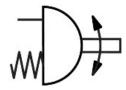
## Semi-rotary drive DFPD-240-RP-90-RS35-F10-R3-C Part number: 8102842

**FESTO** 





## **Data sheet**

Feature	Value
Size of valve actuator	240
Flange hole pattern	F10
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	0.35 MPa 3.5 bar 50.75 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

EPL 65 (68)  Explosion protection  Explosion protection  Explosion protection  Explosion protection  Explosion protection  Explosion protection  Explosion grating authority  Explosion grating authority  Explosion grating authority  Explosion grating authority  Explosion grating protection type for gas  Explosion ingrition protection type for gas  Explosion ingrition protection type for dust  Explosion ingrition ingrition ingrition ingrition ingrition ingrition  Compressed air to ISO 8573-1;2010 [7:4:4]  Dew point at least 10 "Cobov the ambient temperature and temperature in the medium ulubricated operation possible (in which case lubricated operation will advance the medium ulubricated operation possible (in which case lubricated operation will advance to ISO 8573-1;2010 [7:4:4]  Explosion ingrition in least 10 "Cobov the ambient temperature and temperature of the endium clubricated operation possible (in which case lubricated operation will advance to ISO 8573-1;2010 [7:4:4]  Explosion ingrition in least 10 "Cobov the ambient temperature of the endium clubricated operation will advance to ISO 8573-1;2010 [7:	Feature	Value
Zone 2 (MEX) Zone 22 (ATEX) Zone 22 (ATEX) Zone 22 (ATEX) Zone 21 (ATEX) Zone 21 (ATEX) Zone 22	Explosion protection certification outside the EU	
German Technical Control Board (TÜV) Rheinland 968/V 1106.01/2023 ATEX category gas II 36  ATEX category dust II 20  Explosion ignition protection type for gas Ex h III CT 14 Gb X  Explosion ignition protection type for dust Explosion ignition protection type for dust Explosion ambient temperature	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 for Explosion ignition type for dust Explosion ignition ignition protection type for dust Explosion ignition	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 Ompressed 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 °C60 °C  Ambient temperature 20 °C80 °C  Torque at nominal operating pressure and 0° 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 96.9 Nm  Weat nime to dangerous failure (MTTFd) 1101-07  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 172  Product weight Material sub-base Anodised wrought aluminium alloy Material sourbase Material bearing Material serves Material screws Ma	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 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  VDMA24364-81/82-L  Storage temperature  -20 °C60 °C  Ambient temperature  -20 °C80 °C  Torque at nominal operating pressure and 0° swivel angle  Torque at nominal operating pressure and 9° swivel angle  Sovie 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  49 Nm  Mean time to dangerous failure (MTTFd)  1126 years  Probability of Failure on Demand (PFD)  30.00078  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  Shaft connection  51/4  Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material seals  Material seals  Material seals  Material seals  Material seals  Material seals  Material piston  Material bearing  Material bearing  Material bearing  Material bearing  Material bearing  Material bearing  Material seass  Mate	ATEX category dust	II 2D
Explosion ambient temperature  20 °C <= Ta <= +80 °C  Compressed air to ISO 8573-1:2010 [7:4:4]  Deventing medium  Compressed air to ISO 8573-1:2010 [7:4:4]  Deventing medium  Deventing and pilot medium  Lubricated 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  100.1 Nm  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 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  Ali cronsumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle of 122  Preumatic connection  122  Preumatic connection  124  Preumatic connection  Solf-4  Material sub-base  Anodised wrought aluminium alloy  Material sub-base  Materia	Explosion ignition protection type for gas	Ex h IIC T4 Gb X
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 °C60 °C  Ambient temperature  -20 °C60 °C  Ambient temperature  -20 °C80 °C  Torque at nominal operating pressure and 0° swivel angle  Ioo.1 Nm  Forque at nominal operating pressure and 90° swivel angle  Spring return torque at 0° swivel angle  Spring return torque at 0° swivel angle  Spring return torque at 90° swivel angle  49 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  Frequentic connection  G1/4  Note on materials  Material sub-base  Material sub-base  Material sub-base  Material sover  Material sover  Material soring  Material so	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 volume volume Lemperature volume Lemperature volume vo	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 volume volume Lemperature volume Lemperature volume vo	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  100.1 Nm  Forque 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  49 Nm  Spring return torque at 90° swivel angle  96.9 Nm  Material sub-base  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  Shaft connection  722  Preumatic connection  61/4  Mote on materials  Anotised wrought aluminium alloy  Material seals  Material seals  NBR  Material spring  Spring steel  Material bousing  Material bousing  Material bousing  Material bousing  Material bearing  POM  Material com  Material com  Material com  Material bearing  POM  Material com  Material com  Material com  Material com  Material com  Material com  Material bearing  POM  Material com  Material com  Material com  Material com  Material bearing  Material com  Material bearing  Material com  Material com  Material bearing  Material com  Material scals  Material bearing  Material com  Material bearing  Material com  Material scals  Material com  Material scals  Material bearing  Material scals  Material scals  Material com  Material scals  Material s	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 49 Nm Spring return torque at 90° swivel angle 99.9 Nm Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 0.00078 Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 9558 g Shaft connection T22 Preumatic connection G1/4 Note on materials Acterial sub-base Anodised wrought aluminium alloy Material seals NBR Material seals NBR Material spring Spring steel Material sousing Material piston Material piston Material piston Material carm Material sears Material carm Material carm Material carm Material sears Material carm Material sears Material searing Material carm Material carm Material sears Material carm Material sears Material carm Material sears Material carm Material sears Mate	LABS (PWIS) conformity	VDMA24364-B1/B2-L
Forque at nominal operating pressure and 0° swivel angle Forque at nominal operating pressure and 90° swivel angle Forque at nominal operating pressure and 90° swivel angle Forgue at nominal operating pressure and 90° swivel angle Forgue at nominal operating pressure and 90° swivel angle Forgue at nominal operating pressure and 90° swivel angle Forgue at nominal 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.  Forgue at nominal operating pressure and 90° swivel angle Forgue at nominal swivel	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 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 Preumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material seals Material spring Spring steel Material piston Die-cast aluminium Material bearing Material bearing Material core Material sub-base Material bearing Material bearing Material bearing Material core 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  59558 g  Product weight  722  Premunatic connection  61/4  Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material cover  Anodised wrought aluminium alloy  Material seals  NBR  Material spring  Spring steel  Material piston  Material bearing  Material bearing  Material bearing  Material bearing  Material cam  Material screws  High-alloy stainless steel	Torque at nominal operating pressure and 0° swivel angle	100.1 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  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  9558 g  Shaft connection  722  Premantic connection  Solve on materials  Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material seals  NBR  Material spring  Spring steel  Material housing  Material piston  Material piston  Material bearing  Material bearing  Material come  Material come  Material bearing  Material come  Material bearing  Material screws  High-alloy stainless steel	Torque at nominal operating pressure and 90° swivel angle	52.2 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  Shaft connection  T22  Preumatic connection  G1/4  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 bearing  Material com  Material searing  Material com  Material searing  Material searing  Material searing  Material searing  Material screws  Material screws  Material screws  Migh-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  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  9558 g  Shaft connection  722  Preumatic connection  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 searing  Material piston  Material searing  Material com  Material searing  Material bearing  Material bearing  Material searing  Material searing  Material searing  Material searing  Material bearing  Material searing	Spring return torque at 0° swivel angle	49 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  T22  Pneumatic connection  Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material seals  Material spring  Material spring  Material housing  Material piston  Material cam  Material cam  Material cam  Material screws  Material screws	Spring return torque at 90° swivel angle	96.9 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  Anodised wrought aluminium alloy  Material seals  Material seals  Material spring  Material spring  Material housing  Material piston  Material bearing  Material com  Material com  Material com  Material bearing  Material com  Material com  Material searing  Material searing  Material bearing  Material searing  Material sear	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 9558 g  Shaft connection T22  Pneumatic connection G1/4  Note on materials RoHS-compliant  Material sub-base Anodised wrought aluminium alloy  Material cover Anodised wrought aluminium alloy  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	Probability of Failure per Hour (PFH)	1.01E-07
Product weight 9558 g  Shaft connection T22  Pneumatic connection G1/4  Note on materials RoHS-compliant  Material sub-base Anodised wrought aluminium alloy  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	Probability of Failure on Demand (PFD)	0.00078
Pneumatic connection Pneumatic connection  G1/4  Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material cover Anodised wrought aluminium alloy Material seals NBR Material spring Spring steel Material housing Anodised wrought aluminium alloy Die-cast aluminium Material bearing POM Material cam 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
Pneumatic connection Pneumatic connection  G1/4  Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material cover Anodised wrought aluminium alloy Material seals NBR Material spring Spring steel Material housing Anodised wrought aluminium alloy Die-cast aluminium Material bearing POM Material cam Material screws High-alloy stainless steel	Product weight	9558 g
Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material cover  Anodised wrought aluminium alloy  Material seals  MBR  Material spring  Spring steel  Material housing  Anodised wrought aluminium alloy  Die-cast aluminium alloy  Material piston  Die-cast aluminium  Material bearing  POM  Material cam  Steel  Material screws  High-alloy stainless steel	Shaft connection	T22
Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material seals  Material spring  Material housing  Material piston  Material bearing  Material cam  Material screws  ROHS-compliant  Anodised wrought aluminium alloy  MBR  Spring steel  Anodised wrought aluminium alloy  Die-cast aluminium  POM  Steel  Material cam  Material screws  High-alloy stainless steel	Pneumatic connection	G1/4
Material cover Anodised wrought aluminium alloy Material seals NBR Material spring Spring steel Material housing Anodised wrought aluminium alloy Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Note on materials	
Material seals  Material spring  Spring steel  Material housing  Anodised wrought aluminium alloy  Die-cast aluminium  Material bearing  POM  Material cam  Steel  Material screws  High-alloy stainless steel	Material sub-base	Anodised wrought aluminium alloy
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	Anodised wrought aluminium alloy
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	NBR
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  Steel  Material screws  High-alloy stainless steel	Material housing	
Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Material piston	
Material cam Steel Material screws High-alloy stainless steel	Material bearing	POM
Material screws High-alloy stainless steel	Material cam	
	Material screws	
material and standard	Material shaft	High-alloy stainless steel