

Semi-rotary actuators DSR/DSRL - Inch Series



- Wide variety of mounting options
- Infinitely adjustable rotation angle
- Comprehensive range of accessories

Product range overview						
Function	Version	Piston Ø [in]	Rotation angle [°]	Torque [ft-lbf]	Variants	
					P	FW
Double-acting	Semi-rotary actuator with keyed drive shaft	3/8, 1/2	0 ... 181	0.6 ... 1.1	■	■
		5/8, 1, 1-1/4, 1-5/8	0 ... 184	2.2 ... 22.1	■	■

Variants

P	Flexible cushioning pads on each side	FW	With hollow flanged shaft
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Semi-rotary actuators DSR/DSRL - Inch Series

Features

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Description

In these semi-rotary actuators, the force is directly transmitted to the drive shaft via a rotary vane. The rotation angle is infinitely adjustable.

The adjustable stop system is separate from the rotary vane so that any forces which occur are absorbed by the stop blocks. The impacts are cushioned at the end positions by built-in flexible pads.

DSRL-...-FW

This design with hollow flanged shaft permits the passage of liquid or gaseous media, or even tubing or

wiring. The force is transmitted directly and backlash-free via a splined shaft.

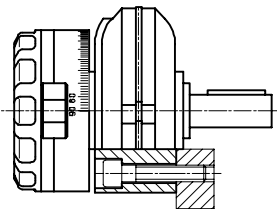
Semi-rotary actuators DSR/DSRL - Inch Series

Features

Mounting options

Without mounting attachments

Direct mounting



With mounting attachments

For DSR

For DSRL

Foot mounting HSR-...-FW

Flange mounting FSR

Foot mounting HSR-...-FW



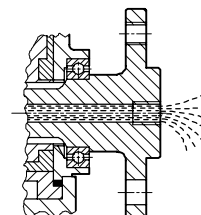
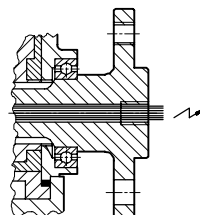
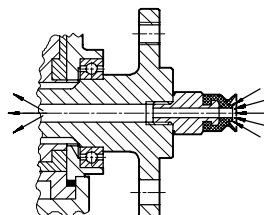
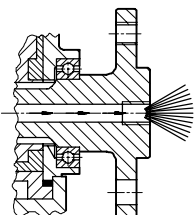
Sample applications with hollow flanged shaft in DSRL

Air blast

Vacuum

Electrical lines

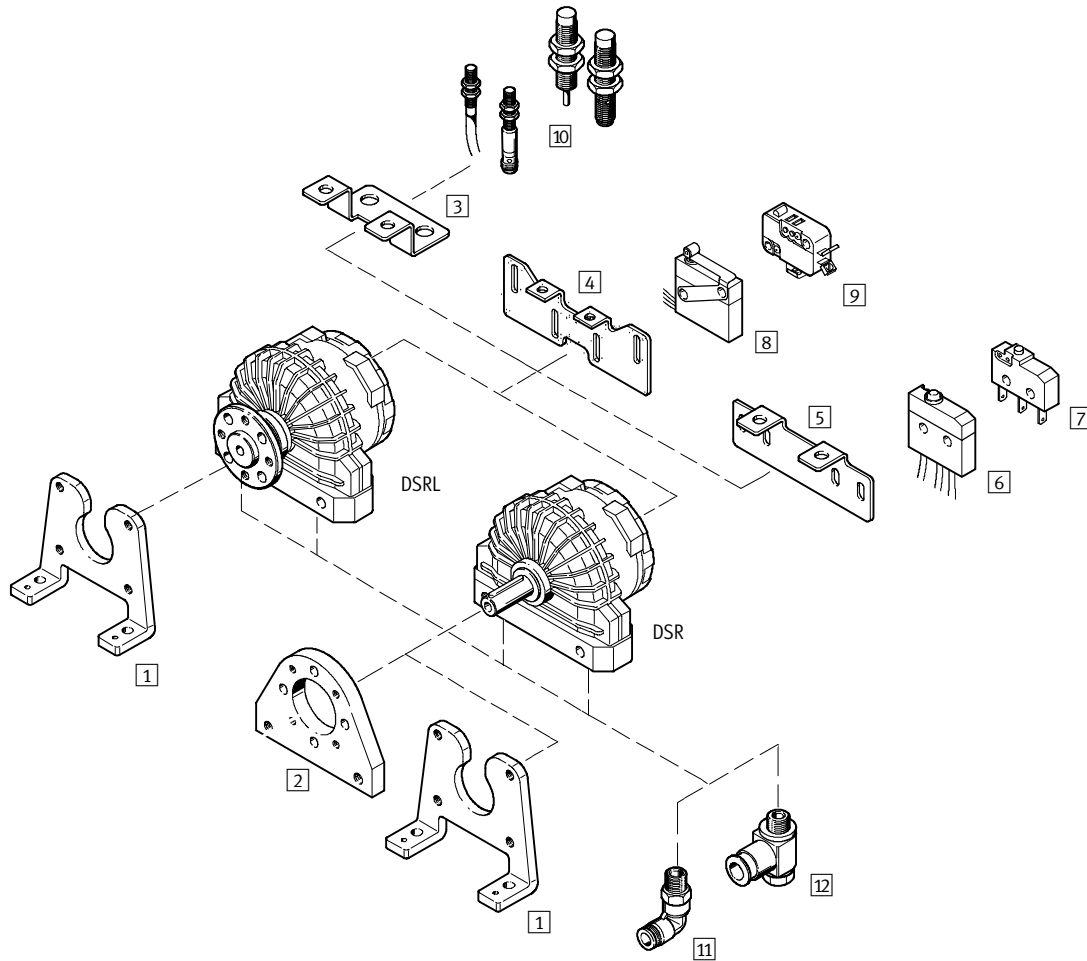
Water, coolant, oil, glue, etc.



Semi-rotary actuators DSR/DSRL - Inch Series

Accessories overview

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Semi-rotary actuators DSR/DSRL - Inch Series

Accessories overview

Mounting attachments and accessories				
	Description	DSR	DSRL	
1	Foot mounting HSR-...-FW	On drive shaft side	■	■
2	Flange mounting FSR	On drive shaft side	■	-
3	Mounting kit WSR-...	For proximity sensor SIEN	■	■
4	Mounting kit WSR-12 ... 40	For micro switch SR-3-E-SW, S-3-E	■	■
5	Mounting kit WSR-10/12-K	For micro switch S-3-BE-SW, S-3-BE	■	■
6	Micro switch S-3-BE-SW	Electric, with cable, splash-proof	■	■
7	Micro switch S-3-BE	Electric, with push-in connector	■	■
8	Micro switch SR-3-E-SW	Electric, with roller lever and cable, splash-proof	■	■
9	Micro switch S-3-E	Electric, screw connector	■	■
10	Proximity sensors SIEN	Inductive	■	■
11	Push-in elbow fitting QSL	For connecting compressed air tubing with standard external diameters	■	■
12	One-way flow control valve GRLA	For speed regulation	■	■

Semi-rotary actuators DSR/DSRL - Inch Series

FESTO

Technical data

Function



Variants

- With keyed shaft
- With hollow flanged shaft

⌀ - Diameter
3/8 ... 1-5/8 inch

≡ - Force
0.6 ... 22.1 ft-lbf



General technical data						
Piston ⌀	3/8	1/2	5/8	1	1-1/4	1-5/8
Pneumatic connection	M3	10-32 UNF	10-32 UNF	10-32 UNF	1/8" NPT	1/4" NPT
Design	Semi-rotary actuator with vane drive					
Cushioning	Non-adjustable at both ends					
Magnet for position sensing	Via electrical, pneumatic, or inductive switches (ordered separately, see accessories)					
Rotation angle	0 ... 181°		0 ... 184°			

Operating conditions						
Piston ⌀	3/8	1/2	5/8	1	1-1/4	1-5/8
Operating medium	Filtered compressed air, lubricated or unlubricated					
Operating pressure [psi]	36.8 ... 117.6	29.4 ... 117.6	22.1 ... 117.6			
Temperature range ¹⁾ [°F]	+14 ... +140					

1) Note operating range of proximity sensors

Forces and torques						
Piston ⌀	3/8	1/2	5/8	1	1-1/4	1-5/8
Torque at 90 psi [ft-lbf]	0.6	1.1	2.2	5.5	11.1	22.1
Max. rotating frequency ²⁾ [Hz]	3					
Max. perm. radial load ³⁾ [lbf]	6.7	10.1	16.9	27.0	45.0	78.7
Max. perm. axial load ³⁾ [lbf]	2.2	4.0	6.7	11.2	16.9	27.0
Max. perm. mass moment of inertia ³⁾	Diagrams					

2) Please observe the max. permissible mass moments of inertia

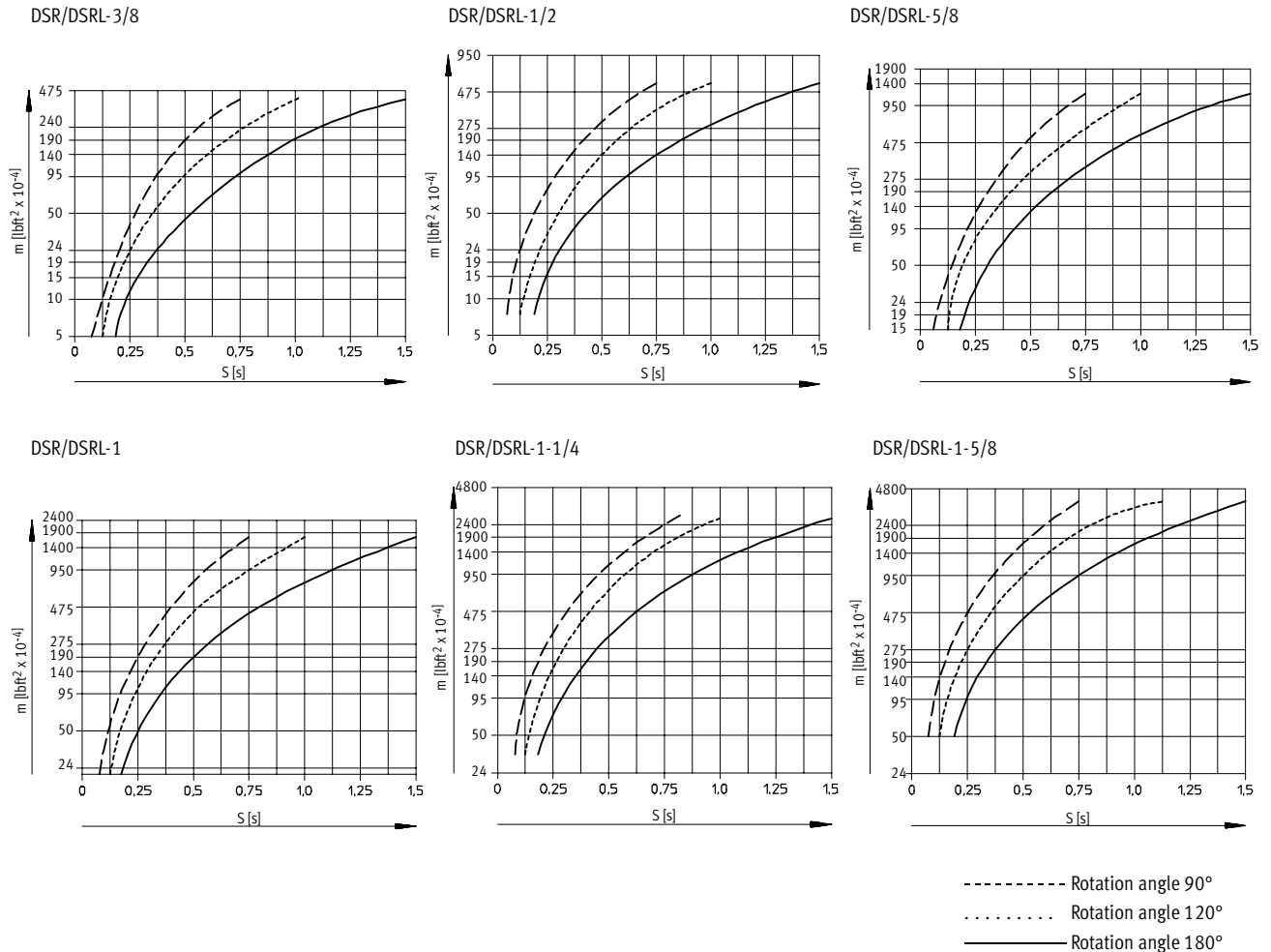
3) On the drive shaft at maximum frequency

Semi-rotary actuators DSR/DSRL - Inch Series

Technical data

Max. permissible mass moment of inertia

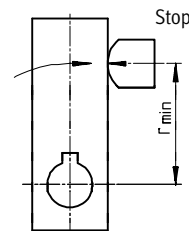
Mass moment of inertia m as a function of rotation time S and rotation angle



Assembly instructions:

If the listed maximum permissible mass moment of inertia is exceeded, external stops must be attached. Please note: the stop must not be less than the minimum radius to the drive shaft (r_{min}). The stop force must not

exceed the maximum force. Due to the flexibility of the internal stops, a precise end position can only be achieved using external stops.



∅ [in]	Stop radius r_{min} [in]	Maximum force [lbf]
3/8	0.5	13.5
1/2	0.6	20.2
5/8	0.7	36.0
1	0.8	71.9
1-1/4	1.1	107.9
1-5/8	1.6	146.1

Note

When throttling the semi-rotary drives to rotating speeds under 180°/s, the drives must be operated

at a pressure of at least 90 psi. A constant speed fluctuation of ±30% is to be expected. The flutters and the

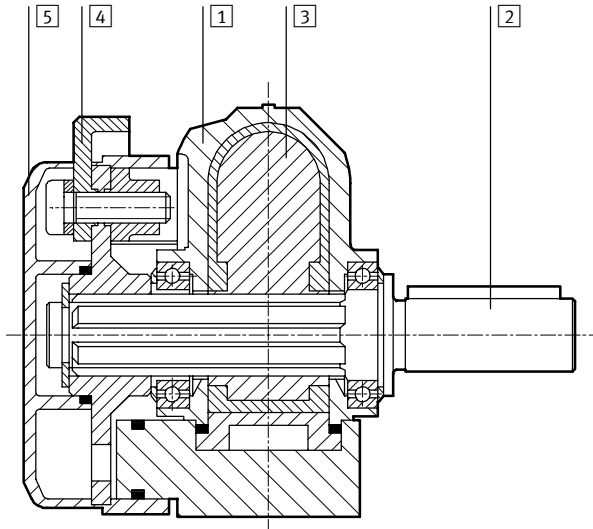
rotating times shown in the diagrams can only be improved by using flow control valves.

Semi-rotary actuators DSR/DSRL - Inch Series

Technical data

Materials

Sectional view



Rotary actuator	
1	Housing Die-cast zinc
2	Drive shaft Nickel plated steel
3	Rotary vane Plastic
4	Trip cam Sintered steel, nickel plated
5	Cover cap Plastic
-	Seals Nitrile rubber

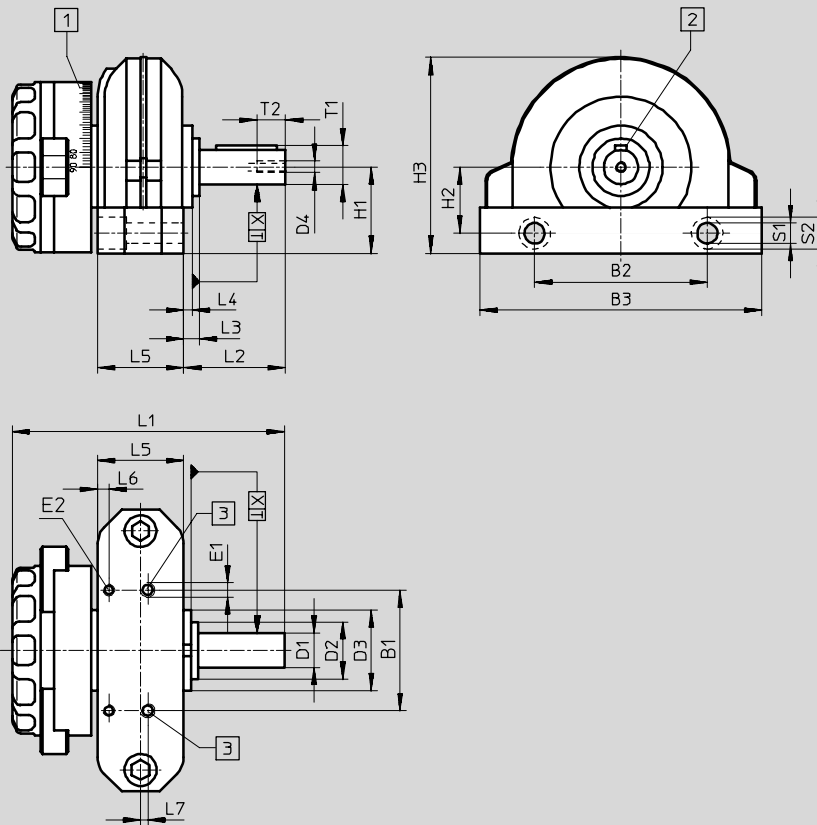
Weights [oz]						
Piston Ø	3/8	1/2	5/8	1	1-1/4	1-5/8
DSR- ...	3.5	7.1	10.9	19.1	45.3	84.7
DSRL-...-FW	4.9	8.5	12.4	21.5	49.0	95.2

Semi-rotary actuators DSR/DSRL - Inch Series

Technical data

Dimensions

DSR



1 Angle scale for rotation angle reading

2 Key position at 0°

3 Supply port

Note

The rotation angle in both directions is 90°, and it is pressure-dependent. The cushioning angle on each side is approx. 1.6° maximum, at 117.6 psi.

After the rotation process, the kinetic energy is converted by cushioning, the drive shaft rotates back by a corresponding angle.

The stops must not be removed as the rotary vane is not suitable for end-position limiting. The cover cap is equipped with an angle scale for adjusting.

When attaching additional components to the drive shaft, the maximum permissible tightening torque of the bolt at D4 must not be exceeded.

∅	B1	B2	B3	D1 ∅	D2 ∅	D3 ∅	D4	E1	E2	H1	H2	H3	L1	L2
[in]														
3/8	0.9	1.3	2.1	15/64	0.5	25/32	1-72 UNF	M3	4-48 UNF	0.8	0.6	1.5	2.2	0.9
1/2	1.0	1.6	2.6	5/16	0.6	7/8	4-48 UNF	10-32 UNF	4-48 UNF	0.9	0.7	1.9	2.6	1.0
5/8	1.2	1.8	3.1	3/8	0.7	61/64	4-48 UNF	10-32 UNF	4-48 UNF	1.1	0.8	2.2	3.0	1.1
1	1.7	2.4	3.9	7/16	0.7	1-7/64	8-32 UNC	10-32 UNF	8-32 UNC	1.2	0.9	2.7	3.7	1.4
1-1/4	2.1	3.1	5.1	5/8	1.1	1-21/32	10-32 UNF	1/8" NPT	8-32 UNC	1.7	1.3	3.6	4.9	2.0
1-5/8	2.8	3.9	6.3	3/4	1.4	2-3/64	1/4-28 UNF	1/4" NPT	8-32 UNC	2.1	1.6	4.8	6.4	2.4

∅	L3	L4	L5	L6	L7	S1	S2	T1	T2	X	Key ¹⁾ [mm]	Tightening torque at D4 [ft-lbf]
[in]												
3/8	0.3	0.2	0.6	0.1	0.1	0.1	0.2	0.3	0.3	0.01	A2 x 2 x 12	0.5
1/2	0.2	0.1	0.7	0.1	0.1	0.2	0.3	0.3	0.4	0.01	A2 x 2 x 16	0.9
5/8	0.2	0.1	0.9	0.1	-	0.2	0.4	0.4	0.4	0.01	A3 x 3 x 18	0.9
1	0.2	0.1	1.2	0.2	-	0.3	0.4	0.5	0.4	0.02	A4 x 4 x 25	4.1
1-1/4	0.4	0.3	1.4	0.2	-	0.3	0.6	0.7	0.5	0.02	A5 x 5 x 36	4.1
1-5/8	0.4	0.2	2.0	0.2	-	0.3	0.6	0.9	0.6	0.02	A6 x 6 x 45	4.1

1) included in scope of delivery

Dimensions are in inches, unless otherwise noted.

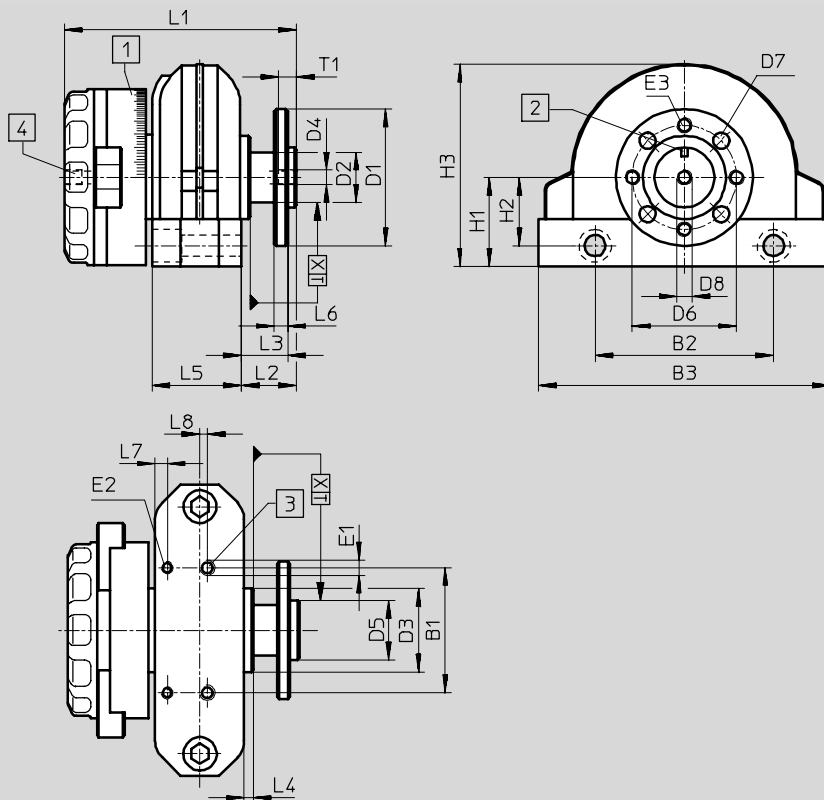
Semi-rotary actuators DSR/DSRL - Inch Series

Technical data

FESTO

Dimensions

DSRL



- 1 Angle scale for rotation angle reading
- 2 Position of marking at angle scale 0°
- 3 Supply port
- 4 Through-hole

Note

The rotation angle in both directions is 90°, and it is pressure-dependent. The cushioning angle on each side is approx. 1.6° maximum, at 117.6 psi.

After the rotation process, the kinetic energy is converted by cushioning, the drive shaft rotates back by a corresponding angle.

The stops must not be removed as the rotary vane is not suitable for end-position limiting. The cover cap is equipped with an angle scale for adjusting.

When attaching additional components to the drive flange, the maximum permissible tightening torque of the bolt at D4 must not be exceeded.

∅	B1	B2	B3	D1	D2	D3	D4	D5	D6	D7	D8	E1	E2	E3	H1
[in]				∅	∅	∅		∅	∅	∅	∅ min.				
3/8	0.9	1.3	2.1	1-3/16	3/8	25/32	1-72 UNF	7/16	13/16	0.13	0.06	M3	4-48 UNF	4-48 UNF	0.8
1/2	1.0	1.6	2.6	1-5/16	1/2	7/8	4-48 UNF	35/64	1	0.13	0.06	10-32 UNF	4-48 UNF	4-48 UNF	0.9
5/8	1.2	1.8	3.1	1-1/2	35/64	61/64	4-48 UNF	5/8	1-7/64	0.20	0.14	10-32 UNF	4-48 UNF	10-32 UNF	1.1
1	1.7	2.4	3.9	1-3/4	43/64	1-7/64	8-32 UNC	3/4	1-3/8	0.20	0.14	10-32 UNF	8-32 UNC	10-32 UNF	1.2
1-1/4	2.1	3.2	5.1	2-3/8	15/16	1-21/32	10-32 UNF	1-3/32	1-3/4	0.27	0.28	1/8" NPT	8-32 UNC	1/4-28 UNF	1.7
1-5/8	2.7	3.9	6.3	2-3/4	1-11/64	2-3/64	1/4-28 UNF	1-13/32	2-1/8	0.33	0.28	1/4" NPT	8-32 UNC	5/16-24 UNF	2.1

∅	H2	H3	L1	L2	L3	L4	L5	L6	L7	L8	S1	S2	T1	X	Tightening torque at D4 [ft-lbf]
[in]															
3/8	0.6	1.5	1.9	0.6	0.5	0.2	0.6	1/8	0.1	0.1	0.1	0.2	0.2	0.01	0.7
1/2	0.7	1.9	2.1	0.5	0.5	0.1	0.7	1/8	0.1	0.1	0.2	0.3	0.2	0.01	1.2
5/8	0.8	2.2	2.6	0.6	0.6	0.1	0.9	5/32	0.1	-	0.2	0.4	0.2	0.01	1.2
1	0.9	2.7	3.1	0.7	0.6	0.1	1.2	11/64	0.2	-	0.3	0.4	0.2	0.02	5.5
1-1/4	1.3	3.6	4.1	1.0	0.9	0.3	1.4	15/64	0.2	-	0.3	0.6	0.3	0.02	5.5
1-5/8	1.6	4.8	5.3	1.2	1.0	0.2	2.0	19/64	0.2	-	0.3	0.6	0.3	0.02	5.5

Dimensions are in inches, unless otherwise noted.

Semi-rotary actuators DSR/DSRL - Inch Series

Ordering Data

Mandatory data					
Function	Piston \varnothing	Rotation angle $^{\circ}$	Cushioning	Magnet for position sensing	Shaft type
DSR DSRL	3/8 1/2 5/8 1 1 1/4 1 5/8	0 ... 184	P	A	FW
DSR	- 1	- 180	- P	- A	-

Ordering table								
Size	3/8	1/2	5/8	1	1 1/4	1 5/8	Code	Enter code
M Function	Semi-rotary actuator with keyed shaft						DSR	
	Semi-rotary actuator, with flanged, hollow drive shaft ¹⁾						DSRL	
Piston \varnothing [in]	1/2	5/8	3/4	1	1 1/4	1 5/8	-...	
Rotation angle $^{\circ}$	0 ... 181		0 ... 184				-...	
Cushioning	Non-adjustable at both ends						-P	-P
Magnet for position sensing	For use with magnetic proximity sensor						-A	-A
Shaft type	Keyed shaft (standard - no product code necessary)							
	Hollow flanged shaft						-FW	

1) Shaft type -FW must be specified with DSRL.

Transfer order code

	-		-		-	P	-	A	-	
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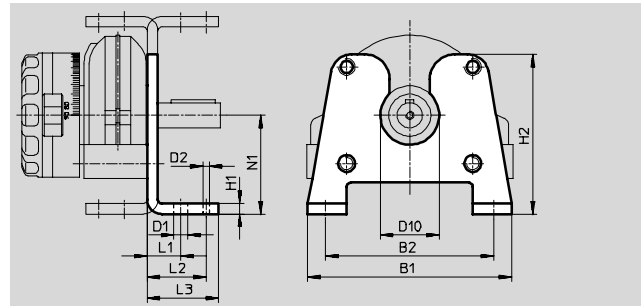
Semi-rotary actuators DSR/DSRL - Inch Series

Accessories



Foot mounting HSR...-FW

Material:
Steel

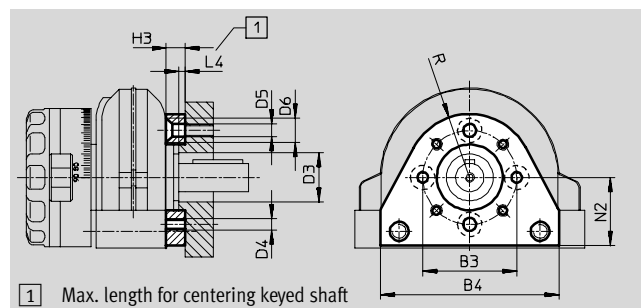
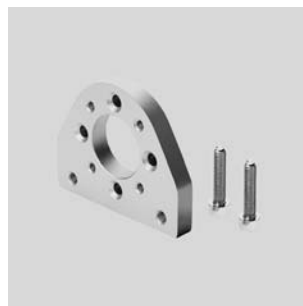


Dimensions and ordering data															
For \varnothing	B1	B2	D1 \varnothing	D2	D10	H1	H2	L1	L2	L3	N1	CRC ¹⁾	Weight	Part No.	Type
[in]													[oz]		
3/8	2.1	1.7	0.1	0.1	0.8	0.2	2.1	0.4	0.7	0.8	1.3	2	2.2	33317	HSR-10-FW
1/2	2.5	2.0	0.1	0.1	0.9	0.2	2.5	0.4	0.7	0.8	1.6	2	3.1	30923	HSR-12-FW
5/8	3.0	2.5	0.2	0.1	0.9	0.2	2.8	0.6	0.9	1.0	1.7	2	6.0	30924	HSR-16-FW
1	3.8	3.1	0.3	0.1	1.1	0.2	3.0	0.6	1.1	1.3	1.9	2	8.3	30925	HSR-25-FW
1-1/4	5.1	4.1	0.3	0.2	1.7	0.3	4.3	0.8	1.3	1.7	2.6	2	23.3	30926	HSR-32-FW
1-5/8	6.3	5.1	0.3	0.2	2.0	0.3	5.3	1.0	1.7	2.0	3.2	2	36.7	30927	HSR-40-FW

1) Corrosion resistance class 2 according to Festo standard 940 070
Components with moderate corrosion resistance for use in normal industrial environments subjected to contact with coolants or lubricating agents.

Flange mounting FSR

Material:
Die-cast Aluminum



1 Max. length for centering keyed shaft

Dimensions and ordering data															
For \varnothing	B3	B4	D3 \varnothing min.	D4	D5 \varnothing	D6 \varnothing	H3	L4 max.	N2	R	CRC ¹⁾	Weight	Part No.	Type	
[in]												[oz]			
3/8	1.1	1.8	0.5	M3	0.1	0.3	0.3	0.1	0.8	0.7	2	0.8	34480	FSR-10	
1/2	1.2	2.1	0.7	M3	0.1	0.3	0.3	0.1	0.9	0.8	2	1.1	14658	FSR-12	
5/8	1.4	2.4	0.7	M4	0.2	0.3	0.3	0.1	1.0	0.9	2	1.8	13236	FSR-16	
1	1.6	3.0	0.8	M5	0.2	0.4	0.3	0.1	1.1	1.1	2	2.5	13237	FSR-25	
1-1/4	2.2	3.9	1.3	M6	0.3	0.5	0.5	0.1	1.7	1.4	2	6.3	13238	FSR-32	
1-5/8	2.8	4.7	1.5	M8	0.4	0.6	0.6	0.2	2.0	1.8	2	10.6	14655	FSR-40	

1) Corrosion resistance class 2 according to Festo standard 940 070
Components with moderate corrosion resistance for use in normal industrial environments subjected to contact with coolants or lubricating agents.

Dimensions are in inches, unless otherwise noted.

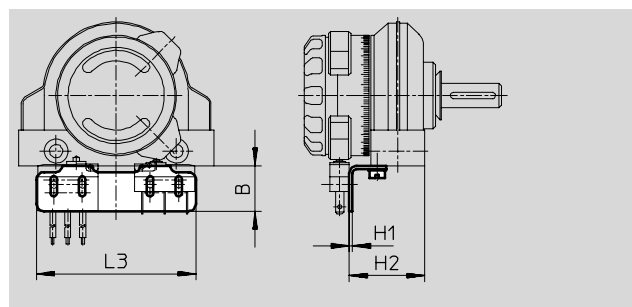
Semi-rotary actuators DSR/DSRL - Inch Series

Accessories

Mounting kit WSR-10/12-K

For micro switch S-3-BE, S-3-BE-SW

Material:
Steel



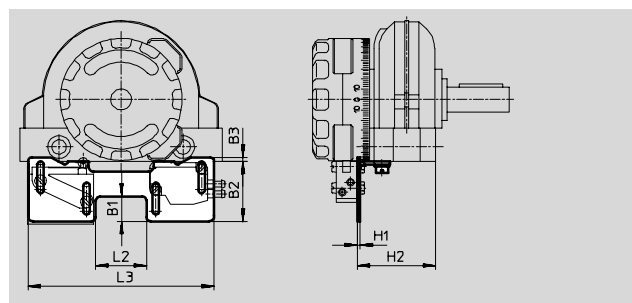
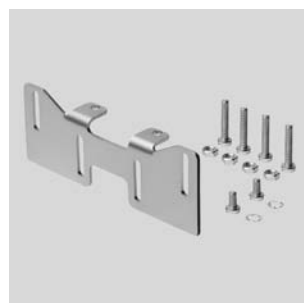
Dimensions and ordering data									
For Ø	B	H1	H2	L3	CRC ¹⁾	Weight	Part No.	Type	
[in]						[oz]			
3/8	0.6	0.04	0.9	1.9	2	0.4	33414	WSR-10-K	
1/2	0.6	0.04	1.0	2.1	2	0.5	15686	WSR-12-K	

1) Corrosion resistance class 2 according to Festo standard 940 070
Components with moderate corrosion resistance for use in normal industrial environments subjected to contact with coolants or lubricating agents.

Mounting kit WSR-1/2 ... 1-5/8

For micro switch S-3-E, SR-3-E-SW

Material:
Steel



Dimensions and ordering data											
For Ø	B1	B2	B3	H1	H2	L2	L3	CRC ¹⁾	Weight	Part No.	Type
[in]									[oz]		
1/2	0.2	0.9	0.2	0.1	0.9	0.6	3.1	2	0.4	15684	WSR-12
5/8	0.4	1.0	0.2	0.1	1.2	0.7	3.3	2	0.8	14874	WSR-16
1	0.5	1.1	0.1	0.1	1.5	1.0	3.5	2	0.9	14796	WSR-25
1-1/4	0.5	1.1	0.1	0.1	1.9	1.6	4.2	2	1.0	14960	WSR-32
1-5/8	0.5	1.1	0.1	0.1	2.7	2.0	4.7	2	1.1	14961	WSR-40

1) Corrosion resistance class 2 according to Festo standard 940 070
Components with moderate corrosion resistance for use in normal industrial environments subjected to contact with coolants or lubricating agents.

Dimensions are in inches, unless otherwise noted.

Semi-rotary actuators DSR/DSRL - Inch Series

Accessories

Mounting kit

WSR-...-J

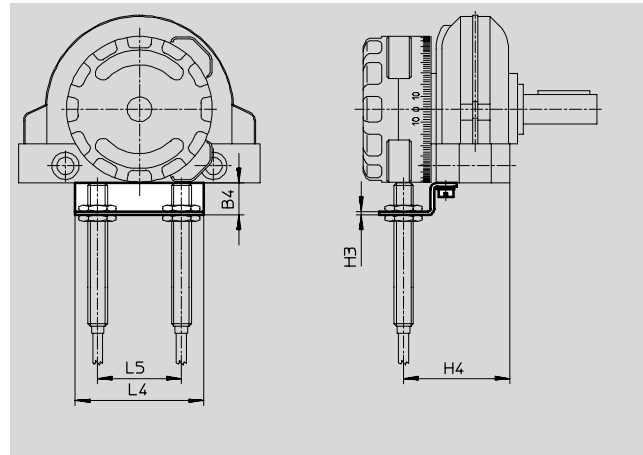
For proximity sensors SIEN-M8

WSR-...-J-M5

For proximity sensors SIEN-M5

Material:

Steel



Dimensions and ordering data									
WSR-...-J									
For Ø	B4	H3	H4	L4	L5	CRC ¹⁾	Weight	Part No.	Type
[in]							[oz]		
3/8	0.5	0.1	1.4	2.0	1.1	2	0.4	14873	WSR-16-J
1/2	0.5	0.1	1.7	2.0	1.3	2	0.6	14799	WSR-25-J
5/8	0.5	0.1	2.1	2.5	1.9	2	0.6	14962	WSR-32-J
1	0.5	0.1	3.0	3.1	2.4	2	0.8	14963	WSR-40-J

Dimensions and ordering data									
WSR-...-J-M5									
For Ø	B4	H3	H4	L4	L5	CRC ¹⁾	Weight	Part No.	Type
[in]							[oz]		
3/8	0.3	0.04	1.0	1.2	0.8	2	0.2	33413	WSR-10-J-M5
1/2	0.3	0.04	1.1	1.3	1.0	2	0.4	15685	WSR-12-J-M5
5/8	0.3	0.04	1.4	1.5	1.1	2	2.8	15931	WSR-16-J-M5
1	0.5	0.06	1.7	2.0	1.3	2	0.6	15932	WSR-25-J-M5
1-1/4	0.5	0.06	2.1	2.5	1.9	2	0.9	15933	WSR-32-J-M5
1-5/8	0.5	0.06	3.0	3.1	2.4	2	1.1	15934	WSR-40-J-M5

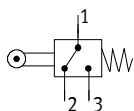
1) Corrosion resistance class 2 according to Festo standard 940 070
Components with moderate corrosion resistance for use in normal industrial environments subjected to contact with coolants or lubricating agents.

Dimensions are in inches, unless otherwise noted.

Semi-rotary actuators DSR/DSRL - Inch Series

Accessories

Electrical limit switch for end-position sensing



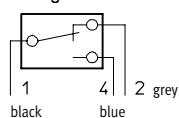
The switching point may only be exceeded by 0.02 inch in these electrical limit switches. Actuation only vertical to stem axis.

	S-3-BE	S-3-BE-SW	S-3-E	SR-3-E-SW
Connection	3 push-in connectors (0.11x0.02 inch)	3 wires (0.0012 in ²)	Screw connector	3 wires 3.3 ft long
Contact rating	See table below			
Operating voltage	250 V AC/250 V DC			
Line current ohmic load	-	-	6 A/250 V AC 0.25 A/250 V DC	5 A/250 V AC 0.25 A/250 V DC
Line current inductive load	-	-	2 A/250 V AC 0.1 A/250 V DC	2 A/250 V AC 0.03 A/250 V DC
Utilization category	AC 12/DC 12 (ohmic load) AC 14/DC 13 (inductive load)			
CE symbol	Yes, as per EU Directive 73/23/EEC			
Protection class to EN 60529	IP40	IP67	IP00	IP65
Temperature range	-4 ... +185 °F		-4 ... +176 °F	
Material	Housing, cover: black plastic			
Weight	0.07 oz	0.56 oz	0.25 oz	0.35 oz

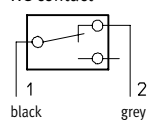
Contact rating				
S-3-BE, S-3-BE-SW				
AC voltage				
Voltage [V] ~	Resistance load [A]	Inductive load [A]		
12	6	6		
24	3	2		
60	1	0.5		
110	0.5	0.2		
220	0.25	0.1		
S-3-E	DC	AC	DC	AC
12	6	-	6	-
24	6	-	6	-
60	1	-	0.5	-
110	0.5	-	0.2	-
220	0.25	-	0.1	-
250	-	6	-	2
SR-3-E-SW	DC	AC	DC	AC
15	3	-	5	-
30	3	-	5	-
50	1	-	1	-
75	0.25	-	0.75	-
125	0.03	5	0.5	5
250	0.03	5	0.25	5

Contact configuration:

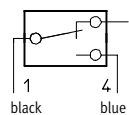
Changeover switch



NC contact



NO contact



Semi-rotary actuators DSR/DSRL - Inch Series

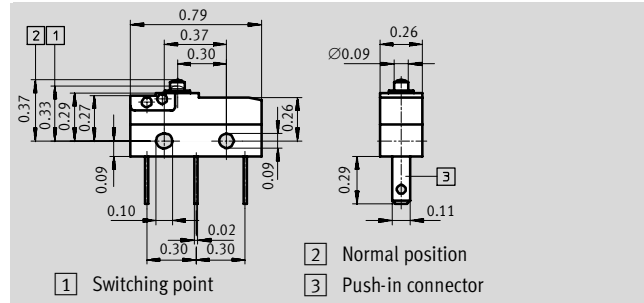
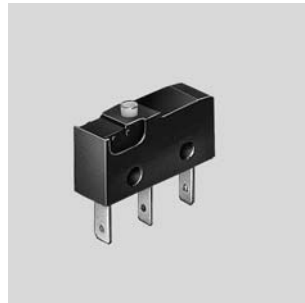
Accessories

FESTO

Electrical limit switch for end-position sensing

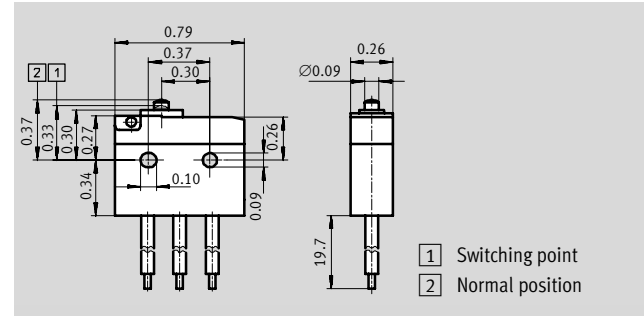
Micro switch

S-3-BE



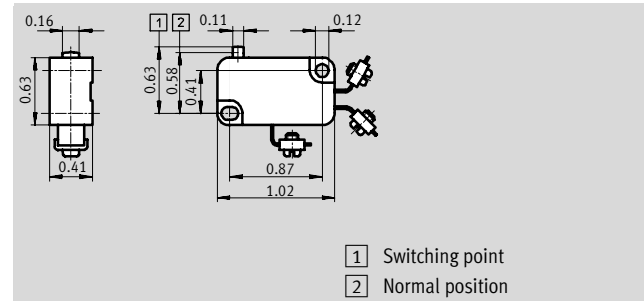
Micro switch with cable (splash-proof)

S-3-BE-SW



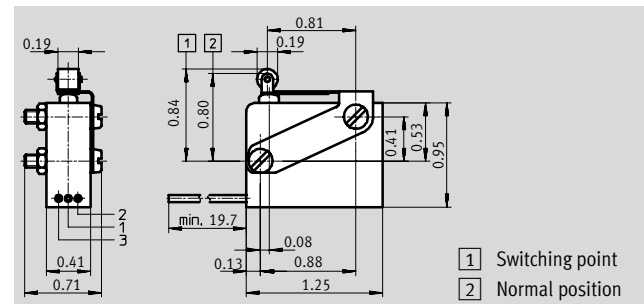
Micro switch

S-3-E



Micro switch with roller lever
(splash-proof)

SR-3-E-SW






Ordering data				
For \varnothing	Description	Design	Part No.	Type
[in]				
3/8 ... 1/2	Micro switch	Spade connectors	30648	S-3-BE
	Micro switch, splash-proof	With cable	30649	S-3-BE-SW
5/8 ... 1-5/8	Micro switch	Screw connectors	7347	S-3-E
	Micro switch, splash-proof	With roller lever	14797	SR-3-E-SW


Dimensions are in inches, unless otherwise noted.

Semi-rotary actuators DSR/DSRL - Inch Series

Accessories

Ordering data – Sensors					
	For Ø [in]	Remarks	Connection	Part No.	Type
	3/8 ... 1-5/8	For mounting kit WSR-...J-M5	Cable	150370	SIEN-M5B-PS-K-L
			Plug	150371	SIEN-M5B-PS-S-L
	5/8 ... 1-5/8	For mounting kit WRM-...J	Cable	150386	SIEN-M8B-PS-K-L
			Plug	150387	SIEN-M8B-PS-S-L

Ordering data – Plug sockets							
	Mounting	Switch output		Connection	Cable length [ft]	Part No.	Type
		PNP	NPN				
Straight socket							
	M8 union nut	<input type="checkbox"/>	<input type="checkbox"/>	3-pin	8.2	159420	SIM-M8-3GD-2.5-PU
					16.4	159421	SIM-M8-3GD-5-PU
Angled socket							
	M8 union nut	<input type="checkbox"/>	<input type="checkbox"/>	3-pin	8.2	159422	SIM-M8-3WD-2.5-PU
					16.4	159423	SIM-M8-3WD-5-PU

Ordering data – One-way flow control valves				
	Connection		Part No.	Type
	Thread	For tubing OD		
	10-32 UNF	5/32"	165008	GRLA-10-32-UNF-QS-5/32-U
		1/4"	192753	GRLA-10-32-UNF-QS-1/4-U
	1/8" NPT	5/32"	165009	GRLA-1/8-NPT-QS-5/32-U
		3/16"	190941	GRLA-1/8-NPT-QS-3/16-U
		1/4"	165010	GRLA-1/8-NPT-QS-1/4-U
	1/4" NPT	5/16"	165013	GRLA-1/8-NPT-QS-5/16-U
		3/16"	190944	GRLA-1/4-NPT-QS-3/16-U
		1/4"	165011	GRLA-1/4-NPT-QS-1/4-U
		5/16"	165014	GRLA-1/4-NPT-QS-5/16-U
		3/8"	190947	GRLA-1/4-NPT-QS-3/8-U