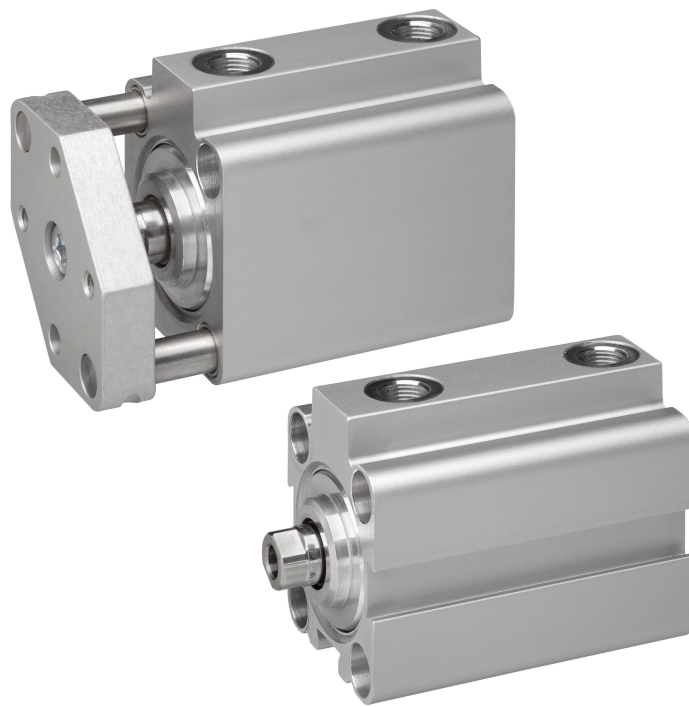


Series KHZ



AVENTICS™

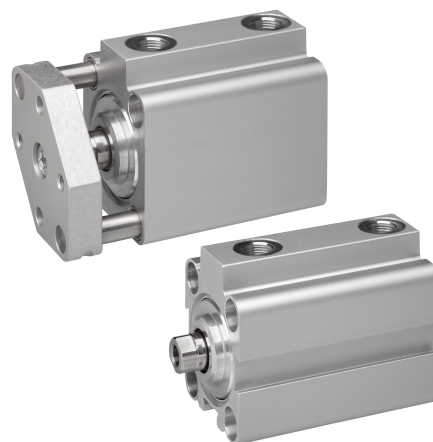
AVENTICS Series KHZ Short-stroke cylinders


EMERSON™

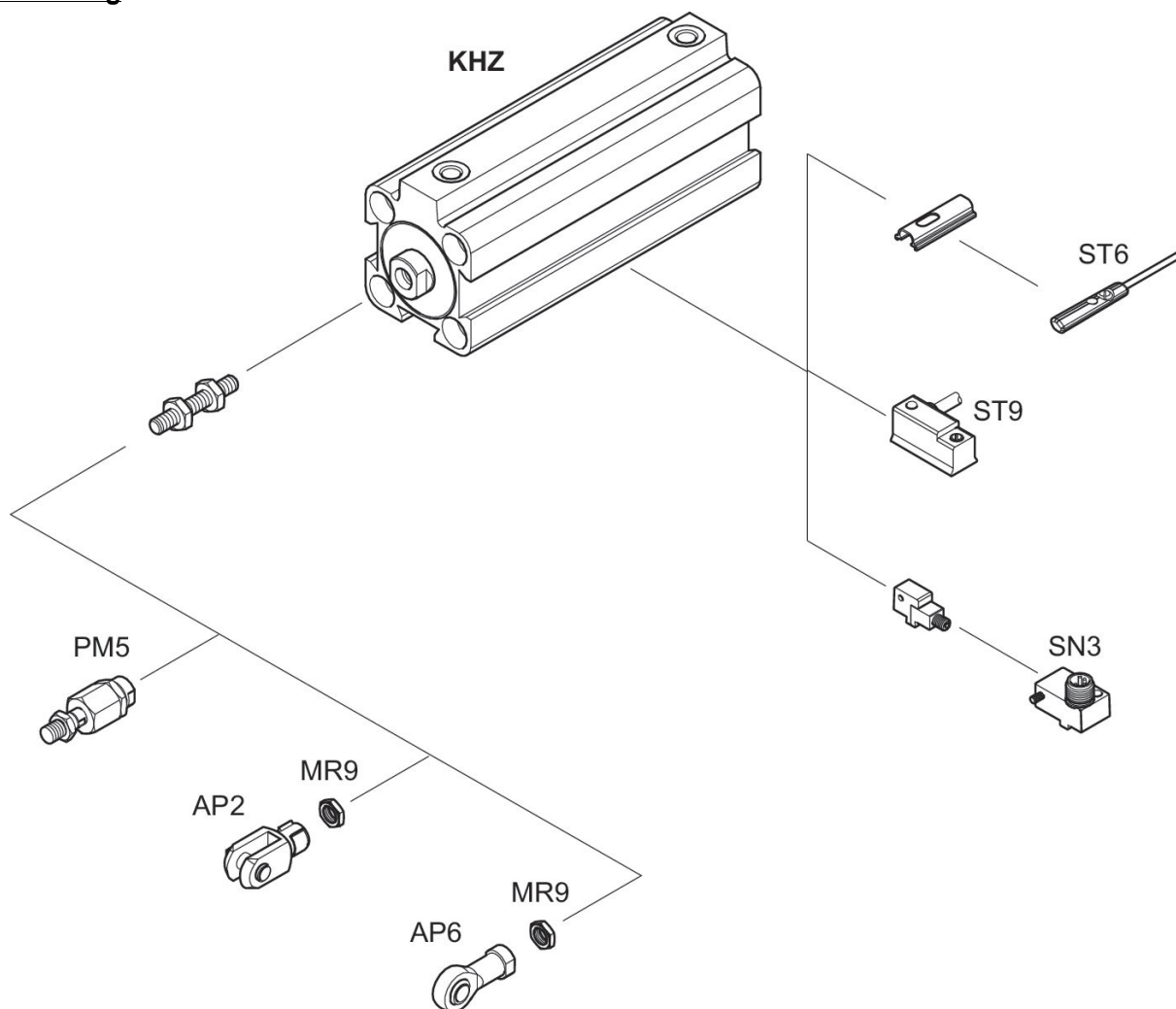
Series KHZ

The AVENTICS Series KHZ is a non-standard short-stroke cylinder ideal for tight installation spaces and ensure easy, safe integration in machinery.

- Ø 8 ... 100 mm
- Stroke max. 100 mm
- For applications with a short and narrow installation space
- Non-rotating piston rod via front plate



Overview drawing



Product overview

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Short-stroke cylinder, Series KHZ

Functional principle: Single-acting, retracted without pressure

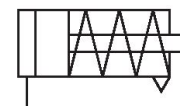
: Piston without magnet

: elastic cushioning

Piston rod thread - type: Internal thread

Ambient temperature min./max.: -25 °C ... 80 °C

Medium temperature min./max.: -25 °C ... 80 °C



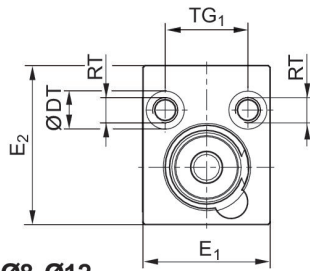
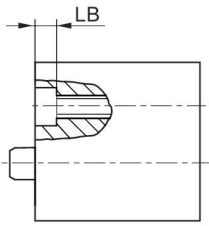
Piston Ø	8 mm	12 mm	16 mm	20 mm	25 mm	32 mm
Piston rod thread			M5	M5	M5	M6
Ports	M5	M5	M5	M5	G 1/8	G 1/8
Stroke 4	0822406001	0822406020	0822406310	0822406320	-	-
5	-	-	-	-	0822406330	0822406340
10	-	0822406021	0822406311	0822406321	0822406331	0822406341
25	-	-	0822406312	0822406322	0822406332	0822406342

Piston Ø	40 mm	50 mm	63 mm	80 mm	100 mm
Piston rod thread	M6	M8	M8	M10	M12
Ports	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4
Stroke 4	-	-	-	-	-
5	0822406350	-	-	-	-
10	0822406351	0822406361	0822406371	-	-
25	0822406352	0822406362	0822406372	R402005783	R402005840

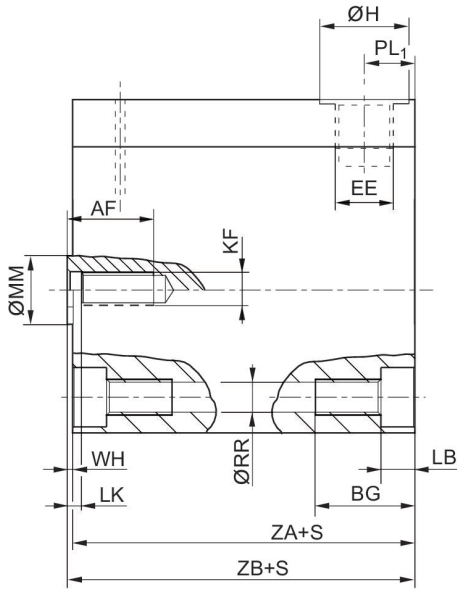
Piston Ø	8 mm	12 mm	16 mm	20 mm	25 mm	32 mm
Retracting piston force	2.8 N	6.8 N	8 N	6.5 N	15.5 N	18.5 N
Extracting piston force	32 N	71 N	127 N	198 N	309 N	507 N
Working pressure min./max.	2 bar ... 10 bar	1.7 bar ... 10 bar	1.5 bar ... 10 bar	1.5 bar ... 10 bar	1.5 bar ... 10 bar	1.3 bar ... 10 bar

Piston Ø	40 mm	50 mm	63 mm	80 mm	100 mm
Retracting piston force	26 N	39 N	48 N	54 N	95 N
Extracting piston force	792 N	1237 N	1964 N	3167 N	4948 N
Working pressure min./max.	1.3 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar

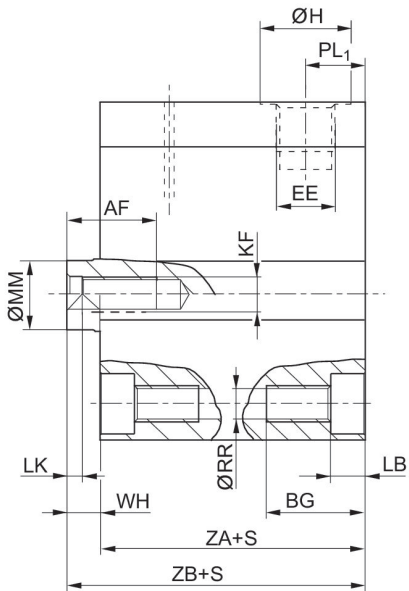
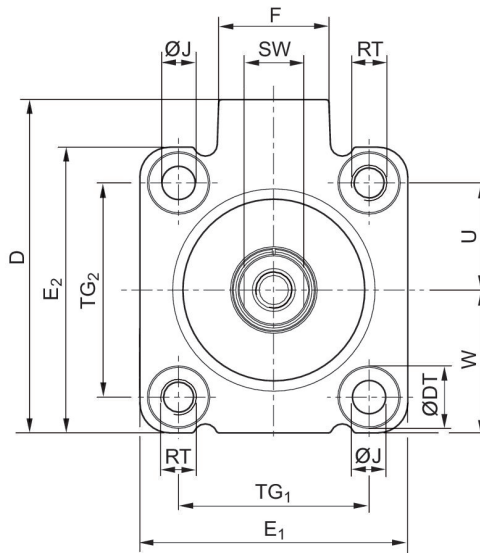
Dimensions



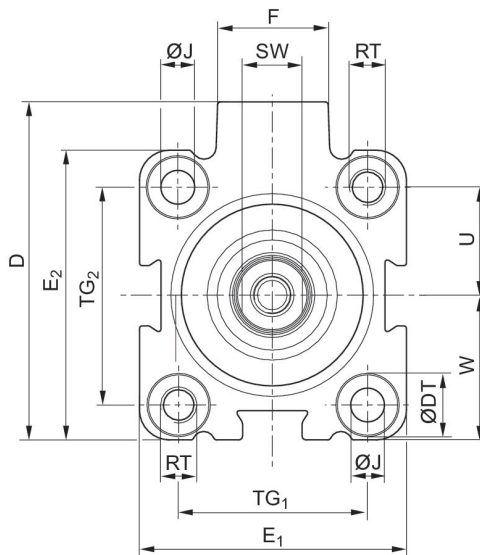
Ø8-Ø12



Ø16-Ø63



Ø80-Ø100



S = stroke

Part No.	Piston Ø	S	AF +1	BG min.	D JS15	ØDT H13	E1 JS15	E2 JS15	EE
0822406001	8	4	–	8	–	6	18	20	M5
0822406020	12	4	–	9	–	6	20	25	M5
0822406021	12	10	–	9	–	6	20	25	M5
0822406310	16	4	10	12.4	33	6	28	28	M5
0822406311	16	10	10	12.4	33	6	28	28	M5
0822406312	16	25	10	17.5	33	6	28	28	M5
0822406320	20	4	9	13.6	37	7.5	32	32	M5
0822406321	20	10	10	13.6	37	7.5	32	32	M5
0822406322	20	25	10	13.6	37	7.5	32	32	M5
0822406330	25	5	10	13.6	47.5	8	37	39	G1/8
0822406331	25	10	10	13.6	47.5	8	37	39	G1/8
0822406332	25	25	10	13.6	47.5	8	37	39	G1/8
0822406340	32	5	13.5	16.7	56	10	45	48	G1/8
0822406341	32	10	14.5	16.7	56	10	45	48	G1/8
0822406342	32	25	14.5	16.7	56	10	45	48	G1/8
0822406350	40	5	13	16.7	62.5	10	54.5	54.5	G1/8
0822406351	40	10	14.5	16.7	62.5	10	54.5	54.5	G1/8
0822406352	40	25	14.5	16.7	62.5	10	54.5	54.5	G1/8
0822406361	50	10	15.5	19.8	72	11	64	64	G1/8
0822406362	50	25	15.5	19.8	72	11	64	64	G1/8
0822406371	63	10	18	25	88	15	80	80	G1/8
0822406372	63	25	18	25	88	15	80	80	G1/8
R402005783	80	25	18	25	110	15	100	100	G1/4
R402005840	100	25	20	30	132	17.5	124	124	G1/4

Part No.	Piston Ø	F	ØH	ØJ H14	KF	LB +0,4	LK +0,5	ØMM f8	PL1
0822406001	8	–	8	–	–	3.4	–	4	5
0822406020	12	–	8	–	–	3.4	–	5	5
0822406021	12	–	8	–	–	3.4	–	5	5
0822406310	16	11.5	8	3.55	M5	3.4	2	8	5
0822406311	16	11.5	8	3.55	M5	3.4	2	8	5
0822406312	16	11.5	8	3.55	M5	8.5	2	8	5
0822406320	20	11	8	4.55	M5	4.6	2	10	5
0822406321	20	11	8	4.55	M5	4.6	2	10	5
0822406322	20	11	8	4.55	M5	4.6	2	10	5
0822406330	25	17.5	15	4.55	M5	4.6	2	10	8.5
0822406331	25	17.5	15	4.55	M5	4.6	2	10	8.5
0822406332	25	17.5	15	4.55	M5	4.6	2	10	8.5
0822406340	32	18.5	15	5.5	M6	5.7	2.5	12	8.5
0822406341	32	18.5	15	5.5	M6	5.7	2.5	12	8.5
0822406342	32	18.5	15	5.5	M6	5.7	2.5	12	8.5
0822406350	40	18.5	15	5.5	M6	5.7	2.5	12	8.5
0822406351	40	18.5	15	5.5	M6	5.7	2.5	12	8.5
0822406352	40	18.5	15	5.5	M6	5.7	2.5	12	8.5
0822406361	50	18	15	7.3	M8	6.8	3.5	16	8.5
0822406362	50	18	15	7.3	M8	6.8	3.5	16	8.5
0822406371	63	23	15	9.2	M8	9	3.5	16	8.5
0822406372	63	23	15	9.2	M8	9	3.5	16	8.5
R402005783	80	27	19	9.2	M10	9	4	20	12
R402005840	100	28	19	11	M12	11	4	25	12

Part No.	Piston Ø	ØRR	RT	SW -0,3	TG1	TG2	U	W	WH
0822406001	8	3.3	M4	–	11 ±0,2	–	8	6,5 ±0,2	1
0822406020	12	3.3	M4	–	13 ±0,2	–	9	9 ±0,2	1
0822406021	12	3.3	M4	–	13 ±0,2	–	9	9 ±0,2	4
0822406310	16	3.3	M4	7	20 ±0,2	20 ±0,2	10	14 ±0,2	1
0822406311	16	3.3	M4	7	20 ±0,2	20 ±0,2	10	14 ±0,2	1
0822406312	16	3.3	M4	7	20 ±0,2	20 ±0,2	10	14 ±0,2	1
0822406320	20	4.2	M5	8	22 ±0,2	22 ±0,2	11	16 ±0,2	1
0822406321	20	4.2	M5	8	22 ±0,2	22 ±0,2	11	16 ±0,2	1
0822406322	20	4.2	M5	8	22 ±0,2	22 ±0,2	11	16 ±0,2	1
0822406330	25	4.2	M5	8	26 ±0,25	28 ±0,25	14	19,5 ±0,2	1
0822406331	25	4.2	M5	8	26 ±0,25	28 ±0,25	14	19,5 ±0,2	1
0822406332	25	4.2	M5	8	26 ±0,25	28 ±0,25	14	19,5 ±0,2	1
0822406340	32	5.05	M6	10	32 ±0,25	36 ±0,25	18	24 ±0,2	1
0822406341	32	5.05	M6	10	32 ±0,25	36 ±0,25	18	24 ±0,2	1
0822406342	32	5.05	M6	10	32 ±0,25	36 ±0,25	18	24 ±0,2	1
0822406350	40	5.05	M6	10	40 ±0,25	40 ±0,25	20	27,3 ±0,2	1
0822406351	40	5.05	M6	10	40 ±0,25	40 ±0,25	20	27,3 ±0,2	1
0822406352	40	5.05	M6	10	40 ±0,25	40 ±0,25	20	27,3 ±0,2	1
0822406361	50	6.8	M8	13	50 ±0,25	50 ±0,25	25	32 ±0,2	1
0822406362	50	6.8	M8	13	50 ±0,25	50 ±0,25	25	32 ±0,2	1
0822406371	63	8.5	M10	13	62 ±0,25	62 ±0,25	31	40 ±0,2	1
0822406372	63	8.5	M10	13	62 ±0,25	62 ±0,25	31	40 ±0,2	2
R402005783	80	8.5	M10	17	82 ±0,3	82 ±0,3	41	50 ±0,3	1
R402005840	100	10.2	M12	22	103 ±0,3	103 ±0,3	51.5	62 ±0,3	1

Part No.	Piston Ø	ZA ±0,2	ZB ±0,8
0822406001	8	12	13
0822406020	12	12	13
0822406021	12	16	20
0822406310	16	20	21
0822406311	16	22	23
0822406312	16	28	29
0822406320	20	16	17
0822406321	20	22	23
0822406322	20	28	29
0822406330	25	21	22
0822406331	25	22	23
0822406332	25	30	31
0822406340	32	21	22
0822406341	32	22	23
0822406342	32	32.5	33.5
0822406350	40	21	22
0822406351	40	21	22
0822406352	40	32.5	33.5
0822406361	50	20	21
0822406362	50	32.5	33.5
0822406371	63	25	26
0822406372	63	35.5	37.5
R402005783	80	42	43
R402005840	100	49.5	50.5

Short-stroke cylinder, Series KHZ

Functional principle: Single-acting, retracted without pressure

: Piston with magnet

: elastic cushioning

Piston rod thread - type: Internal thread

Ambient temperature min./max.: -25 °C ... 80 °C

Medium temperature min./max.: -25 °C ... 80 °C



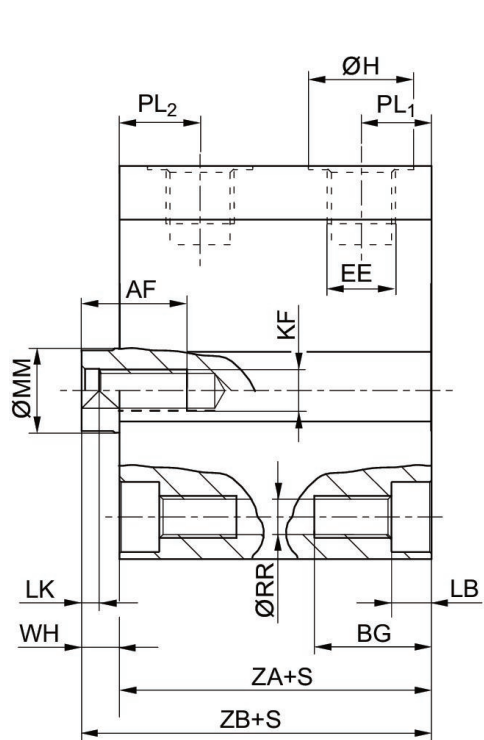
Piston Ø	12 mm	16 mm	20 mm	25 mm	32 mm	40 mm
Piston rod thread	M3	M5	M5	M5	M6	M6
Ports	M5	M5	M5	G 1/8	G 1/8	G 1/8
Stroke 4	0822406400	0822406410	0822406420	-	-	-
5	-	-	-	0822406430	0822406440	0822406450
10	0822406401	0822406411	0822406421	0822406431	0822406441	0822406451
25	-	0822406412	0822406422	0822406432	0822406442	0822406452

Piston Ø	50 mm	63 mm	80 mm	100 mm
Piston rod thread	M8	M8	M10	M12
Ports	G 1/8	G 1/8	G 1/4	G 1/4
Stroke 4	-	-	-	-
5	-	-	-	-
10	0822406461	0822406471	0822406481	0822406491
25	0822406462	0822406472	0822406482	0822406492

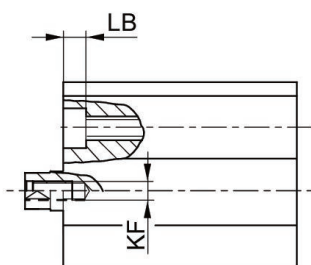
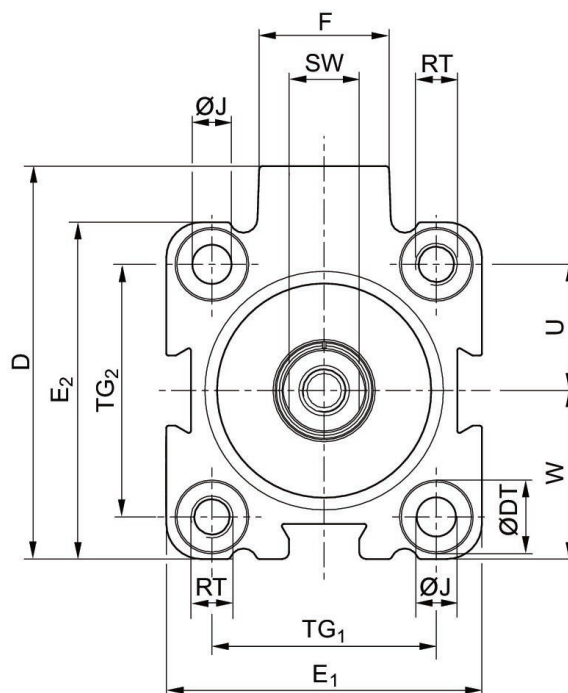
Piston Ø	12 mm	16 mm	20 mm	25 mm	32 mm	40 mm
Retracting piston force	6.8 N	8 N	6.5 N	15.5 N	18.5 N	26 N
Extracting piston force	71 N	127 N	198 N	309 N	507 N	792 N
Working pressure min./max.	1.7 bar ... 10 bar	1.5 bar ... 10 bar	1.5 bar ... 10 bar	1.5 bar ... 10 bar	1.3 bar ... 10 bar	1.3 bar ... 10 bar

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	39 N	48 N	63.5 N	95.5 N
Extracting piston force	1237 N	1964 N	3267 N	4948 N
Working pressure min./max.	1 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar

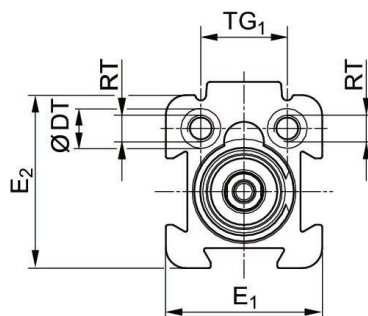
Dimensions



Ø16-Ø100



Ø12



S = stroke

Part No.	Piston Ø	S	AF +1	BG min.	D JS15	ØDT H13	E1 JS15	E2 JS15	EE
0822406400	12	4	8	12.4	28	6	23.5	26	M 5
0822406401	12	10	8	12.4	28	6	23.5	26	M 5
0822406410	16	4	10	12.4	33	6	28	28	M 5
0822406411	16	10	10	12.4	33	6	28	28	M 5
0822406412	16	25	10	17.5	33	6	28	28	M 5
0822406420	20	4	10	13.6	37	7.5	32	32	M 5
0822406421	20	10	10	13.6	37	7.5	32	32	M 5
0822406422	20	25	10	13.6	37	7.5	32	32	M 5
0822406430	25	5	10	13.6	47.5	8	37	39	G 1/8
0822406431	25	10	10	13.6	47.5	8	37	39	G 1/8
0822406432	25	25	10	13.6	47.5	8	37	39	G 1/8
0822406440	32	5	15	16.7	56	10	45	48	G 1/8
0822406441	32	10	15	16.7	56	10	45	48	G 1/8
0822406442	32	25	15	16.7	56	10	45	48	G 1/8
0822406450	40	5	15	16.7	62.5	10	54.5	54.5	G 1/8
0822406451	40	10	15	16.7	62.5	10	54.5	54.5	G 1/8
0822406452	40	25	15	16.7	62.5	10	54.5	54.5	G 1/8
0822406461	50	10	18	19.8	73	11	66	66	G 1/8
0822406462	50	25	18	19.8	73	11	66	66	G 1/8
0822406471	63	10	18	25	88	15	80	80	G 1/8
0822406472	63	25	18	25	88	15	80	80	G 1/8
0822406481	80	10	18	25	110	15	100	100	G 1/4
0822406482	80	25	18	25	110	15	100	100	G 1/4
0822406491	100	10	20	30	132	17.5	124	124	G 1/4
0822406492	100	25	20	30	132	17.5	124	124	G 1/4

Part No.	Piston Ø	F	ØH	ØJ H14	KF	LB +0,4	LK +0,5	ØMM f8	PL1
0822406400	12	11	8	–	M 3	3.4	2	6	6
0822406401	12	11	8	–	M 3	3.4	2	6	6
0822406410	16	11.5	8	3.55	M 5	3.4	2	8	6.5
0822406411	16	11.5	8	3.55	M 5	3.4	2	8	6.5
0822406412	16	11.5	8	3.55	M 5	8.5	2	8	6.5
0822406420	20	11	8	4.55	M 5	4.6	2	10	6.5
0822406421	20	11	8	4.55	M 5	4.6	2	10	6.5
0822406422	20	11	8	4.55	M 5	4.6	2	10	6.5
0822406430	25	17.5	15	4.55	M 5	4.6	2	10	9.5
0822406431	25	17.5	15	4.55	M 5	4.6	2	10	9.5
0822406432	25	17.5	15	4.55	M 5	4.6	2	10	9.5
0822406440	32	18.5	15	5.5	M 6	5.7	2.5	12	10
0822406441	32	18.5	15	5.5	M 6	5.7	2.5	12	10
0822406442	32	18.5	15	5.5	M 6	5.7	2.5	12	10
0822406450	40	18.5	15	5.5	M 6	5.7	2.5	12	10
0822406451	40	18.5	15	5.5	M 6	5.7	2.5	12	10
0822406452	40	18.5	15	5.5	M 6	5.7	2.5	12	10
0822406461	50	18	15	7.3	M 8	6.8	3.5	16	10
0822406462	50	18	15	7.3	M 8	6.8	3.5	16	10
0822406471	63	23	15	9.2	M 8	9	3.5	16	11.5
0822406472	63	23	15	9.2	M 8	9	3.5	16	11.5
0822406481	80	27	19	9.2	M 10	9	4	20	12
0822406482	80	27	19	9.2	M 10	9	4	20	12
0822406491	100	28	19	11	M 12	11	4	25	12
0822406492	100	28	19	11	M 12	11	4	25	12

Part No.	Piston Ø	PL2	ØRR	RT	SW -0,3	TG1	TG2 ±0,2	U	W
0822406400	12	10.5	3.3	M 4	5	13 ±0,2	–	9.5	11,5 ±0,2
0822406401	12	10.5	3.3	M 4	5	13 ±0,2	–	9.5	11,5 ±0,2
0822406410	16	12.5	3.3	M 4	7	20 ±0,2	20 ±0,2	10	14 ±0,2
0822406411	16	12.5	3.3	M 4	7	20 ±0,2	20 ±0,2	10	14 ±0,2
0822406412	16	12.5	3.3	M 4	7	20 ±0,2	20 ±0,2	10	14 ±0,2
0822406420	20	12	4.2	M 5	8	22 ±0,2	22 ±0,2	11	16 ±0,2
0822406421	20	12	4.2	M 5	8	22 ±0,2	22 ±0,2	11	16 ±0,2
0822406422	20	12	4.2	M 5	8	22 ±0,2	22 ±0,2	11	16 ±0,2
0822406430	25	11.5	4.2	M 5	8	26 ±0,25	28 ±0,25	14	19,5 ±0,2
0822406431	25	11.5	4.2	M 5	8	26 ±0,25	28 ±0,25	14	19,5 ±0,2
0822406432	25	11.5	4.2	M 5	8	26 ±0,25	28 ±0,25	14	19,5 ±0,2
0822406440	32	11.5	5.05	M 6	10	32 ±0,25	36 ±0,25	18	24 ±0,2
0822406441	32	11.5	5.05	M 6	10	32 ±0,25	36 ±0,25	18	24 ±0,2
0822406442	32	11.5	5.05	M 6	10	32 ±0,25	36 ±0,25	18	24 ±0,2
0822406450	40	13.5	5.05	M 6	10	40 ±0,25	40 ±0,25	20	27,3 ±0,2
0822406451	40	13.5	5.05	M 6	10	40 ±0,25	40 ±0,25	20	27,3 ±0,2
0822406452	40	13.5	5.05	M 6	10	40 ±0,25	40 ±0,25	20	27,3 ±0,2
0822406461	50	14	6.8	M 8	13	50 ±0,25	50 ±0,25	25	33 ±0,2
0822406462	50	14	6.8	M 8	13	50 ±0,25	50 ±0,25	25	33 ±0,2
0822406471	63	14	8.5	M 10	13	62 ±0,25	62 ±0,25	31	40 ±0,2
0822406472	63	14	8.5	M 10	13	62 ±0,25	62 ±0,25	31	40 ±0,2
0822406481	80	18	8.5	M 10	17	82 ±0,3	82 ±0,3	41	50 ±0,3
0822406482	80	18	8.5	M 10	17	82 ±0,3	82 ±0,3	41	50 ±0,3
0822406491	100	20.5	10.2	M 12	22	103 ±0,3	103 ±0,3	51.5	62 ±0,3
0822406492	100	20.5	10.2	M 12	22	103 ±0,3	103 ±0,3	51.5	62 ±0,3

Part No.	Piston Ø	WH	ZA ±0,2	ZB ±0,8
0822406400	12	4.5	30.5	35
0822406401	12	4.5	30.5	35
0822406410	16	3	32	35
0822406411	16	3	32	35
0822406412	16	4	38	42
0822406420	20	4.5	32	36.5
0822406421	20	4.5	32	36.5
0822406422	20	4.5	38	42.5
0822406430	25	5	39	44
0822406431	25	5	39	44
0822406432	25	5	39	44
0822406440	32	5.5	39.5	45
0822406441	32	5.5	39.5	45
0822406442	32	5.5	39.5	45
0822406450	40	7	39.5	46.5
0822406451	40	7	39.5	46.5
0822406452	40	7	39.5	46.5
0822406461	50	7.5	39.5	47
0822406462	50	7.5	39.5	47
0822406471	63	6.5	42	48.5
0822406472	63	6.5	42	48.5
0822406481	80	8	46	54
0822406482	80	8	46	54
0822406491	100	10	56	66
0822406492	100	10	56	66

Short-stroke cylinder, Series KHZ

Functional principle: Double-acting

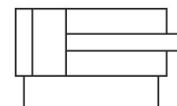
: Piston without magnet

: elastic cushioning

Piston rod thread - type: Internal thread

Ambient temperature min./max.: -25 °C ... 80 °C

Medium temperature min./max.: -25 °C ... 80 °C



Piston Ø	12 mm	16 mm	20 mm	25 mm	32 mm	40 mm
Piston rod thread	M5	M5	M5	M5	M6	M6
Ports	M5	M5	M5	G 1/8	G 1/8	G 1/8
Stroke 5	0822010500	0822010510	0822010520	0822010530	0822010540	0822010550
10	0822010501	0822010511	0822010521	0822010531	0822010541	0822010551
15	0822010502	0822010512	0822010522	0822010532	0822010542	0822010552
20	0822010503	0822010513	0822010523	0822010533	0822010543	0822010553
25	0822010504	0822010514	0822010524	0822010534	0822010544	0822010554
30	0822010505	0822010515	0822010525	0822010535	0822010545	0822010555
40	0822010506	0822010516	0822010526	0822010536	0822010546	0822010556
50	-	-	0822010527	0822010537	0822010547	0822010557

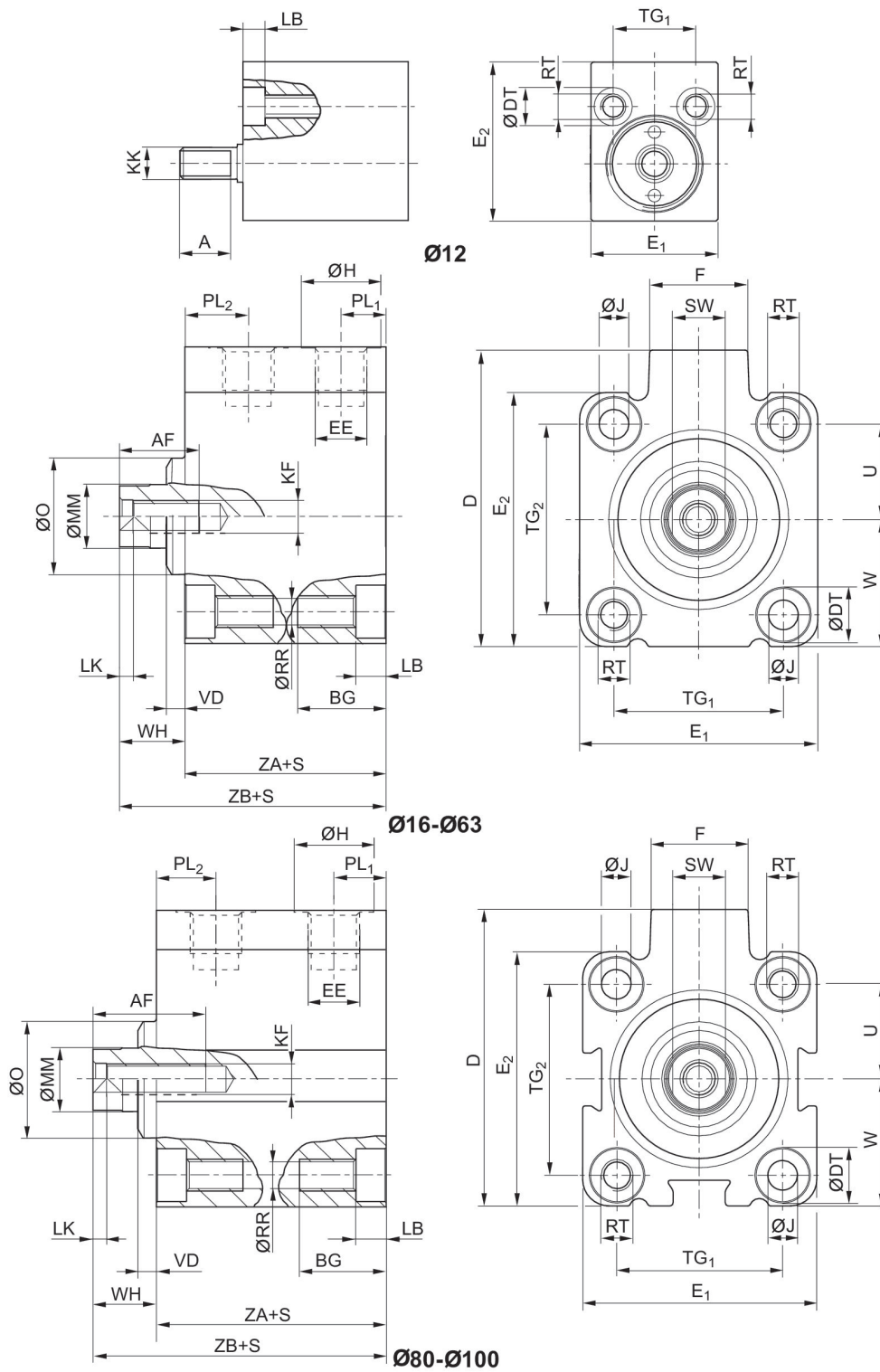
Piston Ø	50 mm	63 mm	80 mm	100 mm
Piston rod thread	M8	M8	M10	M12
Ports	G 1/8	G 1/8	G 1/4	G 1/4
Stroke 5	-	0822010570	-	-
10	0822010561	0822010571	R402005784	-
15	0822010562	0822010572	-	-
20	0822010563	0822010573	-	-
25	0822010564	0822010574	R402005787	R402005833
30	0822010565	0822010575	-	-
40	0822010566	0822010576	-	-
50	0822010567	0822010577	R402005790	R402005836

Piston Ø	12 mm	16 mm	20 mm	25 mm	32 mm	40 mm
Retracting piston force	53 N	95 N	148 N	260 N	435 N	720 N
Extracting piston force	71 N	127 N	198 N	309 N	507 N	792 N
Impact energy	0.03 J	0.06 J	0.08 J	0.1 J	0.16 J	0.24 J

Piston Ø	12 mm	16 mm	20 mm	25 mm	32 mm	40 mm
Weight 0 mm stroke	0.036 kg	0.063 kg	0.082 kg	0.164 kg	0.195 kg	0.285 kg
Weight 10 mm stroke	0.013 kg	0.016 kg	0.021 kg	0.03 kg	0.042 kg	0.052 kg
Working pressure min./max.	1 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	1110 N	1837 N	2857 N	4639 N, 4939 N
Extracting piston force	1237 N	1964 N	3167 N	4948 N
Impact energy	0.32 J	0.38 J	0.38 J	0.5 J
Weight 0 mm stroke	0.388 kg	0.636 kg	1.22 kg	2.38 kg
Weight 10 mm stroke	0.074 kg	0.096 kg	0.149 kg	0.218 kg
Working pressure min./max.	0.6 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar

Dimensions



S = stroke

Piston Ø	Stroke	A	AF +1	BG min.	D JS15	ØDT H13	E1 JS15	E2 JS15	EE
12	5 - 20	8	–	12.4	–	6	20	25	M 5
12	25 - 40	8	–	17.5	–	6	20	25	M 5
16	5 - 15	–	10	12.4	33	6	28	28	M 5
16	20 - 40	–	10	17.5	33	6	28	28	M 5
20	5 - 50	–	10	13.6	37	7.5	32	32	M 5
25	5 - 50	–	10	13.6	47.5	8	37	39	G 1/8
32	5 - 50	–	15	16.7	56	10	45	48	G 1/8
40	5 - 50	–	15	16.7	62.5	10	54.5	54.5	G 1/8
50	10 - 50	–	18	19.8	72	11	64	64	G 1/8
63	5 - 50	–	18	25	88	15	80	80	G 1/8
80	10 - 50	–	18	25	110	15	100	100	G 1/4
100	25 - 50	–	20	30	132	17.5	124	124	G 1/4

Piston Ø	F	ØH	ØJ	KF	KK	LB +0,4	LK +0,5	ØMM f8	ØO
12	–	8	–	–	M 5	3.4	–	6	–
12	–	8	–	–	M 5	8.5	–	6	–
16	11.5	8	3.55	M5	–	3.4	2	8	–
16	11.5	8	3.55	M5	–	8.5	2	8	–
20	11	8	4.55	M5	–	4.6	2	10	–
25	17.5	15	4.55	M5	–	4.6	2	10	20
32	18.5	15	5.5	M6	–	5.7	2.5	12	22
40	18.5	15	5.5	M6	–	5.7	2.5	12	30
50	18	15	7.3	M8	–	6.8	3.5	16	35
63	23	15	9.2	M8	–	9	3.5	16	35
80	27	19	9.2	M10	–	9	4	20	46
100	28	19	11	M12	–	11	4	25	56

Piston Ø	PL1	PL2	ØRR	RT	SW -0,3	TG1	TG2	U	W
12	6	9.5	3.3	M4	–	13 ±0,2	–	9	9 ±0,2
12	6	9.5	3.3	M4	–	13 ±0,2	–	9	9 ±0,2
16	6	11.3	3.3	M4	7	20 ±0,2	20 ±0,2	10	14 ±0,2
16	6	11.3	3.3	M4	7	20 ±0,2	20 ±0,2	10	14 ±0,2
20	5	8	4.2	M5	8	22 ±0,2	22 ±0,2	11	16 ±0,2
25	9	11	4.2	M5	8	26 ±0,25	28 ±0,25	14	19,5 ±0,2
32	8.5	12	5.05	M6	10	32 ±0,25	36 ±0,25	18	24 ±0,2
40	9	11	5.05	M6	10	40 ±0,25	40 ±0,25	20	27,3 ±0,2
50	8.5	11	6.8	M8	13	50 ±0,25	50 ±0,25	25	32 ±0,2
63	8.5	12.5	8.5	M10	13	62 ±0,25	62 ±0,25	31	40 ±0,2
80	13	16	8.8	M10	17	82 ±0,3	82 ±0,3	41	50 ±0,3
100	15.5	15.5	10.2	M12	22	103 ±0,3	103 ±0,3	51.5	62 ±0,3

Piston Ø	VD -1	WH	ZA ±0,2	ZB ±0,8
12	–	–	21	31
12	–	–	21	31
16	–	6	25	31
16	–	6	25	31
20	–	9.5	24.5	34
25	3.5	11.5	31	42.5
32	3.5	12.5	33	45.5
40	4.5	15	33	48
50	6	17	32.5	49.5
63	6.5	17	35.5	52.5
80	8.5	18	42	60
100	7	20	49.5	69.5

Short-stroke cylinder, Series KHZ

Functional principle: Double-acting

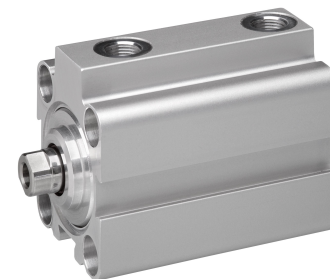
: Piston with magnet

: elastic cushioning

Piston rod thread - type: Internal thread

Ambient temperature min./max.: -25 °C ... 80 °C

Medium temperature min./max.: -25 °C ... 80 °C



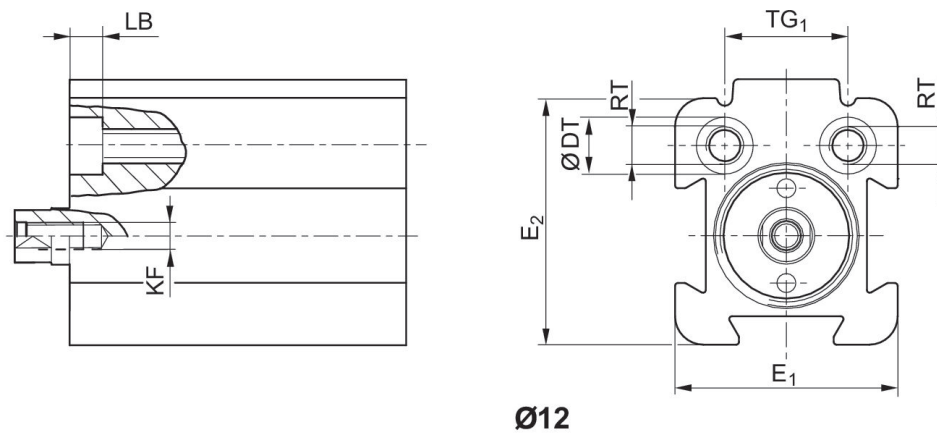
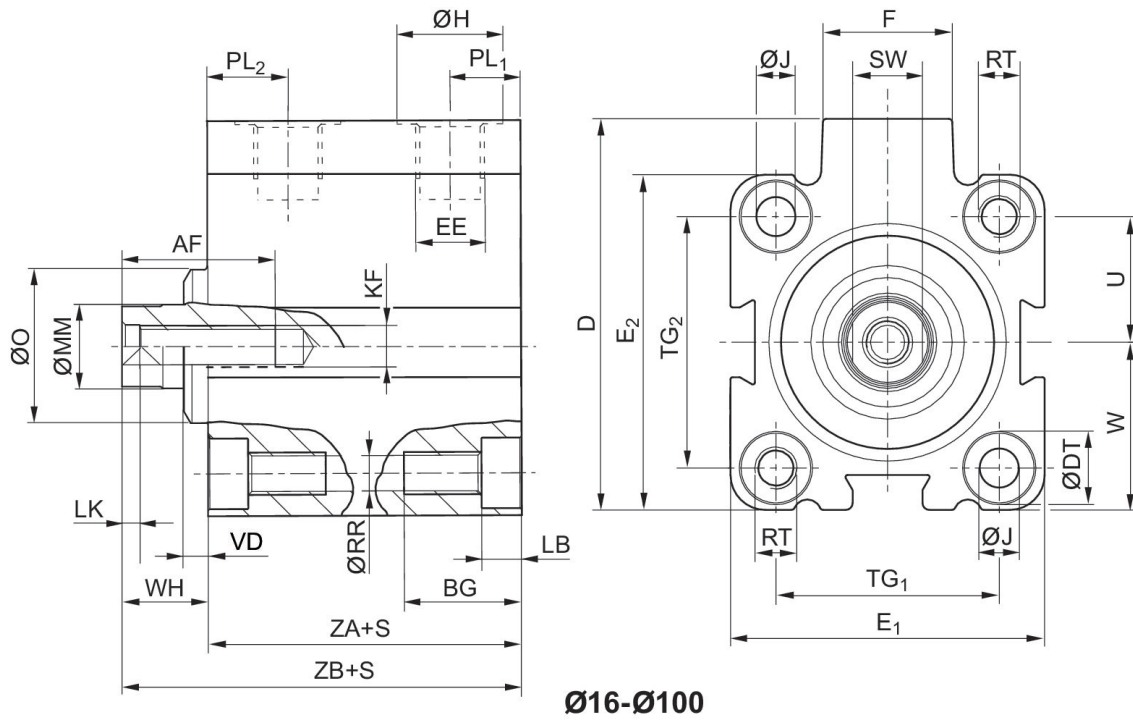
Piston Ø	12 mm	16 mm	20 mm	25 mm	32 mm	40 mm
Piston rod thread	M3	M5	M5	M5	M6	M6
Ports	M5	M5	M5	G 1/8	G 1/8	G 1/8
Stroke 5	0822010600	0822010610	0822010620	0822010630	0822010640	0822010650
10	0822010601	0822010611	0822010621	0822010631	0822010641	0822010651
15	0822010602	0822010612	0822010622	0822010632	0822010642	0822010652
20	0822010603	0822010613	0822010623	0822010633	0822010643	0822010653
25	0822010604	0822010614	0822010624	0822010634	0822010644	0822010654
30	0822010605	0822010615	0822010625	0822010635	0822010645	0822010655
40	0822010606	0822010616	0822010626	0822010636	0822010646	0822010656
50	-	-	0822010627	0822010637	0822010647	0822010657
80	-	-	-	-	0822010648	0822010658
100	-	-	-	-	0822010649	0822010659

Piston Ø	50 mm	63 mm	80 mm	100 mm
Piston rod thread	M8	M8	M10	M12
Ports	G 1/8	G 1/8	G 1/4	G 1/4
Stroke 5	-	-	-	-
10	0822010661	0822010671	0822010681	0822010691
15	0822010662	0822010672	R402005794	-
20	0822010663	0822010673	-	-
25	0822010664	0822010674	0822010684	0822010694
30	0822010665	0822010675	-	-
40	0822010666	0822010676	R402005797	R402005844
50	0822010667	0822010677	0822010687	0822010697
80	0822010668	0822010678	0822010688	0822010698
100	0822010669	0822010679	0822010689	0822010699

Piston Ø	12 mm	16 mm	20 mm	25 mm	32 mm	40 mm
Retracting piston force	53 N	95 N	148 N	260 N	435 N	720 N
Extracting piston force	71 N	127 N	198 N	309 N	507 N	792 N
Impact energy	0.03 J	0.06 J	0.08 J	0.1 J	0.16 J	0.24 J
Weight 0 mm stroke	0.05 kg	0.065 kg	0.092 kg	0.178 kg	0.195 kg	0.285 kg
Weight 10 mm stroke	0.013 kg	0.016 kg	0.021 kg	0.03 kg	0.042 kg	0.052 kg
Working pressure min./max.	1 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	1110 N	1837 N	2857 N	4639 N
Extracting piston force	1237 N	1964 N	3167 N	4948 N
Impact energy	0.32 J	0.38 J	0.38 J	0.5 J
Weight 0 mm stroke	0.388 kg	0.636 kg	1.22 kg	2.38 kg
Weight 10 mm stroke	0.074 kg	0.096 kg	0.149 kg	0.218 kg
Working pressure min./max.	0.6 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar

Dimensions



S = stroke

Piston Ø	Stroke	AF +1	BG min.	D JS15	ØDT H13	E1 JS15	E2 JS15	EE	F
12	5 - 10	8	12.4	28	6	23.5	26	M 5	11
16	5 - 10	10	12.4	33	6	28	28	M 5	11.5
20	5 - 10	10	13.6	37	7.5	32	32	M 5	11
25	5 - 50	10	13.6	47.5	8	37	39	G 1/8	17.5
32	5 - 100	15	16.7	56	10	45	48	G 1/8	18.5
40	5 - 100	15	16.7	62.5	10	54.5	54	G 1/8	18.5
50	10 - 100	18	19.8	73	11	66	66	G 1/8	18
63	10 - 100	18	25	88	15	80	80	G 1/8	23
80	10 - 100	18	25	110	15	100	100	G 1/4	27
100	10 - 100	20	30	132	17.5	124	124	G 1/4	28

Piston Ø	ØH	ØJ	KF	LB +0,4	LK +0,5	ØMM f8	ØO	PL1	PL2
12	8	3.3	M3	3.4	2	6	–	6	10.5
16	8	3.55	M5	3.4	2	8	–	6.5	11.3
20	8	4.55	M5	4.6	2	10	–	6.5	10
25	15	4.55	M5	4.6	2	10	20	9.5	11.5
32	15	5.5	M6	5.7	2.5	12	22	8.5	15
40	15	5.5	M6	5.7	2.5	12	30	10	13.5
50	15	7.3	M8	6.8	3.5	16	35	10	14
63	15	9.2	M8	9	3.5	16	35	11.5	14
80	19	9.2	M10	9	4	20	46	12	15.5
100	19	11	M12	11	4	25	56	12	18.5

Piston Ø	ØRR	RT	SW -0,3	TG1	TG2	U	W	VD -1	WH
12	3.3	M4	5	13 ±0,2	–	9.5	11,5 ±0,2	–	5.5
16	3.3	M4	7	20 ±0,2	20 ±0,2	10	14 ±0,2	–	4.5
20	4.2	M5	8	22 ±0,2	22 ±0,2	11	16 ±0,2	–	4.5
25	4.2	M5	8	26 ±0,25	28 ±0,25	14	19,5 ±0,2	3.5	9.5
32	5.05	M6	10	32 ±0,25	36 ±0,25	18	24 ±0,2	3.5	11
40	5.05	M6	10	40 ±0,25	40 ±0,25	20	27,3 ±0,2	4.5	13.5
50	6.8	M8	13	50 ±0,25	50 ±0,25	25	33 ±0,2	6	13.5
63	8.5	M10	13	62 ±0,25	62 ±0,25	31	40 ±0,2	6.5	15.5
80	8.5	M10	17	82 ±0,3	82 ±0,3	41	50 ±0,3	8.5	18
100	10.2	M12	22	103 ±0,3	103 ±0,3	51.5	62 ±0,3	7	20

Piston Ø	ZA ±0,2	ZB ±0,8
12	30.5	36
16	32	36.5
20	32	36.5
25	39	48.5
32	39.5	50.5
40	39.5	53
50	39.5	53
63	42	57.5
80	46	64
100	56	76

Short-stroke cylinder, Series KHZ

Functional principle: Double-acting

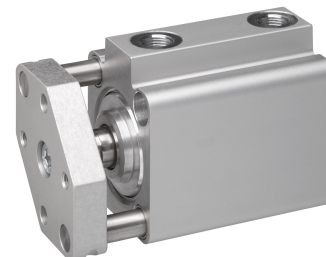
: Piston without magnet

: elastic cushioning

Piston rod thread - type: Internal thread

Ambient temperature min./max.: -25 °C ... 80 °C

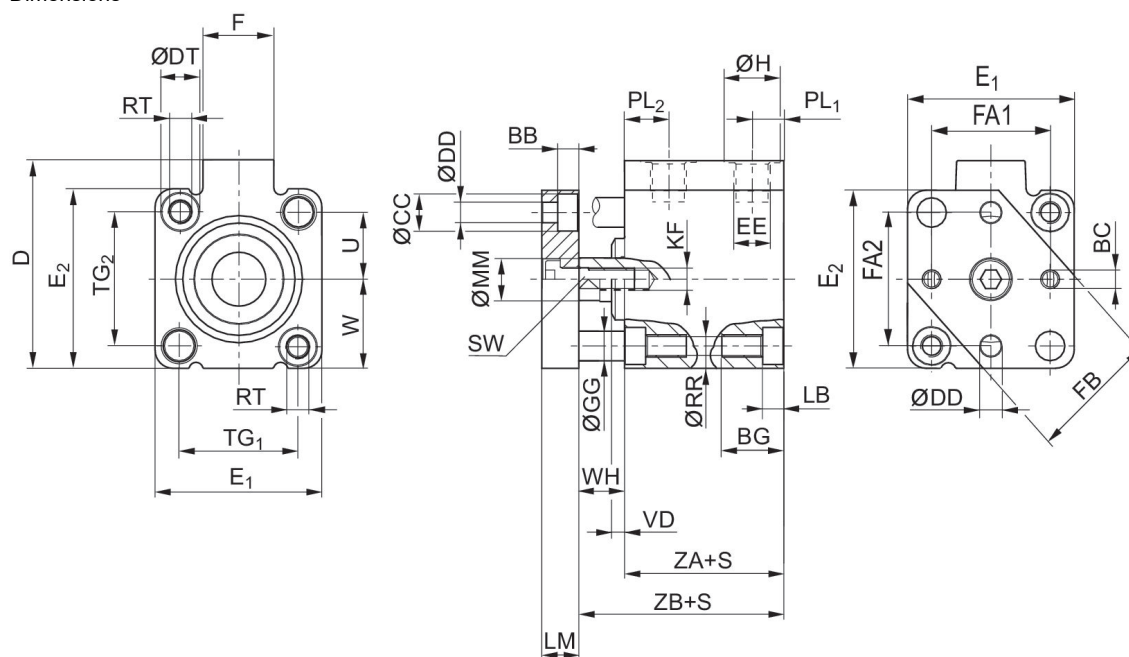
Medium temperature min./max.: -25 °C ... 80 °C



Piston Ø	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Ports	M5	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8
Stroke 10	0822010721	0822010731	0822010741	0822010751	0822010761	0822010771
15	0822010722	0822010732	0822010742	0822010752	0822010762	0822010772
20	0822010723	0822010733	0822010743	0822010753	0822010763	0822010773
25	0822010724	0822010734	0822010744	0822010754	0822010764	0822010774
30	0822010725	0822010735	0822010745	0822010755	0822010765	0822010775
40	0822010726	0822010736	0822010746	0822010756	0822010766	0822010776
50	0822010727	0822010737	0822010747	0822010757	0822010767	0822010777

Piston Ø	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Retracting piston force	148 N	260 N	435 N	720 N	1110 N	1837 N
Extracting piston force	198 N	309 N	507 N	792 N	1237 N	1964 N
Impact energy	0.08 J	0.1 J	0.16 J	0.24 J	0.32 J	0.38 J
Weight 0 mm stroke	0.092 kg	0.178 kg	0.195 kg	0.285 kg	0.388 kg	0.636 kg
Weight 10 mm stroke	0.024 kg	0.034 kg	0.05 kg	0.06 kg	0.086 kg	0.114 kg
Working pressure min./max.	1 bar ... 10 bar	1 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar

Dimensions



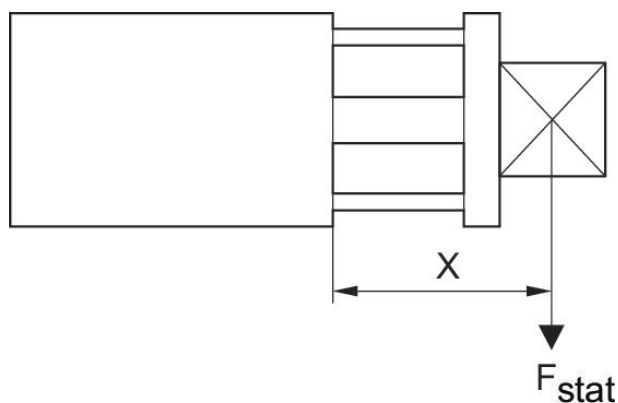
Piston Ø	Stroke	BB	BC	BG min.	ØCC	D JS15	ØDD	ØDT H13	E1 JS15
20	10 - 50	5	M 4	13.6	7.5	37	4.5	7.5	32
25	10 - 50	5	M 4	13.6	8	47.5	4.5	8	37
32	10 - 50	5,7	M 5	16.7	10	56	5.5	10	45
40	10 - 50	5,7	M 5	16.7	10	62.5	5.5	10	54.5
50	10 - 50	6,8	M 6	19.8	11	72	6.5	11	64
63	10 - 50	9	M 6	25	14	88	9	15	80

Piston Ø	E2 JS15	EE	F	FB	ØGG -0,005/-0,025	ØH	KF	LB +0,4	LM
20	32	M 5	11	25	5	8	M 5	4.6	8
25	39	G 1/8	17,5	30	6	15	M 5	4.6	8
32	48	G 1/8	18.5	35	8	15	M 6	5.7	10
40	54.5	G 1/8	18.5	40	8	15	M 6	5.7	10
50	64	G 1/8	18	50	10	15	M 8	6.8	12
63	80	G 1/8	23	60	12	15	M 8	9	12

Piston Ø	ØMM f8	PL1	PL2	ØRR	RT	SW -0,3	TG1	TG2	U
20	10	5	8	4.2	M 5	8	22 ±0,2	22 ±0,2	11
25	10	9	11	4.2	M 5	8	26 ±0,25	28 ±0,25	14
32	12	8,5	12	5.05	M 6	10	32 ±0,25	36 ±0,25	18
40	12	9	11	5.05	M 6	10	40 ±0,25	40 ±0,25	20
50	16	8,5	11	6.8	M 8	13	50 ±0,25	50 ±0,25	25
63	16	8,5	12,5	8.5	M 10	13	62 ±0,25	62 ±0,25	31

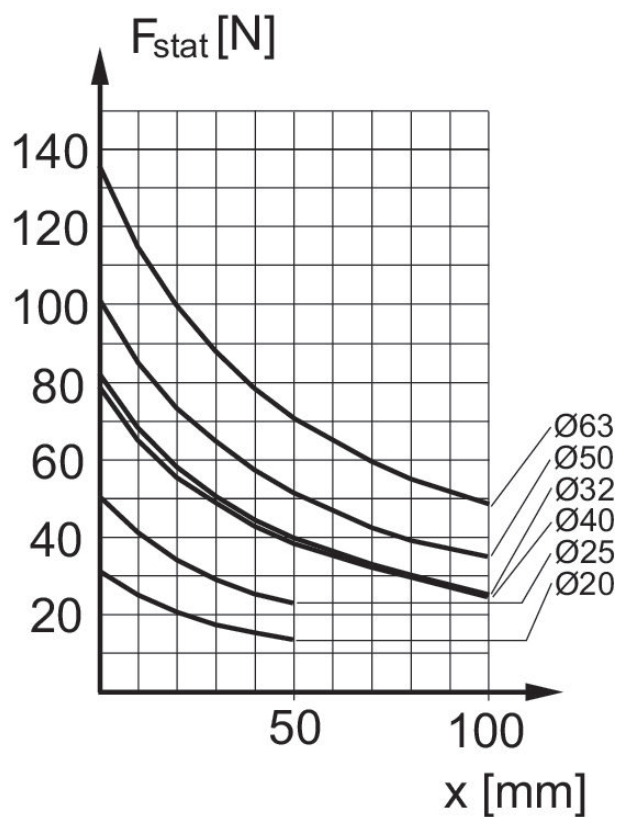
Piston Ø	W	VD -1	WH	FA1 ±0,1	FA2 ±0,1	ZA ±0,2	ZB ±0,8
20	16 ±0,2	–	9,5	22	22	24.5	34
25	19,5 ±0,2	3.5	11,5	26	28	31	42.5
32	24 ±0,2	3.5	12,5	32	36	33	45.5
40	27,3 ±0,2	4.5	15	40	40	33	48
50	32 ±0,2	6	17	50	50	32.5	49.5
63	40 ±0,2	6.5	17	62	62	35.5	52.5

Maximum admissible lateral force



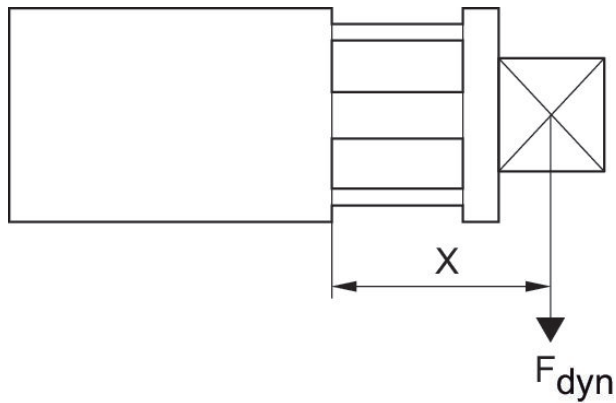
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



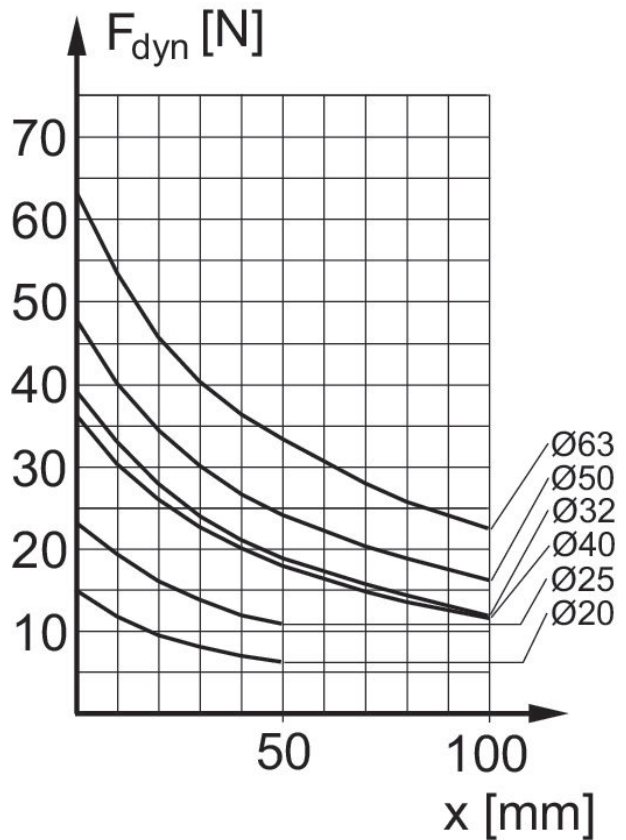
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



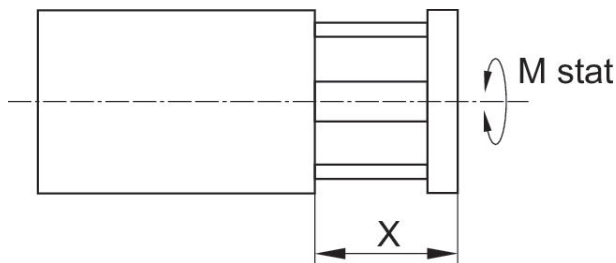
F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force

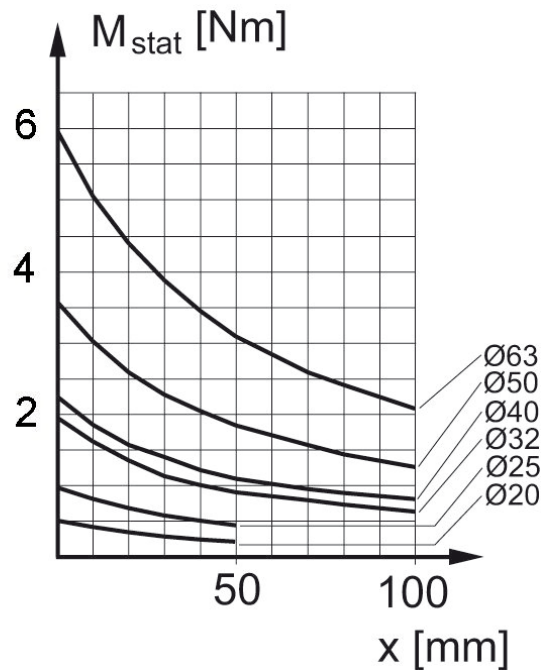


F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover

Max. permissible torque

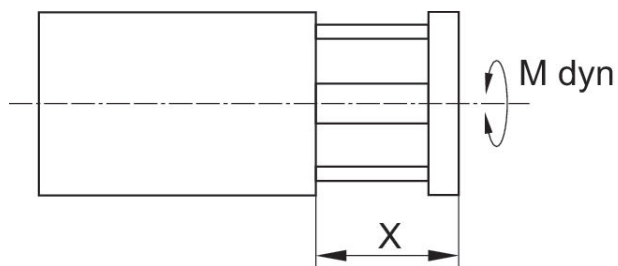


Max. permissible torque

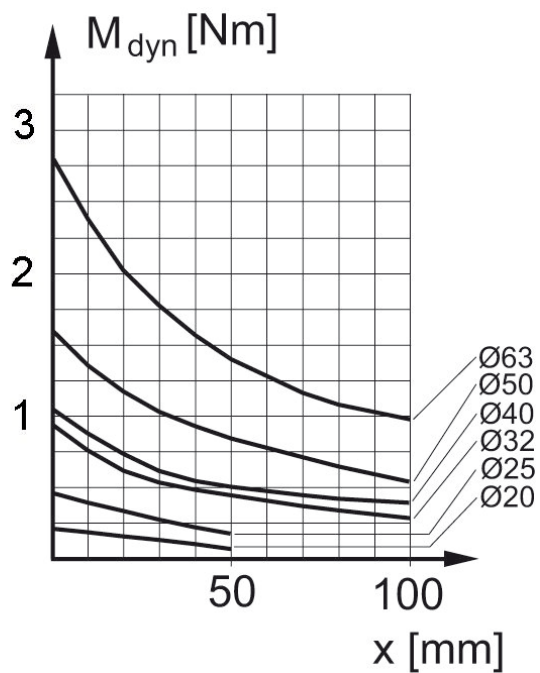


X = distance between force application point and cylinder cover

Max. permissible torque



Max. permissible torque, Dynamic



X = distance between force application point and cylinder cover

Short-stroke cylinder, Series KHZ

Functional principle: Double-acting

: Piston with magnet

: elastic cushioning

Piston rod thread - type: Internal thread

Ambient temperature min./max.: -25 °C ... 80 °C

Medium temperature min./max.: -25 °C ... 80 °C



Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm
Ports	M5	M5	G 1/8	G 1/8	G 1/8	G 1/8
Stroke 10	0822010811	0822010821	0822010831	0822010841	0822010851	0822010861
15	0822010812	0822010822	0822010832	0822010842	0822010852	0822010862
20	0822010813	0822010823	0822010833	0822010843	0822010853	0822010863
25	0822010814	0822010824	0822010834	0822010844	0822010854	0822010864
30	0822010815	0822010825	0822010835	0822010845	0822010855	0822010865
40	0822010816	0822010826	0822010836	0822010846	0822010856	0822010866
50	0822010817	0822010827	0822010837	0822010847	0822010857	0822010867
80	-	-	-	0822010848	0822010858	0822010868
100	-	-	-	0822010849	0822010859	0822010869

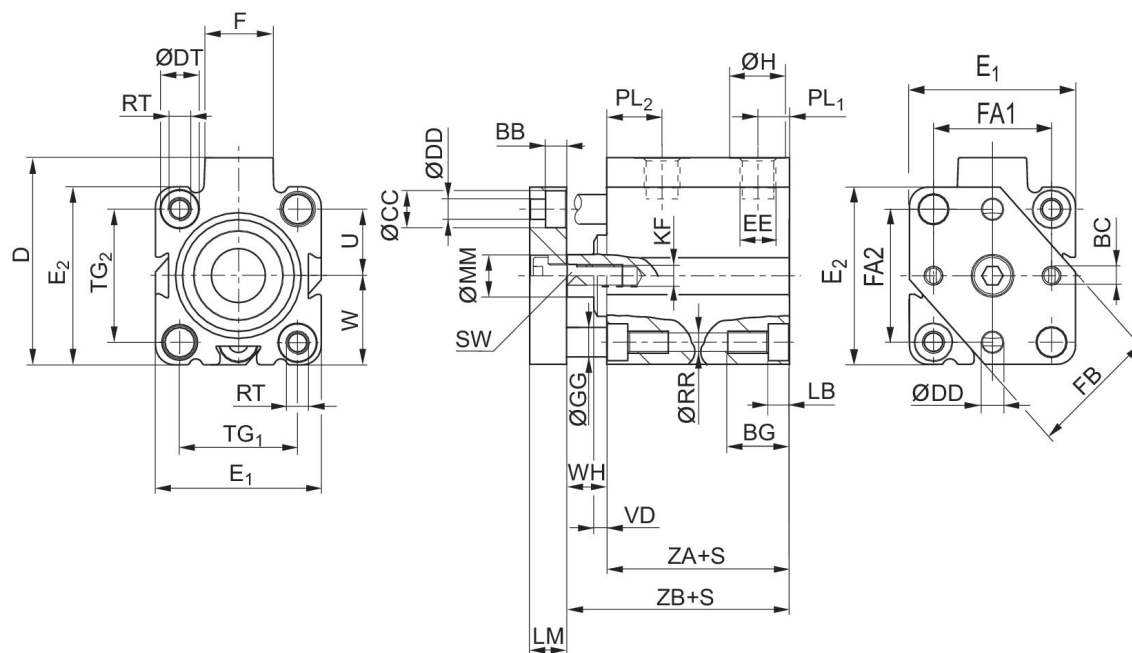
Piston Ø	63 mm	80 mm	100 mm
Ports	G 1/8	G 1/4	G 1/4
Stroke 10	0822010871	0822010881	0822010891
15	0822010872	-	-
20	0822010873	-	-
25	0822010874	0822010884	0822010894
30	0822010875	-	-
40	0822010876	-	-
50	0822010877	0822010887	0822010897
80	0822010878	0822010888	0822010898
100	0822010879	0822010889	0822010899

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm
Retracting piston force	95 N	148 N	260 N	435 N	720 N	1110 N
Extracting piston force	127 N	198 N	309 N	507 N	792 N	1237 N
Impact energy	0.06 J	0.08 J	0.1 J	0.16 J	0.24 J, 0.25 J, 0.26 J	0.32 J
Weight 0 mm stroke	0.084 kg	0.092 kg	0.178 kg	0.195 kg	0.285 kg	0.388 kg

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm
Weight 10 mm stroke	0.018 kg	0.024 kg	0.034 kg	0.05 kg	0.06 kg	0.086 kg
Working pressure min./max.	1 bar ... 10 bar	1 bar ... 10 bar	1 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar

Piston Ø	63 mm	80 mm	100 mm
Retracting piston force	1766 N	2857 N	4639 N
Extracting piston force	1964 N	3167 N	4948 N
Impact energy	0.38 J	0.38 J	0.5 J
Weight 0 mm stroke	0.636 kg	1.22 kg	2.38 kg
Weight 10 mm stroke	0.114 kg	0.167 kg	0.242 kg
Working pressure min./max.	0.6 bar ... 10 bar	0.6 bar ... 10 bar	0.6 bar ... 10 bar

Dimensions



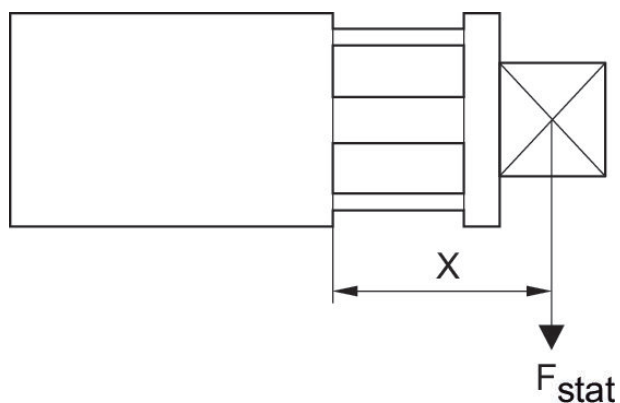
Piston Ø	Stroke	BB	BC	BG min.	ØCC	D JS15	ØDD	ØDT H13	E1 JS15
16	10	3.5	M3	12.4	6	33	3.5	6	28
20	10	5	M4	13.6	7.5	37	4.5	7.5	32
16	15 - 50	3.5	M3	17.5	6	33	3.5	6	28
20	15 - 50	5	M4	13.6	7.5	37	4.5	7.5	32
25	10 - 50	5	M4	13.6	8	47.5	4.5	8	37
32	10 - 100	5.7	M5	16.7	10	56	5.5	10	45
40	10 - 100	5.7	M5	16.7	10	62.5	5.5	10	54.5
50	10 - 100	6.8	M6	19.8	11	73	6.5	11	66
63	10 - 100	9	M6	25	14	88	9	15	80
80	10/25/50 /80/100	9	M8	25	14	110	9	15	100
100	10/25/50 /80/100	9	M8	30	14	132	9	17.5	124

Piston Ø	E2 JS15	EE	F	FB	ØGG -0,005/-0,025	ØH	KF	LB +0,4	LM
16	28	M5	11.5	20	4	8	M 5	3.4	6
20	32	M5	11	25	5	8	M 5	4.6	8
16	28	M5	11.5	20	4	8	M 5	8.5	6
20	32	M5	11	25	5	8	M 5	4.6	8
25	39	G 1/8	17.5	30	6	15	M 5	4.6	8
32	48	G 1/8	18.5	35	8	15	M 6	5.7	10
40	54.5	G 1/8	18.5	40	8	15	M 6	5.7	10
50	66	G 1/8	18	50	10	15	M 8	6.8	12
63	80	G 1/8	23	60	12	15	M 8	9	12
80	100	G 1/4	27	75	12	19	M 10	9	15
100	124	G 1/4	28	90	14	19	M 12	11	15

Piston Ø	ØMM f8	PL1	PL2	ØRR	RT	SW -0,3	TG1	TG2	U
16	8	6.5	11.3	3.3	M4	7	20 ±0,2	20 ±0,2	10
20	10	6.5	10	4.2	M5	8	22 ±0,2	22 ±0,2	11
16	8	6.5	11.3	3.3	M4	7	20 ±0,2	20 ±0,2	10
20	10	6.5	10	4.2	M5	8	22 ±0,2	22 ±0,2	11
25	10	9.5	11.5	4.2	M5	8	26 ±0,25	28 ±0,25	14
32	12	8.5	15	5.05	M6	10	32 ±0,25	36 ±0,25	18
40	12	10	13.5	5.05	M6	10	40 ±0,25	40 ±0,25	20
50	16	10	14	6.8	M8	13	50 ±0,25	50 ±0,25	25
63	16	11.5	14	8.5	M10	13	62 ±0,25	62 ±0,25	31
80	20	12	15.5	8.5	M10	17	82 ±0,3	82 ±0,3	41
100	25	12	18.5	10.2	M12	22	103 ±0,3	103 ±0,3	51.5

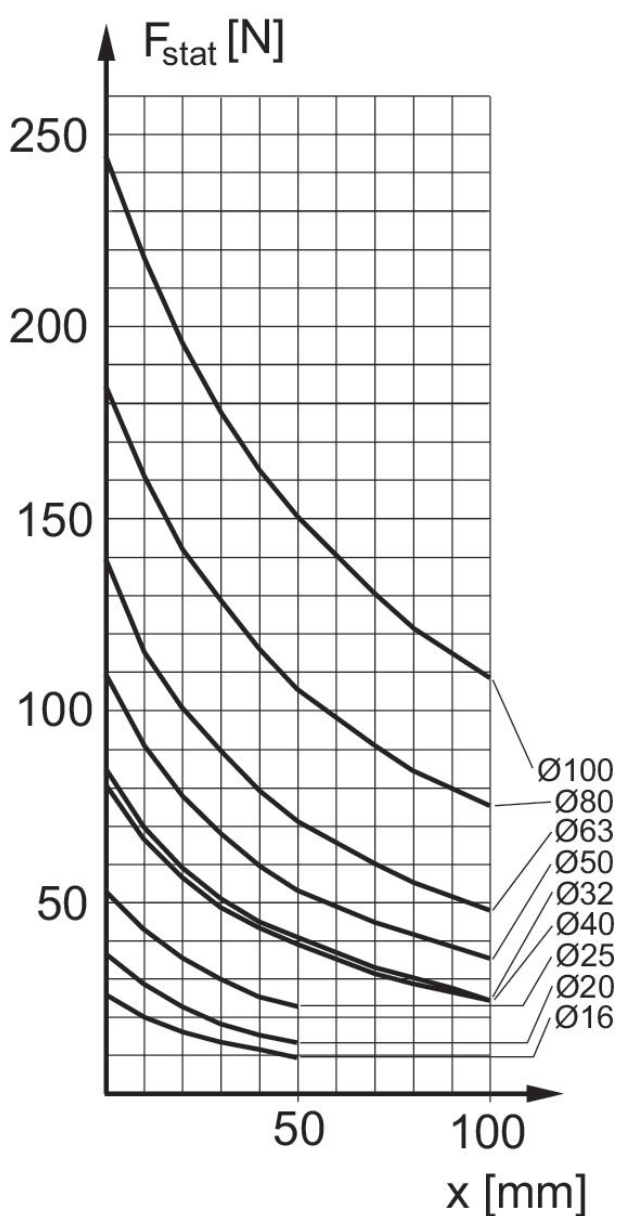
Piston Ø	VD -1	W	WH	FA1 ±0,1	FA2 ±0,1	ZA ±0,2	ZB ±0,8
16	–	14 ±0,2	4.5	20	20	32	36.5
20	–	16 ±0,2	4.5	22	22	32	36.5
16	–	14 ±0,2	4.5	20	20	38	42.5
20	–	16 ±0,2	4.5	22	22	38	42.5
25	3.5	19,5 ±0,2	9.5	26	28	39	48.5
32	3.5	24 ±0,2	11	32	36	39.5	50.5
40	4.5	27,3 ±0,2	13.5	40	40	39.5	53
50	6	33 ±0,2	13.5	50	50	39.5	53
63	6.5	40 ±0,2	15.5	62	62	42	57.5
80	8.5	50 ±0,3	18	82	82	46	64
100	7	62 ±0,3	20	103	103	56	76

Maximum admissible lateral force



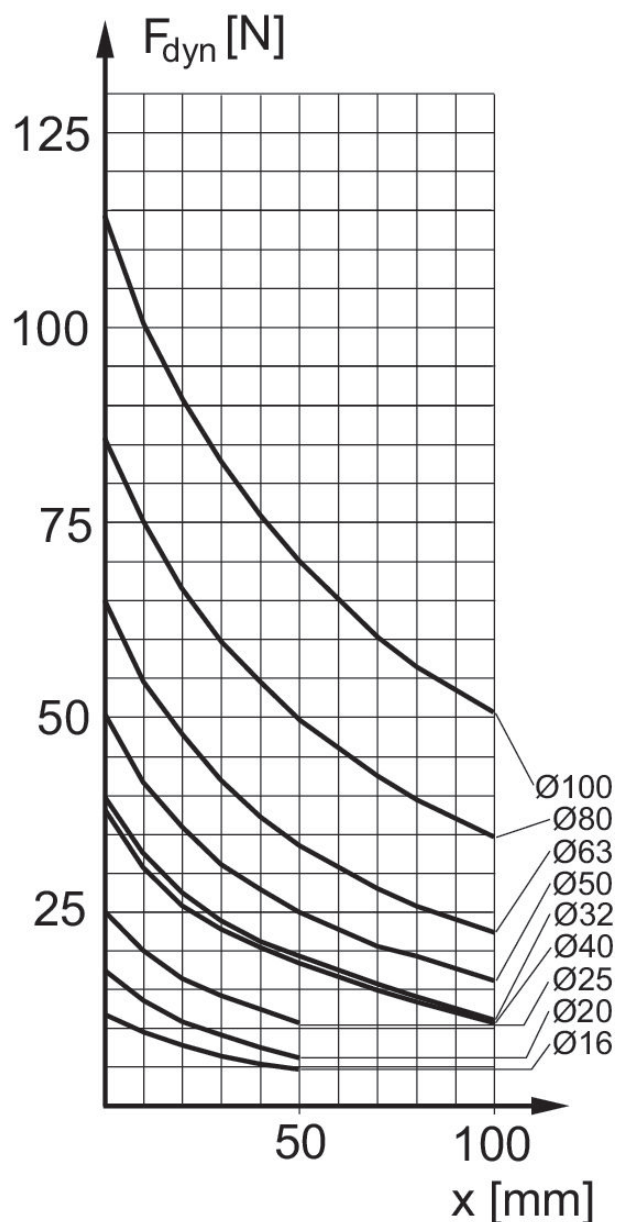
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



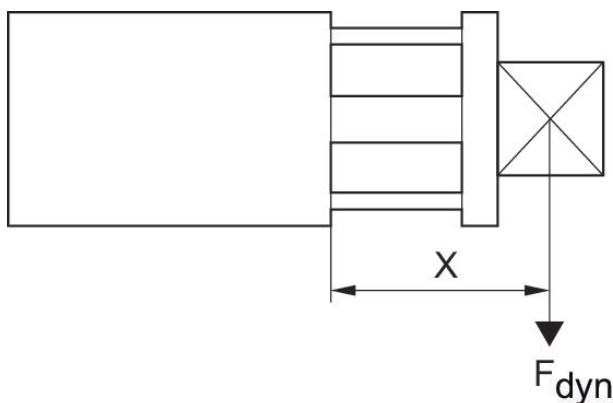
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



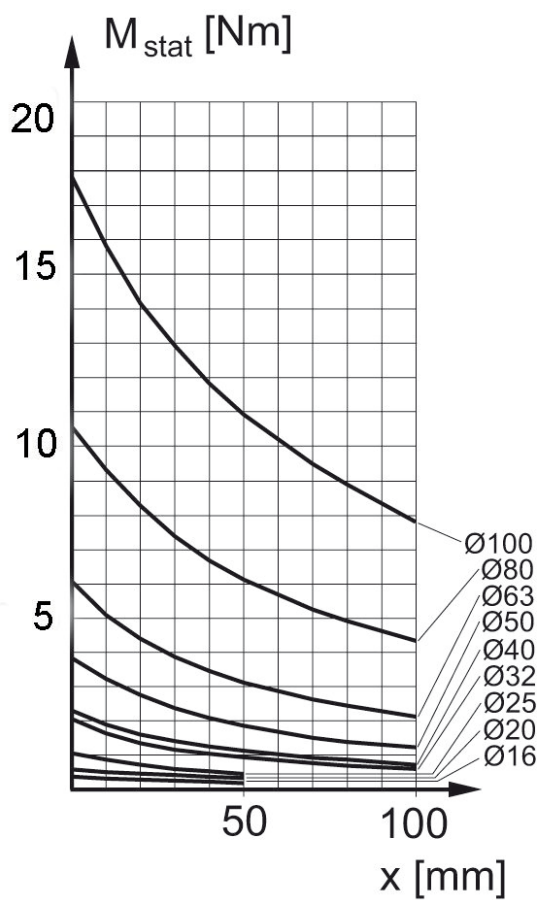
F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force

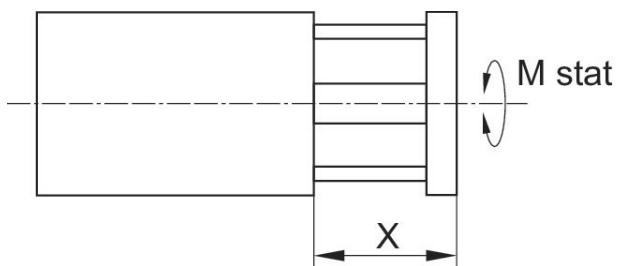


F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover

Max. permissible torque

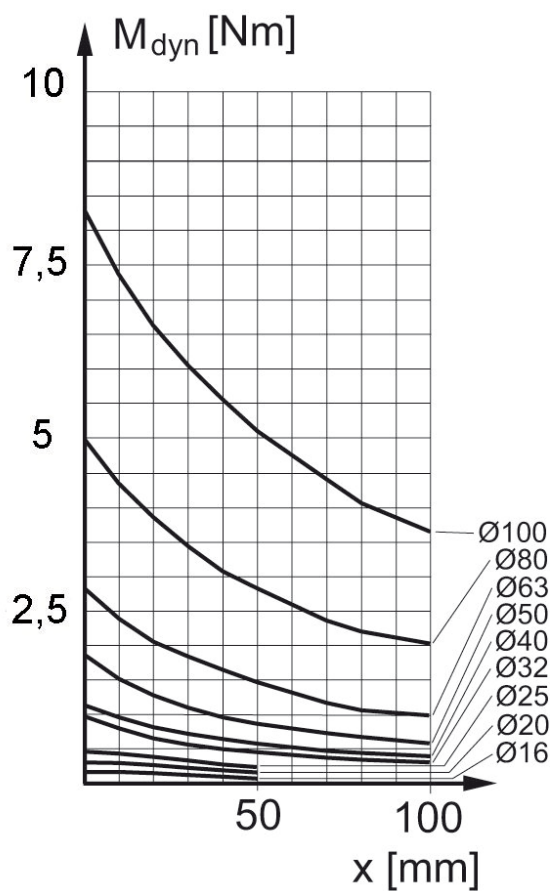


Max. permissible torque

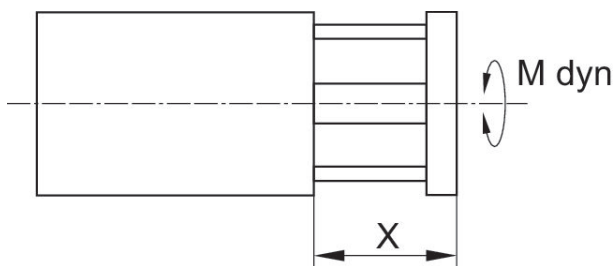


X = distance between force application point and cylinder cover

M = max. permissible torque



Max. permissible torque



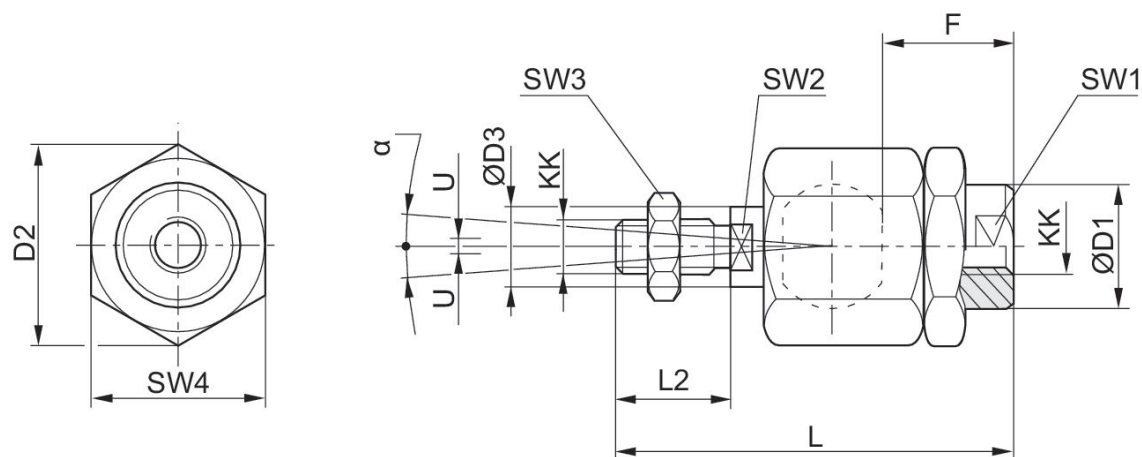
X = distance between force application point and cylinder cover

Flexible spherical coupling, Series PM5



Suitable piston rod thread	for series	Part No.
M5		R412007860
M6x1	CCL-IC, CCI, MNI	R412026140
M8x1,25	CCL-IC, CCI, MNI	R412026141
M10x1,25	PRA/TRB, CCL-IC/-IS, CCI, SSI, KPZ, 167, CVI, RPC	R412026142

Dimensions



* Radial joint

Part No.	KK	Ø D1	D2	Ø D3	F	L ±2	L2	SW1	SW2
1826409008	M4	12	13.5	4	13	33	8	12	3.2
R412007860	M5	8.5	14.8	6	12	38.5	13.5	7	5
R412026140	M6x1	8.5	14.5	6	11	36.5	11	7	5
R412026141	M8x1.25	12.5	19	8	21	58	21	11	7
R412026142	M10x1.25	22	32	14	23	74.5	23	19	12
R412026143	M12x1.25	22	32	14	24	75	24	19	12
R412026144	M16x1.5	32	45	22	30	103	30	30	20
R412026145	M20x1.5	32	45	22	40	119	40	30	20
1826409006	M27x2	62	62	28	48	147	54	32	24
1826409007	M36x2	80	80	38	86	241	72	50	32
R412007729	M42x2	64	98	42	96	271	82	60	36

Part No.	SW3	SW4	U	α [°]	1)
1826409008	7	11	0,5	8	0.05-0.2
R412007860	8	13	0,5	8	0.05-0.2
R412026140	10	13	0,7	6	0.05-0.5
R412026141	13	17	0,7	8	0.05-0.5
R412026142	17	30	1	8	0.05-0.5
R412026143	19	30	1	7	0.05-0.5
R412026144	24	41	1	6	0.05-0.5
R412026145	30	41	1	6	0.05-0.5
1826409006	41	55	1	8	0.05-0.2
1826409007	55	75	1	8	0.05-0.2
R412007729	65	85	1	8	0.05-0.2

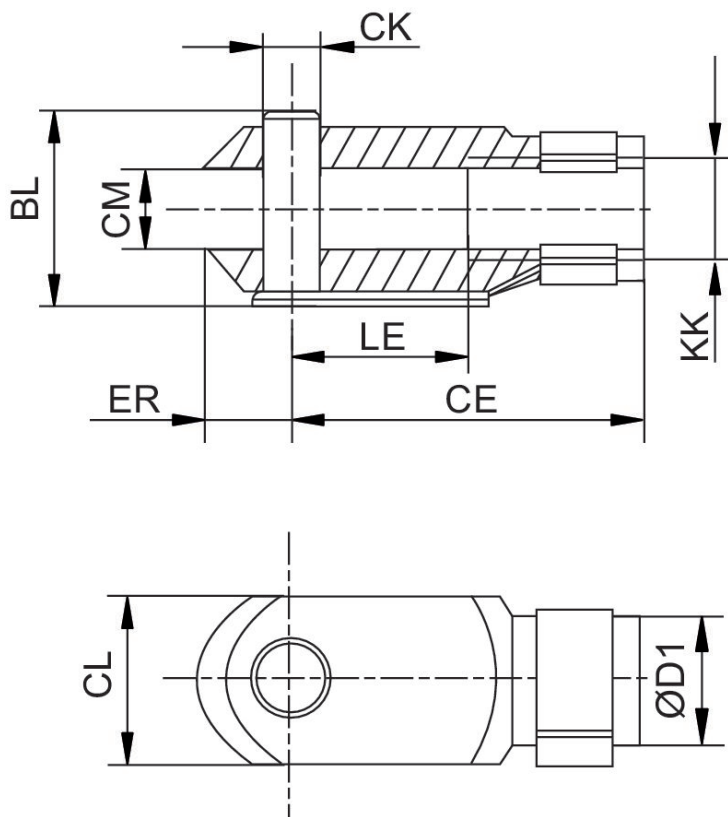
1) Axial play

Rod clevis with lock washer, Series AP2, Galvanized Steel



Suitable piston rod thread	for series	Part No.
M6	CCI, MNI, ICM, KHZ	1822122009
M8	CCI, MNI, ICM, KHZ	1822122010
M10	RPC, KHZ	8958000122

Dimensions



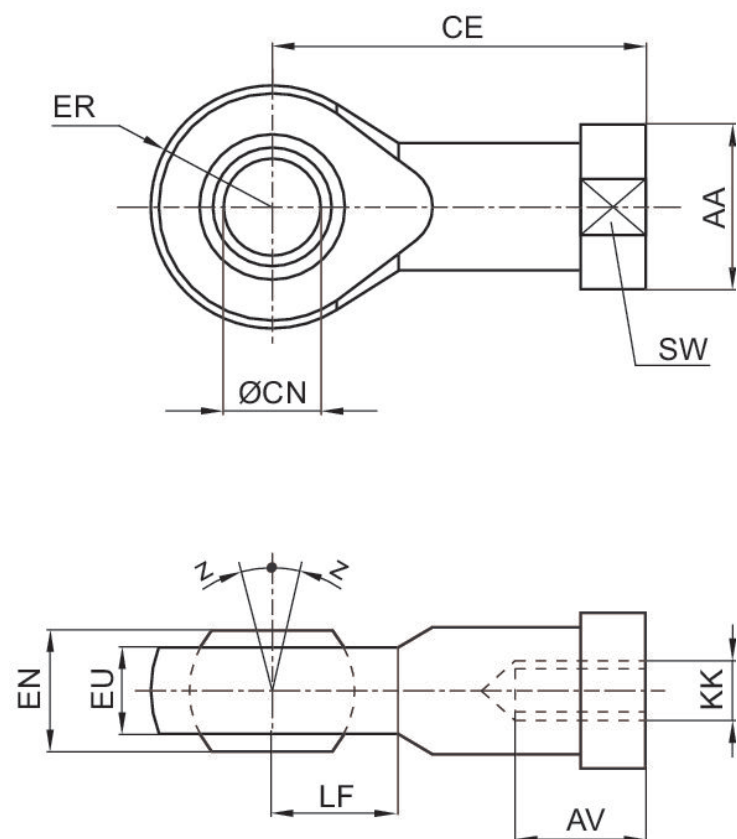
Part No.	BL	CE	ØCK h11	CL	CM	ØD1	ER	KK	LE
1822122028	11	16	4	8	4	8	5	M4	8
1822122008	13.5	20	5	10	5	9	6	M5	10
1822122009	16	24	6	12	6	10	7	M6	12
1822122010	21,5	32	8	16	8	14	10	M8	16
8958000122	26	40	10	20	10	18	12	M10	20
1822122024	26	40	10	20	10	18	12	M10x1,25	20
8958000132	31	48	12	24	12	20	14	M12	24
1822122025	31	48	12	24	12	20	14	M12x1,25	24
1822122005	39	64	16	32	16	26	19	M16x1,5	32
1822122004	50	80	20	40	20	34	20	M20x1,5	40

Ball eye rod end AP6, galvanized Steel



Suitable piston rod thread	for series	Swivel bearing Ø [mm]	Part No.
M6	MNI, CCI, SSI	6	1822124001
M8	MNI, CCI, SSI, KPZ	8	1822124002

Dimensions



KK	Part No.	AA	AV min.	CE	Ø CN H7	EN -0,1	ER	EU max.	LF
M4	1822124000	12	8	27	5	8	9	7.5	9
M6	1822124001	13	9	30	6	9	10	7.5	10
M8	1822124002	16	12	36	8	12	12	9.5	12
M10	8958206402	19	20	43	10	14	14	10.5	13
M12	8958208852	22	22	50	12	16	16	12	16
M10x1,25	1822124003	19	15	43	10	14	14	11.5	14
M12x1,25	1822124004	22	18	50	12	16	16	12.5	16
M16x1,5	1822124005	27	24	64	16	21	21	15.5	21
M20x1,5	1822124006	34	30	77	20	25	25	18.5	25
M24x2	8958208002	42	36	94	25	31	30	23	30
M27x2	1822124013	50	45	110	30	37	35	27	35
M36x2	1822124008	60	56	125	35	43	40	32	40
M42x2	1822124009	69	60	142	40	49	45.5	37	45
M48x2	8958208842	75	65	160	50	60	58	45	60

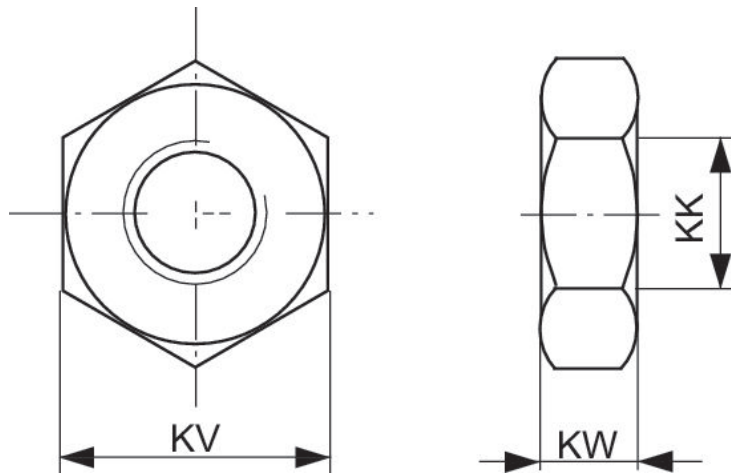
KK	SW	Z [°] max.
M4	9	4
M6	11	4
M8	14	4
M10	17	6
M12	19	13
M10x1,25	17	4
M12x1,25	19	4
M16x1,5	22	4
M20x1,5	30	4
M24x2	36	15
M27x2	41	4
M36x2	50	4
M42x2	55	4
M48x2	65	6

Piston rod nut MR9



Thread size	Material	Part No.
M6	Steel, chrome-plated	1823300033
M8	Steel, chrome-plated	1823300034
M10	Steel, chrome-plated	8103040224
M10x1,25	Steel, chrome-plated	1823A00020

Dimensions



Part No.	KK	KV	KW
8103040114	M4		
1823300033	M6	10	3.2
1823300034	M8	13	4
8103040224	M10	17	8
1823A00020	M10x1,25		
8103060064	M12	19	10
1823A00021	M12x1,25	19	6
8103190344	M12x1,25	19	6
1823300030	M16x1,5	24	8
1823300031	M20x1,5	30	10
8103040344	M20x1,5	30	10
8103190394	M24x2	36	12
1823A00029	M27x2	41	13.5
8103190414	M36x2	50	16
8103190424	M42x2	60	21
8103190434	M48x2	65	25
3330310000	M4	7	2.2
8103190644	M6	10	3.2
3330316000	M6		
8103190164	M8	13	4
3330320000	M8		
8103190464	M10x1,25	17	5
3590302000	M10x1,25		
3590304000	M12x1,25	19	6
3590305000	M16x1,5	24	8
3590308000	M20x1,5	30	10
2990600303	M10x1,25	17	5
2990600304	M12x1,25	19	6
2990600305	M16x1,5	24	8
2990600308	M20x1,5	30	10
2990600312	M27x2	41	13.5
2990600316	M36x2	50	16
2990600325	M42x2	60	21

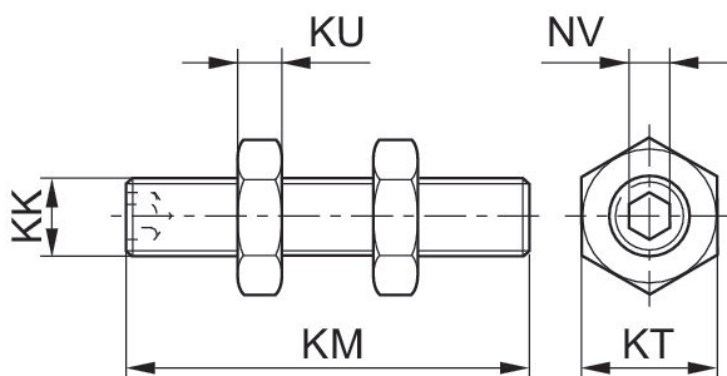
Piston rod extension, series CM2

For series: KHZ SSI



Thread size	Material	Part No.
M3	Stainless Steel	2701412000
M5	Stainless Steel	2701420000
M6	Stainless Steel	2701432000
M8	Stainless Steel	2701450000
M10	Stainless Steel	2701463000

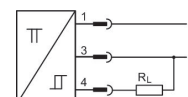
Dimensions



KK	Part No.	KM	KT	KU	NV
M3	2701412000	20	5.5	1.8	1.5
M5	2701420000	25	8	2.7	2.5
M6	2701432000	30	10	3.2	3
M8	2701450000	35	13	4	4
M10	2701463000	40	16	5	5

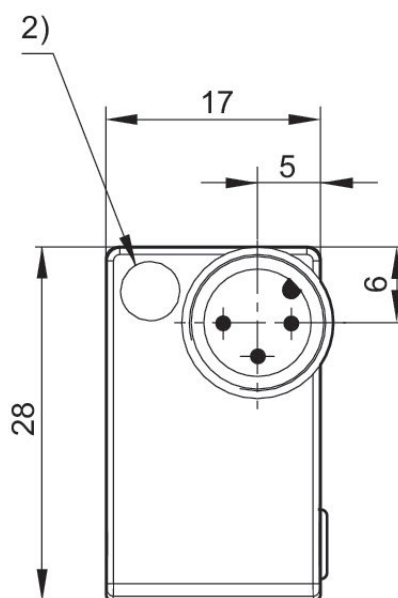
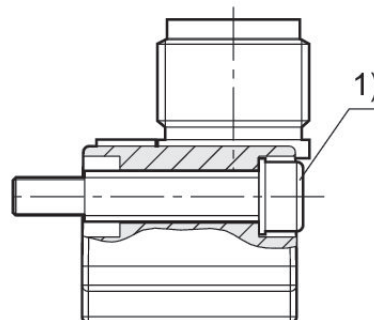
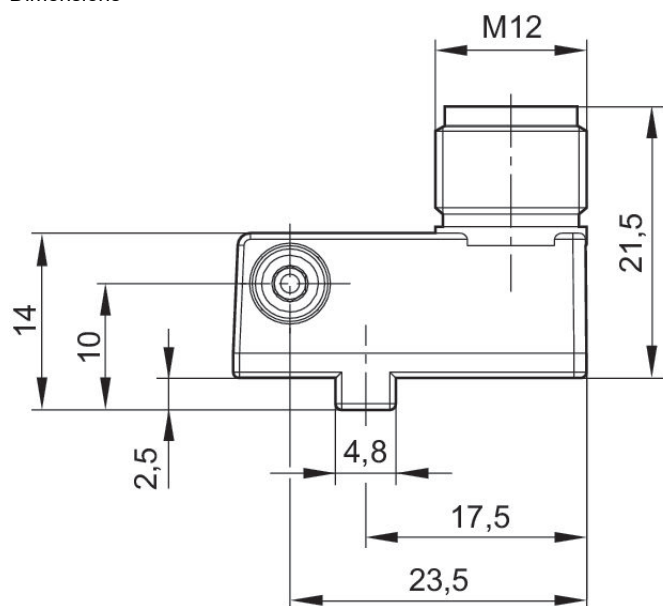
Sensor, Series SN3

To mount on series: PRA PRE CCI KPZ KHZ FLT GPC CVI
Ambient temperature min./max.: -25 °C ... 70 °C



Switch descr.	Electrical connection number of poles	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Part No.
PNP	3-pin	10	30	short circuit resistant, Protected against polarity reversal	0830100438

Dimensions



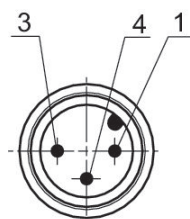
1) Clamping screw

2) LED

Pin assignments: 1 = (+), 3 = (-), 4 = (OUT), EN 60947-5-2:1998

0830100438

Pin assignments



Pin	Allocation
1	(+)
3	(-)
4	(OUT) EN 60947-5-2:1998

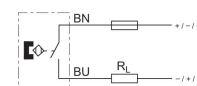
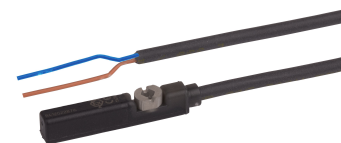
Sensors, Series ST6, open cable ends, 2-pin, Reed

To mount on series: TRB ITS 167 C12P CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR

For series: PRA CCI KPZ SSI GPC CVI

Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)

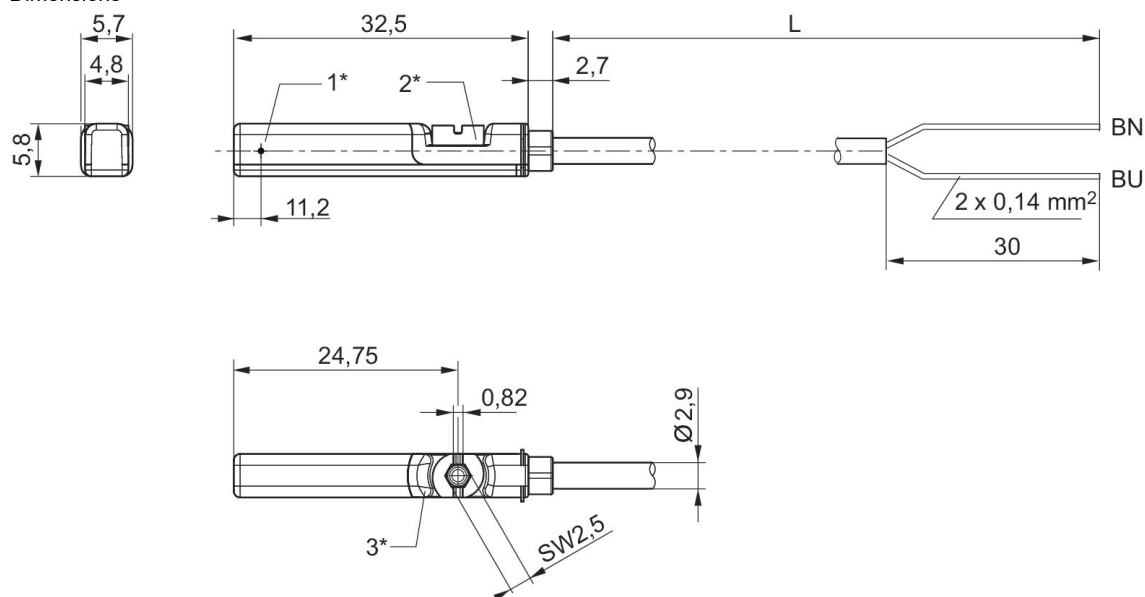
Ambient temperature min./max.: -30 °C ... 80 °C



Switch descr.	Cable sheath	Number of poles	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Part No.
Reed	Polyurethane	2-pin	0.13	0.13	10	230	10	R412022866
Reed	Polyurethane	2-pin	0.13	0.13	10	230	10	R412027170

Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
230	Protected against polarity reversal	3	R412022866
230	Protected against polarity reversal	5	R412027170

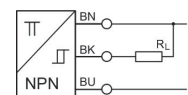
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length BN=brown, BU=blue

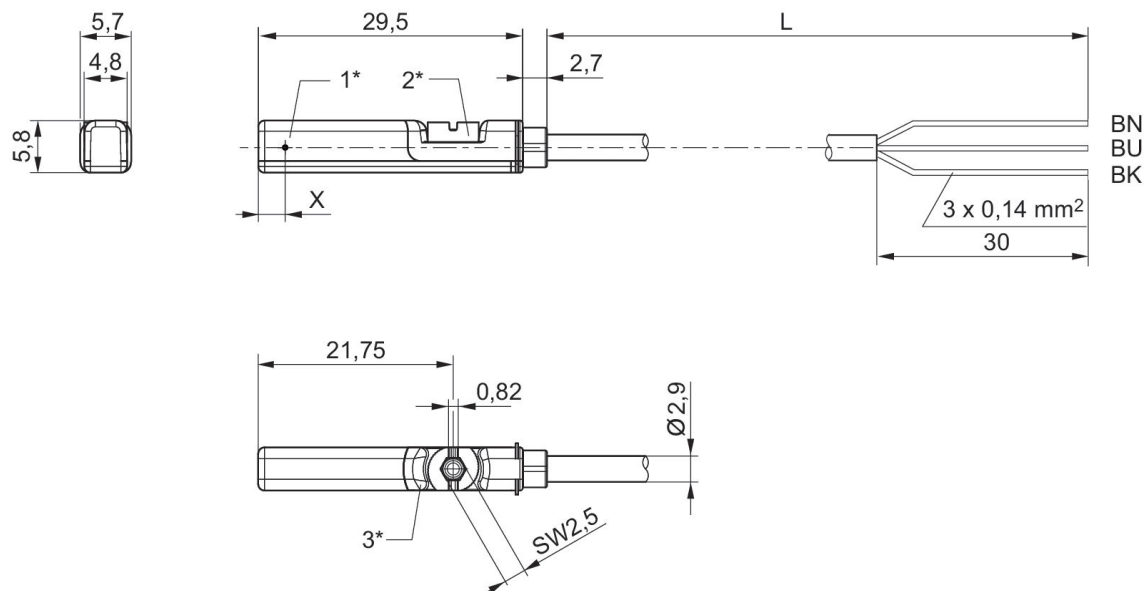
Sensors, Series ST6, open cable ends, 3-pin, NPN

To mount on series: TRB ITS CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR
 For series: PRA PRE CCI KPZ SSI GPC CVI
 Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
 Ambient temperature min./max.: -30 °C ... 80 °C



Switch descr.	Cable sheath	Number of poles	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Cable length L [m]	Part No.
NPN	Polyurethane	3-pin	0.13	10	30	short circuit resistant, Protected against polarity reversal	3	R412022849
NPN	Polyurethane	3-pin	0.13	10	30	short circuit resistant, Protected against polarity reversal	5	R412022850

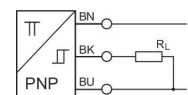
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
 L = cable length BN = brown, BK = black, BU = blue
 X = electronic: 11.6 mm

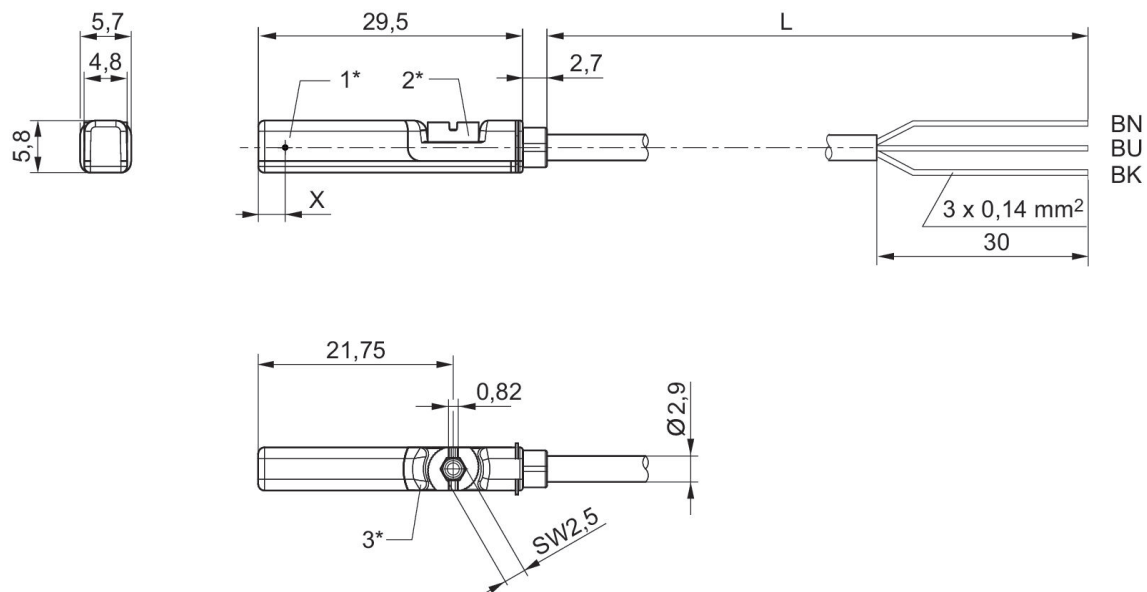
Sensors, Series ST6, open cable ends, 3-pin, PNP

To mount on series: TRB ITS CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR
 For series: PRA PRE CCI KPZ SSI GPC CVI
 Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
 Ambient temperature min./max.: -30 °C ... 80 °C



Switch descr.	Cable sheath	Number of poles	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Cable length L [m]	Part No.
electronic PNP	Polyurethane	3-pin	0.13	10	30	short circuit resistant, Protected against polarity reversal	3	R412022853
electronic PNP	Polyurethane	3-pin	0.13	10	30	short circuit resistant, Protected against polarity reversal	5	R412022855
electronic PNP	Polyurethane	3-pin	0.13	10	30	short circuit resistant, Protected against polarity reversal	10	R412022857

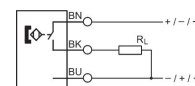
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
 L = cable length BN = brown, BK = black, BU = blue
 X = electronic: 11.6 mm

Sensors, Series ST6, open cable ends, 3-pin, Reed

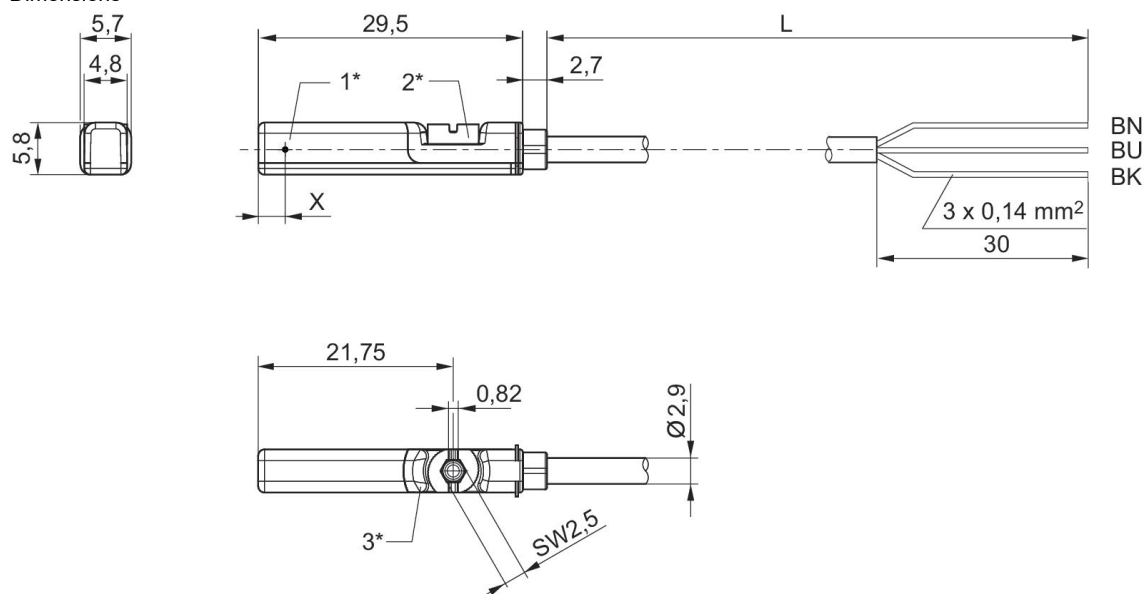
To mount on series: TRB ITS CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR
 For series: PRA PRE CCI KPZ SSI GPC CVI
 Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
 Ambient temperature min./max.: -30 °C ... 80 °C



Switch descr.	Cable sheath	Number of poles	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Part No.
Reed	Polyurethane	3-pin	0.3	0.5	10	30	10	R412022869
Reed	Polyurethane	3-pin	0.3	0.5	10	30	10	R412022870
Reed	Polyurethane	3-pin	0.3	0.5	10	30	10	R412022871

Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
30	Protected against polarity reversal	3	R412022869
30	Protected against polarity reversal	5	R412022870
30	Protected against polarity reversal	10	R412022871

Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
 L = cable length BN = brown, BK = black, BU = blue
 X = electronic: 11.6 mm

Sensors, Series ST6, plug M8x1, with knurled screw

To mount on series: TRB ITS CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR

For series: PRA PRE CCI KPZ SSI GPC CVI

Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)

Ambient temperature min./max.: -30 °C ... 80 °C

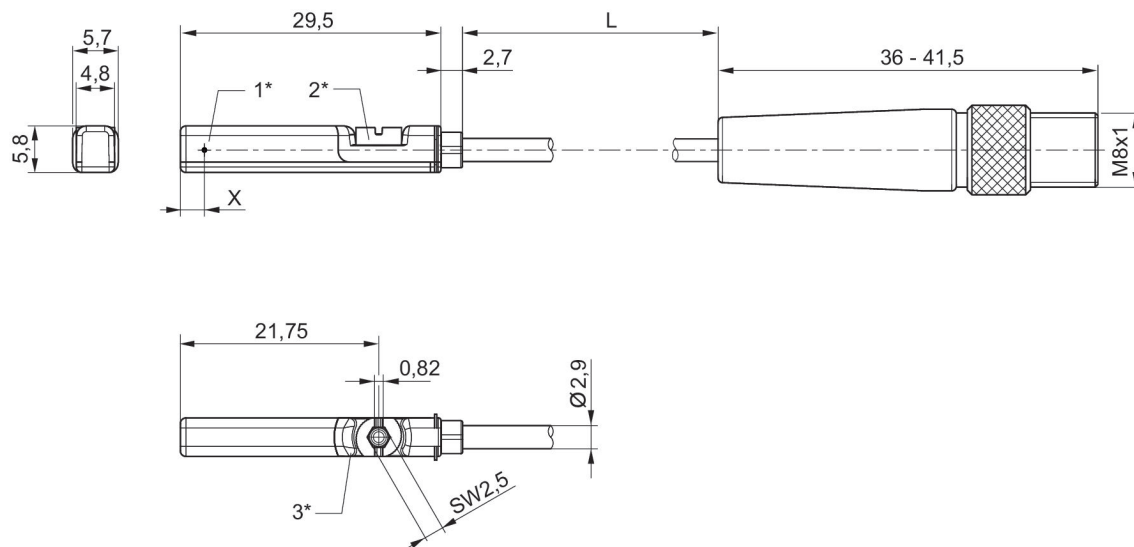


	Switch descr.	Cable sheath	Electrical interface 2	Number of poles	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Part No.
	Reed	Polyurethane	M8x1	3-pin	0.3	0.5	10	R412022873
	Reed	Polyvinyl chloride	M8x1	3-pin	0.3	0.5	10	R412022875
	Reed	Polyurethane	M8x1	3-pin	0.3	0.5	10	R412022874
	electronic PNP	Polyurethane	M8x1	3-pin	0.13		10	R412022859
	electronic PNP	Polyvinyl chloride	M8x1	3-pin	0.13		10	R412022862
	electronic PNP	Polyurethane	M8x1	3-pin	0.13		10	R412022861
	NPN	Polyurethane	M8x1	3-pin	0.13		10	R412022852

Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
30	10	30	Protected against polarity reversal	0.3	R412022873
30	10	30	Protected against polarity reversal	0.3	R412022875
30	10	30	Protected against polarity reversal	0.5	R412022874
30			short circuit resistant, Protected against polarity reversal	0.3	R412022859

Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
30			short circuit resistant, Protected against polarity reversal	0.3	R412022862
30			short circuit resistant, Protected against polarity reversal	0.5	R412022861
30			short circuit resistant, Protected against polarity reversal	0.3	R412022852

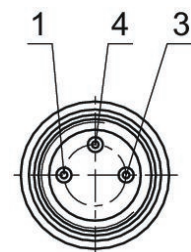
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11,6 mm, Reed: 8,3 mm

R412022873, R412022875, R412022874, R412022859, R412022862, R412022861, R412022852

Pin assignment M8x1 (3-pin)



Pin	Allocation
1	(+)
3	(-)
4	(OUT)

Sensors, Series ST6, plug M8

To mount on series: TRB ITS CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR

For series: PRA PRE CCI KPZ SSI GPC CVI

Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)

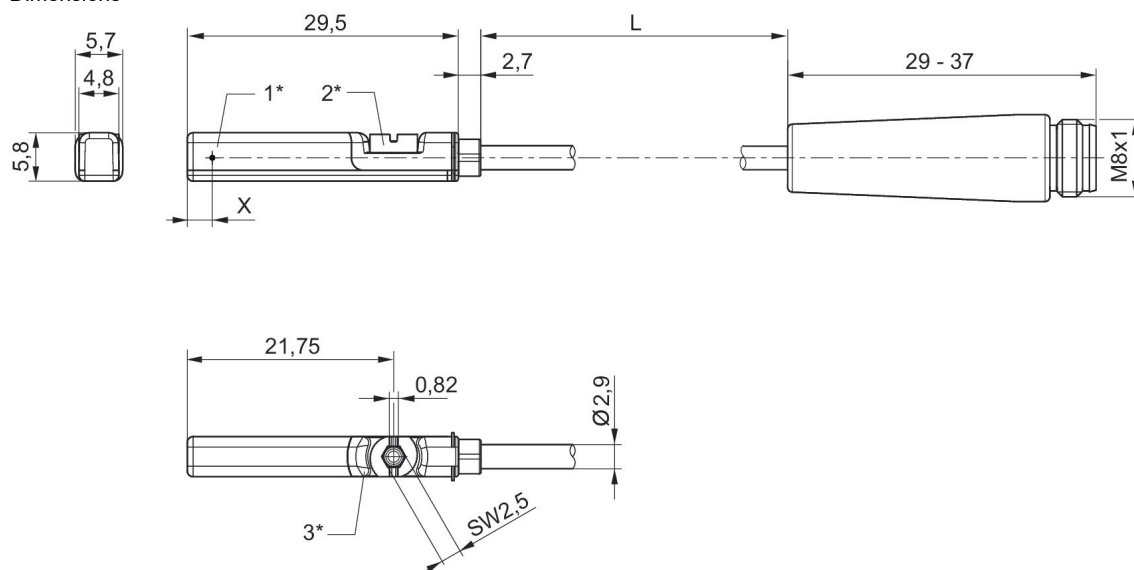
Ambient temperature min./max.: -30 °C ... 80 °C



	Switch descr.	Cable sheath	Electrical interface 2	Number of poles	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Part No.
	Reed	Polyurethane	M8x1	3-pin	0.13	0.13	10	R412022868
	Reed	Polyurethane	M8x1	2-pin	0.13	0.13	10	R412027172
	Reed	Polyurethane	M8x1	3-pin	0.3	0.5	10	R412022872
	electronic PNP	Polyurethane	M8x1	3-pin	0.13		10	R412022858
	NPN	Polyurethane	M8x1	3-pin	0.13		10	R412022851

Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
30	10	30	Protected against polarity reversal	0.3	R412022868
30	10	30	Protected against polarity reversal	0.3	R412027172
30	10	30	Protected against polarity reversal	0.3	R412022872
30			short circuit resistant, Protected against polarity reversal	0.3	R412022858
30			short circuit resistant, Protected against polarity reversal	0.3	R412022851

Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11,6 mm, Reed: 8,3 mm

Sensors, Series ST6, plug M12x1

To mount on series: TRB ITS CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR

For series: PRA PRE CCI KPZ SSI GPC CVI

Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)

Ambient temperature min./max.: -30 °C ... 80 °C

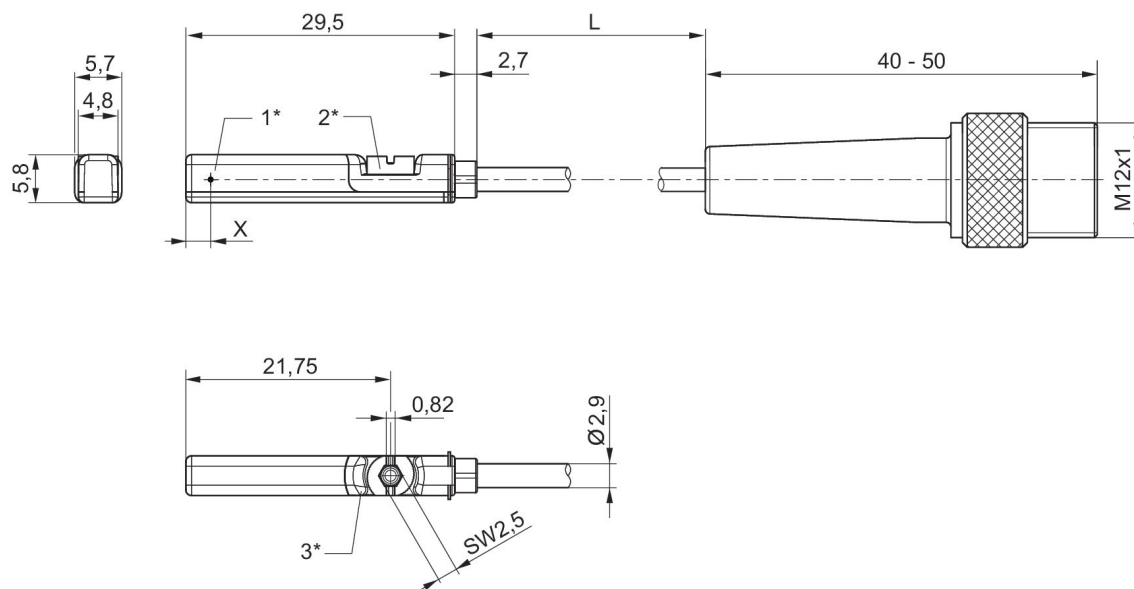


	Switch descr.	Cable sheath	Electrical interface 2	Number of poles	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Part No.
	Reed	Polyurethane	M12x1	2-pin	0.13	0.13	10	R412027171
	Reed	Polyurethane	M12x1	3-pin	0.3	0.5	10	R412022876
	electronic PNP	Polyurethane	M12x1	3-pin	0.13		10	R412022879
	electronic PNP	Polyurethane	M12x1	3-pin	0.13		10	R412022863
	electronic PNP	Polyurethane	M12x1	3-pin	0.13		10	R412022877
	electronic PNP	Polyurethane	M12x1	3-pin	0.13		10	R412022878

Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
30	10	30	Protected against polarity reversal	0.3	R412027171
30	10	30	Protected against polarity reversal	0.3	R412022876
30			short circuit resistant, Protected against polarity reversal	0.1	R412022879
30			short circuit resistant, Protected against polarity reversal	0.3	R412022863
30			short circuit resistant, Protected against	3	R412022877

Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
			polarity reversal		
30			short circuit resistant, Protected against polarity reversal	5	R412022878

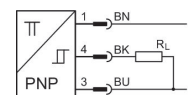
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
 L = cable length
 X = PNP: 11,6 mm, reed: 8,3 mm

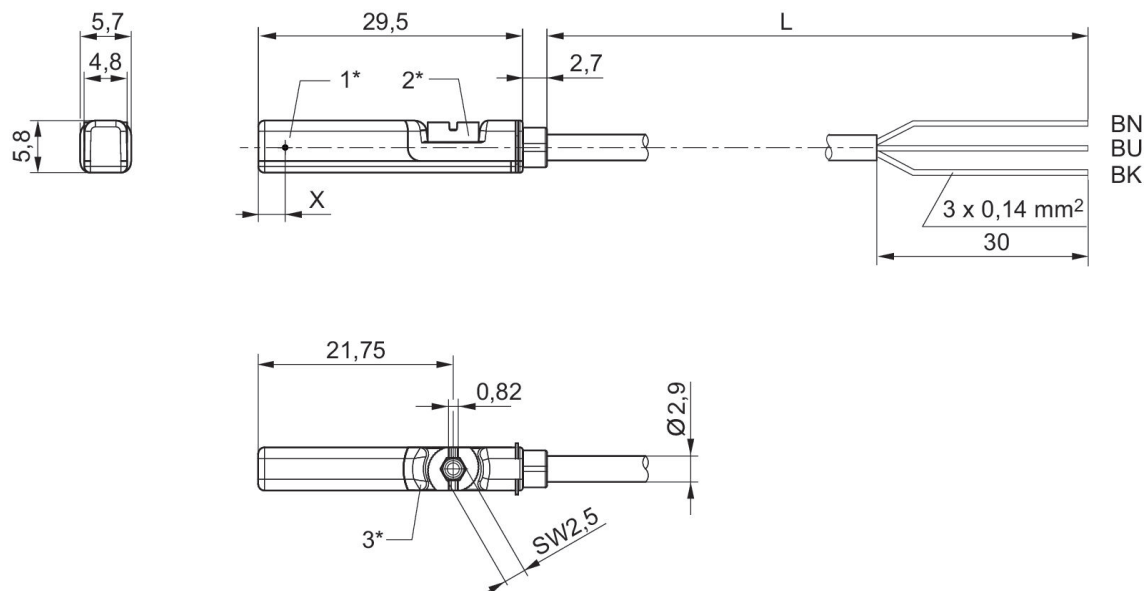
Sensors, Series ST6, open cable ends, 3-pin, PNP, ATEX

To mount on series: TRB ITS CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR
 For series: PRA PRE CCI KPZ SSI GPC CVI
 Certificates: ATEX CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
 Ambient temperature min./max.: -20 °C ... 50 °C



Switch descr.	Cable sheath	Number of poles	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Cable length L [m]	Part No.
PNP	Polyurethane	3-pin	0.1	10	30	short circuit resistant, Protected against polarity reversal	3	R412022854
PNP	Polyurethane	3-pin	0.1	10	30	short circuit resistant, Protected against polarity reversal	5	R412022856

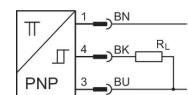
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
 L = cable length BN = brown, BK = black, BU = blue
 X = electronic: 11.6 mm

Sensors, Series ST6, plug M12x1, with knurled screw, ATEX

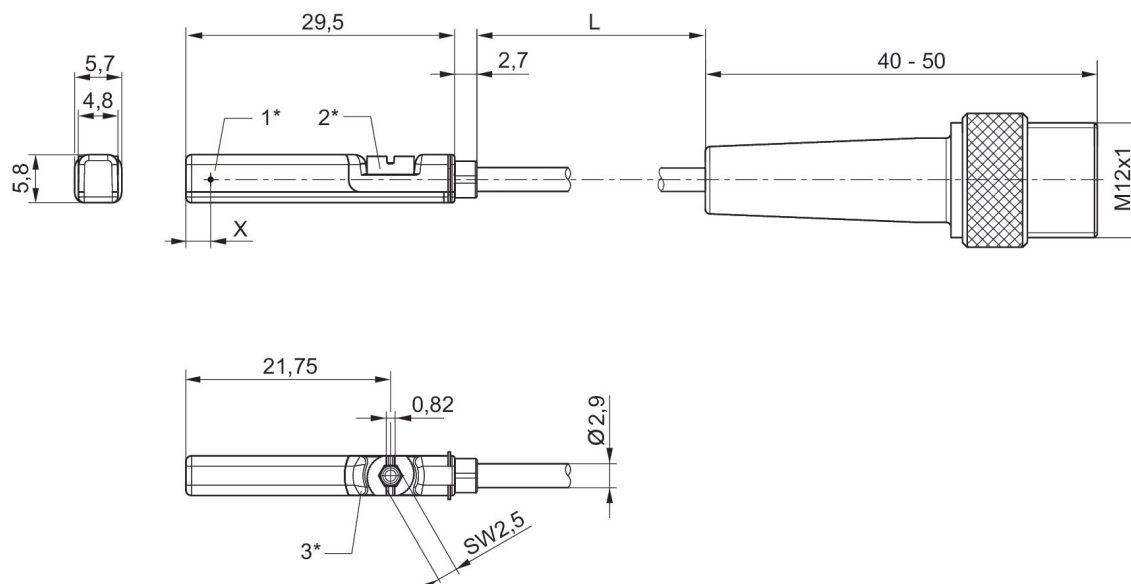
To mount on series: TRB ITS CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR
 For series: PRA PRE CCI KPZ SSI GPC CVI
 Certificates: ATEX CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
 Ambient temperature min./max.: -20 °C ... 50 °C



Switch descr.	Cable sheath	Electrical interface 2	Number of poles	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Part No.
PNP	Polyurethane	M12x1	3-pin	0.1	10	30	short circuit resistant, Protected against polarity reversal	R412022864

Cable length L [m]	Part No.
0.3	R412022864

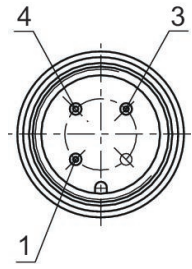
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
 L = cable length
 X = PNP: 11,6 mm, reed: 8,3 mm

R412022864

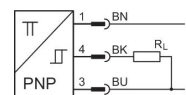
Pin assignments



Pin	Allocation
1	(+)
3	(-)
4	(OUT)

Sensors, Series ST6, plug M8x1, ATEX

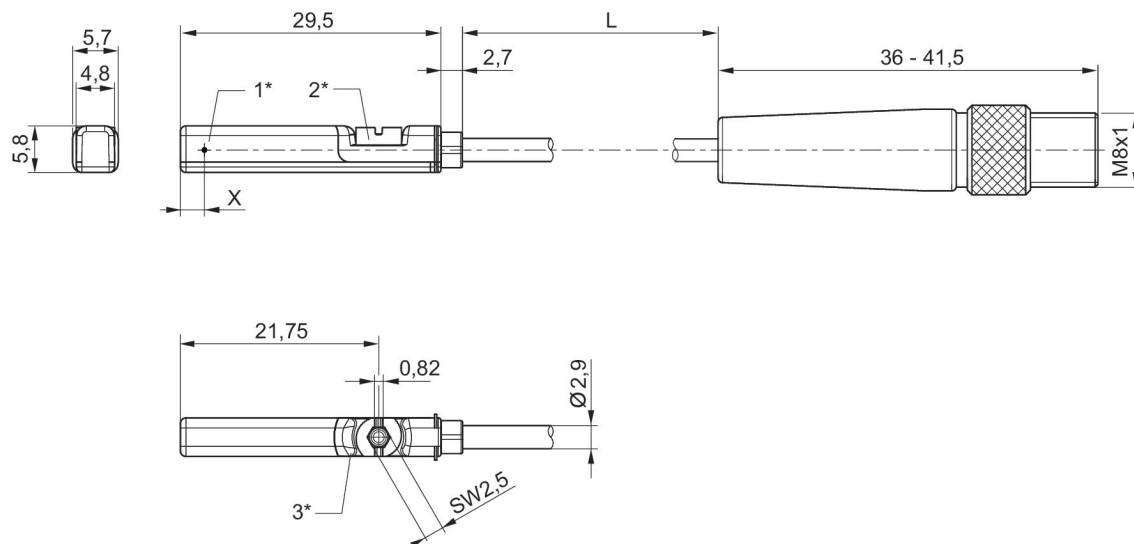
To mount on series: TRB ITS CCL-IS MNI CSL-RD RPC ICS-D2 ICM KHZ TRR
 For series: PRA PRE CCI KPZ SSI GPC CVI
 Certificates: ATEX CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
 Ambient temperature min./max.: -20 °C ... 50 °C



Switch descr.	Cable sheath	Electrical interface 2	Number of poles	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Part No.
PNP	Polyurethane	M8x1	3-pin	0.1	10	30	short circuit resistant, Protected against polarity reversal	R412022860

Cable length L [m]	Part No.
0.3	R412022860

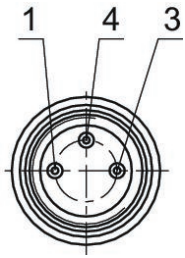
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
 L = cable length
 X = electronic: 11,6 mm, Reed: 8,3 mm

R412022860

Pin assignment M8x1 (3-pin)



Pin	Allocation
1	(+)
3	(-)
4	(OUT)

Sensor, Series ST9, with cable

For series: KHZ

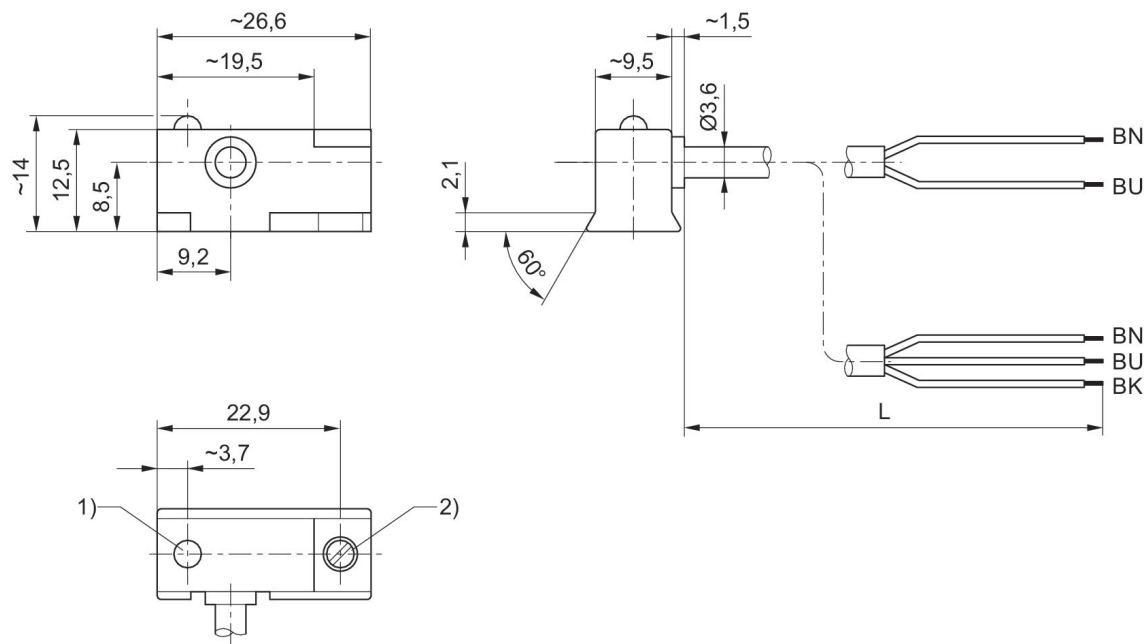


	Direct mounting for series	Switch descr.	Electrical connection 2, number of poles	Cable sheath	Cable length L [m]	Max. DC switching current [A]	Max. AC switching current [A]	Part No.
	KHZ	Reed	2-pin	Polyvinyl chloride	3	0.13	0.2	0830100320
	KHZ	Reed	2-pin	Polyvinyl chloride	3	0.13	0.2	0830100380
	KHZ	Reed	2-pin	Polyvinyl chloride	5	0.13	0.2	0830100381
	KHZ	Reed	2-pin	Polyurethane	3	0.13	0.2	0830100382
	KHZ	Reed	3-pin	Polyurethane	3	0.13	0.2	0830100390
	KHZ	Reed	3-pin	Polyurethane	5	0.13	0.2	0830100396
	KHZ	electronic PNP	3-pin	Polyvinyl chloride	3	0.2		0830100385
	KHZ	electronic PNP	3-pin	Polyvinyl chloride	5	0.2		0830100386
	KHZ	electronic PNP	3-pin	Polyurethane	3	0.2		0830100387

Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Part No.
0	24	0	24	Protected against polarity reversal	0830100320
12	24	12	24	Protected against polarity reversal	0830100380
12	24	12	24	Protected against polarity reversal	0830100381
12	24	12	24	Protected against polarity reversal	0830100382

Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Part No.
12	24	12	24	Protected against polarity reversal	0830100390
12	24	12	24	Protected against polarity reversal	0830100396
12	36			short circuit resistant, Protected against polarity reversal	0830100385
12	36			short circuit resistant, Protected against polarity reversal	0830100386
12	36			short circuit resistant, Protected against polarity reversal	0830100387

Dimensions

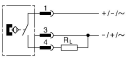
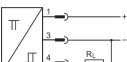


1) LED
2) Clamping screw
L = cable length
BN = brown BK = black BU = blue

Sensor, Series ST9, Plug M8

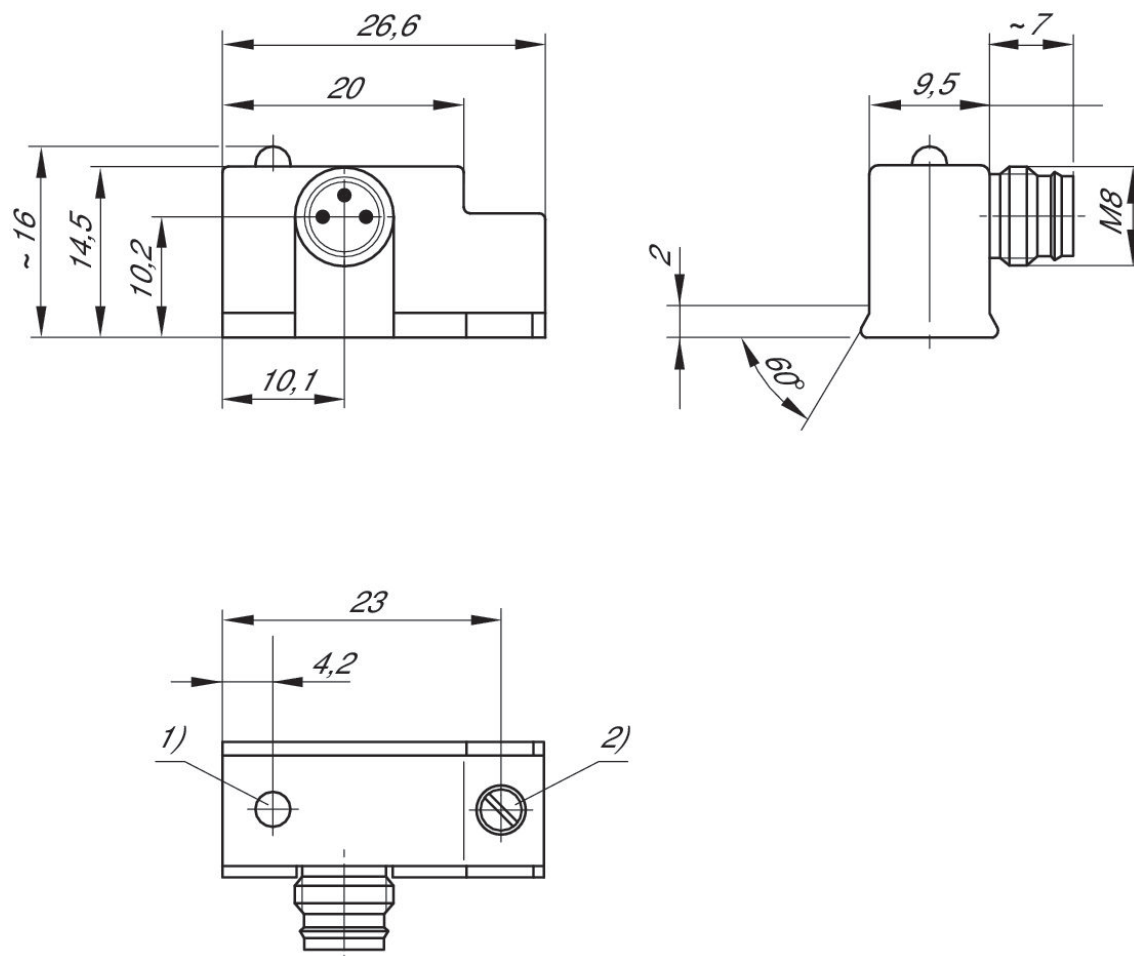
For series: KHZ



	Direct mounting for series	Switch descr.	Electrical connection 2, number of poles	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Part No.
	KHZ	Reed	3-pin	0.13	0.2	10	30	0830100486
	KHZ	electronic PNP	3-pin	0.2		12	36	0830100487

Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Part No.
10	30	Protected against polarity reversal	0830100486
		Protected against polarity reversal, short circuit resistant	0830100487

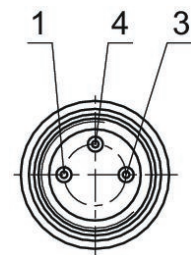
Dimensions



- 1) LED
 - 2) Clamping screw
- M8: combination plug can be combined with valve plug connectors Ø6.5 mm and M8.

0830100486, 0830100487

Pin assignment M8x1 (3-pin)



Pin	Allocation
1	(+)
3	(-)
4	(OUT)

Sensor mounting, Series CB1

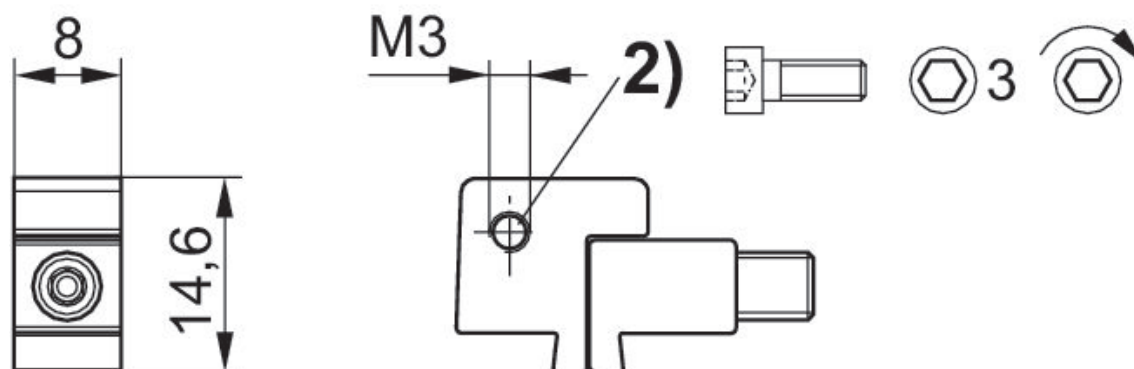
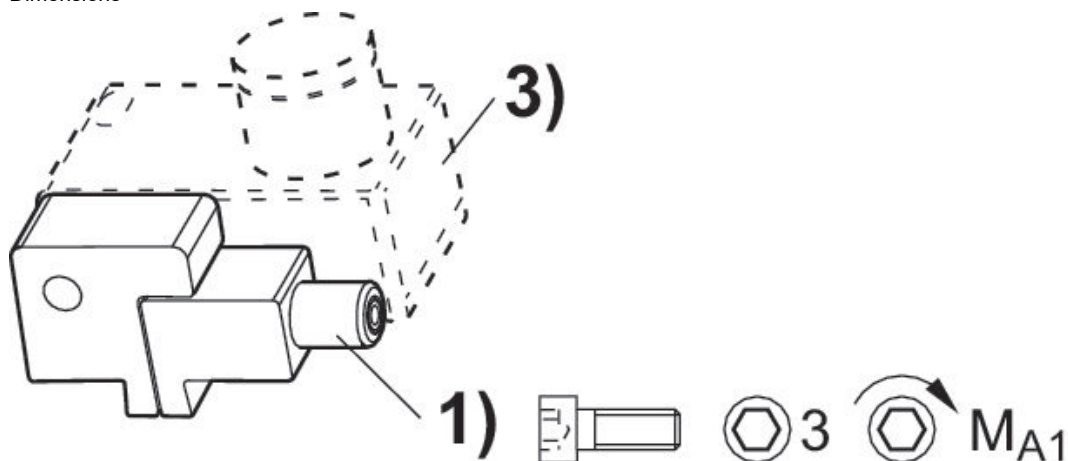
To mount on series: SN3

To mount on series: PRA KPZ GPC CCI KHZ



Material	Part No.
Aluminum	1827020386

Dimensions



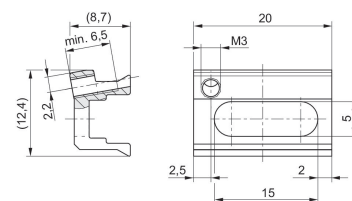
1) Clamping screw 2) Mounting screw for sensor 3) Sensor

Part No.	Clamping screw	MA1 [Nm]
1827020386	M3x25	1,8 +0,4

Sensor mounting, Series CB1

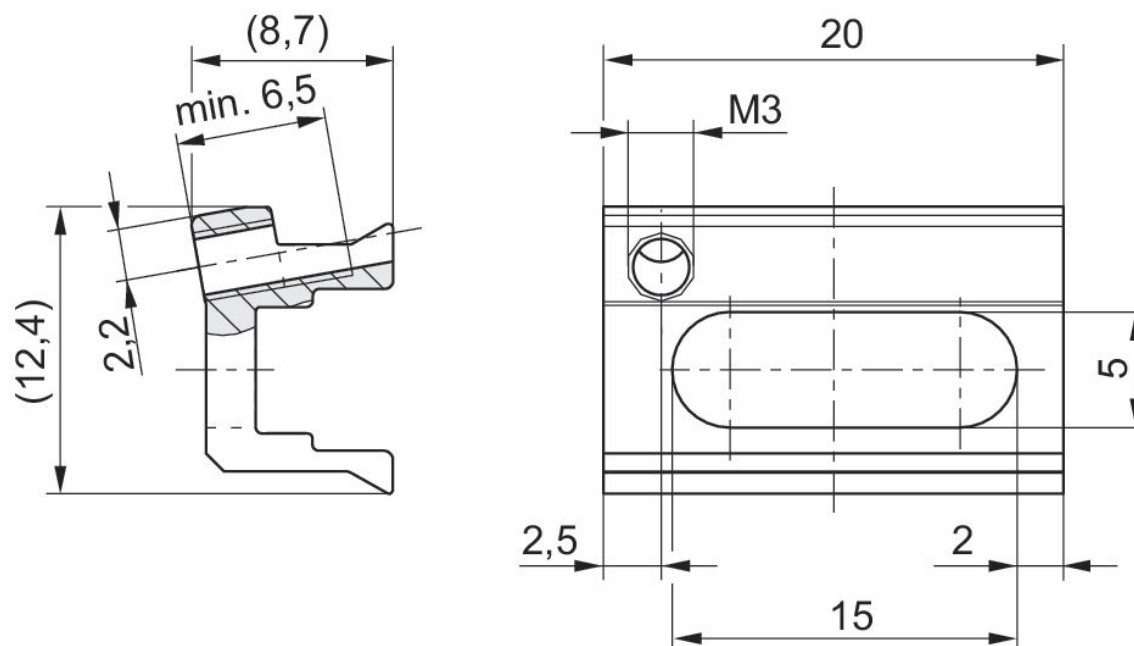
To mount on series: ST6

To mount on series: KHZ



Material	Part No.
Aluminum	R422100250

Dimensions



Scope of delivery: incl. threaded pin

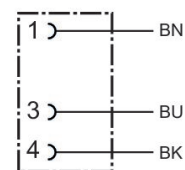
Round plug connector, Series CON-RD

Electrical connection 1: Socket ... M8x1 ... 3-pin ... straight

Electrical connection 2: open cable ends ... 3-pin

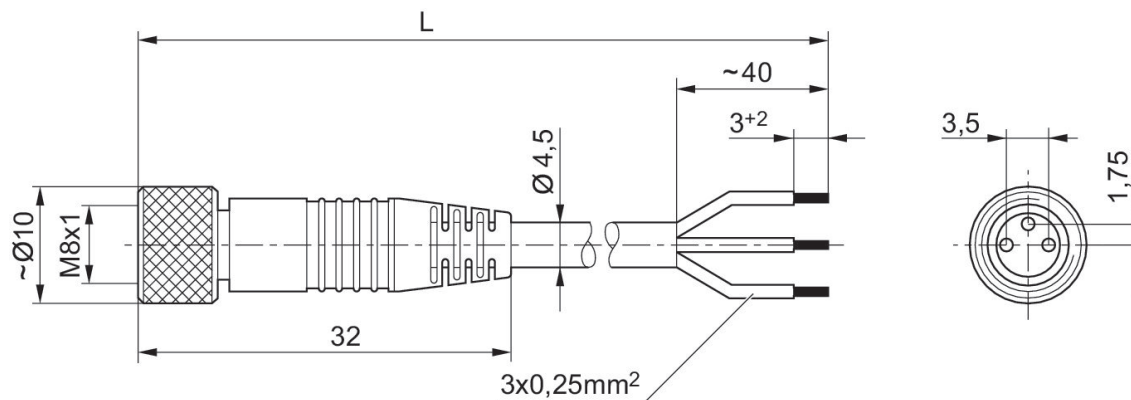
Certification: UL (Underwriters Laboratories)

Ambient temperature min./max.: -25 °C ... 85 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, number of poles	Cable length [m]	Part No.
48 V AC/DC	Socket	M8x1	3-pin	A-coded	open cable ends	3-pin	3	1834484166
48 V AC/DC	Socket	M8x1	3-pin	A-coded	open cable ends	3-pin	5	1834484168
48 V AC/DC	Socket	M8x1	3-pin	A-coded	open cable ends	3-pin	10	1834484247

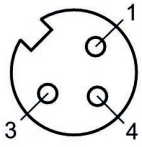
Dimensions



L = length

1834484166, 1834484168, 1834484247

Pin assignment, socket



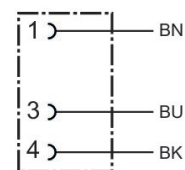
(1) BN=brown (3) BU=blue (4) BK=black

Round plug connector, Series CON-RD

Electrical connection 1: Socket ... M8x1 ... 3-pin ... angled

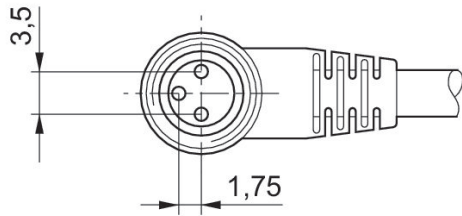
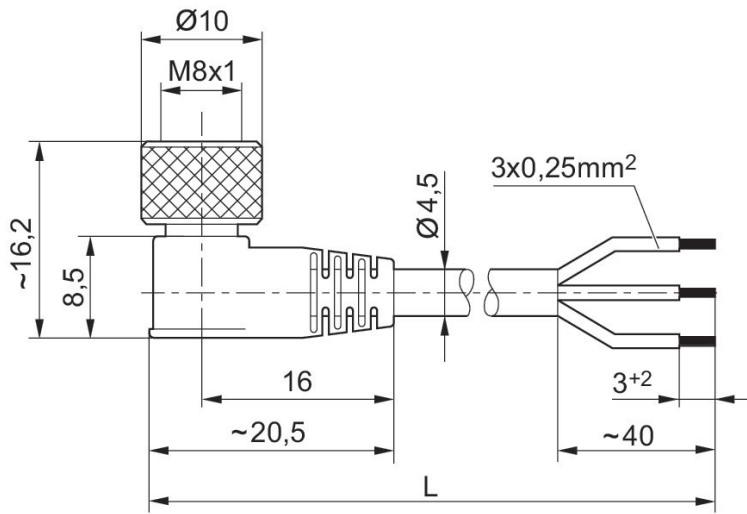
Electrical connection 2: open cable ends ... 3-pin

Ambient temperature min./max.: -40 °C ... 85 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, number of poles	Cable length [m]	Part No.
48 V AC/DC	Socket	M8x1	3-pin	A-coded	open cable ends	3-pin	3	1834484167
48 V AC/DC	Socket	M8x1	3-pin	A-coded	open cable ends	3-pin	5	1834484169
48 V AC/DC	Socket	M8x1	3-pin	A-coded	open cable ends	3-pin	10	1834484248

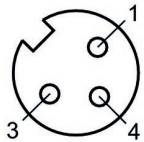
Dimensions



L = length

1834484167, 1834484169, 1834484248

Pin assignment, socket



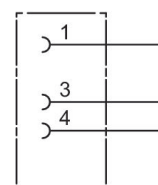
(1) BN=brown (3) BU=blue (4) BK=black

Round plug connector, Series CON-RD

Electrical connection 1: Socket ... M8x1 ... 3-pin ... straight

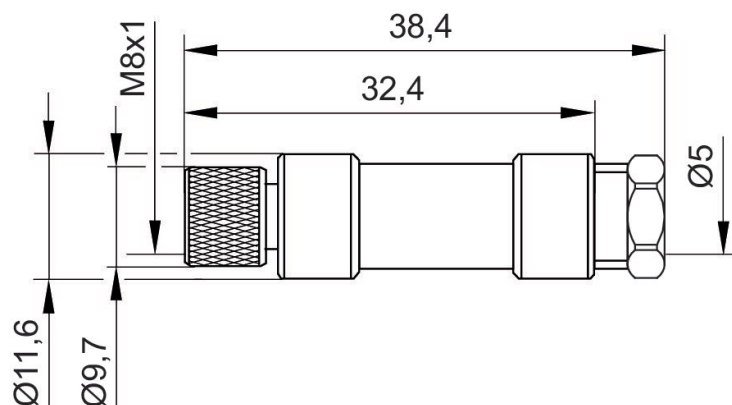
Connection type: Soldering

Ambient temperature min./max.: -25 °C ... 80 °C



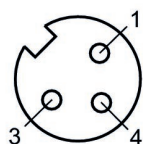
Operational voltage	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	unshielded	Soldering	4	3.5	5	1834484173

Dimensions



1834484173

Pin assignment, socket

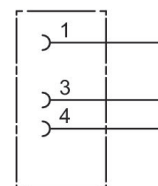


Round plug connector, Series CON-RD

Electrical connection 1: Socket ... M8x1 ... 3-pin ... angled

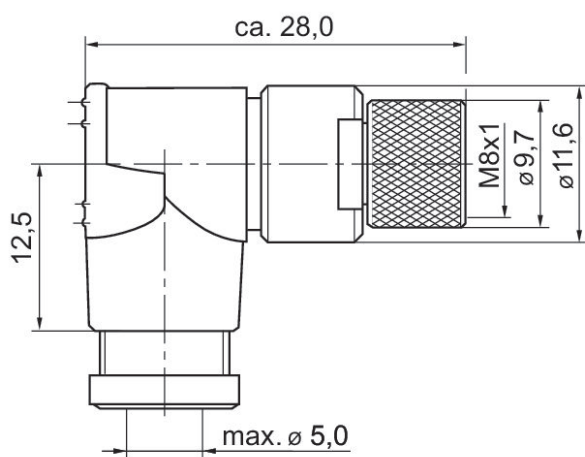
Connection type: Soldering

Ambient temperature min./max.: -25 °C ... 80 °C



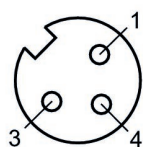
Operational voltage	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	unshielded	Soldering	4	3.5	5	1834484174

Dimensions in mm



1834484174

Pin assignment, socket



Silencers, series SI1, Sintered bronze

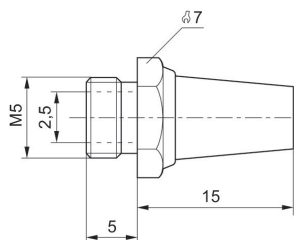
Compressed air connection type: External thread
 Silencer material: Sintered bronze
 Min. ambient temperature: -25 °C
 Max. ambient temperature: 80 °C
 Min. working pressure: 0 bar
 Max. working pressure: 10 bar



G	Sound pressure level [dB]	Nominal flow [l/min]	Delivery unit [piece]	Weight [kg]	Part No.
M5	72	398	10	0.004	1827000006
M7			10	0.005	8140000700
M10x1	75	1747	1	0.011	5324001110
M12x1,5	80	3049	1	0.019	5324001170
M14x1,5	80	3390	1	0.018	5324001120
M22x1,5	85	7223	1	0.071	5324001140
G 1/8	75	1623	10	0.01	1827000000
G 1/4	98	5950	10	0.013	R412004817
G 1/4	79	3390	10	0.02	1827000001
G 3/8	84	6554	5	0.05	1827000002
G 1/2	90	7223	2	0.08	1827000003
G 3/4	92	8394	1	0.13	1827000004
G 1	102	12848	1	0.18	1827000005

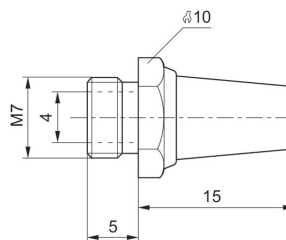
1827000006

Dimensions in mm



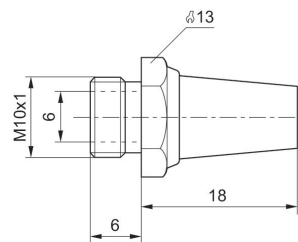
8140000700

Dimensions in mm



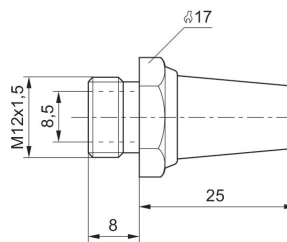
5324001110

Dimensions in mm



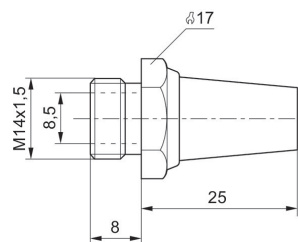
5324001170

Dimensions in mm



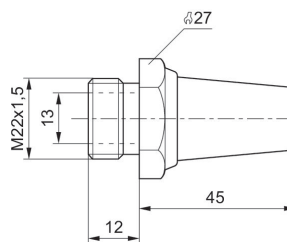
5324001120

Dimensions in mm



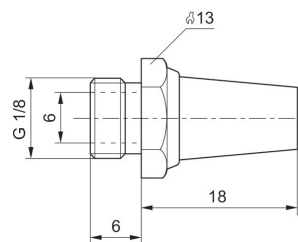
5324001140

Dimensions in mm



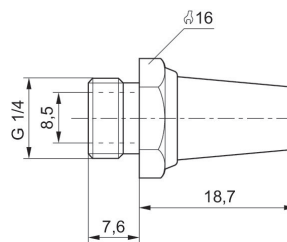
1827000000

Dimensions in mm



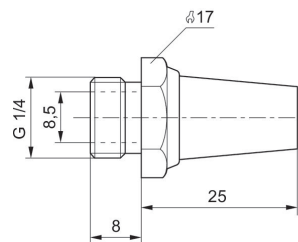
R412004817

Dimensions in mm



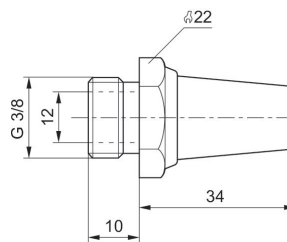
1827000001

Dimensions in mm



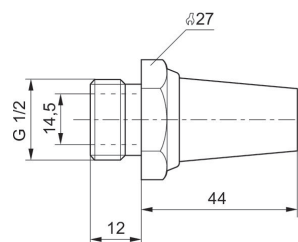
1827000002

Dimensions in mm



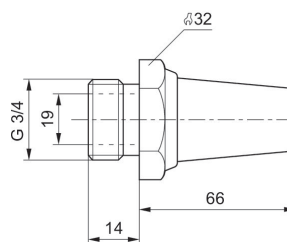
1827000003

Dimensions in mm



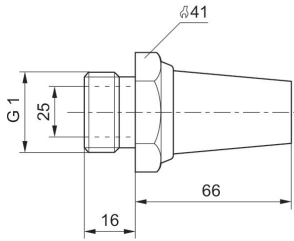
1827000004

Dimensions in mm



1827000005

Dimensions in mm



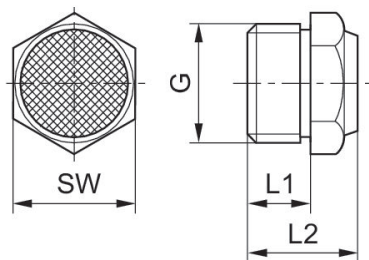
Silencers, series SI1, Sintered bronze

Compressed air connection type: External thread
 Silencer material: Sintered bronze
 Min. ambient temperature: -25 °C
 Max. ambient temperature: 80 °C
 Min. working pressure: 0 bar
 Max. working pressure: 10 bar



G	Sound pressure level [dB]	Nominal flow [l/min]	Delivery unit [piece]	Weight [kg]	Part No.
M5	79	252	10	0.005	1827000032
G 1/8	85	700	10	0.001	1827000031
G 1/4	88	1116	10	0.01	1827000033
G 3/8	90	1706	5	0.016	1827000034
G 1/2	85	2568	2	0.035	1827000035
G 3/4	82	3260	1	0.095	8145003400
G 1	82	9485	1	0.057	8145001000

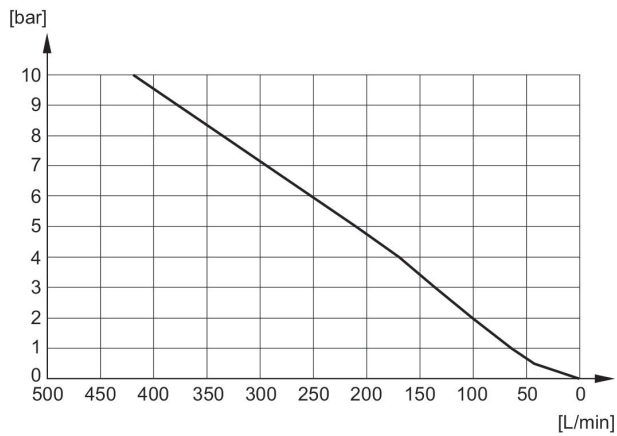
Dimensions



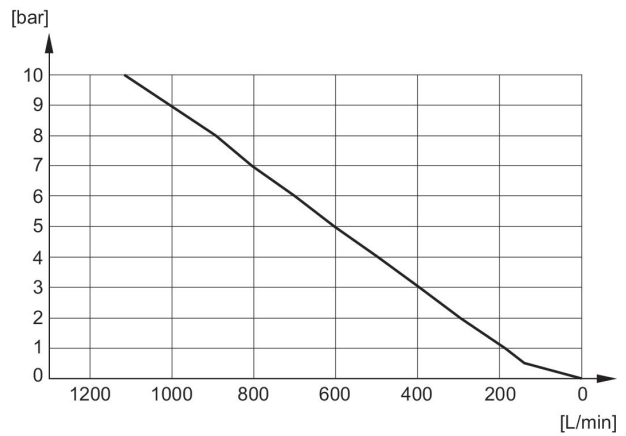
Part No.	Port G	L1	L2	SW
1827000032	M5	5	10.3	7
1827000031	G 1/8	6	11.5	13
1827000033	G 1/4	8	13.5	17
1827000034	G 3/8	10	17.5	22
1827000035	G 1/2	12	19.5	27
8145003400	G 3/4	14	22.5	32
8145001000	G 1	16	22.5	41

Sound pressure level measured at 6 bar at 1 m distance

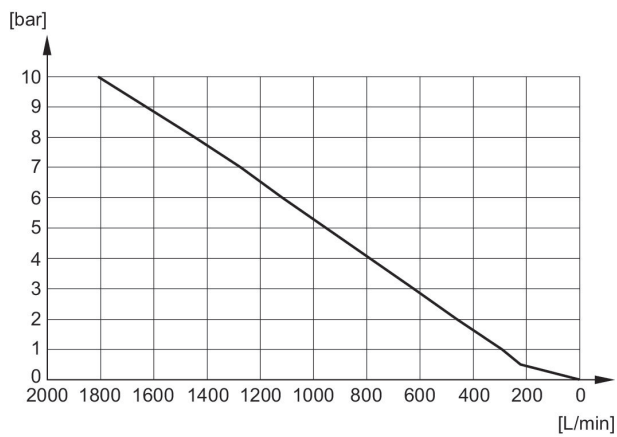
Flow diagram 1827000032



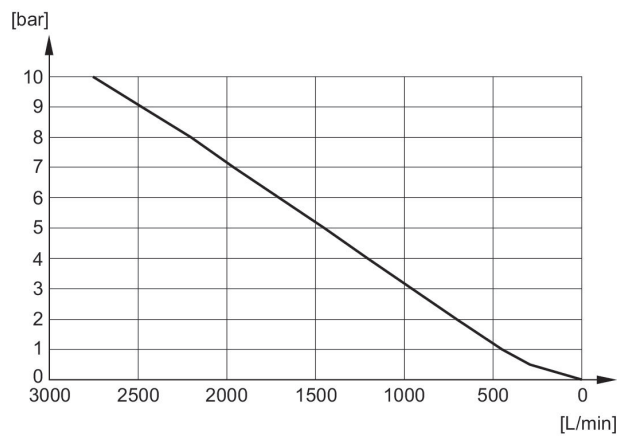
Flow diagram 1827000031



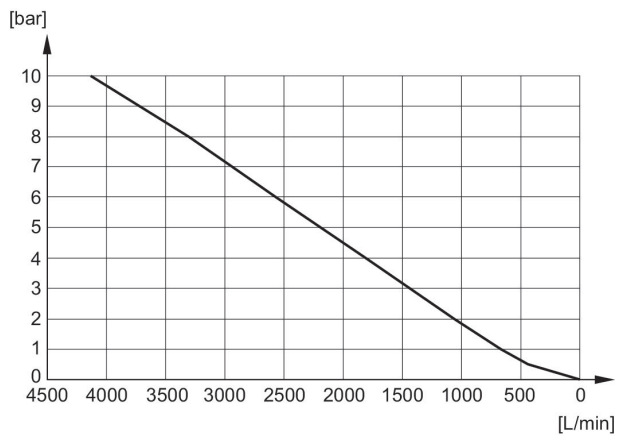
Flow diagram 1827000033



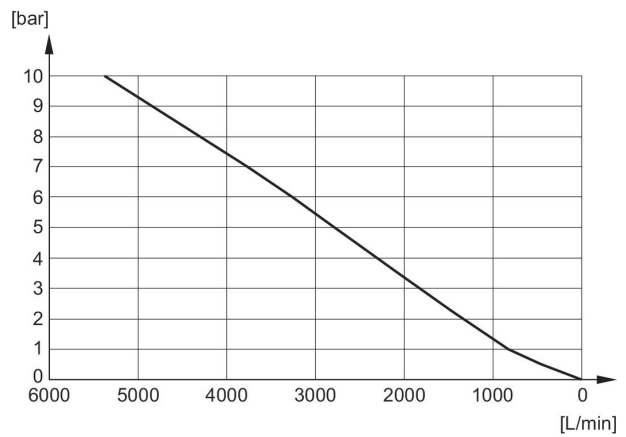
Flow diagram 1827000034



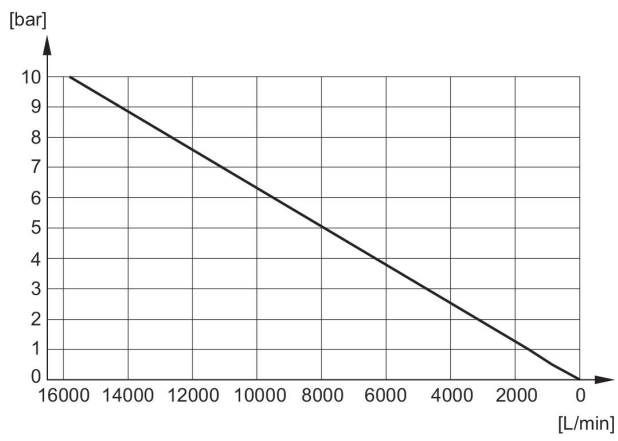
Flow diagram 1827000035



Flow diagram 8145003400







Flow diagram 8145001000



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control valves



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