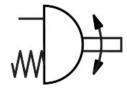
Semi-rotary drive DFPD-240-RP-90-RS30-F0710-R3-EP Part number: 8048147

FESTO





Data sheet

Feature	Value
Size of valve actuator	240
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	0.3 MPa 3 bar 43.5 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 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 T105°C Db X Explosion ignition protection type for dust Explosion ignition protection for use illustration type Explosion ignition protection type for dust Explosion ignition protection full under the protection will applied to perpendicular the protection full under the prot	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 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 VDMA24364-B1/B2-L Storage temperature -20 °C80 °C Ambient temperature -20 °C80 °C Torque at nominal operating pressure and 9° 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 42 Nm Spring return torque at 90° swivel angle 33 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 sourb Material sourb Material seals Material seals Material sourb Material seals Material sourb Material seals Material fouring Material piston Material piston Material piston Material searing Material piston Material searing M	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/B2-L Storage temperature 20 °C80 °C Operating and pilot medium Unbricated operation possible (in which case lubricated operation will always be required) Storage temperature 20 °C80 °C Operation and including pressure and over swivel angle At nominal operating pressure and over swivel angle At mominal operating pressure and over swivel angle At mominal operating pressure and over swivel angle At Nim 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 At Nim Spring return torque at 90° swivel angle At Nim Spring return torque at 90° swivel angle At Nim Operability of Failure on Demand (PFD) At Consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Operability of Failure on Demand (PFD) At Consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Operating the per 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. At Consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle of the medium Defendence to the medium Defendence	ATEX category dust	II 2D
Explosion ambient temperature -20 °C <= Ta <= +80 °C Compressed air to ISO 8573-1:2010 [7:4:4] Deve 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 °C60 °C Ambient temperature Torque at nominal operating pressure and 0° swivel angle Torque at nominal operating pressure and 90° swivel angle A4.8 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 Spring return torque at 90° swivel angle A2 Nm Spring return torque at 90° swivel angle Spring return torque at 90° swivel angle A3 Nm Mean time to dangerous failure (MTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) 0.00078 A1 cronsumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle o' Product weight 942 g Preumatic connection 50 1/4 Note on materials Note on mat	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 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 Ambient temperature -20 °C60 °C Torque at nominal operating pressure and 0° swivel angle 85,8 Nm Torque at nominal operating pressure and 90° swivel angle 44.8 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 83 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 Shaft connection 722 Preduct weight Note on materials RoHS-compliant Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material soush Material soush Material spring Material spring Material sping Material housing Die-cast aluminium, coated Material boring Material soush Material searing Material boring Material soush Material searing Material boring Material searing	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 ubricated operation possible (in which case lubricated operation will always be required) LABS (PWIS) conformity VDMA24364-81/B2-L Storage temperature -20 °C60 °C Ambient temperature -20 °C60 °C Torque at nominal operating pressure and 0° swivel angle Sp. 8 Nm Torque at nominal operating pressure and 90° swivel angle A4.8 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 A2 Nm Spring return torque at 90° swivel angle B3 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 Product weight Product weight Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material soush Material soush Material spring Material spring Material spring Material spring Material spring Material spring Material bousing Material bearing Material bearing Material screws High-alloy stainless steel	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 S5.8 Nm Torque at nominal operating pressure and 90° swivel angle A4.8 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 A3 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 Shaft connection T22 Pneumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Material sub-base Material sub-base Material spring Material spring Material spring Material spring Material piston Material spring Material piston Material spring Material bousing Material bousing Material searing Material sear	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 Sp. 8. 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 42. Nm Spring return torque at 90° swivel angle 83. 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 Shaft connection 122 Prenumatic connection 172 Prenumatic connection 174 Material sub-base Die-cast aluminium, coated Material sourbase Material spring Material spring Spring steel Material spring Material piston Die-cast aluminium, coated Material piston Material piston Material piston Material com Material com Material com Material com Material piston Material scars Material com Material com Material scars Material com Material scars Material com Material piston Material scars Material com Material scars Material com Material scars Material com Material piston Material scars Material scar	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 -25 °S.8 Nm -26 Note on torque -26 °S.8 Nm -27 Note on torque -27 Note on torque -28 Nm -29 Note on torque -29 Note on torque -20 °S80 °C -38 Nm -39 Note on torque at 0° swivel angle -39 Nm -39	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 return torque at 90° swivel angle 83 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 Shaft connection T22 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 boaring Material boaring Material bearing POM Material bearing Material cam Material cam Material screws 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 42 Nm Spring return torque at 90° swivel angle 83 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 Shaft connection 722 Pneumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material seals NBR Material spring Material spring Spring steel Material piston Die-cast aluminium, coated Material bearing Material bearing Material bearing POM Material corm Material corm Material corm Material corm Material bearing Material corm Material corm Material corm Material bearing Material corm Material bearing Material corm Material corm 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 83 Nm Mean time to dangerous failure (MTFd) 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 9442 g Shaft connection 722 Preumatic connection 61/4 Note on materials Material sub-base Die-cast aluminium, coated Material seals NBR 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	85.8 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 83 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 Shaft connection 722 Pheumatic connection G1/4 Note on materials Material sub-base Die-cast aluminium, coated Material seals Material spring Material spring Material piston Material piston Material bearing Material bearing Material com Material bearing Material searing Material searing Material searing Material searing Material bearing Material bearing Material searing Material searing Material screws High-alloy stainless steel	Torque at nominal operating pressure and 90° swivel angle	44.8 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 722 Preumatic 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 com Material com Material com Material bearing Material bearing Material com Material com Material sears Material piston Material bearing Material com Material com Material com Material bearing Material com Material sears Material sears Material sears Material bearing Material sears Material sears Material sears Material sears Material bearing Material sears	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 Shaft connection 722 Preumatic connection Note on materials Material sub-base Material seals Material seals Material spring Material spring Material housing Material piston Material bearing Material cam Material cam Material screws Material screws Material screws Material screws Material screws Material screws High-alloy stainless steel	Spring return torque at 0° swivel angle	42 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 Shaft connection T22 Pneumatic connection Note on materials 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 Material screws Material screws Material screws Material screws Material screws High-alloy stainless steel	Spring return torque at 90° swivel angle	83 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 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 com Material com Material com Material bearing Material com Material com Material com Material sears MBR Material piston Material bearing Material bearing POM Material screws High-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 9442 g Shaft connection T22 Pneumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Die-cast aluminium, coated Material cover Die-cast aluminium, coated Material spring Spring steel Material housing Die-cast aluminium, coated Material piston Die-cast aluminium, coated Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Probability of Failure per Hour (PFH)	1.01E-07
angle-0° Product weight Shaft connection T22 Pneumatic connection G1/4 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 cam Material screws High-alloy stainless steel	Probability of Failure on Demand (PFD)	0.00078
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, coated 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°	8.61
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, coated Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Product weight	9442 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	
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Material cover Material seals Material spring Material spring Material housing Material housing Material piston Material bearing Material bearing Material cam Material screws Die-cast aluminium, coated Die-cast aluminium POM Material screws High-alloy stainless steel	Note on materials	RoHS-compliant
Material seals Material spring Spring steel Material housing Die-cast aluminium, coated Material piston Material bearing POM Material cam Material screws High-alloy stainless steel	Material sub-base	Die-cast aluminium, coated
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	Material cover	Die-cast aluminium, coated
Material housing Die-cast aluminium, coated Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Material seals	NBR
Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Material spring	Spring steel
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