
Material cam Steel Material screws High-alloy stainless steel	Material piston	Die-cast aluminium
Material screws High-alloy stainless steel	Material bearing	РОМ
	Material cam	Steel
Material shaft High-alloy stainless steel	Material screws	High-alloy stainless steel
	Material shaft	High-alloy stainless steel