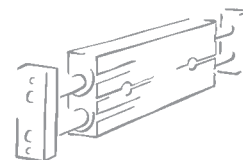


# COMPACT PRECISION SLIDES SERIES S8



1

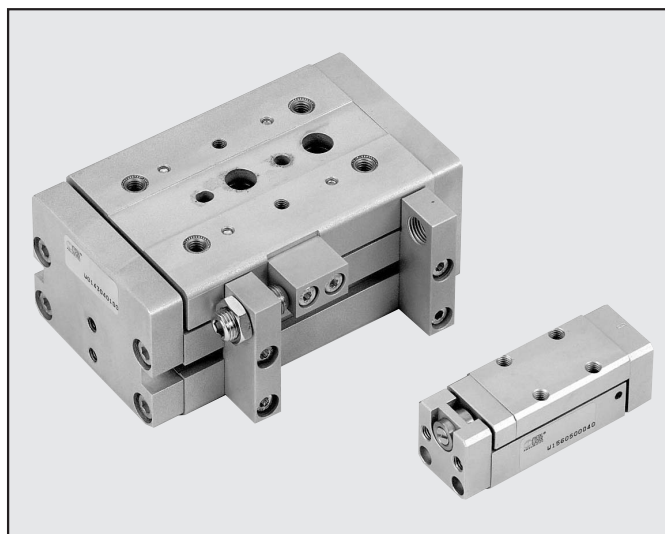
There are two sliding systems available:

- Type S8-B with in-line ball bearings
- Type S8-C with ball re-circulation bearings

The guides fixed onto the slide body are made of hardened and tempered steel. There are slots in the body of slide S8-C for mounting a retracting sensor. There are also kits for mounting adjustable mechanical stops or hydraulic shock absorbers.

All S8 slides come on request with permanent pneumatic cushioning.

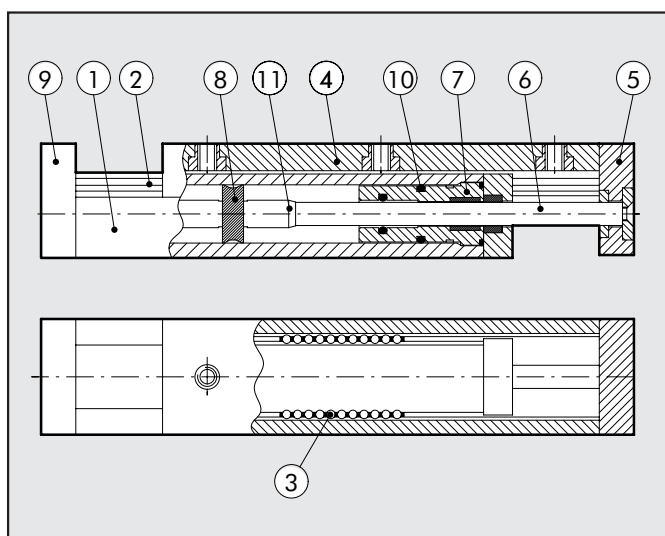
Slide made with Toss-System.



TECHNICAL DATA		S8-B	S8-C
Pressure range	bar	2-6	
Temperature range	°C	-10 to +60	
Fluid		20µ unlubricated filtered air. Lubrication, if used, must be continuous	
Bores	mm	8 10 16 20 25 32 40	10 16 20 25 32 40
Strokes	mm	Ø 8; 10; 25; 50; 80; 100	10 to 40: 25; 50; 80; 100; 125; 160; 200
Type of guide		In-line ball bearings (bars of hardened, tempered and ground steel)	Ball re-circulation (bars of hardened, tempered and ground steel)
Air ports		Both on front plate	
Versions		Double-acting With permanent pneumatic cushioning	Double-acting With permanent pneumatic cushioning With 5 mm adjustable mechanical stops With hydraulic shock absorbers
End-of-stroke sensors		Magnetic, only on request	With pneumatic cushioning and mechanical stops Magnetic, retracting type

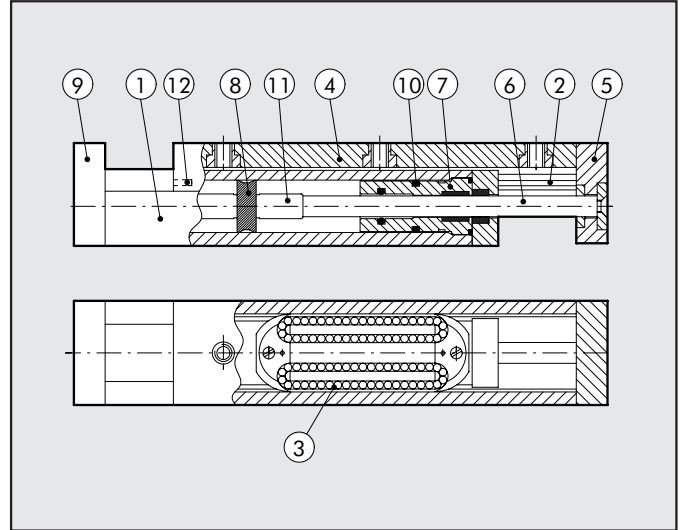
## COMPONENTS FOR SERIES S8-B

- ① SLIDE BODY: aluminium
- ② GUIDES: high Cr alloy steel
- ③ IN-LINE BALL CAGE: steel
- ④ MOVING PART: aluminium
- ⑤ FRONT PLATE: aluminium
- ⑥ PISTON ROD: thick chromium plated steel
- ⑦ BASE: Hostaform®
- ⑧ PISTON: NBR
- ⑨ AIR PORT PLATE: aluminium
- ⑩ STATIC O-RINGS: NBR
- ⑪ CUSHIONING CONE: OT 58



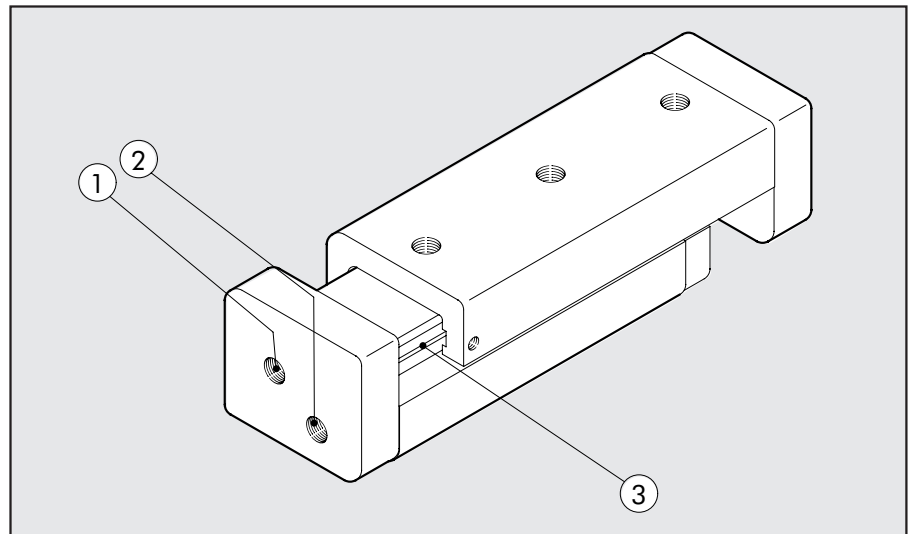
### COMPONENTS FOR SERIES S8-C

- ① SLIDE BODY: aluminium
- ② GUIDES: high Cr alloy steel
- ③ BALL RE-CIRCULATION TRACKS: steel
- ④ MOVING PART: aluminium
- ⑤ FRONT PLATE: aluminium
- ⑥ PISTON ROD: thick chromium plated steel
- ⑦ BASE: Hostaform®
- ⑧ PISTON: NBR
- ⑨ AIR PORT PLATE: aluminium
- ⑩ STATIC O-RINGS: NBR
- ⑪ CUSHIONING CONE: OT 58
- ⑫ MAGNET: Plastroferrite



### COMPACT PRECISION SLIDE SERIES S8-B

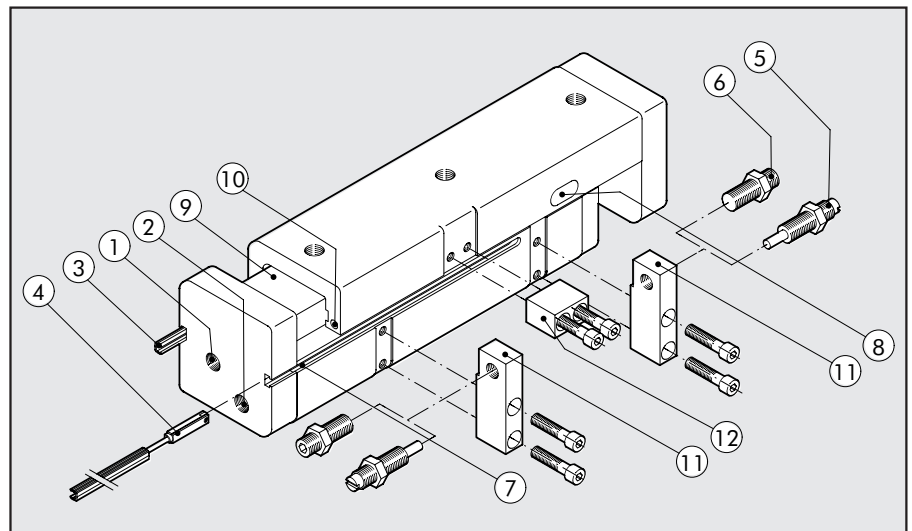
- ① Pneumatic port for slide opening
- ② Pneumatic port for slide closing
- ③ Ball system guide

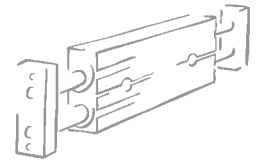


### COMPACT PRECISION SLIDE SERIES S8-C

- ① Pneumatic port for slide opening
- ② Pneumatic port for slide closing
- ③ Slot cover strip
- ④ Retracting sensor
- ⑤ Hydraulic decelerator
- ⑥ Mechanical stop
- ⑦ Sensor slot
- ⑧ Lubrication point for ball re-circulation system
- ⑨ Ball system guide
- ⑩ Magnet
- ⑪ Hydraulic decelerator/mechanical stop support
- ⑫ Counter block for hydraulic decelerator/mechanical stop

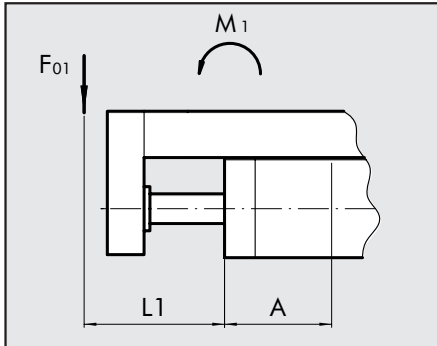
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W0950025390  
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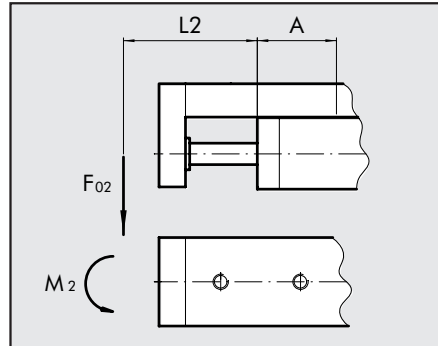


## CALCULATIONS FOR COMPACT PRECISION SLIDES SERIES S8-B

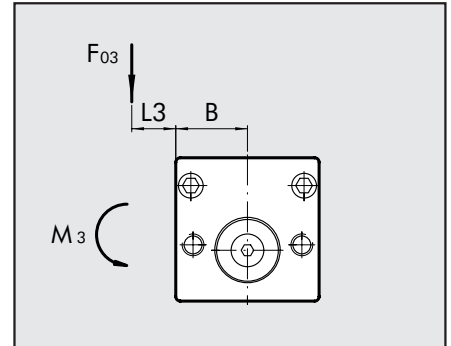
1



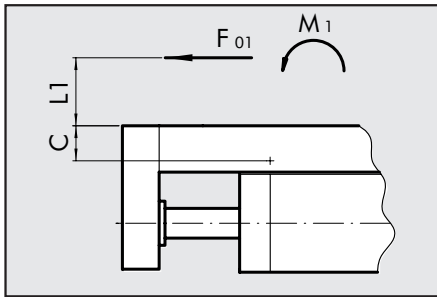
$$F_{01} (L_1 + A) \leq M_1$$



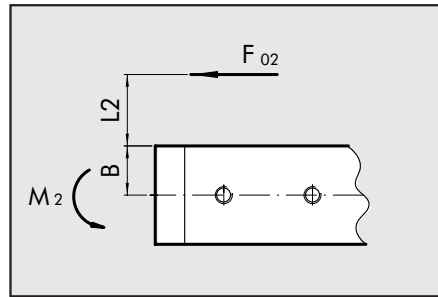
$$F_{02} (L_2 + A) \leq M_2$$



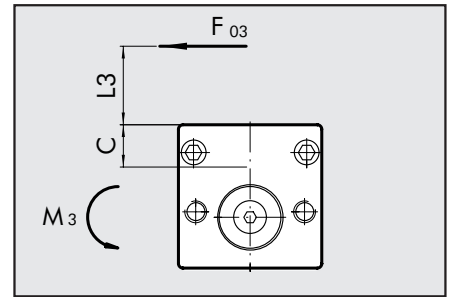
$$F_{03} (L_3 + B) \leq M_3$$



$$F_{01} (L_1 + C) \leq M_1$$



$$F_{02} (L_2 + B) \leq M_2$$

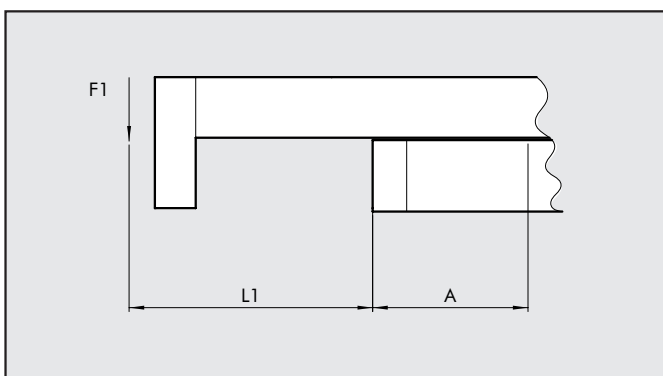


$$F_{03} (L_3 + C) \leq M_3$$

### SERIES S8-B

Ø	STROKE 10 mm					STROKE 25 mm					STROKE 50 mm					STROKE 80 mm				
	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm
8-B	1.28	0.58	34.5	12.25	11.4	1.55	0.58	42	12.25	11.4	2.08	0.81	60.8	12.25	11.4	2.63	0.98	80	12.25	11.4
10-B	1.37	1.04	40.6	17.25	10.4	1.42	1.04	48.1	17.25	10.4	2.12	1.45	66.9	17.25	10.4	2.6	1.76	86.1	17.25	10.4
16-B	1.52	1.15	40.6	19.75	11.5	1.58	1.15	48.1	19.75	11.5	2.35	1.61	66.9	19.75	11.5	2.88	1.96	86.1	19.75	11.5
20-B	1.67	1.27	40.6	19.75	13.6	1.74	1.27	48.1	19.75	13.6	2.58	1.77	66.9	19.75	13.6	3.17	2.16	86.1	19.75	13.6
25-B	3.32	2.65	49.2	27.25	16	3.83	2.65	56.7	27.25	16	4.86	4.16	77	27.25	16	6.7	5.68	102.4	27.25	16
32-B	4.6	3.87	49.7	32.25	17.7	4.78	4.56	57.2	32.25	17.7	6.36	5.88	75.8	32.25	17.7	9.31	8.48	103.2	32.25	17.7
40-B	5.06	4.42	49.7	34.75	20.8	5.26	5.17	57.2	34.75	20.8	7	6.67	75.8	34.75	20.8	10.24	9.59	103.2	34.75	20.8
Ø	STROKE 100 mm					STROKE 125 mm					STROKE 160 mm					STROKE 200 mm				
	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm
8-B	3.37	1.22	96.3	12.25	11.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10-B	3.23	2.18	98.4	17.25	10.4	3.93	2.18	121.2	17.25	10.4	5.22	2.18	151.3	17.25	10.4	6.13	2.18	178.1	17.25	10.4
16-B	3.59	2.42	98.4	19.75	11.5	4.37	2.42	121.2	19.75	11.5	5.8	2.42	151.3	19.75	11.5	6.81	2.42	178.1	19.75	11.5
20-B	3.95	2.67	98.4	19.75	13.6	4.8	2.67	121.2	19.75	13.6	6.38	2.67	151.3	19.75	13.6	7.5	2.67	178.1	19.75	13.6
25-B	8.07	6.82	120.2	27.25	16	13	6.82	140.5	27.25	16	11.38	6.82	168.4	27.25	16	13.71	6.82	201.4	27.25	16
32-B	10.84	9.75	119.4	32.25	17.7	13.07	9.75	141.2	32.25	17.7	14.78	9.75	164.9	32.25	17.7	18.48	9.75	200.4	32.25	17.7
40-B	11.92	11.04	119.4	34.75	20.8	14.38	11.04	141.2	34.75	20.8	16.26	11.04	164.9	34.75	20.8	20.32	11.04	200.4	34.75	20.8

### EXAMPLE OF CALCULATION



Values: Ø25 corsa 80 mm Tipo S8-B

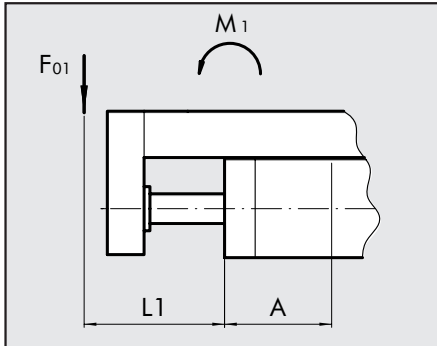
DISTANCE  $L_1 = 40 \text{ mm} = 0.04 \text{ m}$

LONG MOMENT  $M_1 = 6.7 \text{ Nm}$

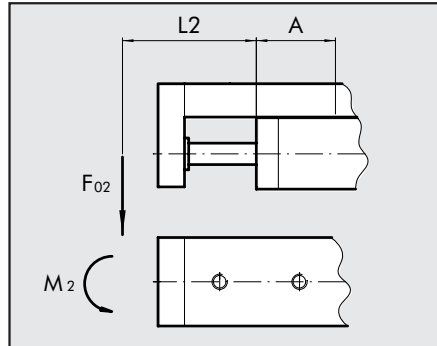
CORRECTION FACTOR  $A = 102.4 \text{ mm} = 0.1024 \text{ m}$

$$\text{CALCULATION: } F_1 \leq \frac{M_1}{L_1 + A} = \frac{6.7 \text{ Nm}}{0.04 + 0.1024} = 47 \text{ N}$$

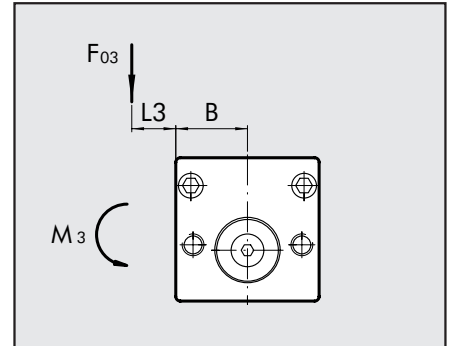
### CALCULATIONS FOR COMPACT PRECISION SLIDES SERIES S8-C



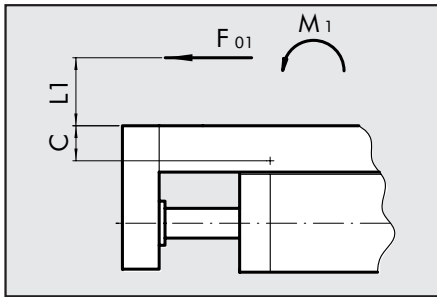
$$F_{01} (L_1 + A) \leq M_1$$



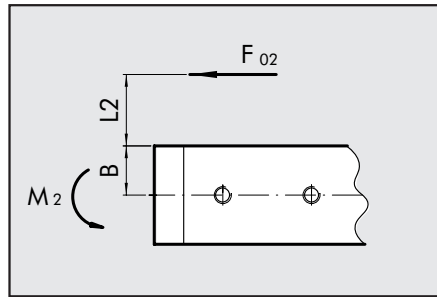
$$F_{02} (L_2 + A) \leq M_2$$



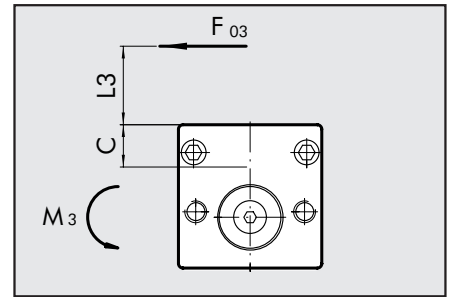
$$F_{03} (L_3 + B) \leq M_3$$



$$F_{01} (L_1 + C) \leq M_1$$



$$F_{02} (L_2 + B) \leq M_2$$



$$F_{03} (L_3 + C) \leq M_3$$

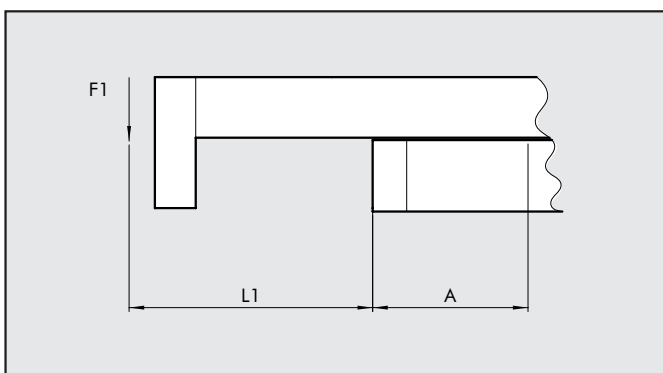
### SERIES S8-C

Ø	STROKE 25 mm					STROKE 50 mm					STROKE 80 mm					STROKE 100 mm				
	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm
10-B	2.6	1.03	58.5	17.25	12	2.9	1.35	66.5	17.25	12	2.7	1.23	64	17.25	12	3.7	1.85	76.5	17.25	12
16-B	2.9	1.15	59.5	19.75	12	3.2	1.5	66.5	19.75	12	3	1.37	64	19.75	12	4.1	2.06	76.5	19.75	12
20-B	3.2	1.27	59.5	19.75	15	3.5	1.65	66.5	19.75	15	3.3	1.51	64	19.75	15	4.5	2.26	76.5	19.75	15
25-B	4.4	2.65	68	27.25	18	6.5	4.24	84.5	27.25	18	6.8	4.77	87	27.25	18	8.2	6.1	97	27.25	18
32-B	7.8	4.56	84.5	32.25	21.8	7.8	4.56	84.5	32.25	21.8	8.3	5	87	32.25	21.8	10.3	6.83	97	32.25	21.8
40-B	8.6	5	89.5	34.75	21.8	8.6	5	89.5	34.75	21.8	9.2	5.5	92	34.75	21.8	11.3	7.5	102	34.75	21.8

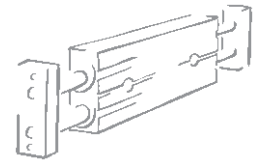
Ø	STROKE 125 mm					STROKE 160 mm					STROKE 200 mm				
	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm	M1/M2 Nm	M3 Nm	A mm	B mm	C mm
10-B	5	2.07	87.5	17.25	12	5.7	2.07	97.5	17.25	12	7.1	2.07	117.5	17.25	12
16-B	5.5	2.3	87	19.75	12	6.3	2.3	97	19.75	12	7.9	2.3	117	19.75	12
20-B	6	2.53	87	19.75	15	6.9	2.53	97	19.75	15	8.7	2.53	117	19.75	15
25-B	10	5.3	101.5	27.25	18	12.3	5.3	119	27.25	18	15.5	5.3	144	27.25	18
32-B	13.2	9.57	112	32.25	21.8	15.8	8.65	116	32.25	21.8	20.2	8.65	166	32.25	21.8
40-B	14.5	10.5	117	34.75	21.8	17.4	9.5	120	34.75	21.8	22.2	9.5	260	34.75	21.8

### EXAMPLE OF CALCULATION



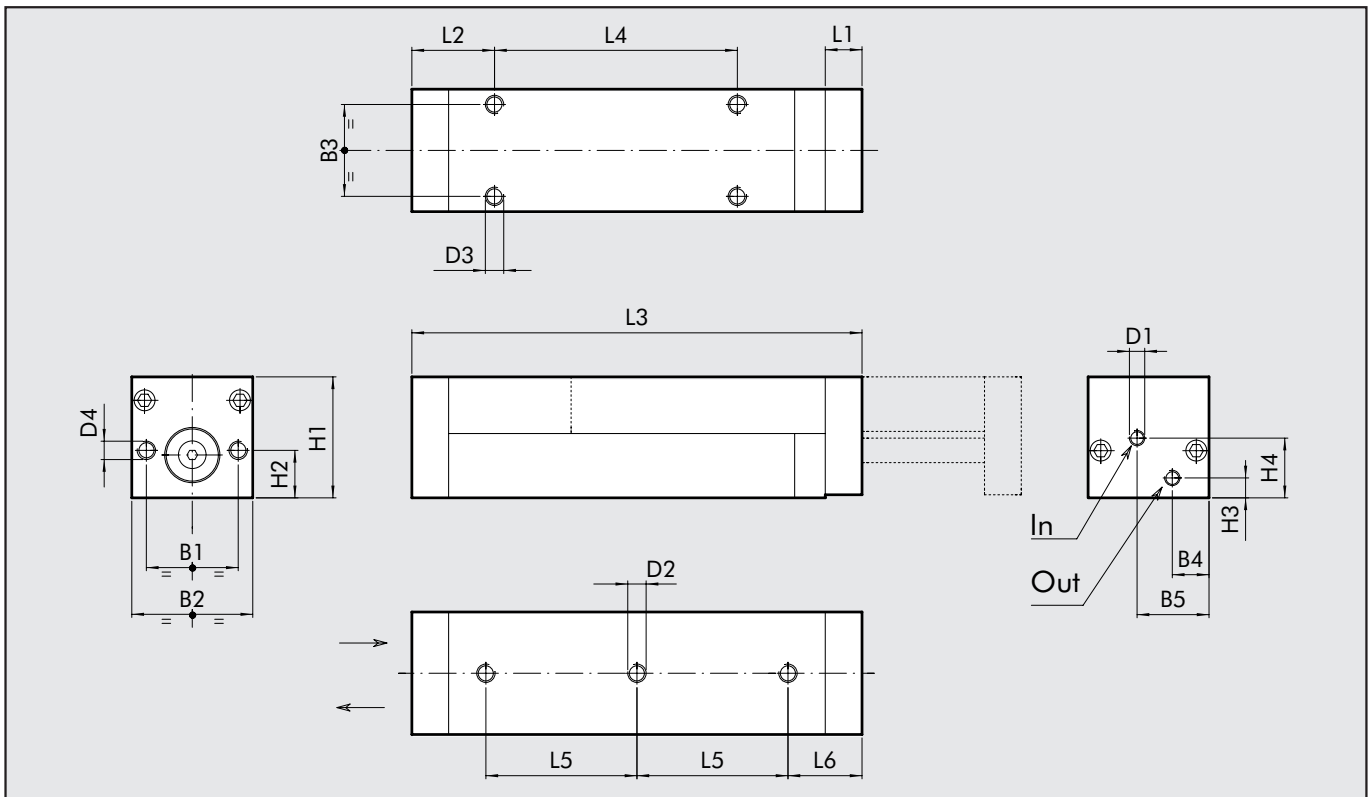
Values: Ø32 corsa 50 mm  
 DISTANCE  $L_1 = 20 \text{ mm} = 0.02 \text{ m}$   
 LONG MOMENT  $M_1 = 7.8 \text{ Nm}$   
 CORRECTION FACTOR  $A = 84.5 \text{ mm} = 0.0845 \text{ m}$

$$\text{CALCULATION: } F_1 \leq \frac{M_1}{L_1 + A} = \frac{7.8 \text{ Nm}}{0.02 + 0.0845} = 74.6 \text{ N}$$



## DIMENSIONS OF COMPACT PRECISION SLIDES SERIES S8-B

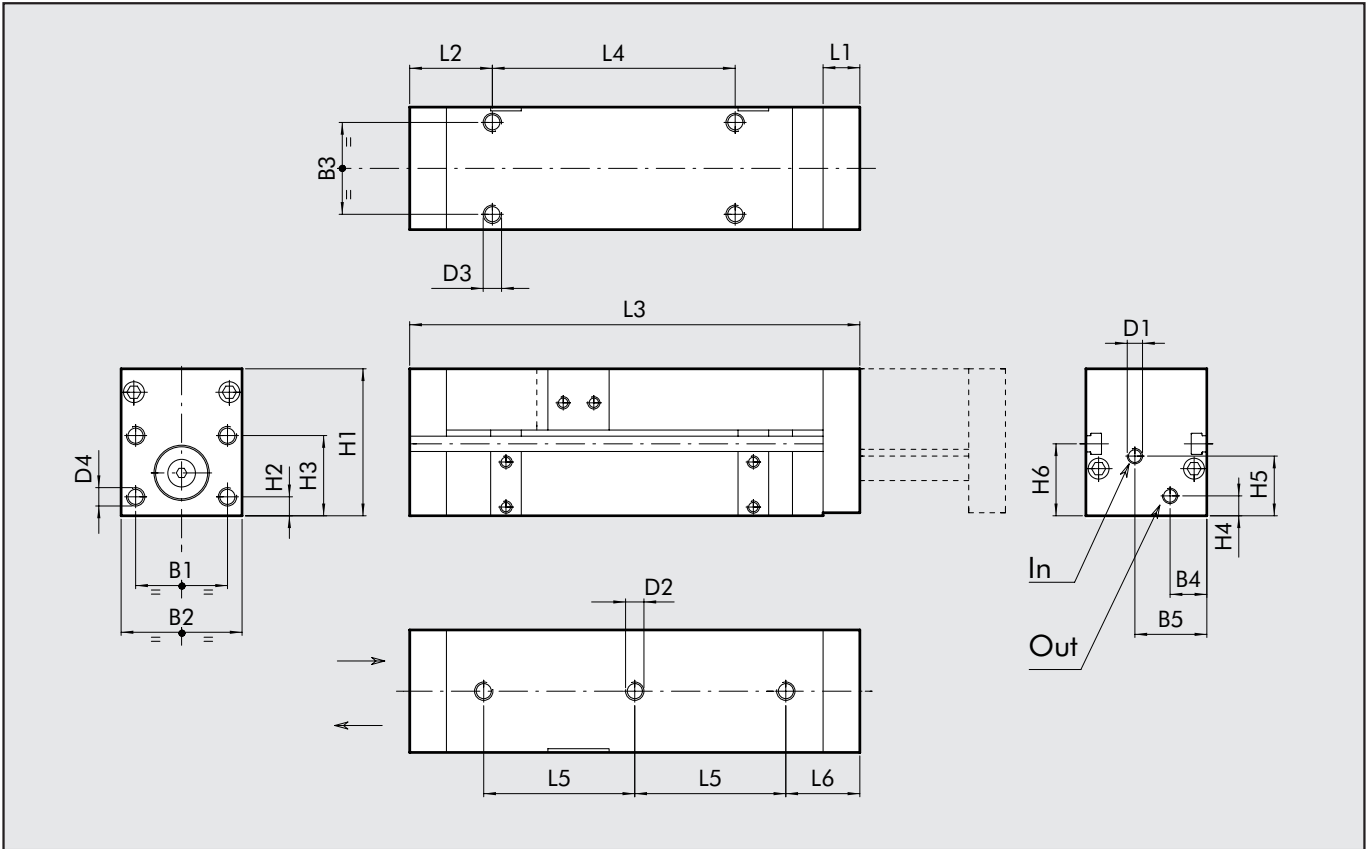
1



Bore Ø (mm)	Piston rod bore Ø (mm)	B1 (mm)	B2 (mm)	B3 (mm)	B4 (mm)	B5 (mm)	D1	D2 Thread/ Depth (mm)	D3 Thread/ Depth (mm)	D4 Thread/ Depth (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L1 (mm)	L2 (mm)
8	4	16	25	18	12.5	12.5	M5	M4/6.0	M4/8.0	M4/9.5	25	11.7	4.5	18.3	10	22
10	5	26	35	25	12.0	21	M5	M6/5.5	M5/10	M6/11.5	26	10.5	5.0	14.0	12	27
16	8	30	40	30	13.0	25.5	M5	M6/5.5	M6/12	M6/11.5	32	12.0	7.5	15.5	12	27
20	8	30	40	30	12.5	24.5	M5	M6/8.0	M6/14	M6/11.5	39.5	15.5	8.0	20.0	12	22
25	10	35	55	39	17.5	34.75	G 1/8"	M8/7.5	M8/18	M8/10.5	45	19.0	12.0	23.0	15	35
32	12	45	65	49	20.0	40.5	G 1/8"	M8/7.5	M8/20	M8/10.5	50	20.0	10.8	28.3	15	35
40	15	50	70	54	23.0	44.5	G 1/4"	M8/10.5	M8/20	M8/10.5	65	27.0	15.0	36.5	20	40

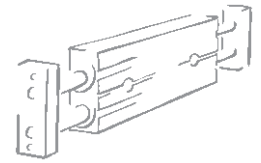
Bore (mm)		(mm) Stroke							
		10	25	50	80	100	125	160	200
8	L3	74	89	129	169	192	-	-	-
	L4	21	36	76	116	2 x 69.5	-	-	-
	L5	29	44	2 x 42	2 x 62	3 x 49	-	-	-
	L6	22	22	22	22	22	-	-	-
	Weight [g]	100	150	200	260	300	-	-	-
10/16	L3	80	95	135	175	200	245	305	360
	L4	15	30	70	2 x 55	2 x 67.5	2 x 90	2 x 120	2 x 147.5
	L5	31	2 x 23	2 x 43	3 x 42	3 x 50	3 x 65	3 x 85	4 x 78
	L6	24	24	24	24	24.5	24.5	24.5	23.5
	Weight [g]	190/290	240/380	340/530	440/630	540/730	590/880	780/1080	890/1280
20	L3	80	95	135	175	200	245	305	360
	L4	25	30	70	2 x 55	2 x 67.5	2 x 90	2 x 120	2 x 147.5
	L5	31	2 x 23	2 x 43	3 x 42	3 x 50	3 x 65	3 x 85	4 x 78
	L6	24	24	24	24	24.5	24.5	24.5	23.5
	Weight [g]	390	440	580	730	830	1030	1280	1530
25/32	L3	101	121	156	211	246	286	341	411
	L4	20	40	75	130	2 x 82.5	2 x 102.5	2 x 130	2 x 165
	L5	45	65	2 x 50	2 x 78	2 x 95	3 x 77	3 x 95	3 x 115
	L6	27.5	27.5	27.5	27	27.5	27	27.5	32.5
	Weight [g]	640/840	740/1000	1000/1300	1340/1740	1540/2040	1840/2400	2200/2840	2600/3440
40	L3	116	131	166	221	256	296	351	421
	L4	25	40	75	130	2 x 82.5	2 x 102.5	2 x 130	2 x 165
	L5	50	65	2 x 50	2 x 78	2 x 95	3 x 77	3 x 95	3 x 115
	L6	32.5	32.5	32.5	32	32.5	32	32.5	37.5
	Weight [g]	1340	1540	1900	2500	2900	3300	3940	4640

**DIMENSIONS OF COMPACT PRECISION SLIDES SERIES S8-C**



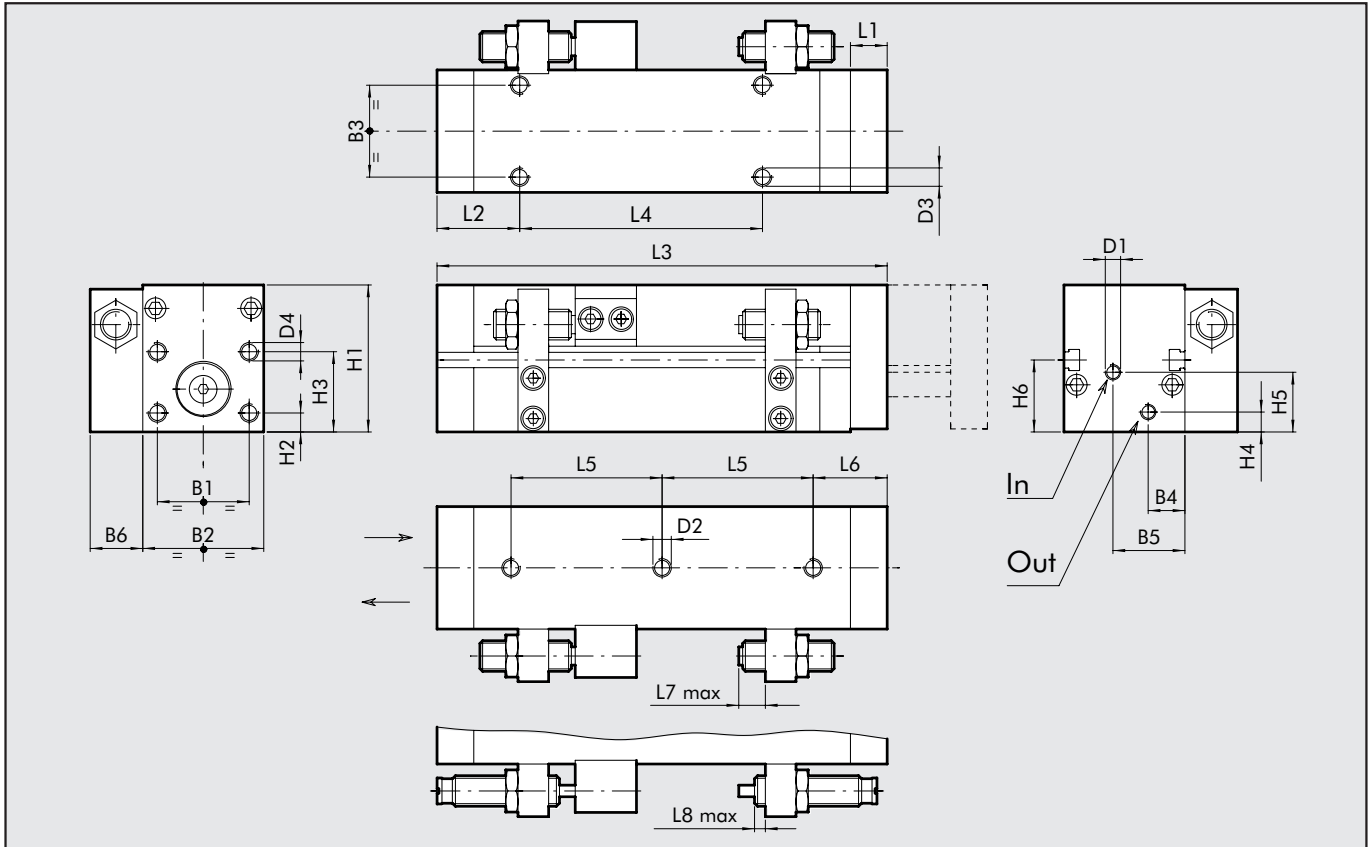
Bore Ø (mm)	Piston rod bore Ø (mm)	B1 (mm)	B2 (mm)	B3 (mm)	B4 (mm)	B5 (mm)	D1	D2 Thread/ Depth (mm)	D3 Thread/ Depth (mm)	D4 Thread/ Depth (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L1 (mm)	L2 (mm)
10	5	24	35	25	12.0	21.0	M5	M6/5.5	M5/6	M6/11.5	35	5.7	20.7	7.0	14.0	12	27
16	8	28	40	30	13.0	25.5	M5	M6/5.5	M6/10	M6/11.5	40	6.2	21.2	7.5	15.5	12	27
20	8	28	40	30	12.5	24.5	M5	M6/8.0	M6/14	M6/11.5	48	6.2	26.2	8.0	20.0	12	27
25	10	35	55	39	17.5	34.75	G 1/8"	M8/7.5	M8/15	M8/10.5	60	10.2	35.2	11.0	24.0	15	35
32	12	45	65	49	20.0	40.5	G 1/8"	M8/7.5	M8/20	M8/10.5	70	10.2	40.2	10.8	28.3	15	35
40	15	50	70	54	23.0	44.5	G 1/4"	M8/10.5	M8/20	M8/10.5	80	10.2	45.2	15.0	36.5	20	40

Bore (mm)		(mm) Stroke						
		25	50	80	100	125	160	200
10/16 /20	L3	135	175	200	245	305	440	
	L4	70	2 x 55	2 x 67.5	2 x 90	2 x 120	3 x 125	
	L5	2 x 43	3 x 42	3 x 50	3 x 65	3 x 85	4 x 98	
	L6	24	24	24.5	24.5	24.5	23.5	
Weight [g]		450/640/780	520/720/860	605/815/960	720/935/1200	870/1100/1460	1080/1335/1740	1320/1595/2160
25/32	L3	156/211	211	246	286	341	501	
	L4	75/130	130	2 x 82.5	2 x 102.5	2 x 130	3 x 140	
	L5	2 x 50/2 x 78	2 x 78	2 x 95	3 x 77	3 x 95	4 x 110	
	L6	27.5/27	27	27.5	27	27.5	30.0	
Weight [g]		1400/2100	1700/2420	2060/2800	2440/3260	2920/3900	3585/4760	4345/5640
40	L3	166	221	256	296	351	511	
	L4	75	130	2 x 82.5	2 x 102.5	2 x 130	3 x 140	
	L5	2 x 50	2 x 78	2 x 95	3 x 77	3 x 95	4 x 110	
	L6	32.5	32	32.5	32	32.5	35	
Weight [g]		2940	3240	3240	3940	4575	5460	6540



## DIMENSIONS OF COMPACT PRECISION SLIDES SERIES S8-C, COMPLETE

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Bore Ø (mm)	Piston rod bore Ø (mm)	B1 (mm)	B2 (mm)	B3 (mm)	B4 (mm)	B5 (mm)	B6 (mm)	D1	D2 Thread/ Depth (mm)	D3 Thread/ Depth (mm)	D4 Thread/ Depth (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L1 (mm)	L2 (mm)	L7 (mm)	L8 (mm)
10	5	24	35	25	12.0	21.0	17.5	M5	M6/5.5	M5/6	M6/11.5	35	5.7	20.7	7.0	14.0	12	27	5	6.4
16	8	28	40	30	13.0	25.5	17.5	M5	M6/5.5	M6/10	M6/11.5	40	6.2	21.2	7.5	15.5	12	27	5	10
20	8	28	40	30	12.5	24.5	17	M5	M6/8.0	M6/14	M6/11.5	48	6.2	26.2	8.0	20.0	12	27	5	16
25	10	35	55	39	17.5	34.75	22	G 1/8"	M8/7.5	M8/15	M8/10.5	60	10.2	35.2	11.0	24.0	15	35	5	16
32	12	45	65	49	20.0	40.5	22	G 1/8"	M8/7.5	M8/20	M8/10.5	70	10.2	40.2	10.8	28.3	15	35	5	16
40	15	50	70	54	23.0	44.5	32	G 1/4"	M8/10.5	M8/20	M8/10.5	80	10.2	45.2	15.0	36.5	20	40	5	19

Bore (mm)		(mm) Stroke						
		25	50	80	100	125	160	200
10/16	L3	135	175	200	245	305	360	440
	L4	70	2 x 55	2 x 67.5	2 x 90	2 x 120	2 x 147.5	3 x 125
	L5	2 x 43	3 x 42	3 x 50	3 x 65	3 x 85	4 x 78	4 x 98
	L6	24	24	24.5	24.5	24.5	23.5	23.5
Weight [g]		500/690/830	570/770/910	655/865/1010	770/9835/1250	920/1150/1510	1080/1335/1740	1320/1595/2160
25/32	L3	156/211	211	246	286	341	411	501
	L4	75/130	130	2 x 82.5	2 x 102.5	2 x 130	2 x 165	3 x 140
	L5	2 x 50/2 x 78	2 x 78	2 x 95	3 x 77	3 x 95	3 x 115	4 x 110
	L6	27.5/27	27	27.5	27	27.5	32.5	30.0
Weight [g]		1500/2200	1800/2520	2160/2900	2540/3360	3020/4000	3685/4860	4445/5740
40	L3	166	221	256	296	351	421	511
	L4	75	130	2 x 82.5	2 x 102.5	2 x 130	2 x 165	3 x 140
	L5	2 x 50	2 x 78	2 x 95	3 x 77	3 x 95	3 x 115	4 x 110
	L6	32.5	32	32.5	32	32.5	37.5	35
Weight [g]		3140	3440	3740	4140	4775	5660	6740

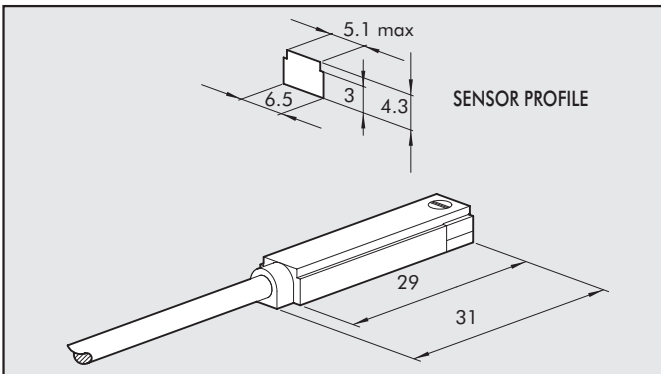
### KEY TO CODES FOR S8-B PRECISION SLIDE

W 1 4 8 B	0 8	O	0 5 0
TYPE	DIAMETER	VARIANT	STROKE
Precision slide series S8 type B	08 10 16 20 25 32 40	0 non-magnetic 6* non-magnetic, cushioned fixed, pneumatic	10 mm 25 mm 50 mm 80 mm 100 mm 125 mm (excluded Ø 8) 160 mm (excluded Ø 8) 200 mm (excluded Ø 8)
* starting from Ø20 and stroke 80			

### KEY TO CODES FOR S8-C PRECISION SLIDE

W 1 4 8 C	1 0	O	0 5 0
TYPE	DIAMETER	VARIANT	STROKE
Precision slide series S8 type C	10 16 20 25 32 40	0 non-magnetic 6* non-magnetic with fixed pneum. cushioning 7 magnetic with mechanical stop 4 magnetic with hydraulic shock absorber 8* magnetic with mech. stop and fixed pneum. cushioning	25 mm 50 mm 80 mm 100 mm 125 mm 160 mm 200 mm
* starting from Ø20 and stroke 50			

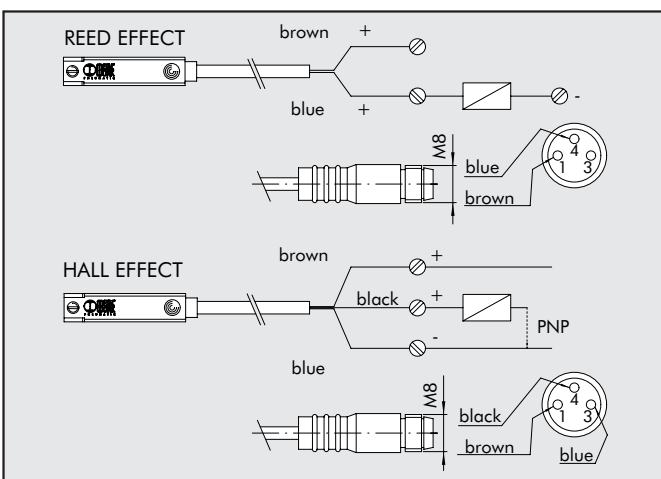
### RETRACTING SENSOR



### ORDERING CODES

Code	Description
W0950025390	Hall sensor DSL, 3 wires, NO 2.5 m
W0950029394	Hall sensor DSL, 3 wires, NO 300 mm M8
W0950022180	Hall sensor DSL, 2 wires, NO 2.5 m
W0950028184	Hall sensor DSL, 2 wires, NO 300 mm M8

### WIRING DIAGRAM



### TECHNICAL FEATURES

	Reed	Hall effect
Type of contact	N.O.	N.O.
Switch	-	PNP
DC voltage range	V 3÷30	6÷30
AC voltage range	V 3÷30	-
Absorption	A 0.1	0.2
DC power	W 6	4
AC power	VA 6	-
Temperature range	°C -20°C to +85°C	
Activation time	s 0.5µ	0.8µ
Risk time	s 0.1µ	0.3µ
Life	imp 10 million	10 <sup>9</sup> million
Contact resistance	Ω 0.1	-
Degree of protection	IP 65	
Voltage drop	V 3	1
Number of wires	2	3