

Series KPZ



AVENTICS™ Series KPZ



Compact cylinder, Series KPZ

- Ø 16-100 mm
- Ports M5 G 1/8
- Single-acting, retracted without pressure
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- Piston rod Optionally through
- Optionally heat-resistant



Standards	NFE 49004
Compressed air connection	Internal thread
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar



Technical data

Piston Ø Piston rod thread Ports	16 mm M4 M5	20 mm M6 M5	25 mm M6 M5	32 mm M8 G 1/8	40 mm M8 G 1/8	50 mm M10 G 1/8
Stroke 5	0822490000	0822491000	0822492000	0822493000	0822494000	0822495000
10	0822490001	0822491001	0822492001	0822493001	0822494001	0822495001
15	0822490002	0822491002	0822492002	0822493002	0822494002	0822495002
20	0822490003	0822491003	0822492003	0822493003	0822494003	0822495003
25	0822490004	0822491004	0822492004	0822493004	0822494004	0822495004

Piston Ø Piston rod thread Ports	63 mm M10 G 1/8	80 mm M12 G 1/8	100 mm M16 G 1/8
Stroke 5	0822496000	0822497000	0822498000
10	0822496001	0822497001	0822498001
15	0822496002	0822497002	0822498002
20	0822496003	0822497003	0822498003
25	0822496004	0822497004	0822498004

Technical data

Piston Ø	16 mm	20 mm
Retracting piston force	12 N	13 N
Extracting piston force	115 N	185 N
Impact energy	0.11 J	0.15 J
Weight 0 mm stroke	0.07 kg	0.098 kg
Weight +10 mm stroke	0.014 kg	0.02 kg
Working pressure min./max.	1.5 ... 10 bar	1.5 ... 10 bar
Scraper material	-	Polyurethane
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	25 mm	25 mm

Piston Ø	25 mm	32 mm	40 mm
Retracting piston force	25 N	35 N	43 N
Extracting piston force	284 N	472 N	749 N
Impact energy	0.2 J	0.4 J	0.52 J
Weight 0 mm stroke	0.143 kg	0.223 kg	0.333 kg
Weight +10 mm stroke	0.02 kg	0.03 kg	0.04 kg
Working pressure min./max.	1.5 ... 10 bar	1.3 ... 10 bar	1.3 ... 10 bar
Scraper material	Polyurethane	Polyurethane	Polyurethane
Sealing material	Nitrile butadiene rubber	Polyurethane	Polyurethane
Stroke max.	25 mm	25 mm	25 mm

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	82 N	82 N	105 N	215 N
Extracting piston force	1155 N	1882 N	3062 N	4733 N
Impact energy	0.64 J	0.75 J	0.75 J	1 J
Weight 0 mm stroke	0.446 kg	0.757 kg	1.32 kg	2.28 kg
Weight +10 mm stroke	0.05 kg	0.08 kg	0.11 kg	0.14 kg
Working pressure min./max.	1 ... 10 bar	1 ... 10 bar	1 ... 10 bar	1 ... 10 bar
Scraper material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Sealing material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Stroke max.	25 mm	25 mm	25 mm	25 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

The material for heat-resistant scraper and seal variants (ambient temperature: -10 °C ... 120 °C) is fluorocautchouc.

Further options can be generated in the Internet configurator.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel

Dimensions

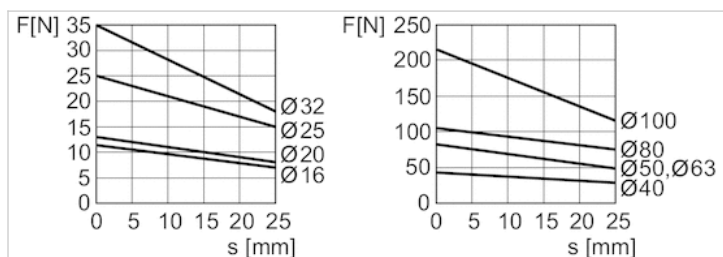
Piston Ø	AF min. Option: through piston rod	BG min.	DA H11	DT H13	E	EE	KF	LA	LB
16 mm	10	14.5	10	6	29.5	M5	M4	2.5	3.5
20 mm	12 10: S3 mm 2)	15.5	12	7.5	36	M5	M6	2.5	4.5
25 mm	12 10: S3 mm 2)	15.5	12	8	40	M5	M6	2.5	4.4
32 mm	12	18	14	8.6	50	G 1/8	M8	2.5	5.5
40 mm	12	18	14	9	58	G 1/8	M8	2.5	5.5
50 mm	16 12: S4 mm 2)	24	18	11	68	G 1/8	M10	2.5	2
63 mm	16 12: S4 mm 2)	24	18	11	80	G 1/8	M10	2.5	2
80 mm	20 15: S3 mm 2)	28	23	14	99	G 1/8	M12	3	1
100 mm	26 21: S5 mm 2)	27.5	28	15	120	G 1/8	M16	3	3.5

Piston Ø	LJ	LW	MM f8	PL	Ø RR	RT	SW	TG	WH	X1	X2	X3	ZA + Stroke
16 mm	2.5	2.8	8	7.5	3.3	M4	7	18 ±0,4	4.5	–	–	–	38
20 mm	4.5	3.7	10	7.5	4.2	M5	8	22 ±0,4	5	4.2	–	–	38
25 mm	5	3.7	10	7.5	4.2	M5	8	26 ±0,4	5.5	4.5	–	–	39
32 mm	5.1	5	12	8.5	5.1	M6	10	32 ±0,5	7	6.5	–	–	44
40 mm	9.6	5	12	8.5	5.1	M6	10	42 ±0,5	7	11	–	–	45
50 mm	8.5	5.7	16	8.5	6.7	M8	13	50 ±0,6	7.5	13	4	13	45.5
63 mm	17.8	5.7	16	8.5	6.7	M8	13	62 ±0,7	8	18	12	21	49
80 mm	22.9	7	20	8.3	8.5	M10	16	82 ±0,7	9.5	18	16.5	25.5	54.5
100 mm	26.5	7.5	25	9.7	8.5	M10	21	103 ±0,7	10.5	20	20	29	66.5

Piston Ø	ZB + Stroke
16 mm	42,5 0/+1,4
20 mm	43 0/+1,4
25 mm	44,5 0/+1,4
32 mm	51 0/+1,6
40 mm	52 0/+1,6
50 mm	53 0/+1,6
63 mm	57 0/+2
80 mm	64 0/+2
100 mm	77 0/+2

Diagrams

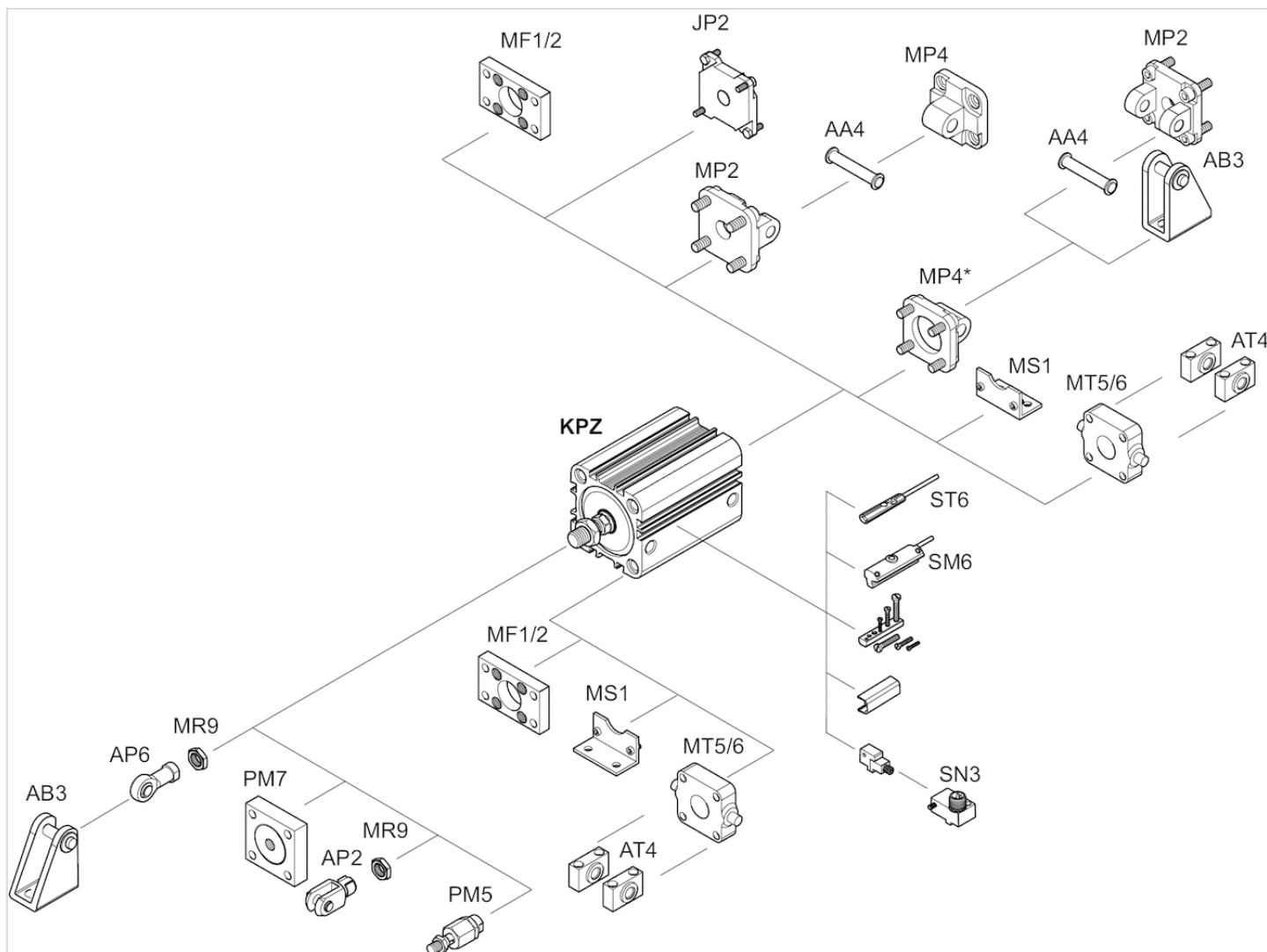
Extracting piston force



F = spring return force, s = return stroke

Accessories overview

Overview drawing



* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Compact cylinder, Series KPZ

- Ø 16-100 mm
- Ports M5 G 1/8
- Single-acting, retracted without pressure
- with magnetic piston
- Cushioning elastic
- Piston rod External thread
- Piston rod Optionally through (hollow)
- Optionally heat-resistant



Standards	NFE 49004
Compressed air connection	Internal thread
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar



Technical data

Piston Ø Piston rod thread Ports	16 mm M8 M5	20 mm M10x1,25 M5	25 mm M10x1,25 M5	32 mm M10x1,25 G 1/8	40 mm M10x1,25 G 1/8	50 mm M12x1,25 G 1/8
Stroke 5	0822490200	0822491200	0822492200	0822493200	0822494200	0822495200
10	0822490201	0822491201	0822492201	0822493201	0822494201	0822495201
15	0822490202	0822491202	0822492202	0822493202	0822494202	0822495202
20	0822490203	0822491203	0822492203	0822493203	0822494203	0822495203
25	0822490204	0822491204	0822492204	0822493204	0822494204	0822495204

Piston Ø Piston rod thread Ports	63 mm M12x1,25 G 1/8	80 mm M16x1,5 G 1/8	100 mm M20x1,5 G 1/8
Stroke 5	0822496200	0822497200	0822498200
10	0822496201	0822497201	0822498201
15	0822496202	0822497202	0822498202
20	0822496203	0822497203	0822498203
25	0822496204	0822497204	0822498204

Technical data

Piston Ø	16 mm	20 mm
Retracting piston force	12 N	13 N
Extracting piston force	115 N	185 N
Impact energy	0.11 J	0.15 J
Weight 0 mm stroke	0.083 kg	0.112 kg
Weight +10 mm stroke	0.014 kg	0.02 kg
Working pressure min./max.	1.5 ... 10 bar	1.5 ... 10 bar
Scraper material	-	Polyurethane
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	25 mm	25 mm

Piston Ø	25 mm	32 mm	40 mm
Retracting piston force	25 N	35 N	43 N
Extracting piston force	284 N	472 N	749 N
Impact energy	0.2 J	0.4 J	0.705 J
Weight 0 mm stroke	0.157 kg	0.237 kg	0.347 kg
Weight +10 mm stroke	0.02 kg	0.03 kg	0.04 kg
Working pressure min./max.	1.5 ... 10 bar	1.3 ... 10 bar	1.3 ... 10 bar
Scraper material	Polyurethane	Polyurethane	Polyurethane
Sealing material	Nitrile butadiene rubber	Polyurethane	Polyurethane
Stroke max.	25 mm	25 mm	25 mm

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	82 N	82 N	105 N	215 N
Extracting piston force	1155 N	1882 N	3062 N	4733 N
Impact energy	0.64 J	0.75 J	0.75 J	1 J
Weight 0 mm stroke	0.468 kg	0.779 kg	1.37 kg	2.38 kg
Weight +10 mm stroke	0.05 kg	0.08 kg	0.11 kg	0.14 kg
Working pressure min./max.	1 ... 10 bar	1 ... 10 bar	1 ... 10 bar	1 ... 10 bar
Scraper material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Sealing material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Stroke max.	25 mm	25 mm	25 mm	25 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

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The material for heat-resistant scraper and seal variants (ambient temperature: -10 °C ... 120 °C) is fluorocautchouc.

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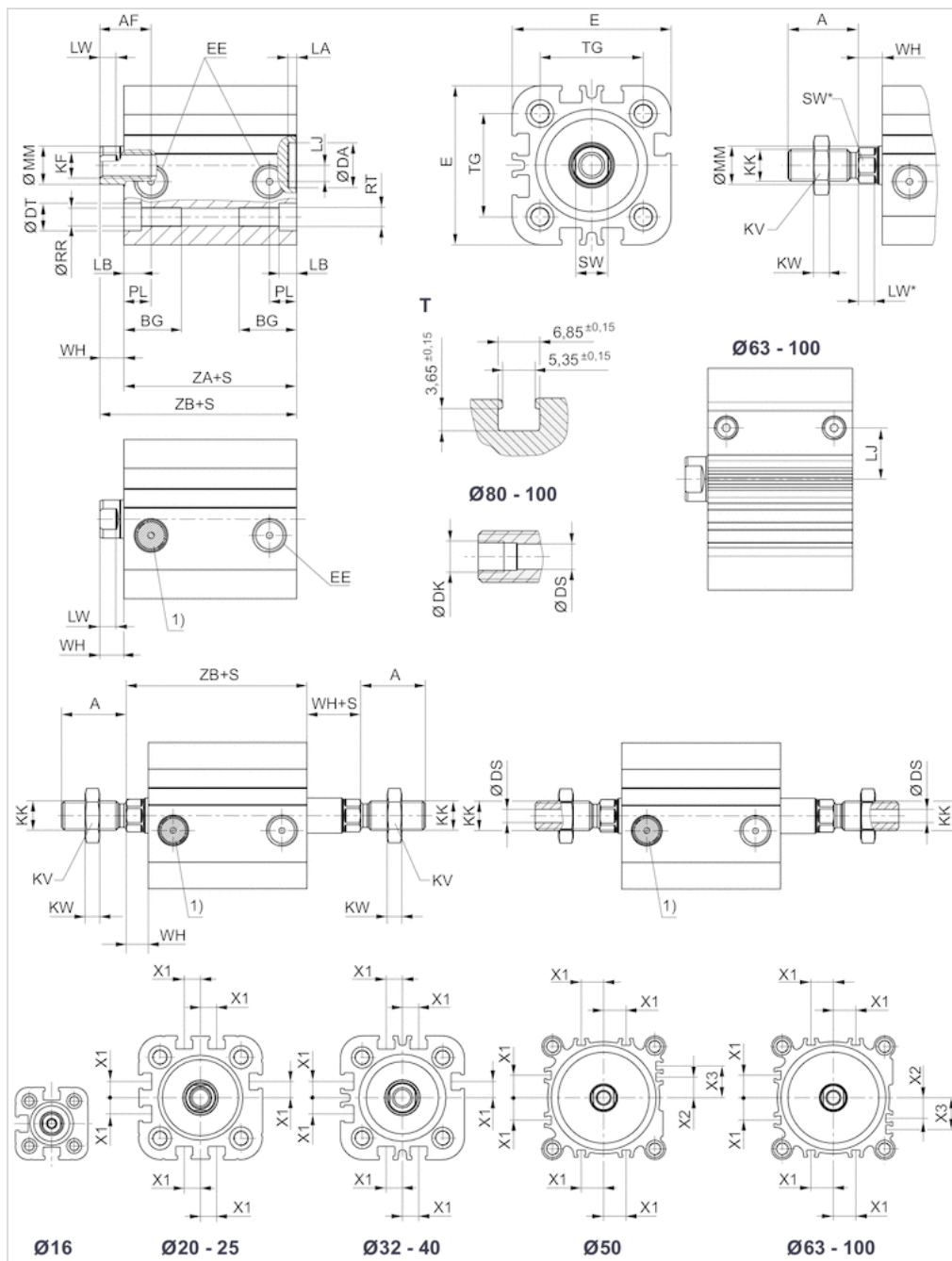
LW*/SW* Hexagonal key required

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Nitrile butadiene rubber Polyurethane
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane

Dimensions

Dimensions



S = stroke

T = View for sensor groove

1) Filter

Dimensions

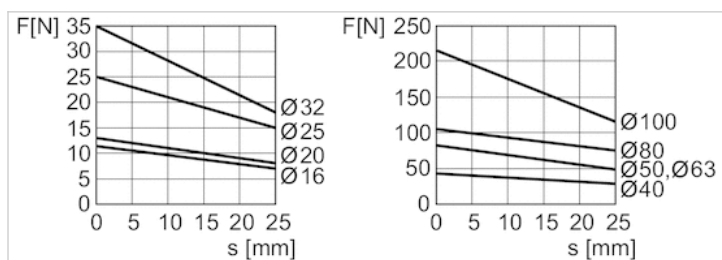
Piston Ø	A	BG min.	DA H11	Ø DK	Ø DS	DT H13	E	EE	KK	KV	KW	LA	LB	LJ
16 mm	20	14.5	10	–	–	6	29.5	M5	M8x1,25	13	4	2.5	3.5	2.5
20 mm	22	15.5	12	–	3	7.5	36	M5	M10x1,25	16	5	2.5	4.5	4.5
25 mm	22	15.5	12	–	3	8	40	M5	M10x1,25	16	5	2.5	4.4	5
32 mm	22	18	14	–	4.5	8.6	50	G 1/8	M10x1,25	16	5	2.5	5.5	5.1
40 mm	22	18	14	–	4.5	9	58	G 1/8	M10x1,25	16	5	2.5	5.5	9.6
50 mm	24	24	18	–	6	11	68	G 1/8	M12x1,25	18	6	2.5	2	8.5
63 mm	24	24	18	–	6	11	80	G 1/8	M12x1,25	18	6	2.5	2	17.8
80 mm	32	28	23	G 1/8	8	14	99	G 1/8	M16x1,5	24	8	3	1	22.9
100 mm	40	27.5	28	G 1/4	11.5	15	120	G 1/8	M20x1,5	30	10	3	3.5	26.5

Piston Ø	LW	MM f8	PL	Ø RR	RT	SW	TG	WH	X1	X2	X4	ZA + Stroke
16 mm	2.8	8	7.5	3.3	M4	7	18 ±0,4	4.5	–	–	–	38
20 mm	3.7	10	7.5	4.2	M5	8	22 ±0,4	5	4.2	–	–	38
25 mm	3.7	10	7.5	4.2	M5	8	26 ±0,4	5.5	4.5	–	–	39
32 mm	5*	12	8.5	5.1	M6	10*	32 ±0,5	7	6.5	–	–	44
40 mm	5*	12	8.5	5.1	M6	10*	42 ±0,5	7	11	–	–	45
50 mm	4,8*	16	8.5	6.7	M8	13*	50 ±0,6	7.5	13	4	13	45.5
63 mm	4,8*	16	8.5	6.7	M8	13*	62 ±0,7	8	18	12	21	49
80 mm	6,4*	20	8.3	8.5	M10	16*	82 ±0,7	9.5	18	16.5	25.5	54.5
100 mm	6,4*	25	9.7	8.5	M10	21*	103 ±0,7	10.5	20	20	20	66.5

Piston Ø	ZB + Stroke
16 mm	42,5 0/+1,4
20 mm	43 0/+1,4
25 mm	44,5 0/+1,4
32 mm	51 0/+1,6
40 mm	52 0/+1,6
50 mm	53 0/+1,6
63 mm	57 0/+2
80 mm	64 0/+2
100 mm	77 0/+2

Diagrams

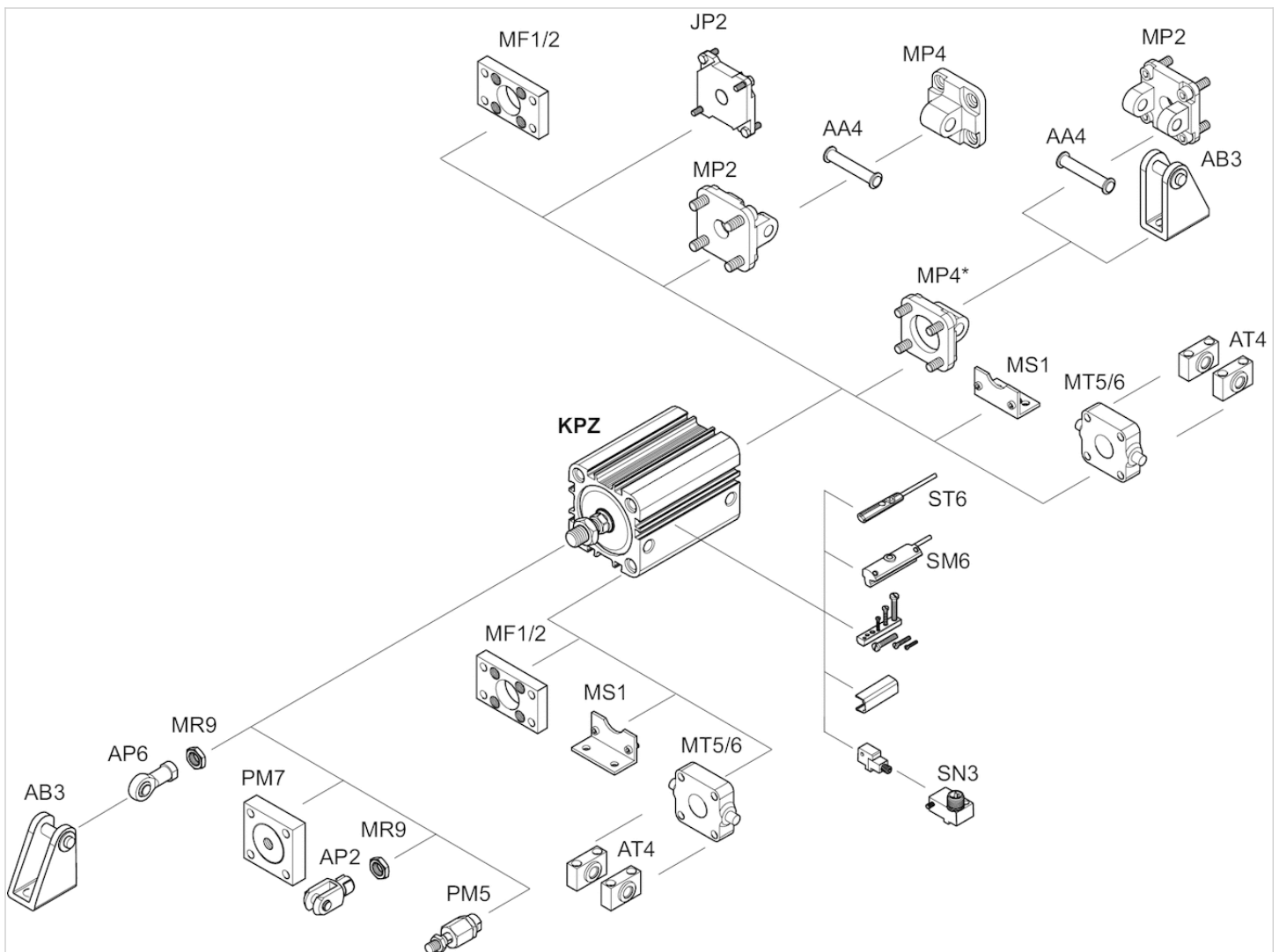
Extracting piston force



F = spring return force, s = return stroke

Accessories overview

Overview drawing



* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

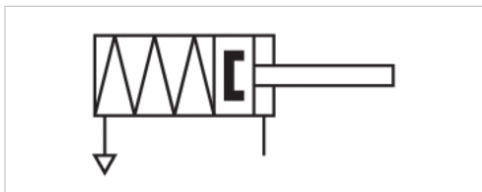
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Compact cylinder, Series KPZ

- Ø 16-100 mm
- Ports M5 G 1/8
- Single-acting, extended without pressure
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- Piston rod Optionally heat-resistant



Standards	NFE 49004
Compressed air connection	Internal thread
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar



Technical data

Piston Ø Piston rod thread Ports	16 mm M4 M5	20 mm M6 M5	25 mm M6 M5	32 mm M8 G 1/8	40 mm M8 G 1/8	50 mm M10 G 1/8
Stroke 5	0822490100	0822491100	0822492100	0822493100	0822494100	0822495100
10	0822490101	R480660211	0822492101	0822493101	0822494101	0822495101
15	0822490102	0822491102	0822492102	0822493102	0822494102	0822495102
20	0822490103	0822491103	0822492103	0822493103	0822494103	0822495103
25	0822490104	0822491104	0822492104	0822493104	0822494104	0822495104

Piston Ø Piston rod thread Ports	63 mm M10 G 1/8	80 mm M12 G 1/8	100 mm M16 G 1/8
Stroke 5	0822496100	0822497100	0822498100
10	0822496101	0822497101	0822498101
15	0822496102	0822497102	0822498102
20	0822496103	0822497103	0822498103
25	0822496104	0822497104	0822498104

Technical data

Piston Ø	16 mm	20 mm
Retracting piston force	127 N	198 N
Extracting piston force	12 N	13 N
Impact energy	0.11 J	0.15 J
Weight 0 mm stroke	0.07 kg	0.098 kg
Weight +10 mm stroke	0.014 kg	0.02 kg
Working pressure min./max.	1.5 ... 10 bar	1.5 ... 10 bar
Scraper material	-	Polyurethane
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	25 mm	25 mm

Piston Ø	25 mm	32 mm	40 mm
Retracting piston force	309 N	507 N	792 N
Extracting piston force	25 N	35 N	43 N
Impact energy	0.2 J	0.4 J	0.52 J
Weight 0 mm stroke	0.143 kg	0.223 kg	0.333 kg
Weight +10 mm stroke	0.02 kg	0.03 kg	0.04 kg
Working pressure min./max.	1.5 ... 10 bar	1.3 ... 10 bar	1.3 ... 10 bar
Scraper material	Polyurethane	Polyurethane	Polyurethane
Sealing material	Nitrile butadiene rubber	Polyurethane	Polyurethane
Stroke max.	25 mm	25 mm	25 mm

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	1237 N	1964 N	3167 N	4948 N
Extracting piston force	82 N	82 N	105 N	215 N
Impact energy	0.64 J	0.75 J	0.75 J	1 J
Weight 0 mm stroke	0.446 kg	0.757 kg	1.32 kg	2.28 kg
Weight +10 mm stroke	0.05 kg	0.08 kg	0.11 kg	0.14 kg
Working pressure min./max.	1 ... 10 bar	1 ... 10 bar	1 ... 10 bar	1 ... 10 bar
Scraper material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Sealing material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Stroke max.	25 mm	25 mm	25 mm	25 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

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The material for heat-resistant scraper and seal variants (ambient temperature: -10 °C ... 120 °C) is fluorocautchouc.

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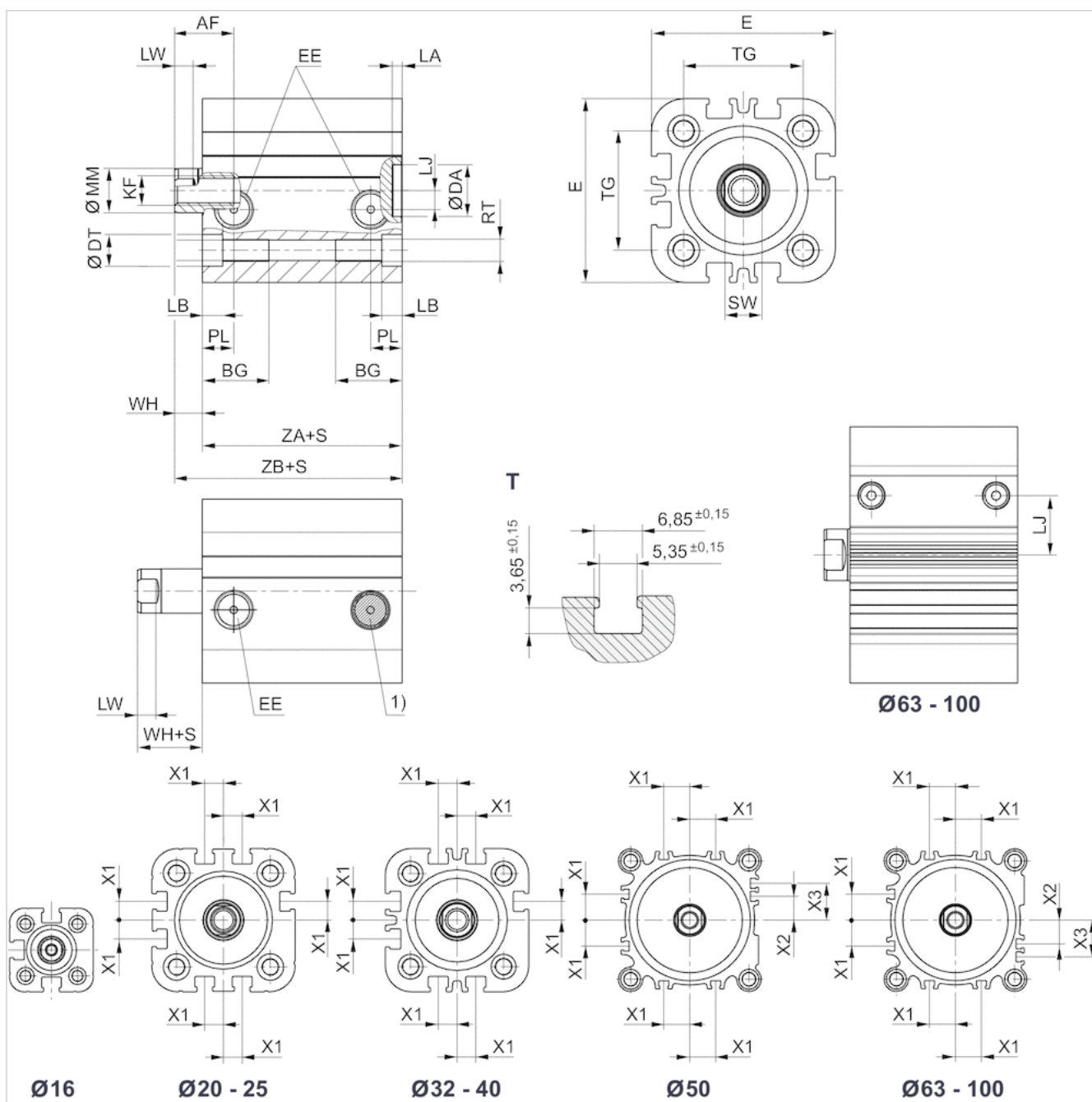
Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel

Material	
Front cover	Aluminum
End cover	Aluminum
Seal	Nitrile butadiene rubber Polyurethane
Scraper	Polyurethane

Dimensions

Dimensions



S = stroke

T = View for sensor groove

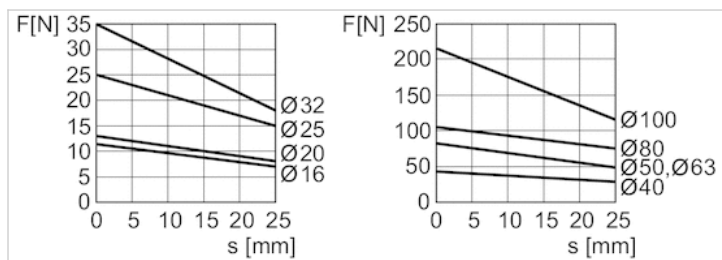
Dimensions

Piston Ø	AF	BG min.	DA H11	DT H13	E	EE	KF	LA	LB	LJ	LW	MM f8	PL	RT	SW
16 mm	10	14.5	10	6	29.5	M5	M4	2.5	3.5	2.5	2.8	8	7.5	M4	7
20 mm	12	15.5	12	7.5	36	M5	M6	2.5	4.5	4.5	3.7	10	7.5	M5	8
25 mm	12	15.5	12	8	40	M5	M6	2.5	4.4	5	3.7	10	7.5	M5	8
32 mm	12	18	14	8.6	50	G 1/8	M8	2.5	5.5	5.1	5	12	8.5	M6	10
40 mm	12	18	14	9	58	G 1/8	M8	2.5	5.5	9.6	5	12	8.5	M6	10
50 mm	16	24	18	11	68	G 1/8	M10	2.5	2	8.5	5.7	16	8.5	M8	13
63 mm	16	24	18	11	80	G 1/8	M10	2.5	2	17.8	5.7	16	8.5	M8	13
80 mm	20	28	23	14	99	G 1/8	M12	3	1	22.9	7	20	8.3	M10	16
100 mm	26	27.5	28	15	120	G 1/8	M16	3	3.5	26.5	7.5	25	9.7	M10	21

Piston Ø	TG	WH	X1	X2	X3	ZA + Stroke	ZB + Stroke
16 mm	18 ±0,4	4.5	–	–	–	38	42,5 0/+1,2
20 mm	22 ±0,4	5	4.2	–	–	38	43 0/+1,4
25 mm	26 ±0,4	5.5	4.5	–	–	38	44,5 0/+1,4
32 mm	32 ±0,5	7	6.5	–	–	44	51 0/+1,6
40 mm	42 ±0,5	7	11	–	–	45	52 0/+1,6
50 mm	50 ±0,6	7.5	13	4	13	45.5	53 0/+1,6
63 mm	62 ±0,7	8	18	12	21	49	57 0/+2
80 mm	82 ±0,7	9.5	18	16.5	25.5	54.5	64 0/+2
100 mm	103 ±0,7	10.5	20	20	29	66.5	77 0/+2

Diagrams

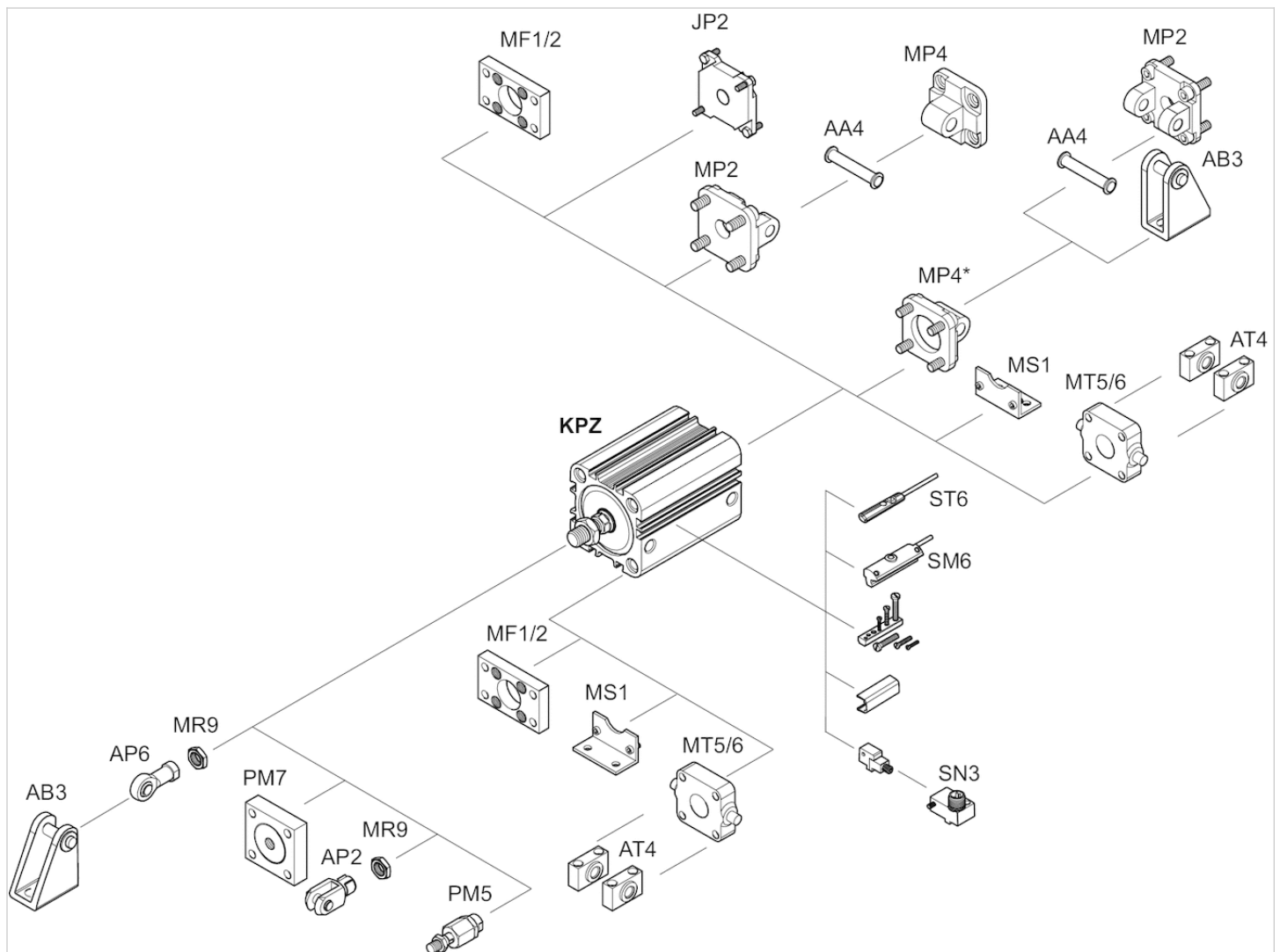
Extracting piston force



F = spring return force, s = return stroke

Accessories overview

Overview drawing



* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

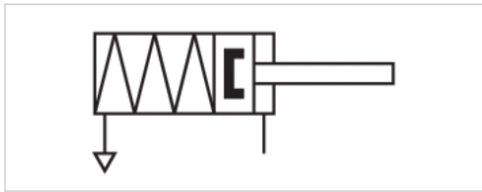
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- Ports M5 G 1/8
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- with magnetic piston
- Cushioning elastic
- Piston rod External thread
- Piston rod Optionally heat-resistant



Standards	NFE 49004
Compressed air connection	Internal thread
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar



Technical data

Piston Ø Piston rod thread Ports	16 mm M8 M5	20 mm M10x1,25 M5	25 mm M10x1,25 M5	32 mm M10x1,25 G 1/8	40 mm M10x1,25 G 1/8	50 mm M12x1,25 G 1/8
Stroke 5	0822490300	0822491300	0822492300	0822493300	0822494300	0822495300
10	0822490301	0822491301	0822492301	0822493301	0822494301	0822495301
15	0822490302	0822491302	0822492302	0822493302	0822494302	0822495302
20	0822490303	0822491303	0822492303	0822493303	0822494303	0822495303
25	0822490304	0822491304	0822492304	0822493304	0822494304	0822495304

Piston Ø Piston rod thread Ports	63 mm M12x1,25 G 1/8	80 mm M16x1,5 G 1/8	100 mm M20x1,5 G 1/8
Stroke 5	0822496300	0822497300	0822498300
10	0822496301	0822497301	0822498301
15	0822496302	0822497302	0822498302
20	0822496303	0822497303	0822498303
25	0822496304	0822497304	0822498304

Technical data

Piston Ø	16 mm	20 mm
Retracting piston force	127 N	198 N
Extracting piston force	12 N	13 N
Impact energy	0.11 J	0.15 J
Weight 0 mm stroke	0.083 kg	0.112 kg
Weight +10 mm stroke	0.014 kg	0.02 kg
Working pressure min./max.	1.5 ... 10 bar	1.5 ... 10 bar
Scraper material	-	Polyurethane
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	25 mm	25 mm

Piston Ø	25 mm	32 mm	40 mm
Retracting piston force	309 N	507 N	792 N
Extracting piston force	25 N	35 N	43 N
Impact energy	0.2 J	0.4 J	0.52 J
Weight 0 mm stroke	0.157 kg	0.237 kg	0.347 kg
Weight +10 mm stroke	0.02 kg	0.03 kg	0.04 kg
Working pressure min./max.	1.5 ... 10 bar	1.3 ... 10 bar	1.3 ... 10 bar
Scraper material	Polyurethane	Polyurethane	Polyurethane
Sealing material	Nitrile butadiene rubber	Polyurethane	Polyurethane
Stroke max.	25 mm	25 mm	25 mm

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	1237 N	1964 N	3167 N	4948 N
Extracting piston force	82 N	82 N	105 N	215 N
Impact energy	0.64 J	0.75 J	0.75 J	1 J
Weight 0 mm stroke	0.468 kg	0.779 kg	1.37 kg	2.38 kg
Weight +10 mm stroke	0.05 kg	0.08 kg	0.11 kg	0.14 kg
Working pressure min./max.	1 ... 10 bar	1 ... 10 bar	1 ... 10 bar	1 ... 10 bar
Scraper material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Sealing material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Stroke max.	25 mm	25 mm	25 mm	25 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

The material for heat-resistant scraper and seal variants (ambient temperature: -10 °C ... 120 °C) is fluorocautchouc.

Further options can be generated in the Internet configurator.

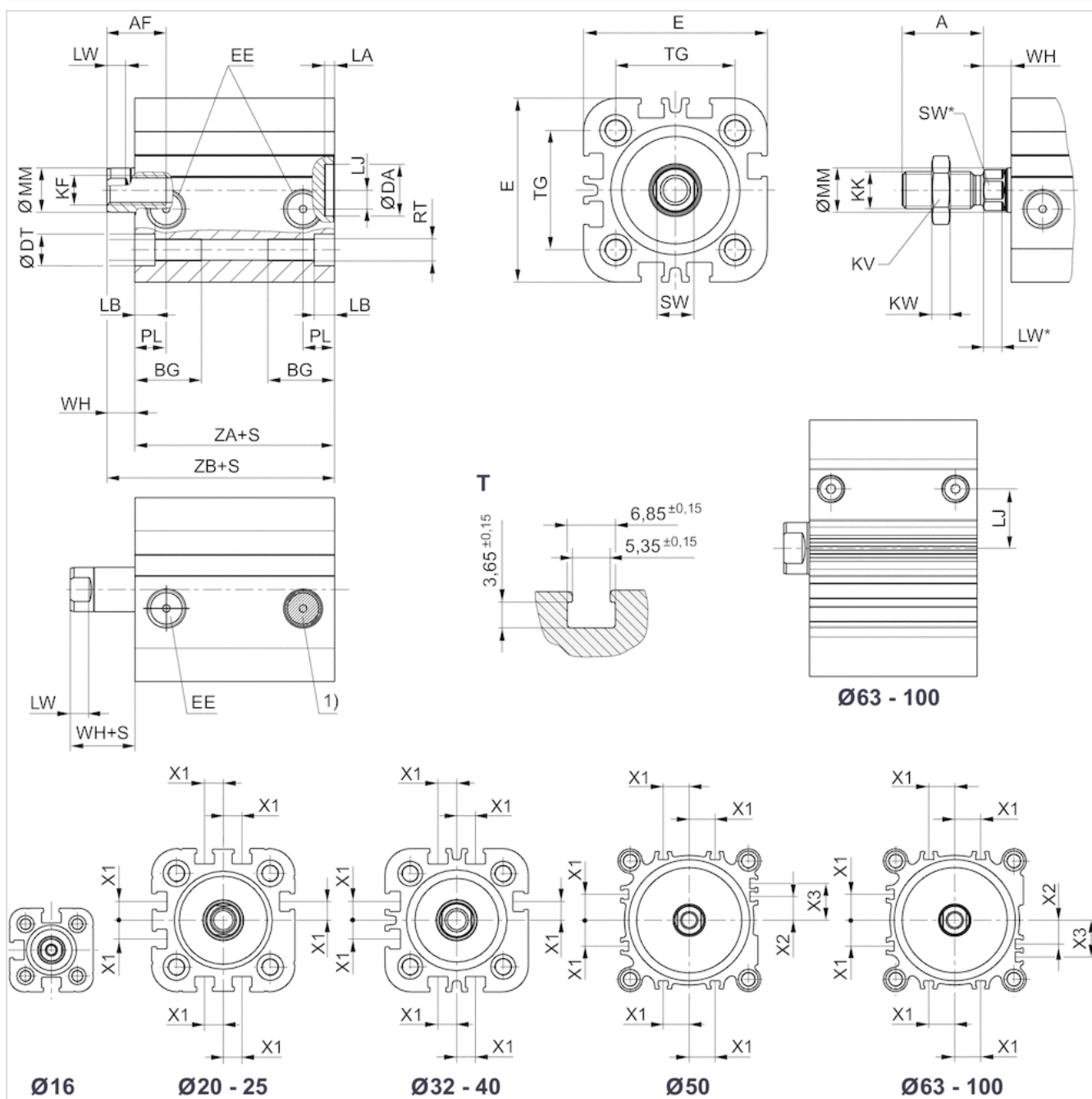
LW*/SW* Hexagonal key required

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Nitrile butadiene rubber Polyurethane
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane

Dimensions

Dimensions



S = stroke

T = View for sensor groove

Dimensions

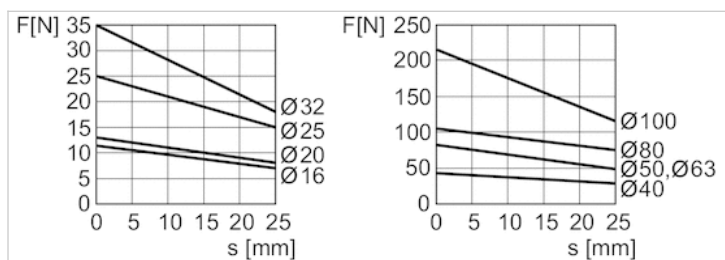
Piston Ø	A	BG min.	DA H11	DT H13	E	EE	KK	KV	KW	LA	LB	LJ	LW	MM f8	PL
16 mm	20	14.5	10	6	29.5	M5	M8x1,25	13	4	2.5	3.5	2.5	2.8	8	7.5
20 mm	22	15.5	12	7.5	36	M5	M10x1,25	16	5	2.5	4.5	4.5	3.7	10	7.5
25 mm	22	15.5	12	8	40	M5	M10x1,25	16	5	2.5	4.4	5	3.7	10	7.5
32 mm	22	18	14	8.6	50	G 1/8	M10x1,25	16	5	2.5	5.5	5.1	5*	12	8.5
40 mm	22	18	14	9	58	G 1/8	M10x1,25	16	5	2.5	5.5	9.6	5*	12	8.5

Piston Ø	A	BG min.	DA H11	DT H13	E	EE	KK	KV	KW	LA	LB	LJ	LW	MM f8	PL
50 mm	24	24	18	11	68	G 1/8	M12x1,25	18	6	2.5	2	8.5	4,8*	16	8.5
63 mm	24	24	18	11	80	G 1/8	M12x1,25	18	6	2.5	2	17.8	4,8*	16	8.5
80 mm	32	28	23	14	99	G 1/8	M16x1,5	24	8	3	1	22.9	6,4*	20	8.3
100 mm	40	27.5	28	15	120	G 1/8	M20x1,5	30	10	3	3.5	26.5	6,4*	25	9.7

Piston Ø	RT	SW	TG	WH	X1	X2	X4	ZA +S	ZB +S
16 mm	M4	7	18 ±0.4	4.5	–	–	–	38	42,5 0/+1,4
20 mm	M5	8	22 ±0.4	5	4.2	–	–	38	43 0/+1,4
25 mm	M5	8	26 ±0,4	5.5	4.5	–	–	39	44,5 0/+1,4
32 mm	M6	10*	32 ±0,5	7	6.5	–	–	44	51 0/+1,6
40 mm	M6	10*	42 ±0,5	7	11	–	–	45	52 0/+1,6
50 mm	M8	13*	50 ±0,6	7.5	13	4	13	45.5	53 0/+1,6
63 mm	M8	13*	62 ±0,7	8	18	12	21	49	57 0/+2
80 mm	M10	16*	82 ±0,7	9.5	18	16.5	25.5	54.5	64 0/+2
100 mm	M10	21*	103 ±0,7	10.5	20	20	20	66.5	77 0/+2

Diagrams

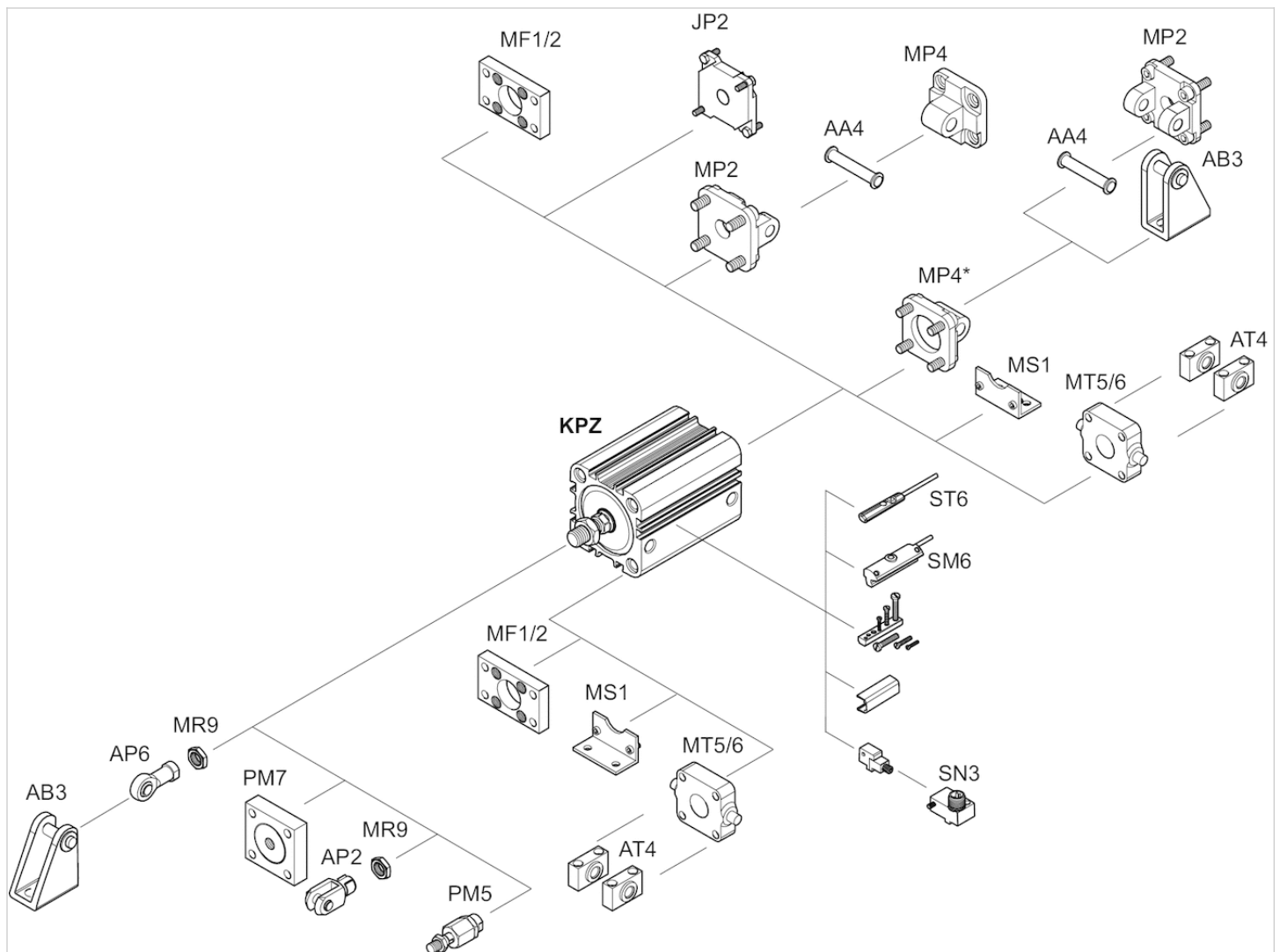
Extracting piston force



F = spring return force, s = return stroke

Accessories overview

Overview drawing



* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Compact cylinder, Series KPZ

- Ø 16-100 mm
- Ports M5 G 1/8
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- Piston rod Optionally through
- ATEX optional
- Optionally heat-resistant



Standards	NFE 49004
Certificates	ATEX optional
Compressed air connection	Internal thread
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar

Technical data

Piston Ø Piston rod thread Ports	16 mm M4 M5	20 mm M6 M5	25 mm M6 M5	32 mm M8 G 1/8	40 mm M8 G 1/8	50 mm M10 G 1/8
Stroke 5	0822390000	0822391000	0822392000	0822393000	0822394000	0822395000
10	0822390001	0822391001	0822392001	0822393001	0822394001	0822395001
15	0822390002	0822391002	0822392002	0822393002	0822394002	0822395002
20	0822390003	0822391003	0822392003	0822393003	0822394003	0822395003
25	0822390004	0822391004	0822392004	0822393004	0822394004	0822395004
30	0822390005	0822391005	0822392005	0822393005	0822394005	0822395005
40	0822390006	0822391006	0822392006	0822393006	0822394006	0822395006
50	0822390007	0822391007	0822392007	0822393007	0822394007	0822395007
60	0822390008	0822391008	0822392008	0822393008	0822394008	0822395008
80	-	-	-	0822393009	0822394009	0822395009
100	-	-	-	0822393010	0822394010	0822395010

Piston Ø Piston rod thread Ports	63 mm M10 G 1/8	80 mm M12 G 1/8	100 mm M16 G 1/8
Stroke 5	0822396000	0822397000	0822398000
10	0822396001	0822397001	0822398001
15	0822396002	0822397002	0822398002
20	0822396003	0822397003	0822398003
25	0822396004	0822397004	0822398004
30	0822396005	0822397005	0822398005
40	0822396006	0822397006	0822398006
50	0822396007	0822397007	0822398007
60	0822396008	0822397008	0822398008
80	0822396009	0822397009	0822398009
100	0822396010	0822397010	0822398010

Technical data

Piston Ø	16 mm	20 mm
Retracting piston force	95 N	148 N
Extracting piston force	127 N	198 N
Impact energy	0.15 J	0.2 J
Working pressure min./max.	1 ... 10 bar	1 ... 10 bar
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	300 mm	300 mm

Piston Ø	25 mm	32 mm	40 mm
Retracting piston force	260 N	435 N	720 N
Extracting piston force	309 N	507 N	792 N
Impact energy	0.3 J	0.5 J	0.7 J
Working pressure min./max.	1 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar
Sealing material	Nitrile butadiene rubber	Polyurethane	Polyurethane
Stroke max.	300 mm	300 mm	300 mm

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	1110 N	1827 N	2969 N	4639 N
Extracting piston force	1237 N	1964 N	3167 N	4948 N
Impact energy	1 J	1.3 J	1.8 J	2.5 J
Working pressure min./max.	0.6 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar
Sealing material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Stroke max.	300 mm	300 mm	500 mm	500 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

ATEX-certified cylinders with identification II 2G Ex h IIB T4 Gb / II 2D Ex h IIIB T135°C Db_X can be generated in the Internet configurator.

The operating temperature range for ATEX-certified cylinders is -20 °C ... 50 °C.

The material for heat-resistant scraper and seal variants (ambient temperature: -10 °C ... 120 °C) is fluorocautchouc.

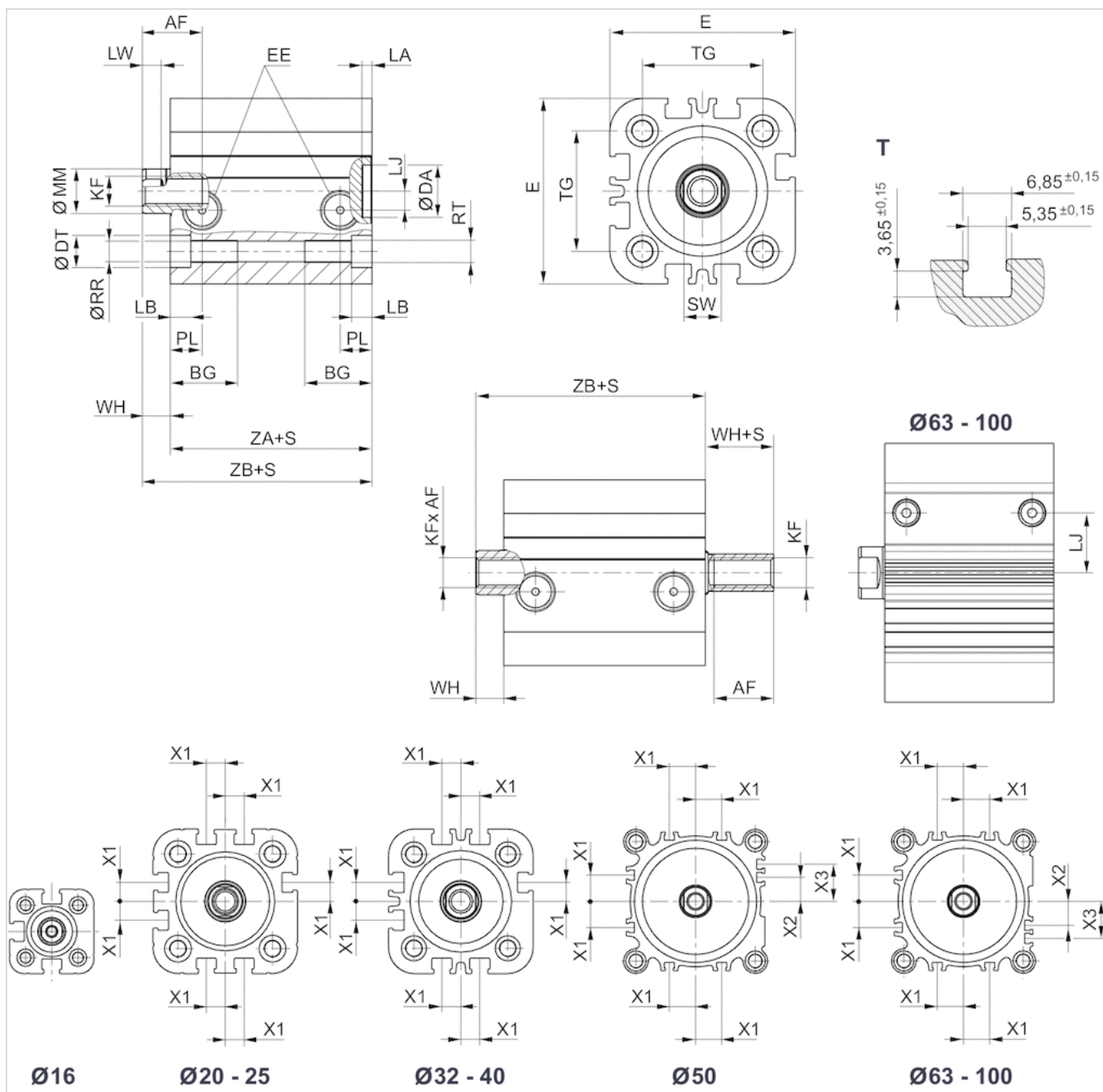
Further options can be generated in the Internet configurator.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Nitrile butadiene rubber Polyurethane
Scraper	Polyurethane

Dimensions

Dimensions



S = stroke

T = View for sensor groove

Dimensions

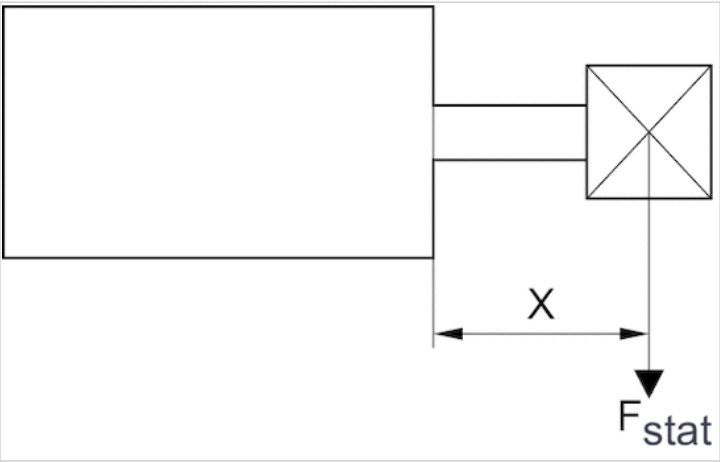
Piston Ø	AF min. Option: through piston rod	BG min.	DA H11	DT H13	E	EE	KF	LA	LB
16 mm	10	14.5	10	6	29.5	M5	M4	2.5	3.5
20 mm	12 10: S3 mm 2)	15.5	12	7.5	36	M5	M6	2.5	4.5
25 mm	12 10: S3 mm 2)	15.5	12	8	40	M5	M6	2.5	4.4
32 mm	12	18	14	8.6	50	G 1/8	M8	2.5	5.5
40 mm	12	18	14	9	58	G 1/8	M8	2.5	5.5
50 mm	16 12: S4 mm 2)	24	18	11	68	G 1/8	M10	2.5	2
63 mm	16 12: S4 mm 2)	24	18	11	80	G 1/8	M10	2.5	2
80 mm	20 15: S5 mm 2)	28	23	14	99	G 1/8	M12	3	1
100 mm	26 21: S5 mm 2)	27.5	28	15	120	G 1/8	M16	3	3.5

Piston Ø	LJ	LW	MM f8	PL	Ø RR	RT	SW	TG	WH	X1	X2	X3	ZA + Stroke
16 mm	2.5	2.8	8	7.5	3.3	M4	7	18 ±0,4	4.5	—	—	—	38
20 mm	4.5	3.7	10	7.5	4.2	M5	8	22 ±0,4	5	4.2	—	—	38
25 mm	5	3.7	10	7.5	4.2	M5	8	26 ±0,4	5.5	4.5	—	—	39
32 mm	5.1	5	12	8.5	5.1	M6	10	32 ±0,5	7	6.5	—	—	44
40 mm	9.6	5	12	8.5	5.1	M6	10	42 ±0,5	7	11	—	—	45
50 mm	8.5	4.8	16	8.5	6.7	M8	13	50 ±0,6	7.5	13	4	13	45.5
63 mm	17.8	4.8	16	8.5	6.7	M8	13	62 ±0,7	8	18	12	21	49
80 mm	22.9	6.4	20	8.3	8.5	M10	16	82 ±0,7	9.5	18	16.5	25.5	54.5
100 mm	26.5	6.4	25	9.7	8.5	M10	21	103 ±0,7	10.5	20	20	29	66.5

Piston Ø	ZB + Stroke
16 mm	42,5 0/+1,4
20 mm	43 0/+1,4
25 mm	44,5 0/+1,4
32 mm	51 0/+1,6
40 mm	52 0/+1,6
50 mm	53 0/+1,6
63 mm	57 0/+2
80 mm	64 0/+2
100 mm	77 0/+2

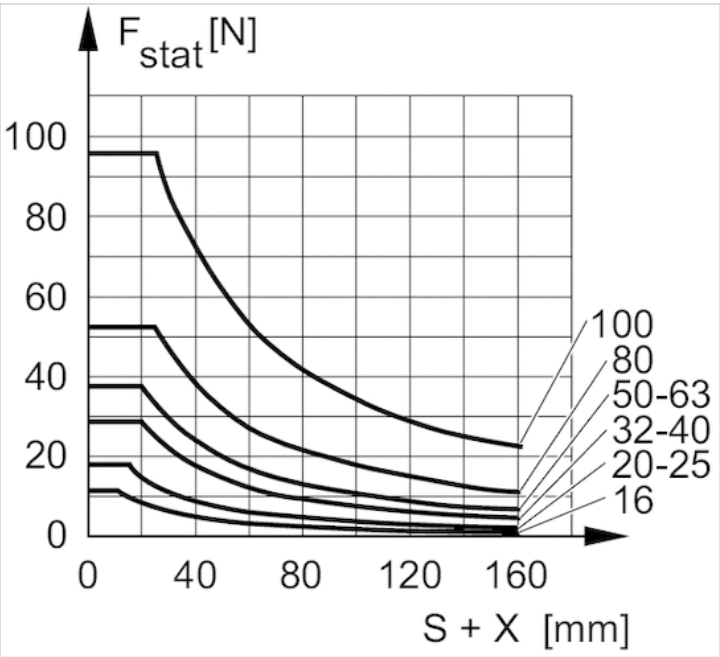
Diagrams

Maximum admissible lateral force, static



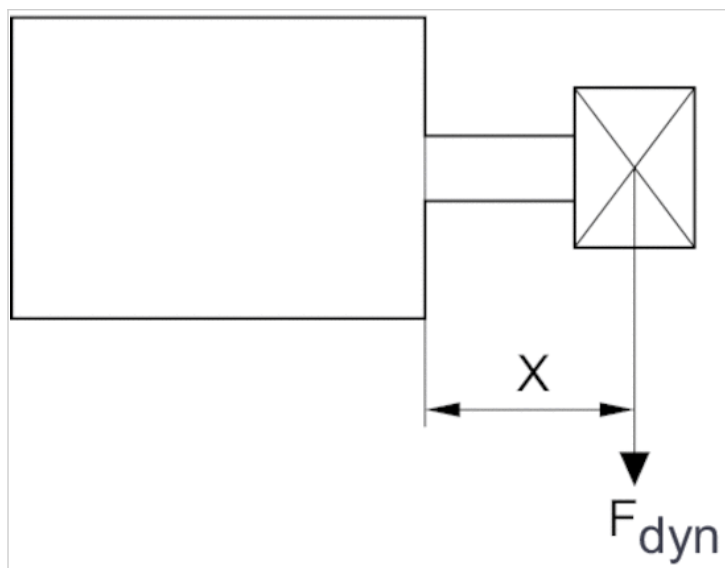
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force, static



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

Maximum admissible lateral force, dynamic

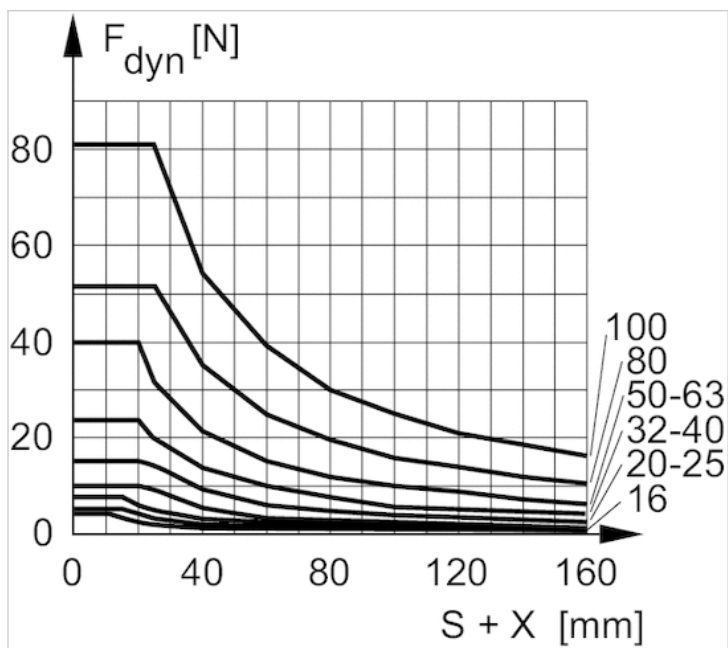


F_{dyn} = dynamic lateral force

X = distance between force application point and cylinder cover

S = stroke

Maximum admissible lateral force, dynamic



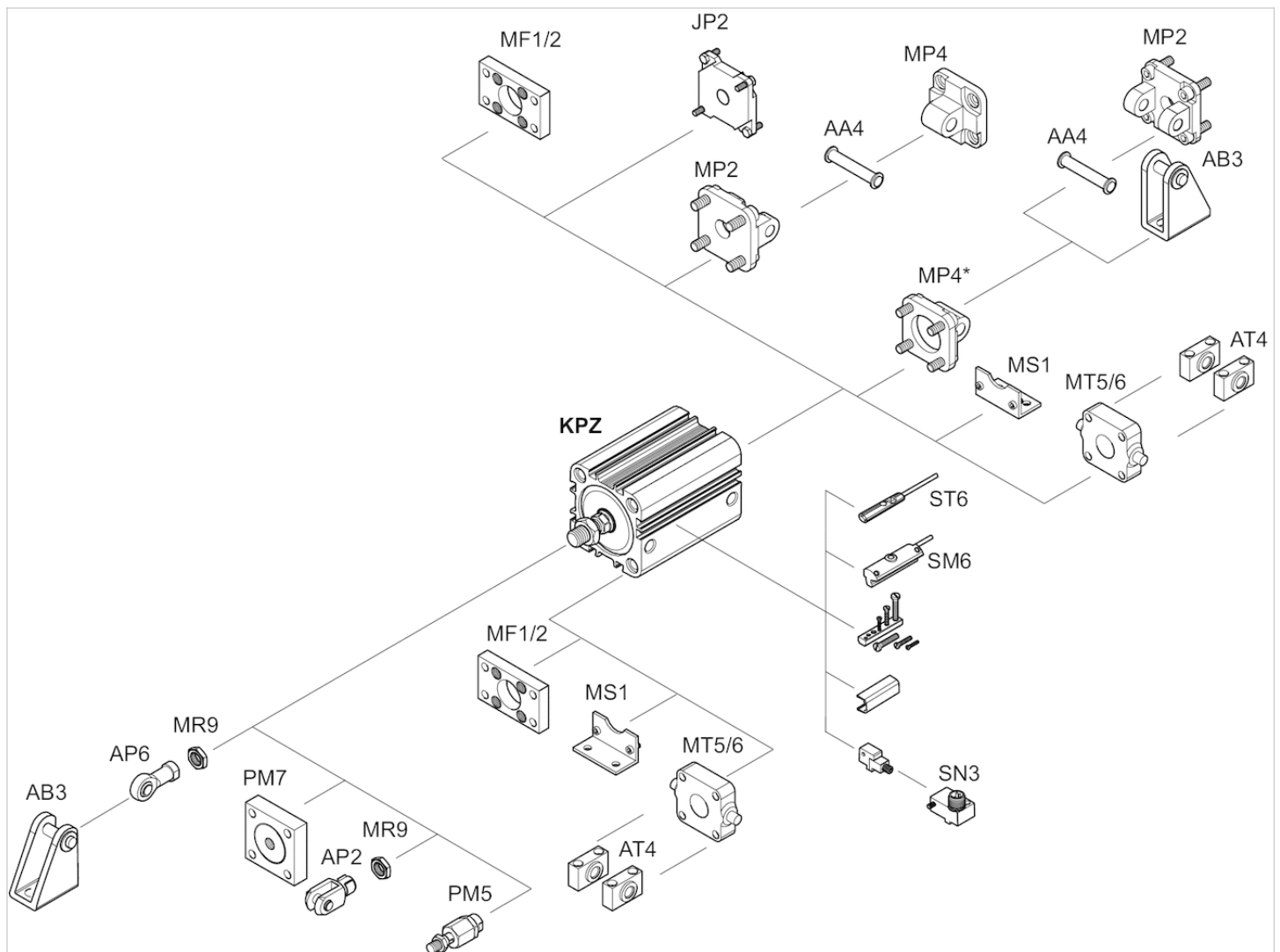
F_{dyn} = dynamic lateral force

X = distance between force application point and cylinder cover

S = stroke

Accessories overview

Overview drawing



* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Compact cylinder, Series KPZ

- Ø 16-100 mm
- Ports M5 G 1/8
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod External thread
- Piston rod Optionally through (hollow)
- ATEX optional
- Optionally heat-resistant



Standards	NFE 49004
Certificates	ATEX optional
Compressed air connection	Internal thread
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar



Technical data

Piston Ø Piston rod thread Ports	16 mm M8 M5	20 mm M10x1,25 M5	25 mm M10x1,25 M5	32 mm M10x1,25 G 1/8	40 mm M10x1,25 G 1/8	50 mm M12x1,25 G 1/8
Stroke 5	0822390200	0822391200	0822392200	0822393200	0822394200	0822395200
10	0822390201	0822391201	0822392201	0822393201	0822394201	0822395201
15	0822390202	0822391202	0822392202	0822393202	0822394202	0822395202
20	0822390203	0822391203	0822392203	0822393203	0822394203	0822395203
25	0822390204	0822391204	0822392204	0822393204	0822394204	0822395204
30	0822390205	0822391205	0822392205	0822393205	0822394205	0822395205
40	0822390206	0822391206	0822392206	0822393206	0822394206	0822395206
50	0822390207	0822391207	0822392207	0822393207	0822394207	0822395207
60	0822390208	0822391208	0822392208	0822393208	0822394208	0822395208
80	-	-	-	0822393209	0822394209	0822395209
100	-	-	-	0822393210	0822394210	0822395210

Piston Ø Piston rod thread Ports	63 mm M12x1,25 G 1/8	80 mm M16x1,5 G 1/8	100 mm M20x1,5 G 1/8
Stroke 5	0822396200	0822397200	0822398200
10	0822396201	0822397201	0822398201
15	0822396202	0822397202	0822398202
20	0822396203	0822397203	0822398203
25	0822396204	0822397204	0822398204
30	0822396205	0822397205	0822398205
40	0822396206	0822397206	0822398206
50	0822396207	0822397207	0822398207
60	0822396208	0822397208	0822398208
80	0822396209	0822397209	0822398209
100	0822396210	0822397210	0822398210

Technical data

Piston Ø	16 mm	20 mm
Retracting piston force	95 N	148 N
Extracting piston force	127 N	198 N
Impact energy	0.15 J	0.2 J
Working pressure min./max.	1 ... 10 bar	1 ... 10 bar
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	300 mm	300 mm

Piston Ø	25 mm	32 mm	40 mm
Retracting piston force	260 N	435 N	720 N
Extracting piston force	309 N	507 N	792 N
Impact energy	0.3 J	0.5 J	0.7 J
Working pressure min./max.	1 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar
Sealing material	Nitrile butadiene rubber	Polyurethane	Polyurethane
Stroke max.	300 mm	300 mm	300 mm

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	1110 N	1837 N	2969 N	4639 N
Extracting piston force	1237 N	1964 N	3167 N	4948 N
Impact energy	1 J	1.3 J	1.8 J	2.5 J
Working pressure min./max.	0.6 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar
Sealing material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Stroke max.	300 mm	300 mm	500 mm	500 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

ATEX-certified cylinders with identification II 2G Ex h IIB T4 Gb / II 2D Ex h IIIB T135°C Db_X can be generated in the Internet configurator.

The operating temperature range for ATEX-certified cylinders is -20 °C ... 50 °C.

The material for heat-resistant scraper and seal variants (ambient temperature: -10 °C ... 120 °C) is fluorocautchouc.

Further options can be generated in the Internet configurator.

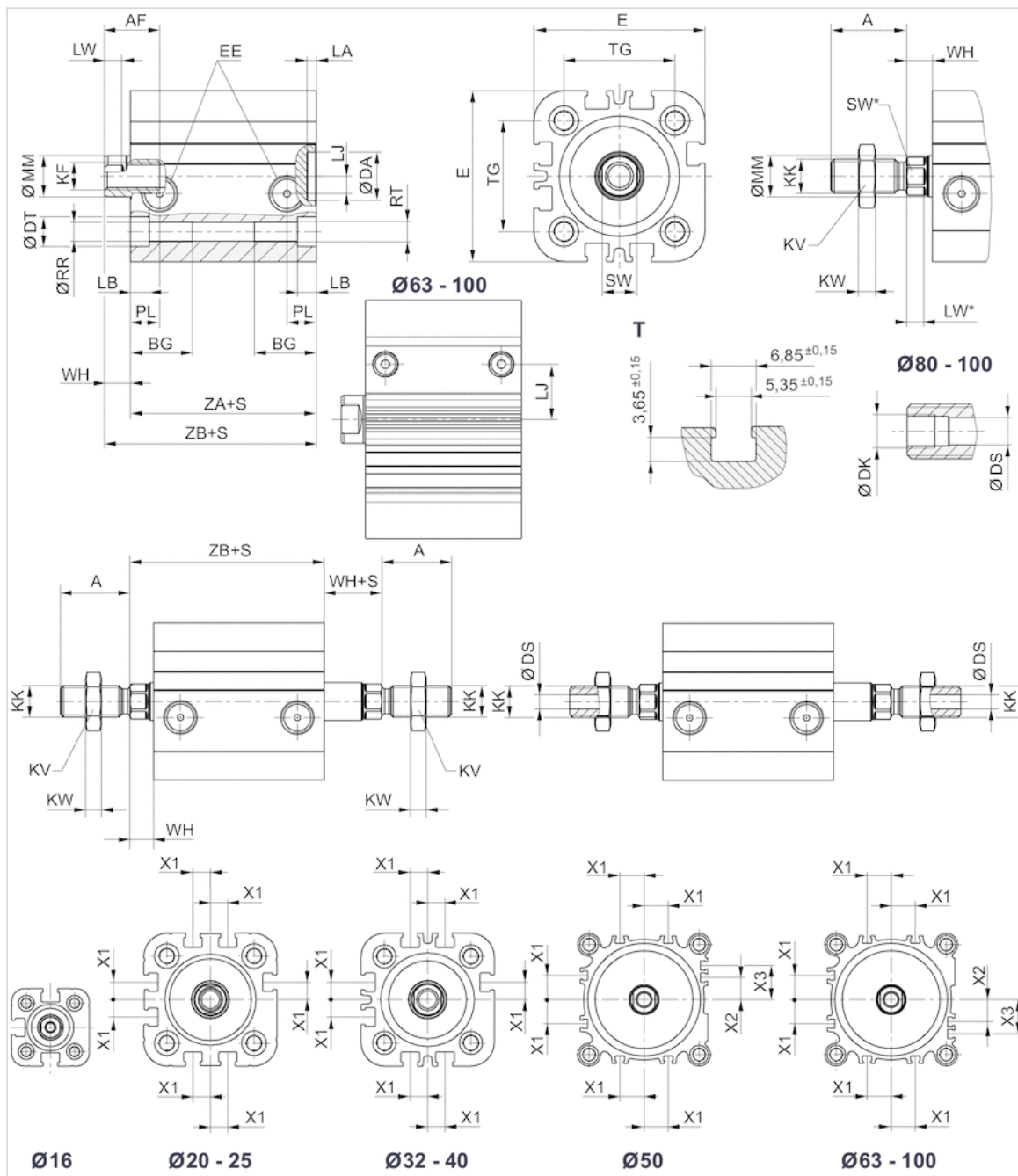
LW*/SW* Hexagonal key required

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Nitrile butadiene rubber Polyurethane
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane

Dimensions

Dimensions



S = stroke

T = View for sensor groove

Dimensions

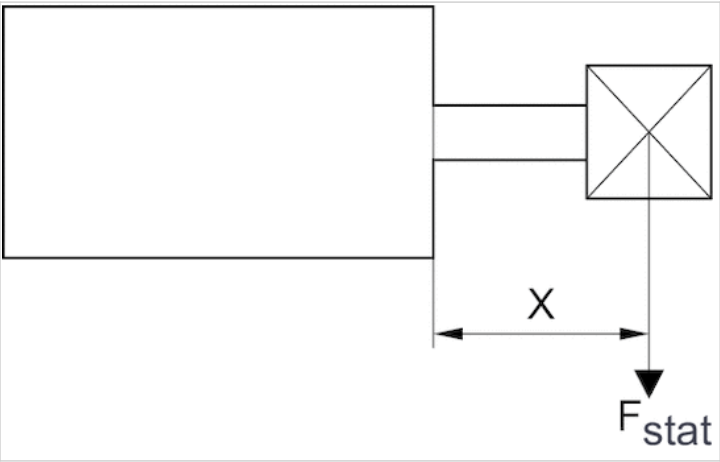
Piston Ø	A	BG min.	DA H11	Ø DK	Ø DS	DT H13	E	EE	KK	KV	KW	LA	LB	LJ
16 mm	20	14.5	10	–	–	6	29.5	M5	M8x1,25	13	4	2.5	3.5	2.5
20 mm	22	15.5	12	–	3	7.5	36	M5	M10x1,25	16	5	2.5	4.5	4.5
25 mm	22	15.5	12	–	3	8	40	M5	M10x1,25	16	5	2.5	4.4	5
32 mm	22	18	14	–	4.5	8.6	50	G 1/8	M10x1,25	16	5	2.5	5.5	5.1
40 mm	22	18	14	–	4.5	9	58	G 1/8	M10x1,25	16	5	2.5	5.5	9.6
50 mm	24	24	18	–	6	11	68	G 1/8	M12x1,25	18	6	2.5	2	8.5
63 mm	24	24	18	–	6	11	80	G 1/8	M12x1,25	18	6	2.5	2	17.8
80 mm	32	28	23	G 1/8	8	14	99	G 1/8	M16x1,5	24	8	3	1	22.9
100 mm	40	27.5	28	G 1/4	11.5	15	120	G 1/8	M20x1,5	30	10	3	3.5	26.5

Piston Ø	LW	MM f8	PL	Ø RR	RT	SW	TG	WH	X1	X2	X3	ZA + Stroke
16 mm	2.8	8	7.5	3.3	M4	7	18 ±0,4	4.5	–	–	–	38
20 mm	3.7	10	7.5	4.2	M5	8	22 ±0,4	5	4.2	–	–	38
25 mm	3.7	10	7.5	4.2	M5	8	26 ±0,4	5.5	4.5	–	–	39
32 mm	5*	12	8.5	5.1	M6	10*	32 ±0,5	7	6.5	–	–	44
40 mm	5*	12	8.5	5.1	M6	10*	42 ±0,5	7	11	–	–	45
50 mm	4,8*	16	8.5	6.7	M8	13*	50 ±0,6	7.5	13	4	13	45.5
63 mm	4,8*	16	8.5	6.7	M8	13*	62 ±0,7	8	18	12	21	49
80 mm	6,4*	20	8.3	8.5	M10	16*	82 ±0,7	9.5	18	16.5	25.5	54.5
100 mm	6,4*	25	9.7	8.5	M10	21*	103 ±0,7	10.5	20	20	29	66.5

Piston Ø	ZB + Stroke
16 mm	42,5 0/+1,4
20 mm	43 0/+1,4
25 mm	44,5 0/+1,4
32 mm	51 0/+1,6
40 mm	52 0/+1,6
50 mm	53 0/+1,6
63 mm	57 0/+2
80 mm	64 0/+2
100 mm	77 0/+2

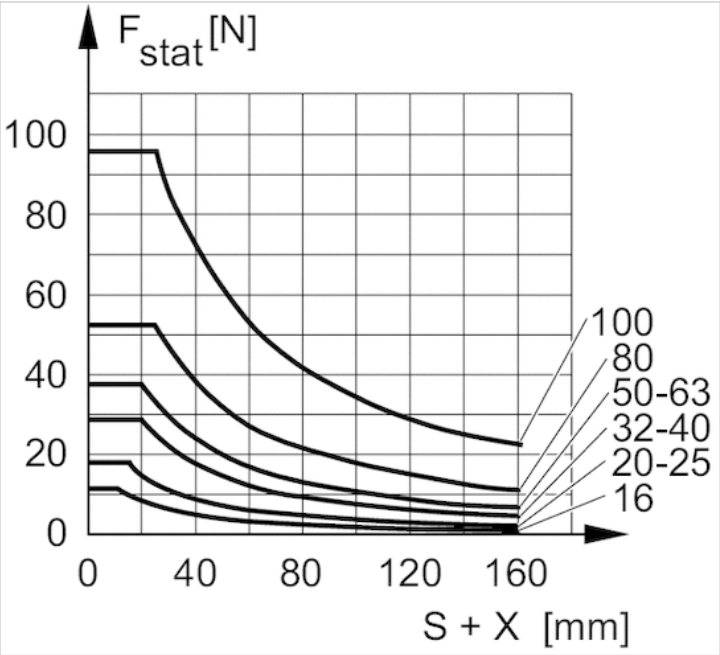
Diagrams

Maximum admissible lateral force, static



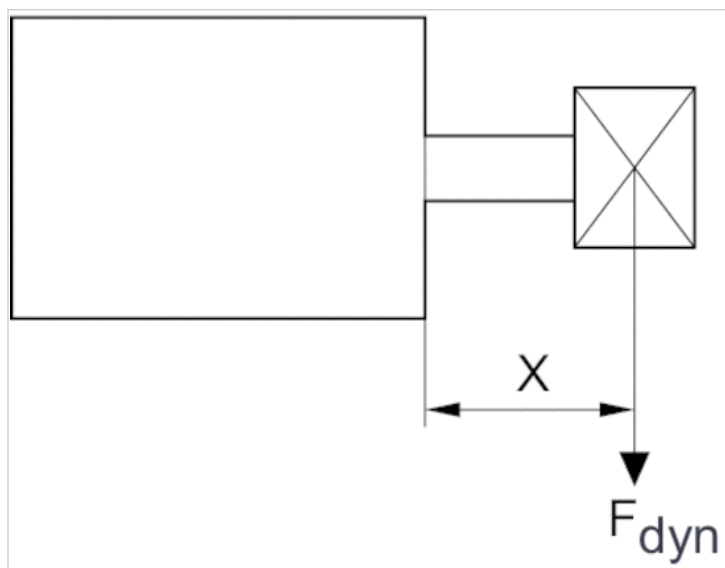
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force, static



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

Maximum admissible lateral force, dynamic

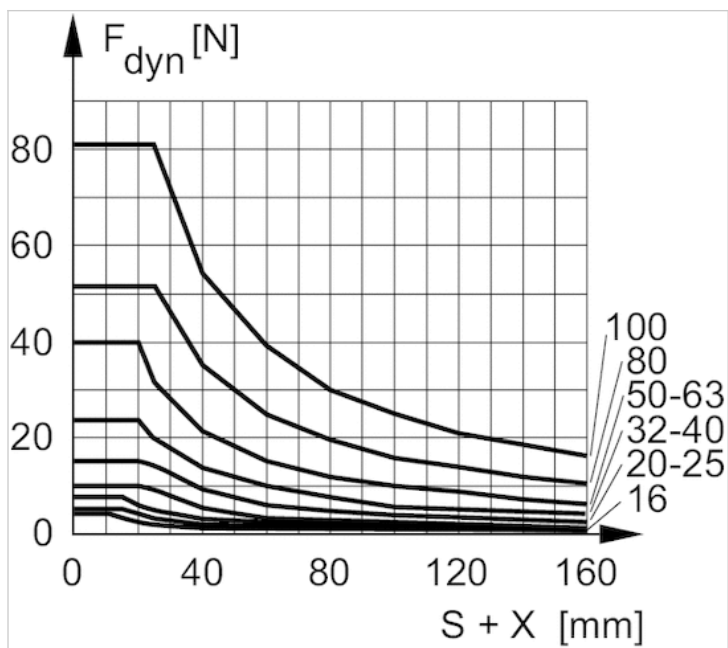


F_{dyn} = dynamic lateral force

X = distance between force application point and cylinder cover

S = stroke

Maximum admissible lateral force, dynamic



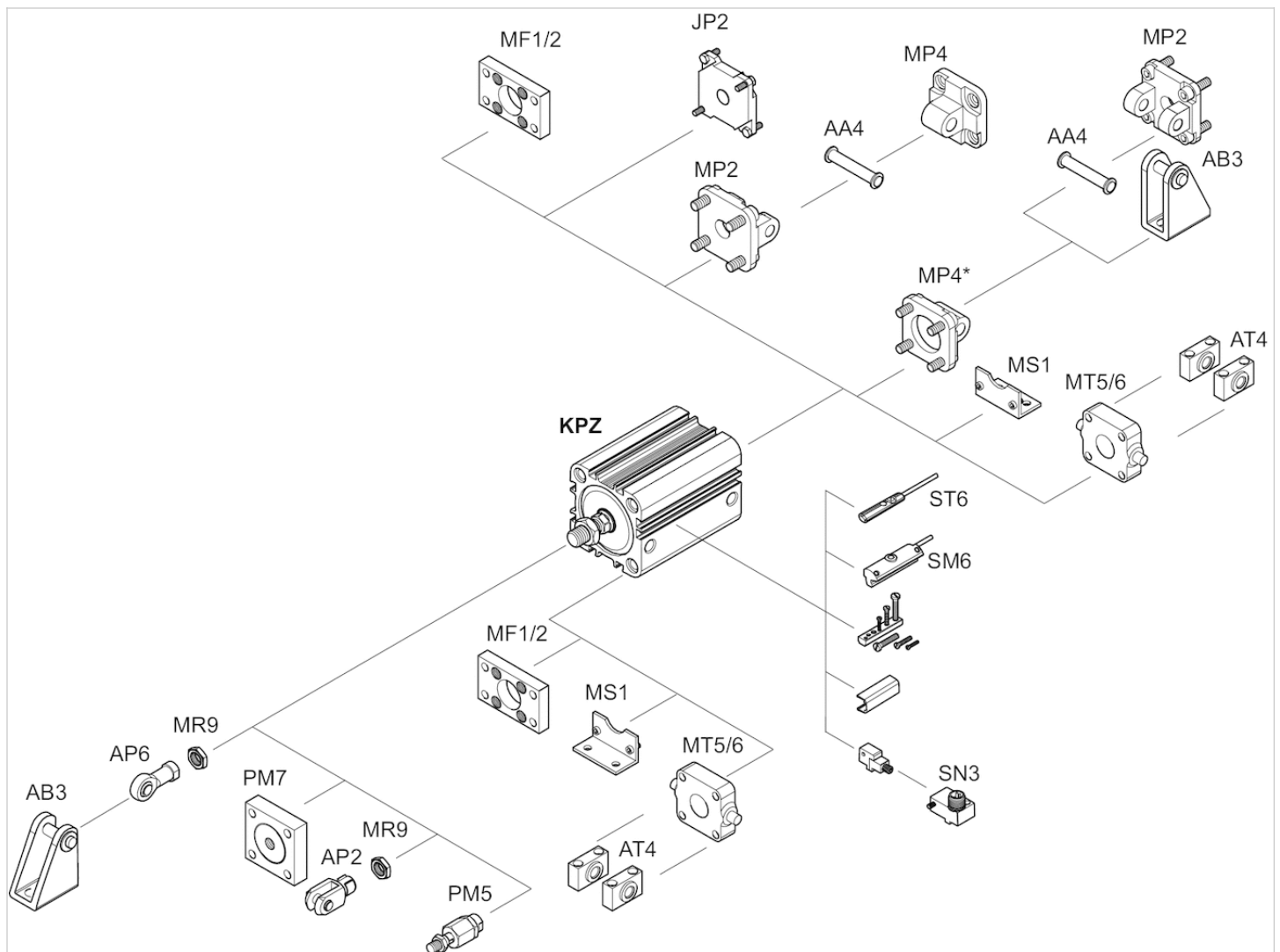
F_{dyn} = dynamic lateral force

X = distance between force application point and cylinder cover

S = stroke

Accessories overview

Overview drawing



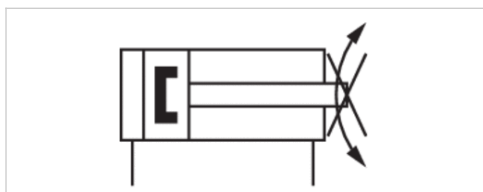
* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Compact cylinder, Series KPZ

- Ø 16-100 mm
- Ports M5 G 1/8
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod non-rotating, with front plate, Optionally through
- Optionally heat-resistant



Standards

Compressed air connection	NFE 49004
Ambient temperature min./max.	Internal thread
Medium temperature min./max.	-20 ... 80 °C
Medium	-20 ... 80 °C
Max. particle size	Compressed air
Oil content of compressed air	50 µm
Pressure for determining piston forces	0 ... 5 mg/m³
	6.3 bar

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Stroke 5	0822390600	0822391600	0822392600	0822393600	0822394600	0822395600	0822396600
10	0822390601	0822391601	0822392601	0822393601	0822394601	0822395601	0822396601
15	0822390602	0822391602	0822392602	0822393602	0822394602	0822395602	0822396602
20	0822390603	0822391603	0822392603	0822393603	0822394603	0822395603	0822396603
25	0822390604	0822391604	0822392604	0822393604	0822394604	0822395604	0822396604
30	0822390605	0822391605	0822392605	0822393605	0822394605	0822395605	0822396605
40	0822390606	0822391606	0822392606	0822393606	0822394606	0822395606	0822396606
50	0822390607	0822391607	0822392607	0822393607	0822394607	0822395607	0822396607
60	0822390608	0822391608	0822392608	0822393608	0822394608	0822395608	0822396608
80	-	-	-	0822393609	0822394609	0822395609	0822396609
100	-	-	-	0822393610	0822394610	0822395610	0822396610

Piston Ø	80 mm	100 mm
Stroke 5	0822397600	0822398600
10	0822397601	0822398601
15	0822397602	0822398602

Piston Ø	80 mm	100 mm
20	0822397603	0822398603
25	0822397604	0822398604
30	0822397605	0822398605
40	0822397606	0822398606
50	0822397607	0822398607
60	0822397608	0822398608
80	0822397609	0822398609
100	0822397610	0822398610

Technical data

Piston Ø	16 mm	20 mm
Retracting piston force	95 N	148 N
Extracting piston force	127 N	198 N
Impact energy	0.15 J	0.2 J
Working pressure min./max.	1 ... 10 bar	1 ... 10 bar
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	300 mm	300 mm

Piston Ø	25 mm	32 mm	40 mm
Retracting piston force	260 N	435 N	720 N
Extracting piston force	309 N	507 N	792 N
Impact energy	0.3 J	0.5 J	0.7 J
Working pressure min./max.	1 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar
Sealing material	Nitrile butadiene rubber	Polyurethane	Polyurethane
Stroke max.	300 mm	300 mm	300 mm

Piston Ø	50 mm	63 mm	80 mm	100 mm
Retracting piston force	1110 N	1837 N	2969 N	4639 N
Extracting piston force	1237 N	1964 N	3167 N	4948 N
Impact energy	1 J	1.3 J	1.8 J	2.5 J
Working pressure min./max.	0.6 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar
Sealing material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Stroke max.	300 mm	300 mm	300 mm	300 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

The material for heat-resistant scraper and seal variants (ambient temperature: -10 °C ... 120 °C) is fluorocautchouc.

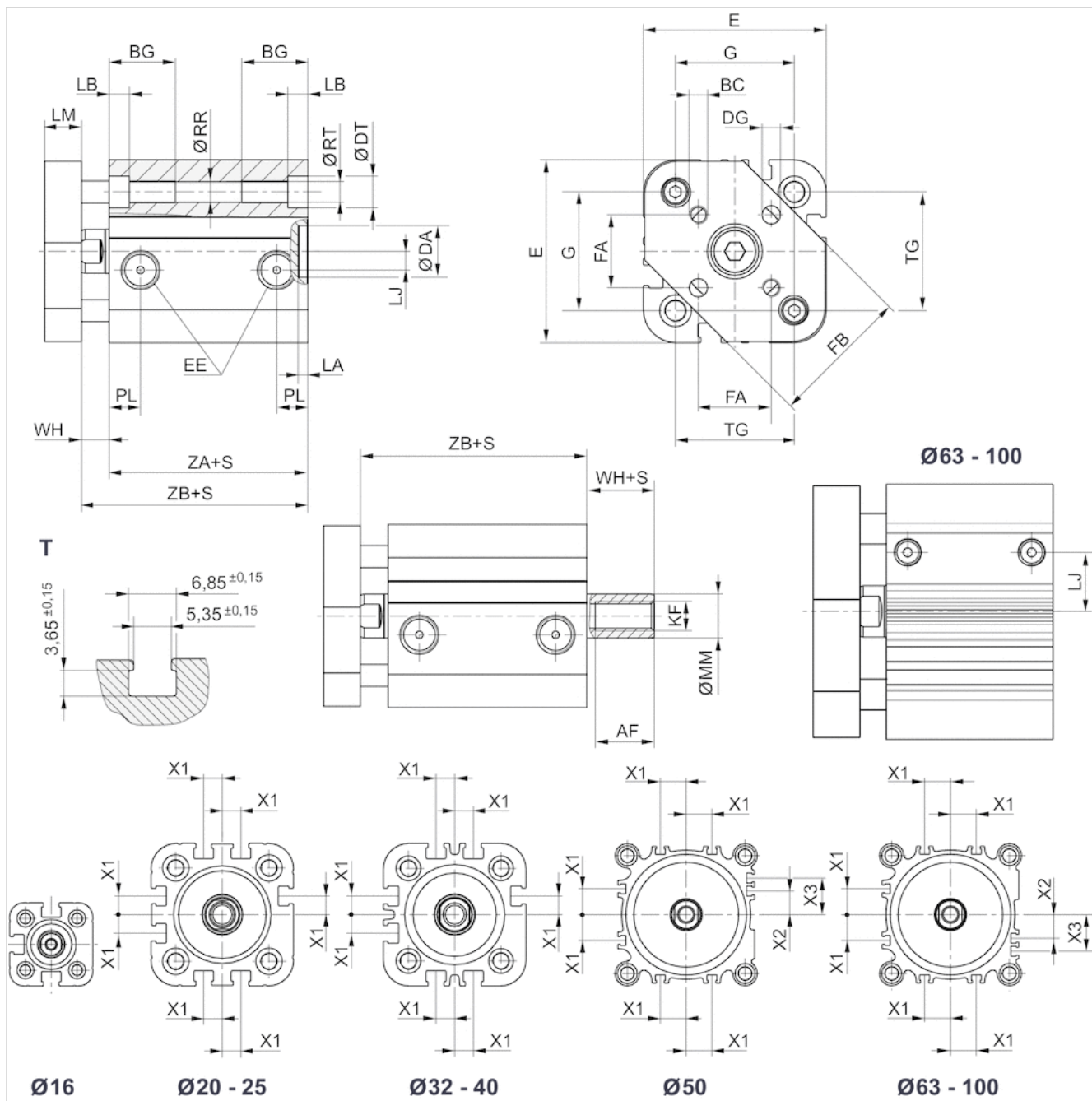
Further options can be generated in the Internet configurator.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Nitrile butadiene rubber Polyurethane
Front plate	Aluminum
Scraper	Polyurethane

Dimensions

Dimensions



S = stroke

T = View for sensor groove without guide plate

Dimensions

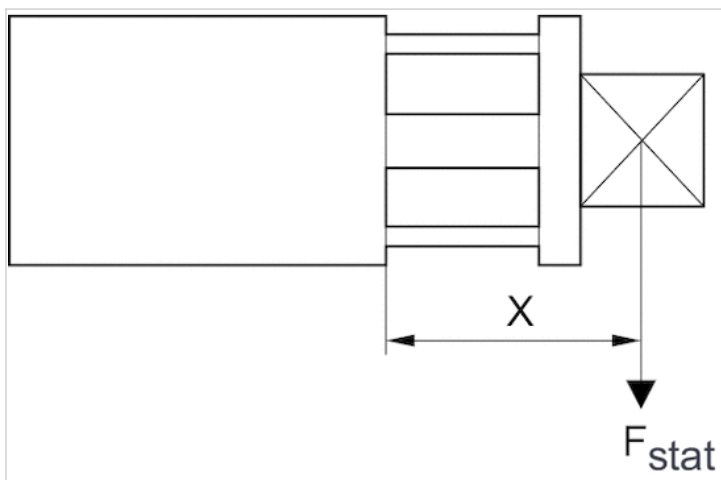
Piston Ø	AF min. Option: through piston rod	BC	BG min.	DA H11	DG H13	DT H13	E	EE
16 mm	10	M3	14.5	10	3	6	29.5	M5
20 mm	12	M4	15.5	12	4	7.5	36	M5
	10: S3 mm 2)							
25 mm	12	M5	15.5	12	5	8	40	M5
	10: S3 mm 2)							
32 mm	12	M5	18	14	5	8.6	50	G 1/8
40 mm	12	M5	18	14	5	9	58	G 1/8
50 mm	16	M6	24	18	6	11	68	G 1/8
	12: S4 mm 2)							
63 mm	16	M6	24	18	6	11	80	G 1/8
	12: S4 mm 2)							
80 mm	20	M8	28	23	8	14	99	G 1/8
	15: S3 mm 2)							
100 mm	26	M10	27.5	28	10	15	120	G 1/8
	21: S5 mm 2)							

Piston Ø	FA ±0,1	FB	G	KF	LA	LB	LJ	LM	MM f8	PL	Ø RR	RT	TG	WH	X1	X2
16 mm	9.9	20	19	M4	2.5	3.5	2.5	6	8	7.5	3.3	M4	18 ±0,4	4.5	–	–
20 mm	12	24	25	M6	2.5	4.5	4.5	8	10	7.5	4.2	M5	22 ±0,4	5	4.2	–
25 mm	15.6	30	27	M6	2.5	4.4	5	8	10	7.5	4.2	M5	26 ±0,4	5.5	4.5	–
32 mm	19.8	38	32	M8	2.5	5.5	5.1	10	12	8.5	5.1	M6	32 ±0,5	7	6.5	–
40 mm	23.3	44	42	M8	2.5	5.5	9.6	10	12	8.5	5.1	M6	42 ±0,5	7	11	–
50 mm	29.7	54	50	M10	2.5	2	8.5	12	16	8.5	6.7	M8	50 ±0,6	7.5	13	4
63 mm	35.4	62	62	M10	2.5	2	17.8	12	16	8.5	6.7	M8	62 ±0,7	8	18	12
80 mm	46	80	82	M12	3	1	22.9	14	20	8.3	8.5	M10	82 ±0,7	9.5	18	16.5
100 mm	56.6	100	103	M16	3	3.5	26.5	14	25	9.7	8.5	M10	103 ±0,7	10.5	20	20

Piston Ø	X3	ZA + Stroke	ZB + Stroke
16 mm	–	38	42,5 0/+1,4
20 mm	–	38	43 0/+1,4
25 mm	–	39	44,5 0/+1,4
32 mm	–	44	51 0/+1,6
40 mm	–	45	52 0/+1,6
50 mm	13	45.5	53 0/+1,6
63 mm	21	49	57 0/+2
80 mm	25.5	54.5	64 0/+2
100 mm	29	66.5	77 0/+2

Diagrams

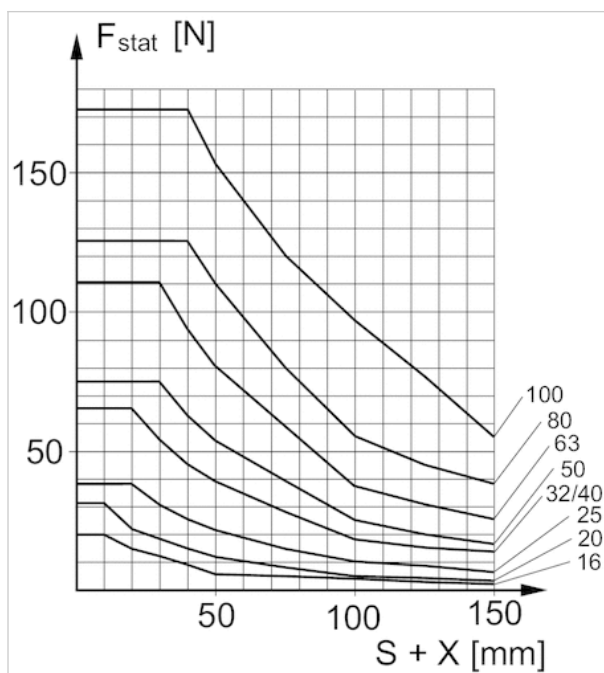
Maximum admissible lateral force, static



F_{stat} = static lateral force

X = distance between force application point and cylinder cover

Maximum admissible lateral force, static

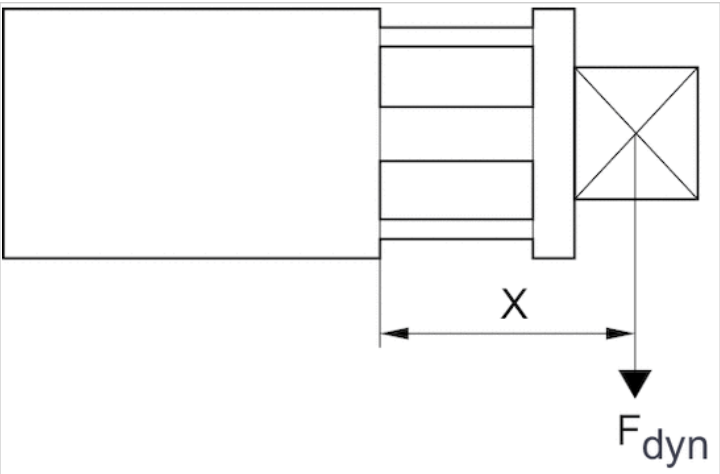


F_{stat} = static lateral force

X = distance between force application point and cylinder cover

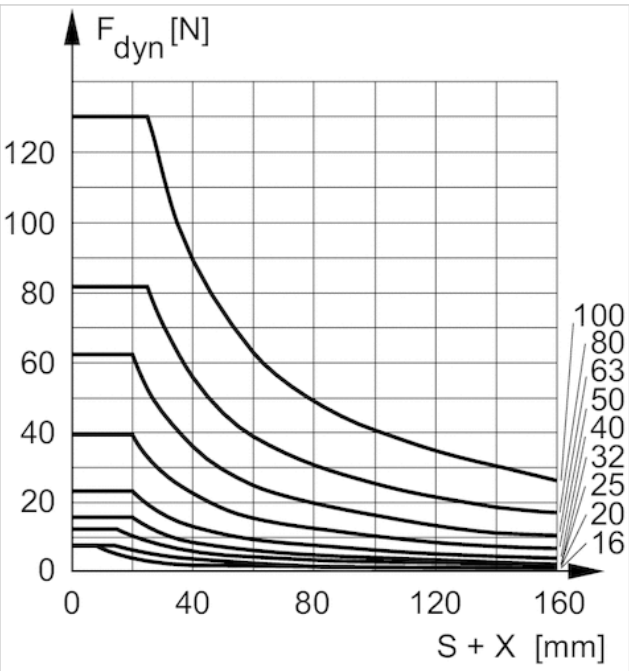
S = stroke

Maximum admissible lateral force, dynamic



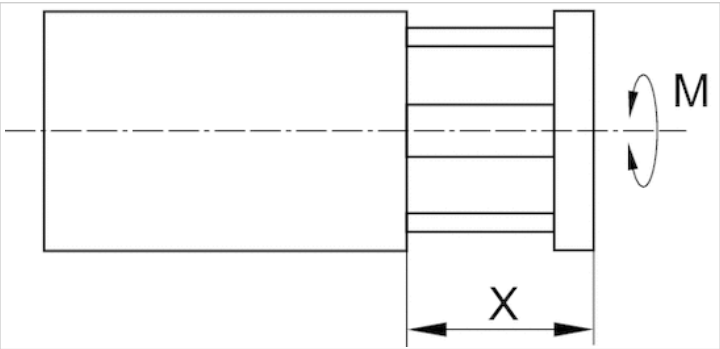
F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force, dynamic



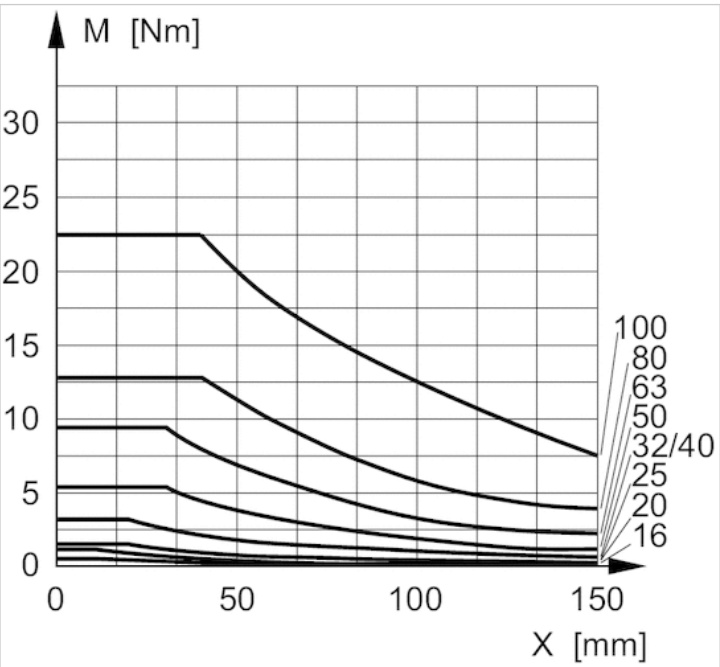
F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Max. permissible torque



M = max. permissible torque
X = distance between force application point and cylinder cover

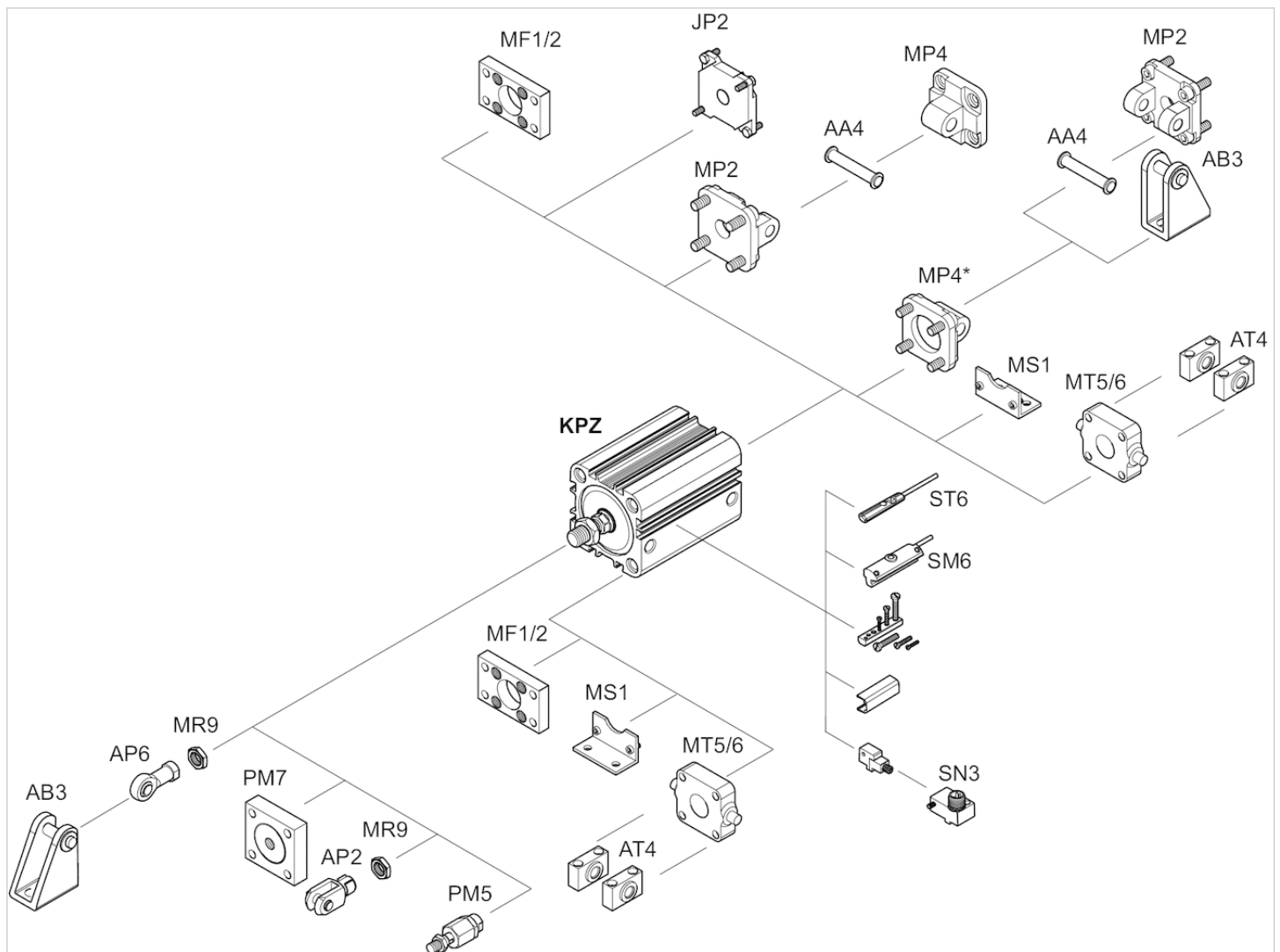
Max. permissible torque



M = max. permissible torque
X = spacing between torque contact surface and cylinder cover

Accessories overview

Overview drawing



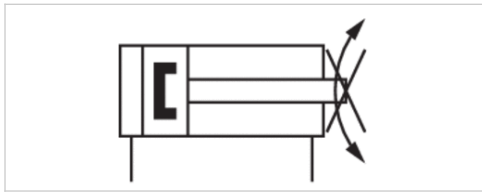
* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Compact cylinder, Series KPZ

- Ø 20-63 mm
- Ports M5 G 1/8
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- Piston rod non-rotating, Optionally through (hollow)



Standards	NFE 49004
Compressed air connection	Internal thread
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar

Technical data

Piston Ø Piston rod thread Ports	20 mm M6 M5	25 mm M6 M5	32 mm M8 G 1/8	40 mm M8 G 1/8	50 mm M10 G 1/8	63 mm M10 G 1/8
Stroke 5	0822391900	0822392900	0822393900	0822394900	0822395900	0822396900
10	0822391901	0822392901	0822393901	0822394901	0822395901	0822396901
15	0822391902	0822392902	0822393902	0822394902	0822395902	0822396902
20	0822391903	0822392903	0822393903	0822394903	0822395903	0822396903
25	0822391904	0822392904	0822393904	0822394904	0822395904	0822396904
30	0822391905	0822392905	0822393905	0822394905	0822395905	0822396905
40	0822391906	0822392906	0822393906	0822394906	0822395906	0822396906
50	0822391907	0822392907	0822393907	0822394907	0822395907	0822396907
60	0822391908	0822392908	0822393908	0822394908	0822395908	0822396908
80	0822391909	0822392909	0822393909	0822394909	0822395909	0822396909
100	0822391910	0822392910	0822393910	0822394910	0822395910	0822396910

Technical data

Piston Ø	20 mm	25 mm
Retracting piston force	148 N	260 N
Extracting piston force	198 N	309 N
Impact energy	0.2 J	0.3 J
Torque for torsion protection, max.	0.25 Nm	0.4 Nm
Working pressure min./max.	1 ... 10 bar	1 ... 10 bar
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	300 mm	300 mm

Piston Ø	32 mm	40 mm	50 mm
Retracting piston force	435 N	720 N	1110 N
Extracting piston force	507 N	792 N	1237 N
Impact energy	0.5 J	0.7 J	1 J
Torque for torsion protection, max.	0.75 Nm	0.75 Nm	1.5 Nm
Working pressure min./max.	0.6 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar
Sealing material	Polyurethane	Polyurethane	Polyurethane
Stroke max.	300 mm	300 mm	300 mm

Piston Ø	63 mm
Retracting piston force	1827 N
Extracting piston force	1964 N
Impact energy	1.3 J
Torque for torsion protection, max.	1.5 Nm
Working pressure min./max.	0.6 ... 10 bar
Sealing material	Polyurethane
Stroke max.	300 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

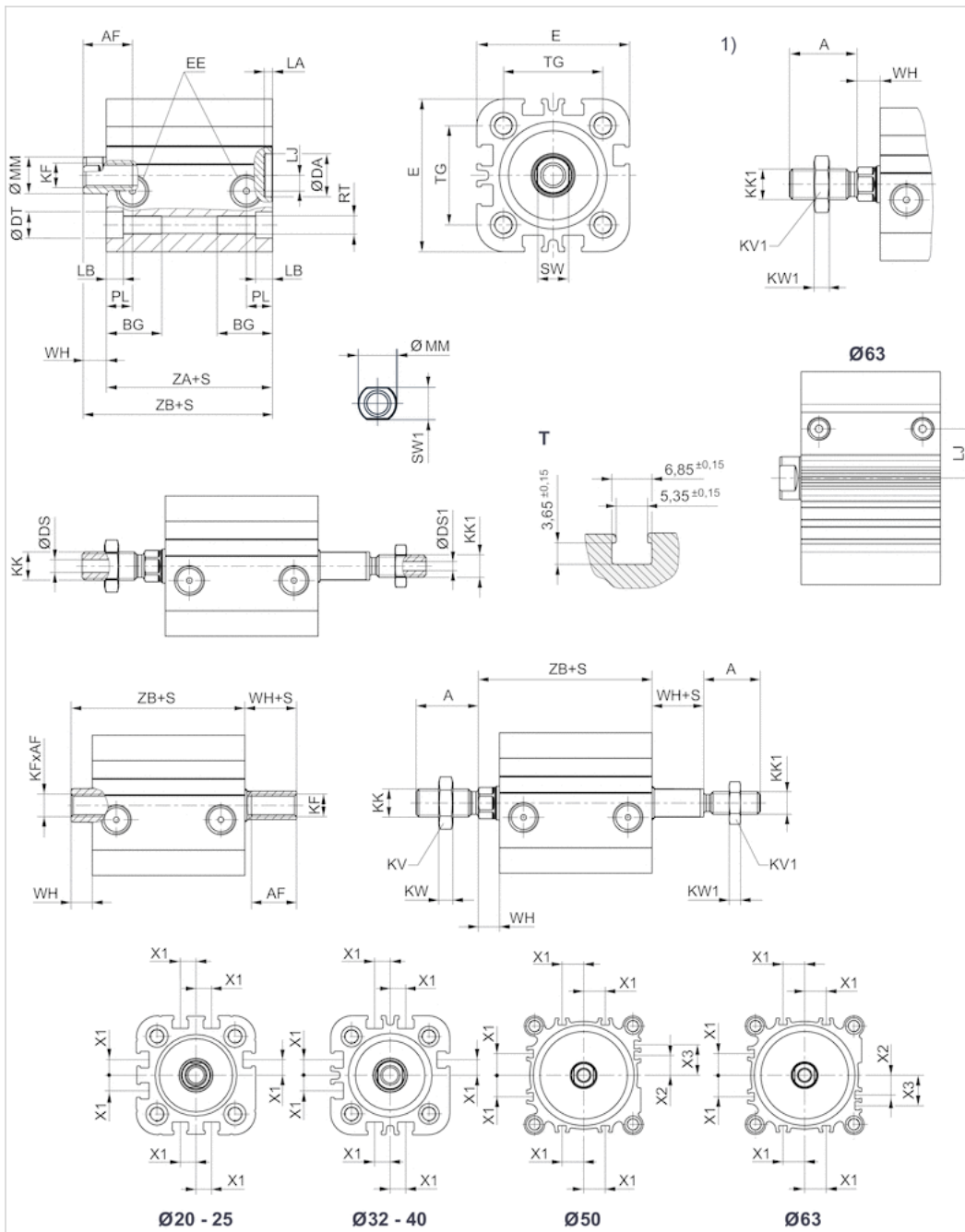
Use our Internet configurator to order variants with an external thread.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Nitrile butadiene rubber Polyurethane
Scraper	Polyurethane

Dimensions

Dimensions



S = stroke

T = View for sensor groove

1) External thread

Use our Internet configurator to order variants with an external thread.

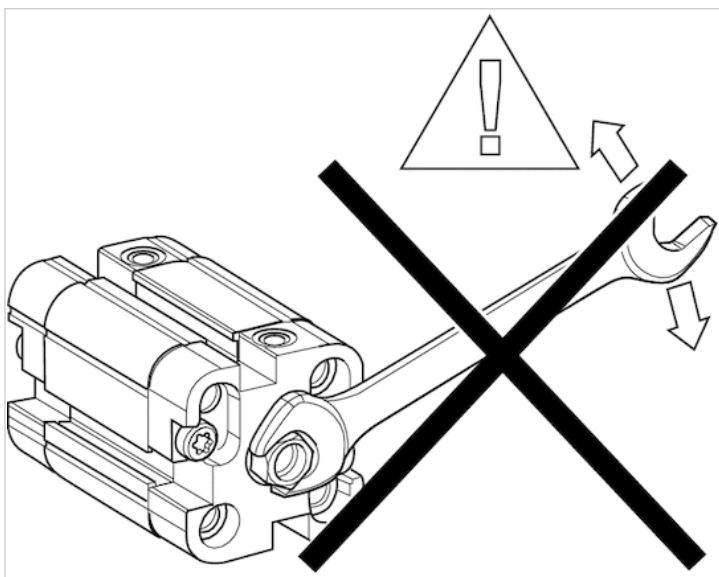
Dimensions

Piston Ø	A	AF min. Option: through piston rod	BG min.	Ø DA H11	Ø DS	Ø DS1	Ø DT H13	E
20 mm	22	12 10: S3 mm 2)	15,5	12	3	-	7,5	36
25 mm	22	12 10: S3 mm 2)	15,5	12	3	-	8	40
32 mm	22	12	18	14	4,5	3	8,6	50
40 mm	22	12	18	14	4,5	3	9	58
50 mm	24	16 12: S4 mm 2)	24	18	6	6	11	68
63 mm	24	16 12: S4 mm 2)	24	18	6	6	11	80

Piston Ø	EE	KF	KK	KK1	KV	KV1	KW	KW1	LA	LB	LJ	LW	MM f8	PL	RT	SW
20 mm	M5	M6	M10x1,25	M8x1,25	16	13	5	4	2,5	4,5	4,5	3,7	10	7,5	M5	8
25 mm	M5	M6	M10x1,25	M8x1,25	16	13	5	4	2,5	4,4	5	3,7	10	7,5	M5	8
32 mm	G 1/8	M8	M10x1,25	M8x1,25	16	13	5	4	2,5	5,5	5,1	5	12	8,5	M6	10
40 mm	G 1/8	M8	M10x1,25	M8x1,25	16	13	5	4	2,5	5,5	9,6	5	12	8,5	M6	10
50 mm	G 1/8	M10	M12x1,25	M10x1,25	18	16	6	5	2,5	2	8,5	5,7	16	8,5	M8	13
63 mm	G 1/8	M10	M12x1,25	M10x1,25	18	16	6	5	2,5	2	17,8	5,7	16	8,5	M8	13

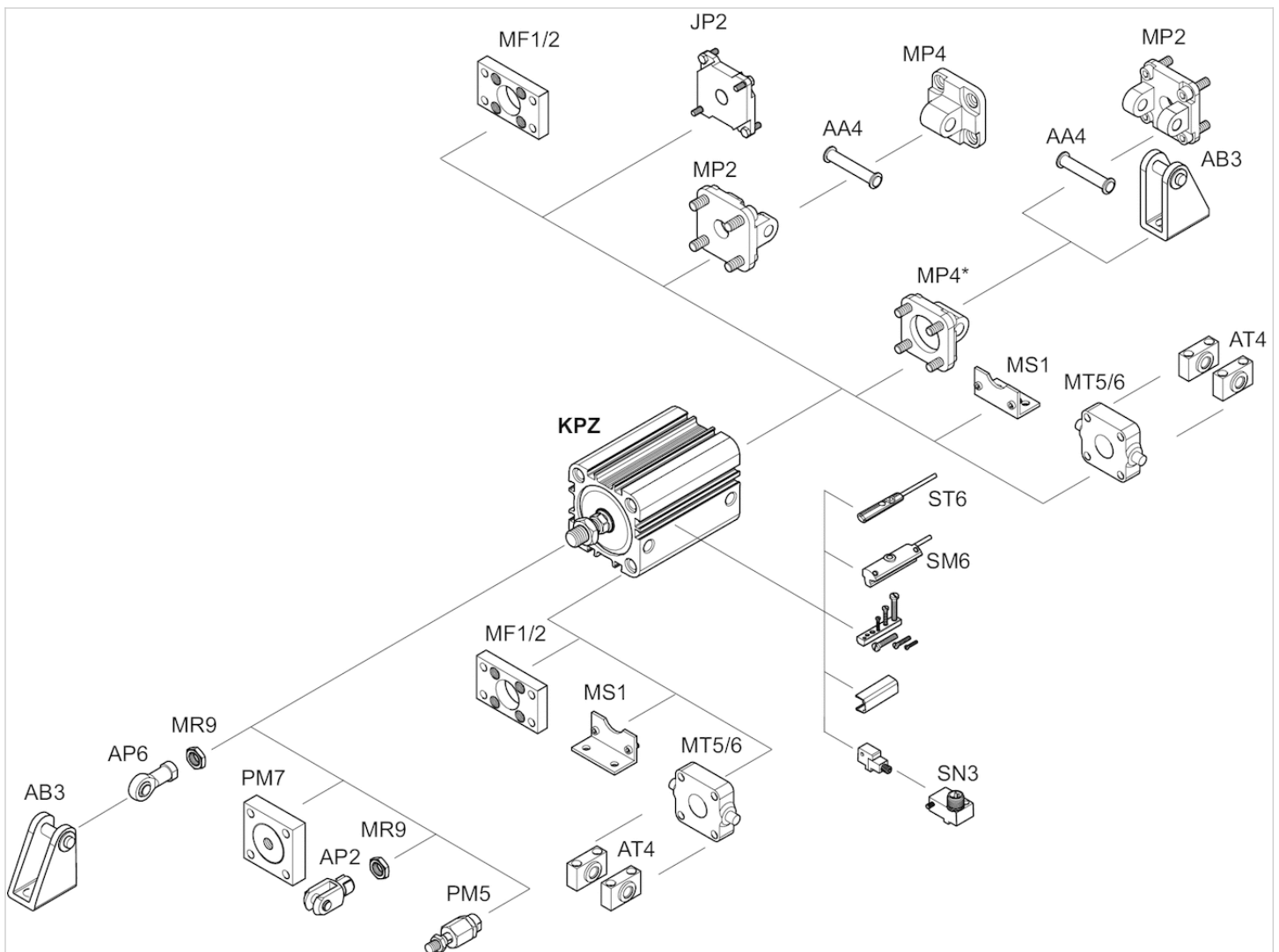
Piston Ø	SW1	TG	WH	X1	X2	X3	ZA + Stroke	ZB + Stroke
20 mm	8	22 ±0,4	5	4,2	-	-	38	43 0/+1,4
25 mm	8	26 ±0,4	5,5	4,5	-	-	39	44,5 0/+1,6
32 mm	10	32 ±0,5	7	6,5	-	-	44	51 0/+1,6
40 mm	10	42 ±0,5	7	11	-	-	45	52 0/+1,6
50 mm	13	50 ±0,6	7,5	13	4	13	45,5	53 0/+1,6
63 mm	13	62 ±0,7	8	18	12	21	49	57 ±2

Dimensions



Accessories overview

Overview drawing



* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

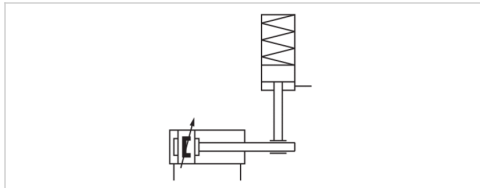
This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Series KPZ with integrated holding unit

- Ø 20-100 mm
- double-acting
- with magnetic piston
- Cushioning elastic
- with integrated holding unit
- Piston rod Internal thread



Compressed air connection	Internal thread
Working pressure min./max.	2 ... 8 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar



Technical data

Piston Ø	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm	80 mm
Retracting piston force	148 N	260 N	435 N	665 N	1039 N	1766 N	2857 N
Extracting piston force	198 N	309 N	507 N	792 N	1237 N	1964 N	3167 N
Impact energy	0.2 J	0.3 J	0.5 J	0.7 J	1 J	1.3 J	1.8 J
Weight 0 mm stroke	0.27 kg	0.29 kg	0.56 kg	0.88 kg	1.25 kg	1.6 kg	3 kg
Weight +10 mm stroke	0.02 kg	0.03 kg	0.04 kg	0.06 kg	0.08 kg	0.09 kg	0.12 kg
Axial play	0.3 mm	0.3 mm	0.3 mm	0.3 mm	0.35 mm	0.35 mm	0.35 mm
Min. holding force at 0 bar	400 N	400 N	650 N	1100 N	1600 N	2500 N	4000 N
Stroke max.	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm	500 mm

Piston Ø	100 mm
Retracting piston force	4639 N
Extracting piston force	4948 N
Impact energy	2.5 J
Weight 0 mm stroke	5 kg
Weight +10 mm stroke	0.15 kg
Axial play	0.35 mm
Min. holding force at 0 bar	6300 N
Stroke max.	500 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
The oil content of compressed air must remain constant during the life cycle.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

Warning: The holding unit may not be used for the following applications:
1) for dynamic holding
2) in or as safety equipment
Holding unit may only be unlocked when turned off.
Make sure that the load direction does not change during a holding interval. A change in the direction of force, as well as external forces such as impacts, strong vibrations, or torsional forces, will briefly release the piston rod and may destroy the HU1 holding unit. When clamped, there must be no residual pressure on the holding unit (0 bar).

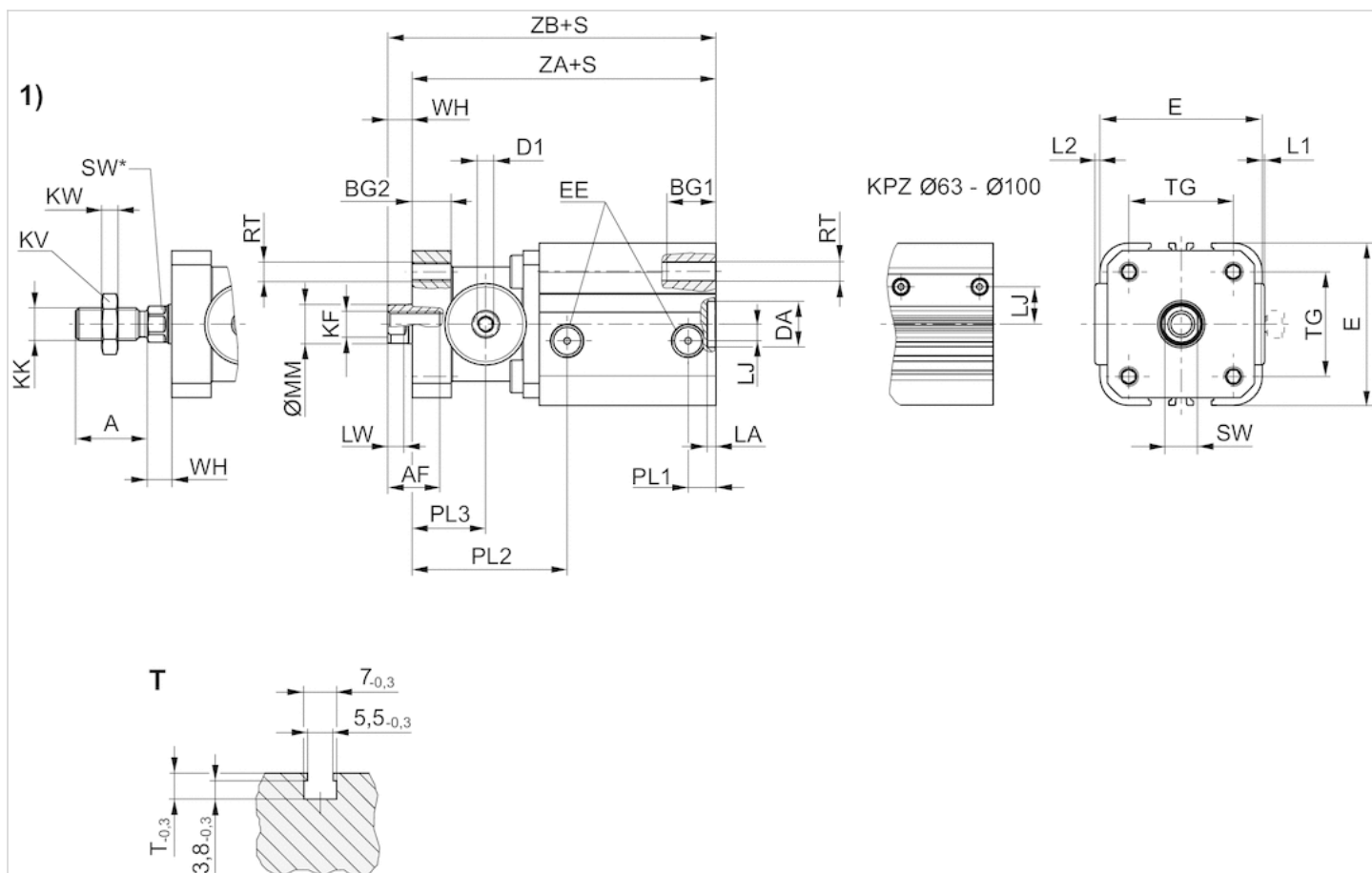
NOTE:
The minimum control pressure is >= working pressure!
Use our Internet configurator to order variants with an external thread.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Scraper	Polyurethane

Dimensions

Dimensions



S = stroke

T = View for sensor groove

1) External thread

Use our Internet configurator to order variants with an external thread.

Dimensions

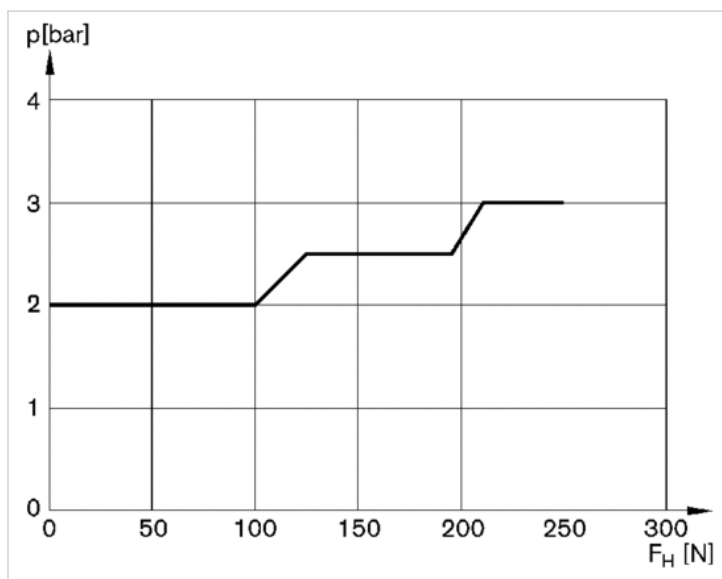
Ø	20	25	32	40	50	63	80
A	22	22	22	24	32	32	40
min. AF	12	12	12	16	20	20	26
min. BG1	15.5	15.5	18	18	24	24	28
BG2	15	10	12	20	25	18	20
Ø D1	M5	M5	M5	G 1/8	G 1/8	G 1/8	G 1/8
DA	12	12	14	14	18	18	23
H11							
E	36	40	50	58	68	80	100
EE	M5	M5	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8
KF	M6	M6	M8	M10	M12	M12	M16
KK	M10x1,25	M10x1,25	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5
KV	16	16	16	18	24	24	30
KW	5	5	5	6	8	8	10
L1	3	1	0.5	1	2	—	—

Ø	20	25	32	40	50	63	80
L2	1	—	—	—	—	—	—
LA	2.5	2.5	2.5	2.5	2.5	2.5	3
LJ	4.5	5	5	9.5	8.5	18	23
LW	3.5	3.5	5	6	7	7	7.5
MM	10	10	12	16	20	20	25
PL1	5.5	5.5	8.5	8.5	8.5	8.5	8.3
PL2	43	39	47.5	63.5	72	62.5	77
PL3	21	20.5	22.5	34.5	38.5	33	40
RT	M5	M5	M6	M6	M8	M8	M10
SW	8	8	10	13	16	16	20
SW*	—	—	10	13	16	16	20
TG	22 ±0,4	26 ±0,4	32 ±0,5	42 ±0,5	50 ±0,6	62 ±0,7	82 ±0,7
WH	5.5	5.5	7	9.5	10	10	12
+ Stroke ZA	65 ±0,5	66,5 ±0,5	83 ±0,5	95 ±0,5	104,5 ±0,5	97,5 ±0,5	122,5 ±0,5
+ Stroke ZB	70,5 ±1,4	72 ±1,4	90 ±1,6	104,5 ±1,6	114,5 ±1,6	107,5 ±2	134,5 ±2

100
40
26
27.5
20
G 1/8
28
120
G 1/8
M16
M20x1,5
30
10
—
—
3
26.5
7.5
25
9.7
91
45.5
M10
20
20
103 ±0,7
12
143,5 ±0,5
155,5 ±2

Diagrams

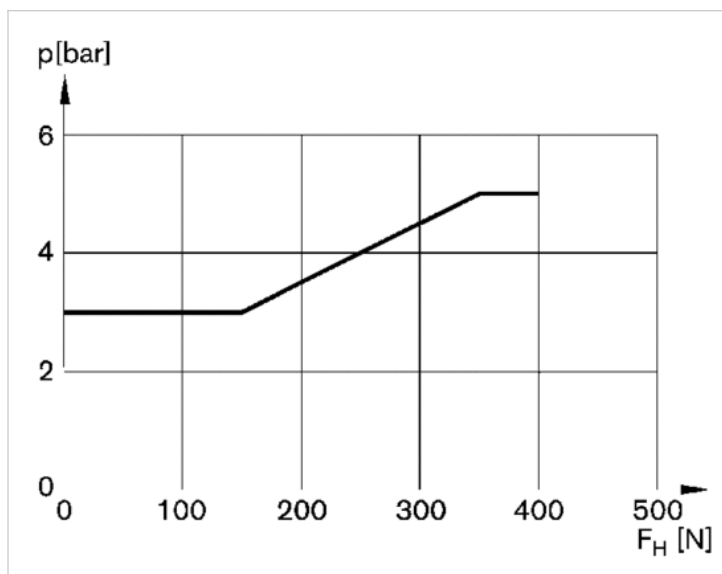
Holding force for piston Ø 20



p = release pressure for holding unit

F_H = holding force of cylinder

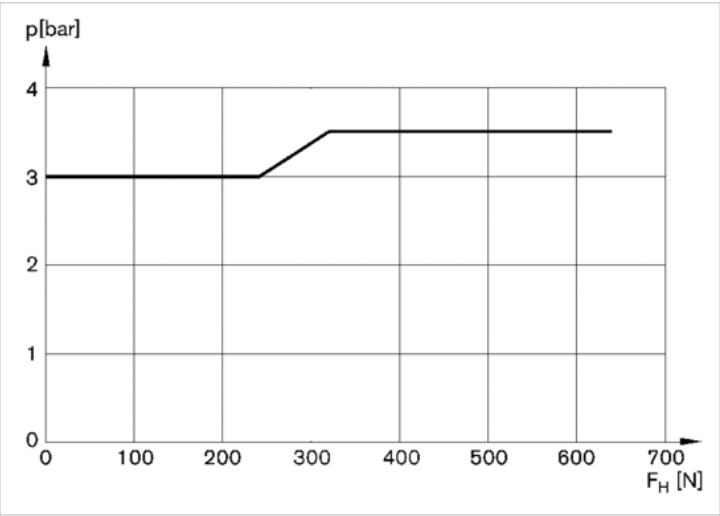
Holding force for piston Ø 25



p = release pressure for holding unit

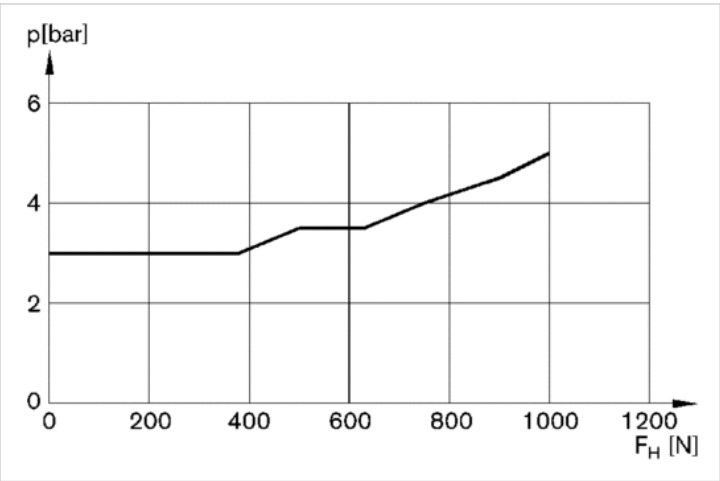
F_H = holding force of cylinder

Holding force for piston Ø 32



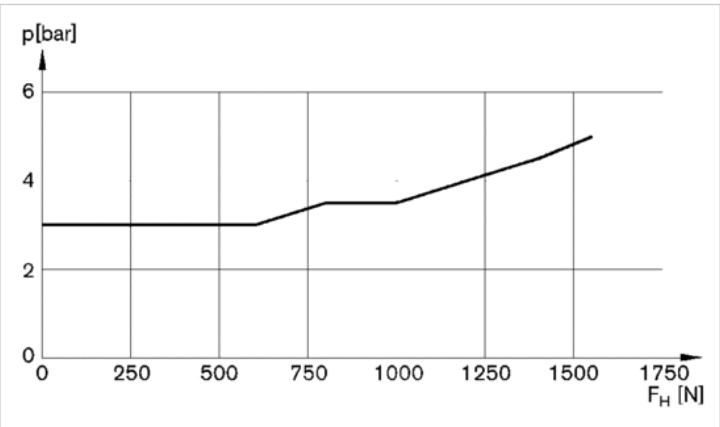
p = release pressure for holding unit
FH = holding force of cylinder

Holding force for piston Ø 40

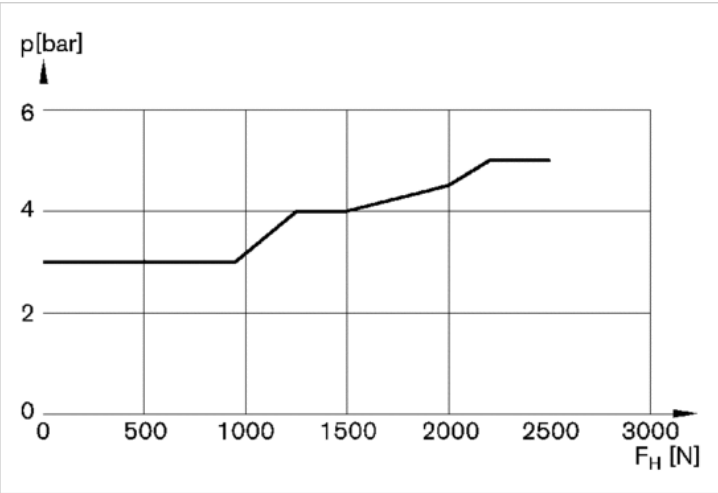


p = release pressure for holding unit
FH = holding force of cylinder

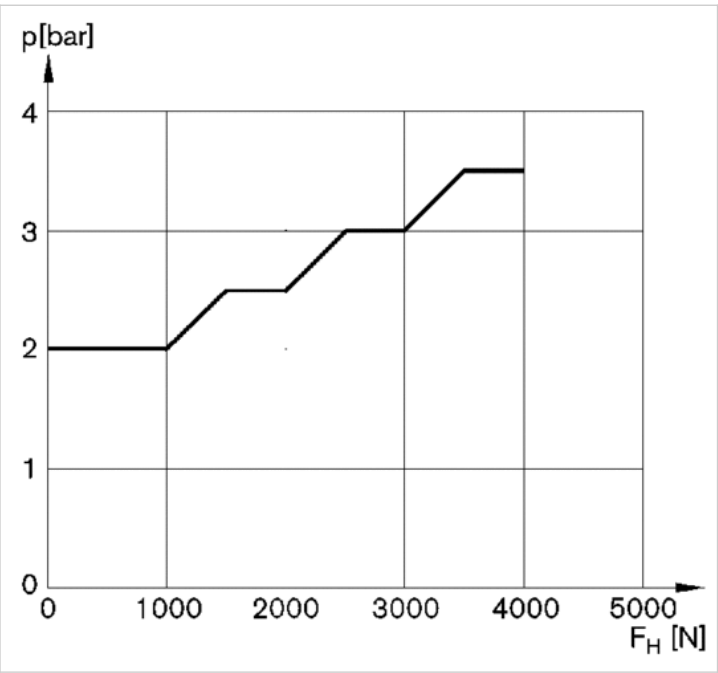
Holding force for piston Ø 50



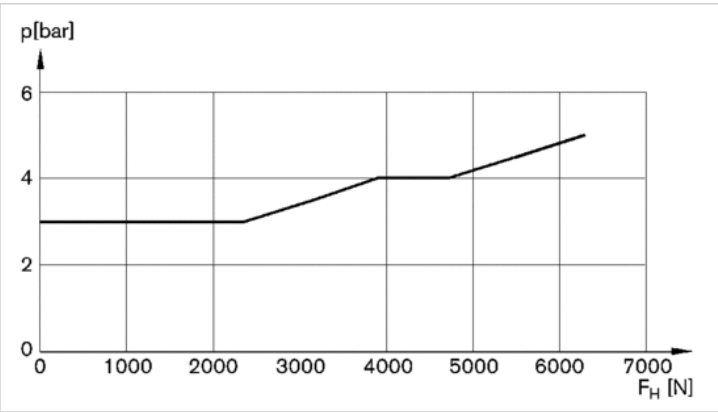
Holding force for piston Ø 63



Holding force for piston Ø 80

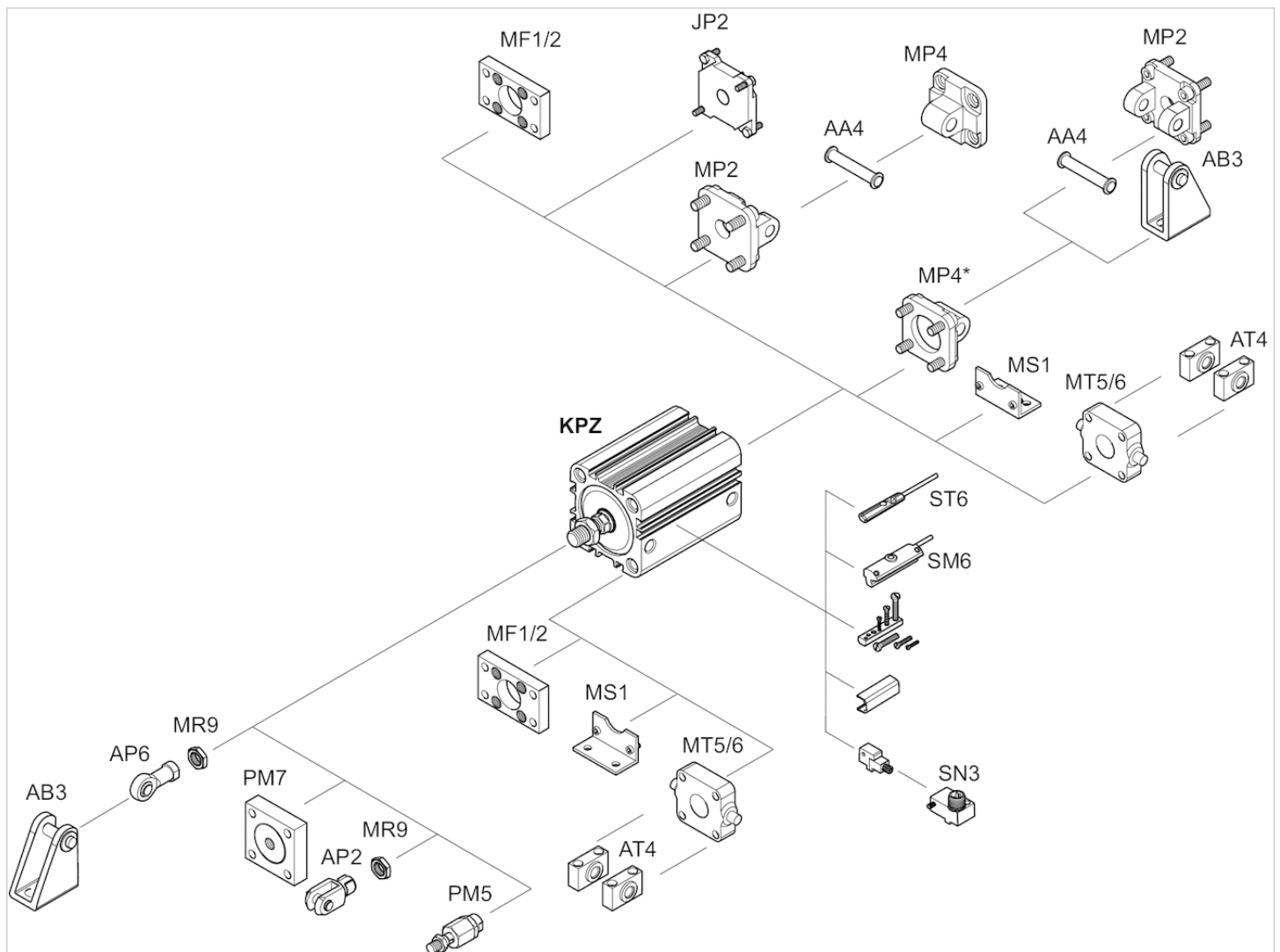


Holding force for piston Ø 100



Accessories overview

Overview drawing



* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Series KPZ-Multiple position

- Ø 25-100 mm
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- Piston rod Reinforced
- multi-position cylinder 3 positions



Compressed air connection	Internal thread
Working pressure min./max.	1 ... 10 bar
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar

Technical data

Piston Ø	25 mm	40 mm	63 mm	100 mm
Retracting piston force	260 N	665 N	1766 N	4639 N
Extracting piston force	309 N	792 N	1964 N	4948 N
Impact energy	0.3 J	0.7 J	1.3 J	2.5 J
Max. single stroke	400 mm	850 mm	850 mm	850 mm
Stroke max.	400 mm	2000 mm	2000 mm	2000 mm

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

In case of tensile load, positioning for intermediate strokes is only possible with counter pressure in the front chamber.

Use our Internet configurator to order variants with an external thread.

Technical information

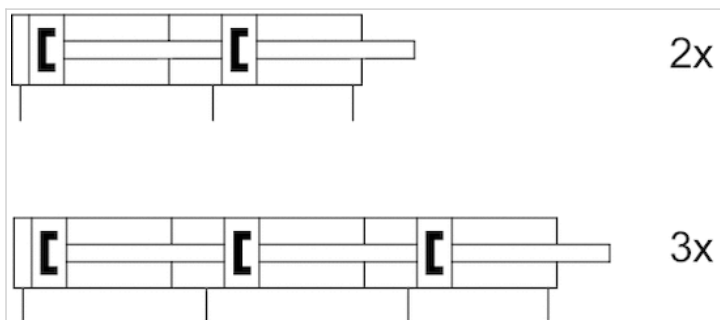
Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum

Dimensions

Ø	25	40	63	100
min. AF	14	20	20	26
AM (2)	22 (44)	24 (48)	32 (64)	40 (80)
min. BG	15.5	17	18	20
DA H11	12	14	18	28
E	40	58	80	120
EE	M5	M5	G 1/8	G 1/8
KF 6H	M6	M10	M12	M16
KK	M10x1,25	M12x1,25	M16x1,5	M20x1,5
KV	16	18	24	30
KW	5	6	8	10
LA	2.5	2.5	2.5	3
max. LB	3.5	4	5.5	6.5
LJ	4	9.5	17.8	26.5
MM f8	10	16	20	25
PL 1	7.5	12.5	11.5	13.8
PL 2	7.5	14.5	19	24.8
PL 3	42.6	61.6	66.4	87.1
PL4	75.1	99.6	108.9	145.1
RT	M5	M6	M8	M10
SW h13	8	13	16	21
SW*	–	13	16	21
TG	26 ±0,4	42 ±0,5	62 ±0,7	103 ±0,7
WH	7,5 ±1,4	9,5 ±1,6	10 ±1,6	12 ±2,0
X1	4.5	11	18	20
X2	–	–	12	20
X3	–	–	21	29
ZA0 (2x) ±0,5	78	102,5	116	154,5
ZA0 (3x) ±0,8	110,5	140,5	158,5	212,5
ZB0 (2x)	85,5 ±1,4	112 ±1,6	126 ±1,6	166,5 ±2,0
ZB0 (3x)	118 ±1,4	150 ±1,6	168,5 ±1,6	224,5 ±2,0

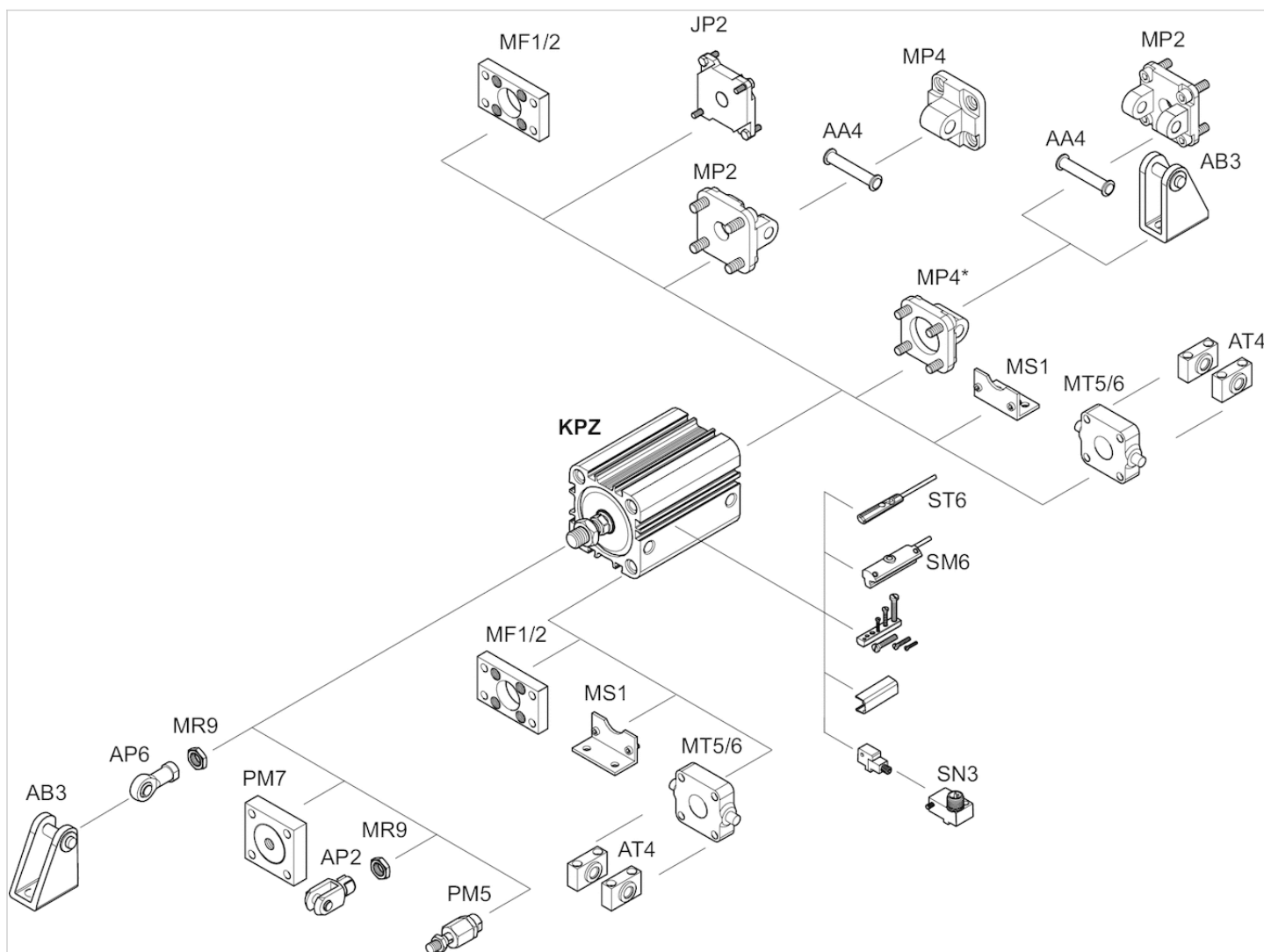
Diagrams

Circuit symbol



Accessories overview

Overview drawing



* Available for installation on KPZ for cylinder diameters 16 - 25 mm

NOTE:

This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Clevis mounting AB3, Series CM1

- Suitable piston Ø 12, 16 20, 25 mm



The delivered product may vary from that in the illustration.

Technical data

Part No.	Piston Ø	Swivel bearing Ø	Fig.
1827001446	12, 16 mm	6 mm	Fig. 1
1827001445	20, 25 mm	8 mm	Fig. 1

Scope of delivery: clevis mounting incl. pivot pins

Technical information

Material	
Material	Steel
	galvanized

Dimensions

Fig. 1

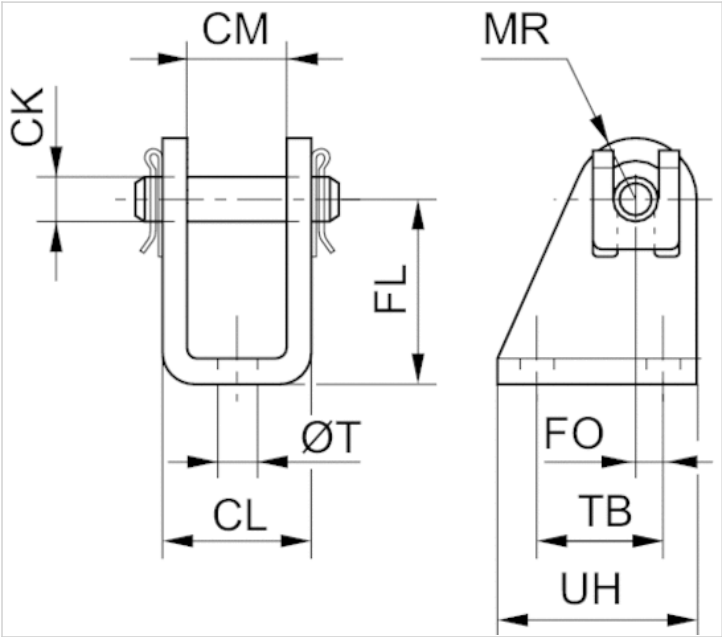
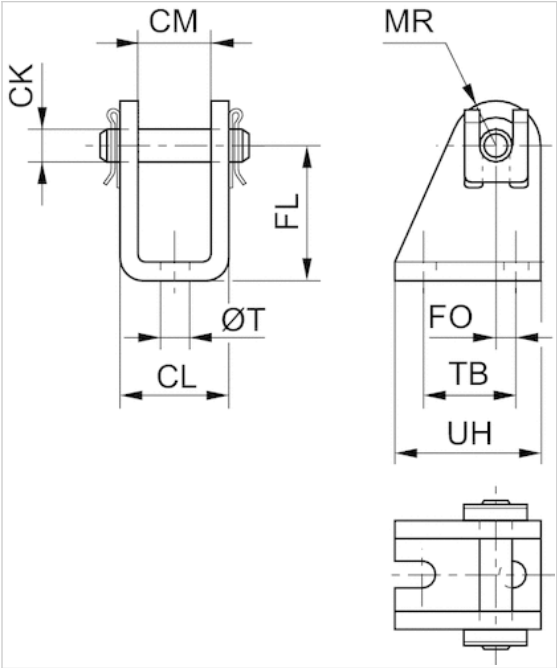


Fig. 2



Dimensions

Part No.	Piston Ø	Fig.	CM	Ø CK	CL	FL	FO	MR	Ø T	TB	UH
1827001446	12, 16 mm	Fig. 1	12,1	6	18,1	27	2,0	7	5,5	15	25
1827001445	20, 25 mm	Fig. 1	16,1	8	24,1	30	4,0	10	6,6	20	32

Clevis mounting MP2, Series CM1

- Suitable piston Ø 32 40 50 63 80 100 mm
- for series KPZ



Technical data

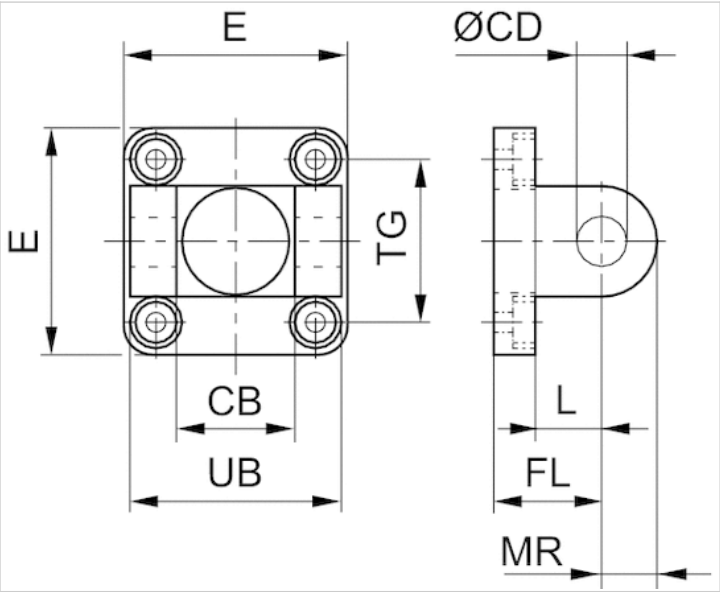
Part No.	Piston Ø	Swivel bearing Ø
1827002302	32 mm	10 mm
1827002303	40 mm	12 mm
1827002304	50 mm	12 mm
1827002305	63 mm	16 mm
1827002306	80 mm	16 mm
1827002307	100 mm	20 mm

Scope of delivery: clevis mounting incl. mounting screws

Technical information

Material	
Material	Steel
	galvanized
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	CB H14	Ø CD H9	E	FL ±0.2	L min.	MR max.	UB h13	TG
1827002302	32 mm	26	10	48	22	13	10	45	32 ±0.5
1827002303	40 mm	28	12	58	25	16	12.5	52	42 ±0.5
1827002304	50 mm	32	12	66	27	16	12.5	60	50 ±0.6
1827002305	63 mm	40	16	83	32	21	15	70	62 ±0.6
1827002306	80 mm	50	16	102	36	23	15	90	82 ±0.7
1827002307	100 mm	60	20	123	41	26	20	110	103 ±0.7

Rear eye MP4-HD, Series CM1

- Suitable for robust mechanical engineering applications ■ for clevis mounting MP2 and AB3
- Cylinder mounting in accordance with ISO 21287 ISO 15552
- Suitable piston Ø 16 20 25 32 40 50 63 80 100 mm



Standards

See table below

Technical data

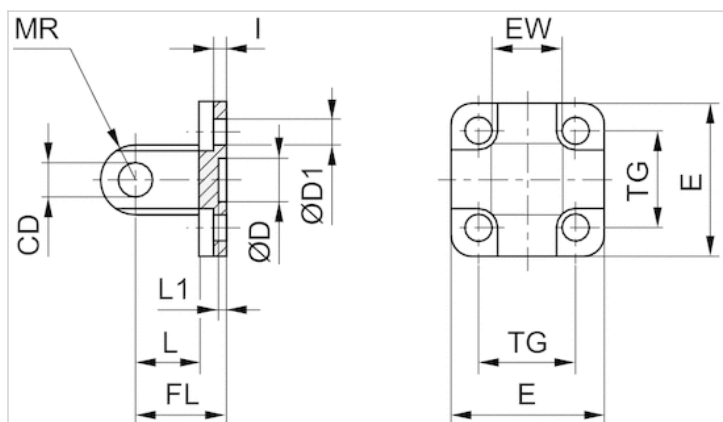
Part No.	Piston Ø	Swivel bearing Ø	Standardization	Housing material	Surface
1825805368	16 mm	6 mm	-	Die-cast aluminum	-
1827002300	20 mm	8 mm	ISO 21287	Steel	galvanized
1827002301	25 mm	8 mm	ISO 21287	Steel	galvanized
1827001283	32 mm	10 mm	ISO 15552	Aluminum (forged)	-
1827001284	40 mm	12 mm	ISO 15552	Aluminum (forged)	-
1827001285	50 mm	12 mm	ISO 15552	Aluminum (forged)	-
1827020086	63 mm	16 mm	ISO 15552	Aluminum (forged)	-
1827001287	80 mm	16 mm	ISO 15552	Aluminum (forged)	-
1827001288	100 mm	20 mm	ISO 15552	Aluminum (forged)	-

Scope of delivery: clevis incl. mounting screws

Technical information

Material	
Material	Die-cast aluminum Steel Aluminum (forged)
	galvanized
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	CD H9	Ø D	Ø D1	E	EW	FL ±0,2	I ±0,5	L min.	L1 min.
1825805368	16 mm	6	10 H13	4.5	27	12 -0,2/-0,6	16	2.6	10	3
1827002300	20 mm	8	12 H13	5.5	34	16 -0,2/-0,6	20	2.6	14	3
1827002301	25 mm	8	12 H13	5.5	40	16 -0,2/-0,6	20	2.6	14	3
1827001283	32 mm	10	30 H11	6.6	48	26 -0,2/-0,6	22	5.5	12	4.5
1827001284	40 mm	12	35 H11	6.6	53	28 -0,2/-0,6	25	5.5	15	4.5
1827001285	50 mm	12	40 H11	9	63	32 -0,2/-0,6	27	6.5	15	4.5
1827020086	63 mm	16	45 H11	9	73	40 -0,2/-0,6	32	6.5	20	4.5
1827001287	80 mm	16	45 H11	11	98	50 -0,2/-0,6	36	10	20	4.5
1827001288	100 mm	20	55 H11	11	115	60 -0,2/-0,6	41	10	25	4.5

MR max.	TG
6	18 ±0,2
8	22 ±0,4
8	26 ±0,4
10	32,5 ±0,2
12	38 ±0,2
12	46,5 ±0,2
16	56,5 ±0,2
16	72 ±0,2
20	89 ±0,2

Trunnion mounting MT5, MT6, Series CM1

- for mounting to the cylinder cover or base
- Suitable piston Ø 20 25 32 40 50 63 80 100 mm
- for series CCI, KPZ, CCL-IC/-IS KPZ



Weight

See table below

The delivered product may vary from that in the illustration.

Technical data

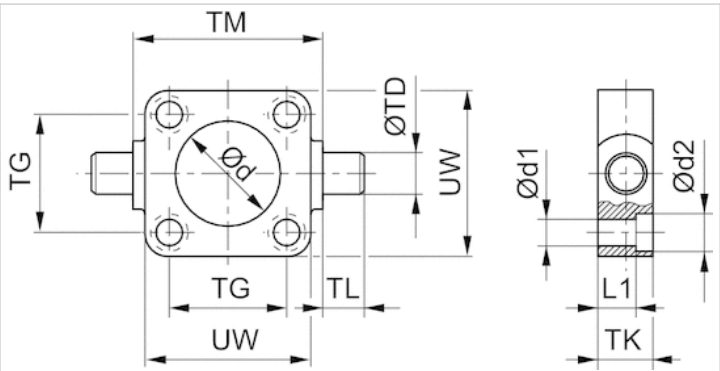
Part No.	Piston Ø	Weight
1825805360	20 mm	0.104 kg
1825805361	25 mm	0.122 kg
1825805362	32 mm	0.128 kg
1825805363	40 mm	0.308 kg
1825805364	50 mm	0.37 kg
1825805365	63 mm	0.69 kg
1825805366	80 mm	0.894 kg
1825805367	100 mm	1.58 kg

Scope of delivery: trunnion mounting incl. mounting screws

Technical information

Material	
Material	Nodular graphite iron
	galvanized
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston $\varnothing$	$\varnothing d$ H11	$\varnothing d1$	$\varnothing d2$	L1	TD e9	TG $\pm 0,2$	TK	TL h14	TM h14	UW
1825805360	20 mm	18	5.5	10	8	12	22	14	12	38	35
1825805361	25 mm	22	5.5	10	8	12	26	14	12	42	39
1825805362	32 mm	32	6.6	10.5	7	12	32	14	12	52	46
1825805363	40 mm	46	6.6	11	12	16	42	19	16	63	59
1825805364	50 mm	53	9	14	10	16	50	19	16	75	69
1825805365	63 mm	69	9	15	15	20	62	24	20	90	84
1825805366	80 mm	87	11	18	13	20	82	24	20	110	102
1825805367	100 mm	55	11	18	18	25	103	29	25	132	125

Bearing AT4, Series CM1

- for trunnion mounting MT4, MT5, MT6
- Cylinder mounting in accordance with ISO 15552
- Suitable piston Ø 20, 25, 32 40, 50 63, 80 100, 125 mm
- for series CCI, CCL-IC, ICL, KPZ, PRA/TRB CCI, CCL-IC, KPZ, PRA/TRB



Standards

ISO 15552

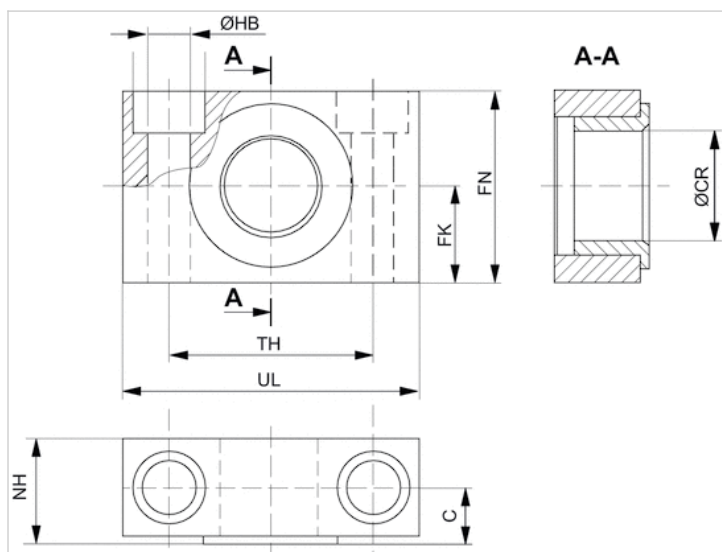
Technical data

Part No.	Piston Ø	Swivel bearing Ø	Scope of delivery
1827001603	20, 25, 32 mm	12 mm	2 piece
1827001604	40, 50 mm	16 mm	2 piece
1827001605	63, 80 mm	20 mm	2 piece
1827001606	100, 125 mm	25 mm	2 piece

Technical information

Material	
Material	Steel
	galvanized
Guide bushing	Sintered bronze

Dimensions



Dimensions

Part No.	Piston Ø	UL	NH	TH	C	CR H9	HB H13	FN	FK	Plain bearing
1827001603	20, 25, 32 mm	46	18	32 ±0,2	10.5	12	6.6	30	15 ±0,1	Sintered bronze
1827001604	40, 50 mm	55	21	36 ±0,2	12	16	9	36	18 ±0,1	Sintered bronze
1827001605	63, 80 mm	65	23	42 ±0,2	13	20	11	40	20 ±0,1	Sintered bronze
1827001606	100, 125 mm	75	28.5	50 ±0,2	16	25	14	50	25 ±0,1	Sintered bronze

Flange mounting MF1, MF2, Series CM1

- Suitable piston Ø 16 20 25 mm



Weight

See table below

Technical data

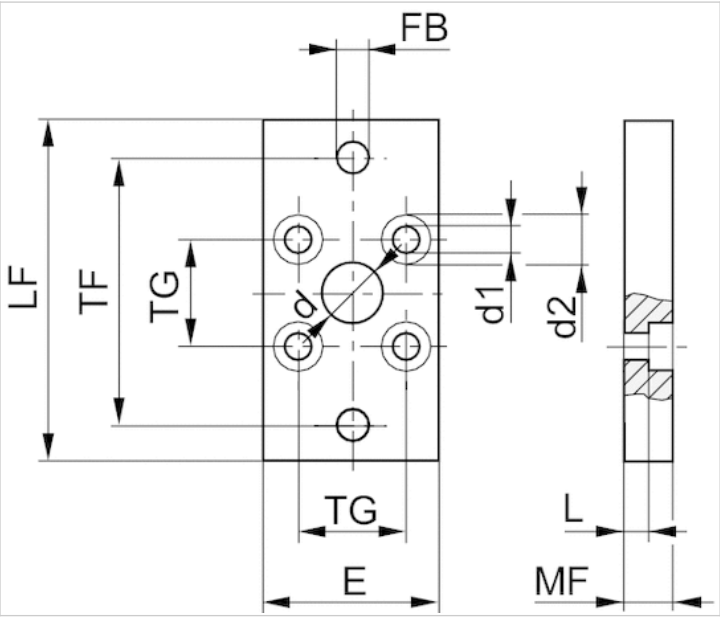
Part No.	Piston Ø	Swivel bearing Ø	Weight
1821038241	16 mm	10 mm	0.05 kg
1827002292	20 mm	12 mm	0.18 kg
1827002293	25 mm	12 mm	0.23 kg

Scope of delivery: flange mounting incl. mounting screws

Technical information

Material	
Material	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	Ød H11	Ød1	Ød2	E 1)	ØFB	L4	MF	R	TF	TG	UF
1821038241	16 mm	10	4.5	10	29	5.5	5.6	10	–	43	18	55
1827002292	20 mm	12	5.5	10	36	6.6	4.6	10	–	55	22	70
1827002293	25 mm	12	5.5	10	40	6.6	4.6	10	–	60	26	76

1) Max.

Flange mounting MF1, MF2, Series CM1

- Suitable piston Ø 32 40 50 63 80 100 mm



Weight

See table below

Technical data

Part No.	Piston Ø	Weight
1827002294	32 mm	0.23 kg
1827002295	40 mm	0.45 kg
1827002296	50 mm	0.66 kg
1827002297	63 mm	1.27 kg
1827002298	80 mm	1.9 kg
1827002299	100 mm	2.7 kg

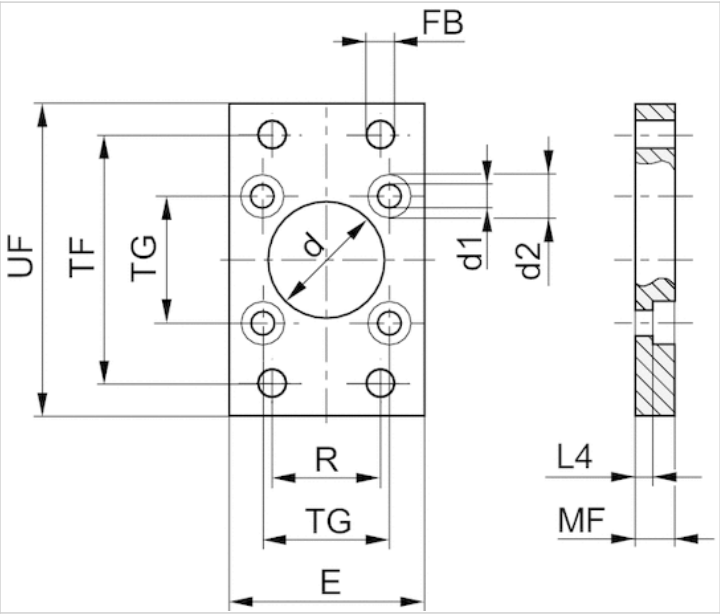
Scope of delivery: flange mounting incl. mounting screws

Technical information

Material	
Material	Steel
	galvanized
Screws	Steel
	galvanized

Dimensions

Dimensions



Dimensions

Part No.	Piston $\varnothing$	$\varnothing d$ H11	$\varnothing d1$	$\varnothing d2$	E 1)	$\varnothing FB$	L4	MF	R	TF	TG	UF
1827002294	32 mm	14	6.6	11	50	7	3.6	10	32	65	32	80
1827002295	40 mm	14	6.6	11	60	9	3.6	10	36	82	42	102
1827002296	50 mm	18	9	15	66	9	3.4	12	45	90	50	110
1827002297	63 mm	18	9	15	87	9	6.4	15	50	110	62	130
1827002298	80 mm	23	11	18	107	12	4.4	15	63	135	82	160
1827002299	100 mm	28	11	18	128	14	4.4	15	75	163	103	190

1) Max.

Intermediate flange JP2, Series CM1

- for multi-position cylinders
- Suitable piston Ø 16 20 25 32 40 50 63 80 100 mm
- for series CCI, KPZ KPZ



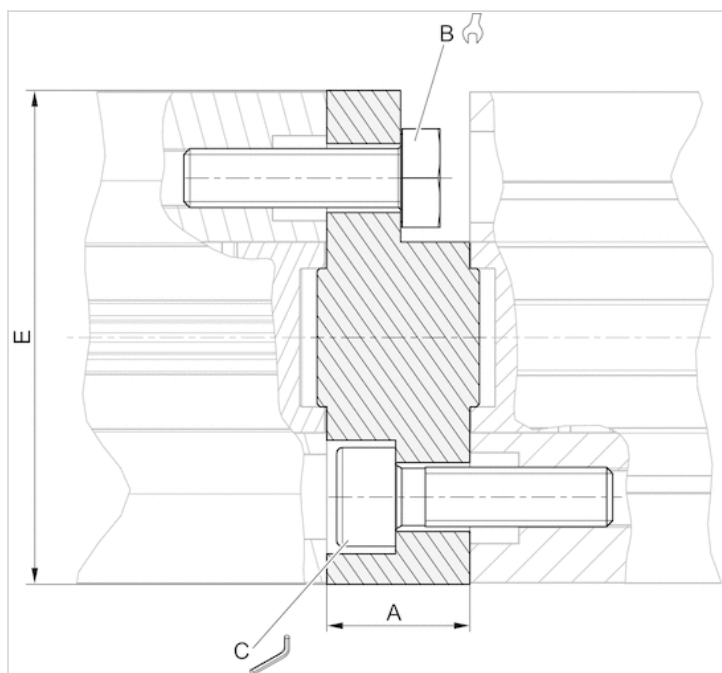
Technical data

Part No.	Piston Ø
1827020290	16 mm
1827020267	20 mm
1827020268	25 mm
1827020269	32 mm
1827020270	40 mm
1827020271	50 mm
1827020272	63 mm
1827020273	80 mm
1827020274	100 mm

Technical information

Material	
Material	Aluminum

Dimensions



Dimensions

Part No.	For series	A	B	C	Md [Nm] 1)	E
1827020290	CCI, KPZ	12.5	7	–	2.5	28.4
1827020267	CCI, KPZ	12.5	8	–	4	35
1827020268	CCI, KPZ	13	8	4	4	40
1827020269	CCI, KPZ	14.5	10	5	4	50
1827020270	CCI, KPZ	14.5	10	5	4	57.1
1827020271	CCI, KPZ	14.5	13	6	8	67.4
1827020272	CCI, KPZ	14.5	13	6	8	80
1827020273	KPZ	16.5	16	–	16	98.4
1827020274	KPZ	19.5	16	–	16	120

1) torque

Foot mounting MS1, Series CM1

- to mount on cylinder PRA, TRB, CCL-IS/-IC, CCI, KPZ, 167, CVI, ITS
- Suitable piston Ø 16 20 25 32 40 50 63 80 100 mm



Technical data

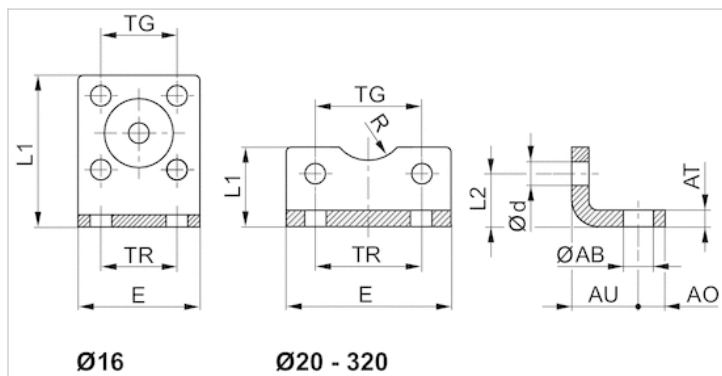
Part No.	Piston Ø	For series
1821332053	16 mm	KPZ CCI CCL-IC
1827002284	20 mm	KPZ CCI CCL-IC
1827002285	25 mm	KPZ CCI CCL-IC
1827002286	32 mm	KPZ
1827002287	40 mm	KPZ
1827002288	50 mm	KPZ
1827002289	63 mm	KPZ
1827002290	80 mm	KPZ
1827002291	100 mm	KPZ

Scope of delivery: 2 foot mountings incl. mounting screws

Technical information

Material	
Material	Steel
	galvanized
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	ØAB	AO	AT	AU ±0,2	Ød	E	L1	L2	R	TG	TR
1821332053	16 mm	5.5	5	3	13	4.5	29	35.5	13	8	18 ±0,2	18
1827002284	20 mm	6.6	6	4	16	5.4	36	22	16	10	22 ±0,2	22
1827002285	25 mm	6.6	6	4	16	5.4	40	23	17	11	26 ±0,2	26
1827002286	32 mm	6.6	8	5	18	6.6	50	24	16	–	32	32
1827002287	40 mm	9	8	5	20	6.6	60	29.5	21.5	–	42	42
1827002288	50 mm	9	8	6	24	9	68	30	22	–	50	50
1827002289	63 mm	11	12	6	27	9	84	39	28.5	–	62	62
1827002290	80 mm	11	12	8	30	11	102	36.5	24.5	–	82	82
1827002291	100 mm	13.5	12	8	33	11	123	38.5	26.5	–	103	103

Bolts AA4, Series CM1

- Suitable piston Ø 32 40 50 63 80 100 mm



Weight

See table below

Technical data

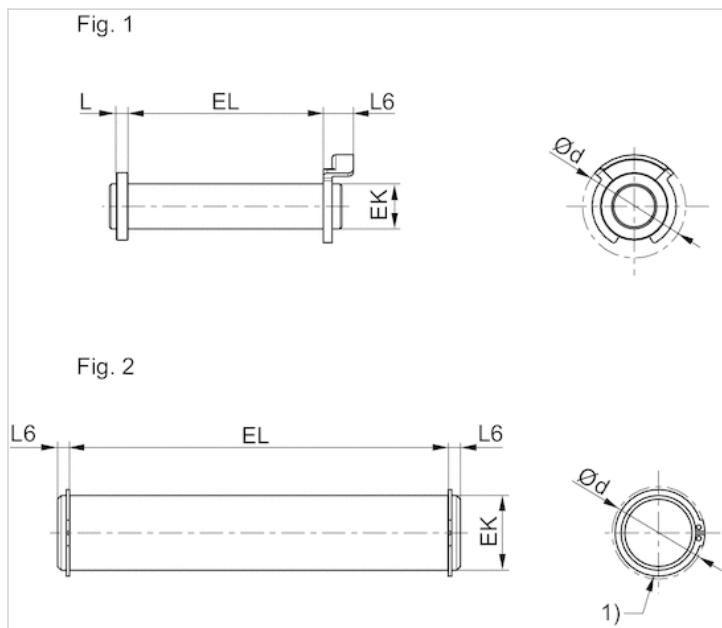
Part No.	Piston Ø	Weight	Fig.
1823120020	32 mm	0.03 kg	Fig. 1
1823120021	40 mm	0.05 kg	Fig. 1
1823120022	50 mm	0.06 kg	Fig. 1
1823120023	63 mm	0.12 kg	Fig. 1
1823120024	80 mm	0.15 kg	Fig. 1
1823120025	100 mm	0.29 kg	Fig. 1

Scope of delivery: pivot pins incl. circlips

Technical information

Material	
Material	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	Fig.	Ø d max.	EK e8	EL	L max.	L6 max.
1823120020	32 mm	Fig. 1	20	10	45.2 +0,3	3.5	9
1823120021	40 mm	Fig. 1	22	12	52.2 +0,3	4	9
1823120022	50 mm	Fig. 1	22	12	60.2 +0,3	4	9
1823120023	63 mm	Fig. 1	28	16	70.2 +0,3	4.5	11
1823120024	80 mm	Fig. 1	28	16	90.2 +0,3	4.5	11
1823120025	100 mm	Fig. 1	38	20	110.2 +0,3	5	11

Mounting kit



Weight

0.02 kg

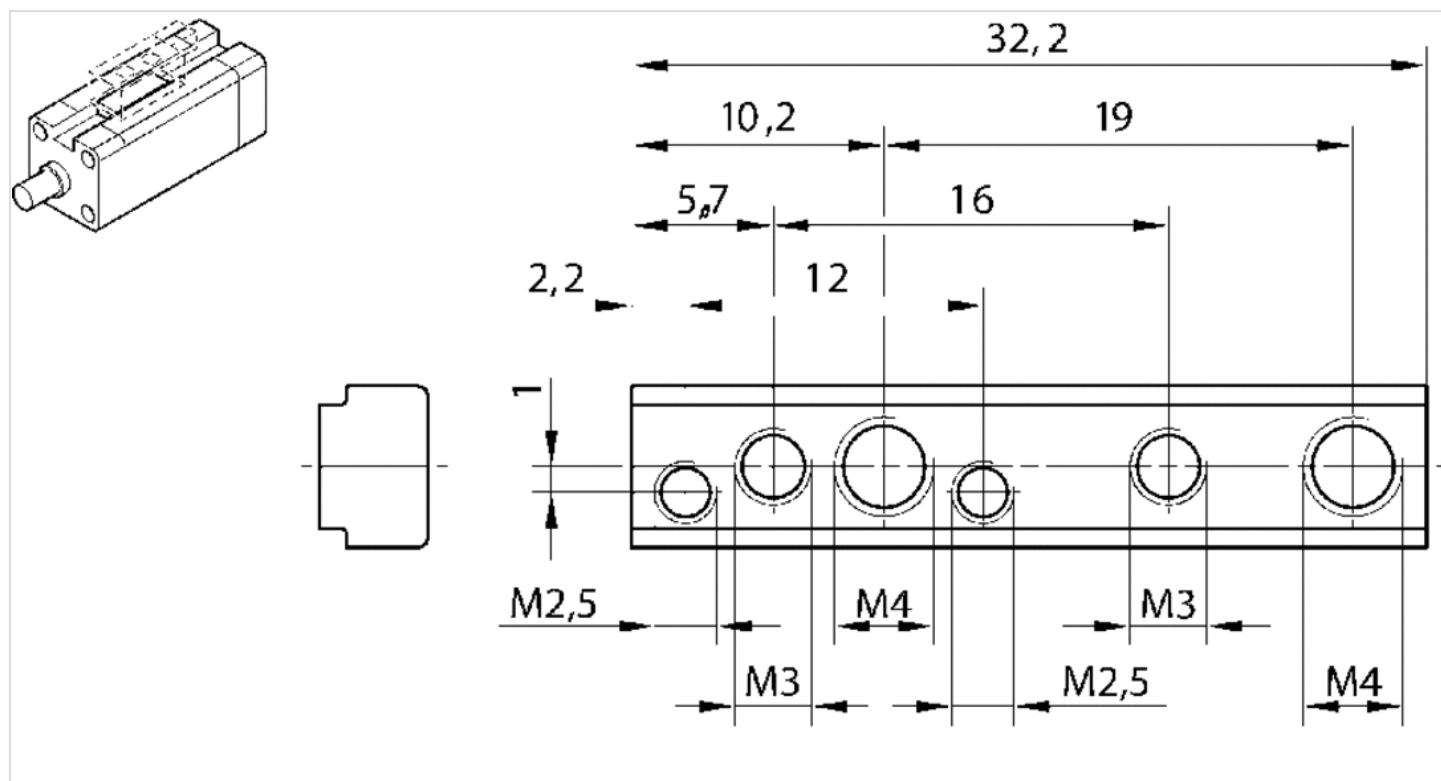
Technical data

Part No.
1827020275

Technical information

Material	
Housing	Brass

Dimensions



Dimensions

Part No.	Ø mm	Material Screws	Surface Screws
1827020275	16–100	Steel	galvanized

Piston rod nut MR9



Weight

See table below

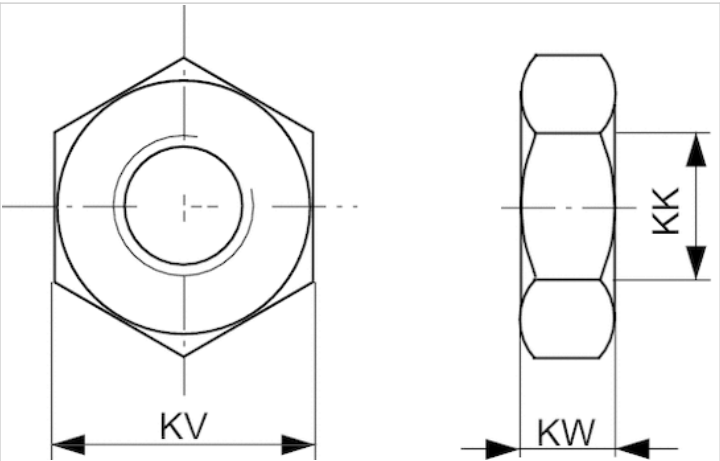
Technical data

Part No.	Suitable piston rod thread	Weight
1823300034	M8	0.005 kg
8103190344	M12x1,25	0.012 kg

Technical information

Material	
	Steel
	galvanized

Dimensions



Dimensions

Part No.	KK	KV	KW
1823300034	M8	13	4
8103190344	M12x1,25	19	6

Rod clevis AP2, Series CM2

- to mount on cylinder PRA, TRB, CCI, MNI, ICM, KPZ, KHZ, 167, CVI, RPC, RDC, ITS



Weight

See table below

Technical data

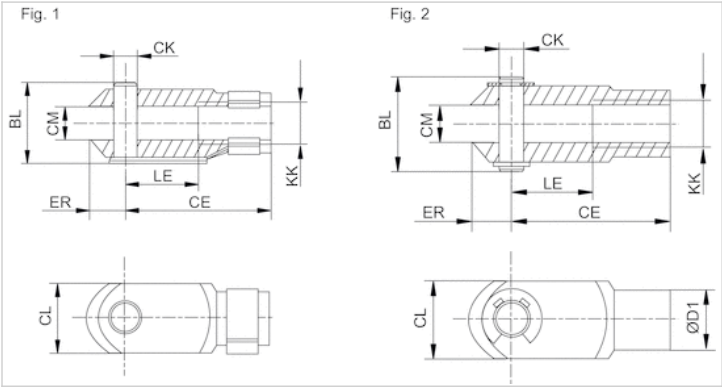
Part No.	Suitable piston rod thread	for	Weight
1822122010	M8	CCI MNI ICM KHZ	0.05 kg
1822122024	M10x1,25	PRA TRB CCI MNI ICM KPZ 167 CVI RPC RDC	0.1 kg
1822122025	M12x1,25	PRA TRB CCI KPZ 167 CVI RPC 102	0.16 kg
1822122005	M16x1,5	PRA TRB CCI KPZ 167 CVI RPC RDC 102	0.4 kg
1822122004	M20x1,5	PRA TRB KPZ 167 CVI 102	0.7 kg

Part No.	Fig.
1822122010	Fig. 1
1822122024	Fig. 1
1822122025	Fig. 1
1822122005	Fig. 1
1822122004	Fig. 1

Technical information

Material	
	Steel
	galvanized

Dimensions



Dimensions

Part No.	KK	BL	CE	ØCK e11	CL	CM	ØD1	ER	LE	Fig.
1822122010	M8	21,5	32	8	16	8	14	10	16	Fig. 1
1822122024	M10x1,25	26	40	10	20	10	18	12	20	Fig. 1
1822122025	M12x1,25	31	48	12	24	12	20	14	24	Fig. 1
1822122005	M16x1,5	39	64	16	32	16	26	19	32	Fig. 1
1822122004	M20x1,5	50	80	20	40	20	34	20	40	Fig. 1

Rod clevis PM6, Series CM2

- for ball eye rod end AP6



Technical data

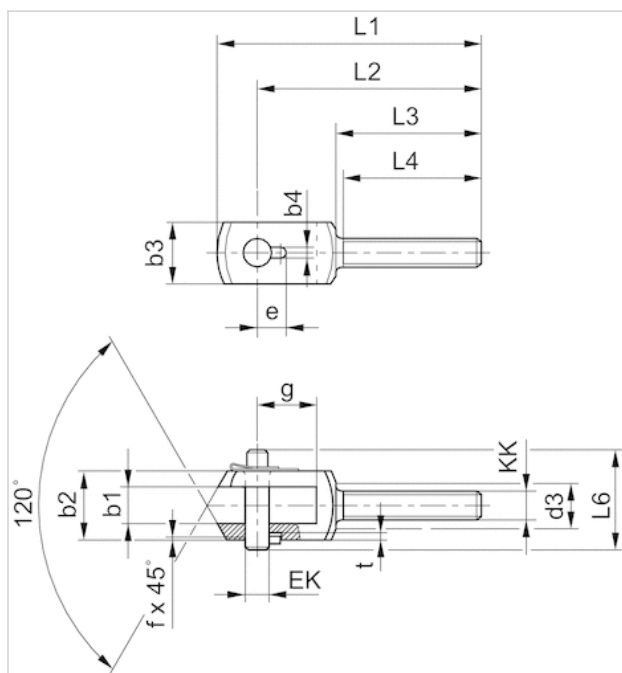
Part No.	for	Swivel bearing Ø
1822122032	AP6	14 mm
1822122033	AP6	16 mm
1822122034	AP6	21 mm
1822122035	AP6	25 mm

Scope of delivery incl. bolt

Technical information

Material	
	Steel
	galvanized

Dimensions



Dimensions

Part No.	b1 B12	b2 d12	b3	b4 +0,2	d3	e +0,3	EK	f	g	L1	L2	L3	L4 +1	L6	t +0,2
1822122032	14	28	20	3.3	17	11.5	10	0.7	20	90	78	53	50	35	3
1822122033	16	30	25	4.3	19	12	12	1	26	108	92	58	55	39	3
1822122034	21	40	35	4.3	24	14	16	1	31	129	108	65	62	50	3
1822122035	25	50	40	4.3	30	16	20	1	43	156	131	73	69	60	3

Ball eye rod end AP6, series CM2

- with flange to mount on cylinder PRA, TRB, CCI, SSI, MNI, RPC, KPZ, 167, CVI, RDC, 102, ITS



Weight

See table below

Technical data

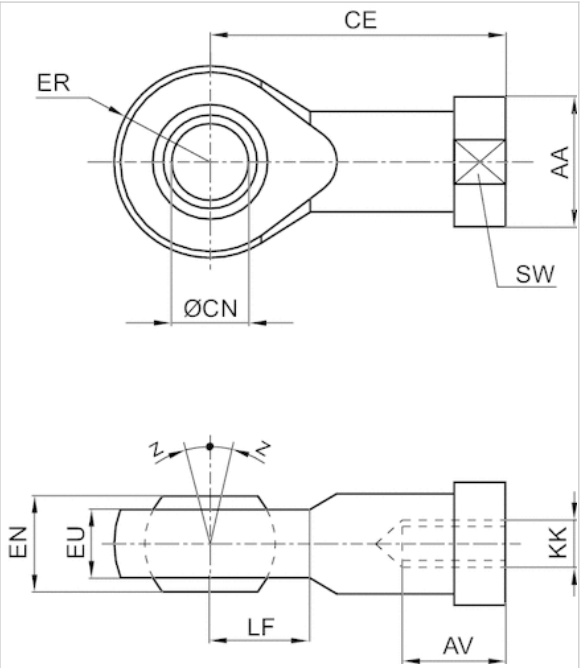
Part No.	Suitable piston rod thread	for	Swivel bearing Ø
1822124002	M8	MNI CCI SSI KPZ	203.2 mm
1822124003	M10x1,25	PRA TRB MNI CCI SSI RPC KPZ 167 CVI RDC	254 mm
1822124004	M12x1,25	PRA TRB CCI SSI RPC KPZ 167 CVI 102	304.8 mm
1822124005	M16x1,5	PRA TRB CCI SSI RPC KPZ 167 CVI RDC 102	406.4 mm
1822124006	M20x1,5	PRA TRB KPZ 167 CVI 102	508 mm

Part No.	Weight
1822124002	0.05 kg
1822124003	0.07 kg
1822124004	0.12 kg
1822124005	0.21 kg
1822124006	0.38 kg

Technical information

Material	
	Steel
	galvanized

Dimensions



Dimensions

Part No.	KK	AA	AV min.	CE	Ø CN H7	EN -0,1	ER	EU max.	LF	SW	Z [°] max.
1822124002	M8	16	12	36	8	12	12	9.5	12	14	4
1822124003	M10x1,25	19	15	43	10	14	14	11.5	14	17	4
1822124004	M12x1,25	22	18	50	12	16	16	12.5	16	19	4
1822124005	M16x1,5	27	24	64	16	21	21	15.5	21	22	4
1822124006	M20x1,5	34	30	77	20	25	25	18.5	25	30	4

Compensating coupling PM5, series CM2

- to mount on cylinder PRA, TRB, CCL-IS/-IC, CCI, SSI, MNI, KPZ, KHZ, 167, CVI, RPC, RDC, ITS■spherical



Weight

See table below

Technical data

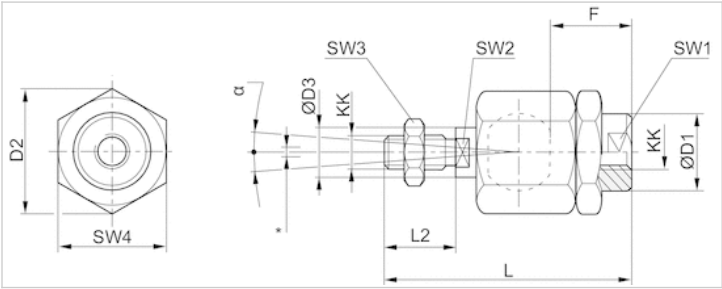
Part No.	Suitable piston rod thread	for
R412026142	M10x1,25	PRA TRB CCL-IS CCL-IC CCI SSI KPZ 167 CVI RPC
R412026143	M12x1,25	PRA TRB CCI CCL-IS CCL-IC SSI KPZ 167 CVI RPC
R412026144	M16x1,5	PRA TRB CCI CCL-IS CCL-IC KPZ 167 CVI RPC RDC
R412026145	M20x1,5	PRA TRB CCL-IS SSI KPZ 167 CVI

Part No.	Weight
R412026142	0.21 kg
R412026143	0.21 kg
R412026144	0.65 kg
R412026145	0.68 kg

Technical information

Material
Steel
galvanized

Dimensions



* Radial joint

Dimensions

Part No.	KK	Ø D1	D2	Ø D3	F	L ±2	L2	SW1	SW2	SW3	SW4	α [°]	1)	2)
R412026142	M10x1,25	22	32	14	23	74.5	23	19	12	17	30	8	0.05-0.5	0-2
R412026143	M12x1,25	22	32	14	24	75	24	19	12	19	30	7	0.05-0.5	0-2
R412026144	M16x1,5	32	45	22	30	103	30	30	20	24	41	6	0.05-0.5	0-2
R412026145	M20x1,5	32	45	22	40	119	40	30	20	30	41	6	0.05-0.5	0-2

1) Axial play

2) Radial play

Compensating coupling PM7, series CM2

- to mount on cylinder PRA, TRB, CCL-IS/-IC, CCI, SSI, KPZ, 167, CVI, RPC, ITS■with plate



Weight

See table below

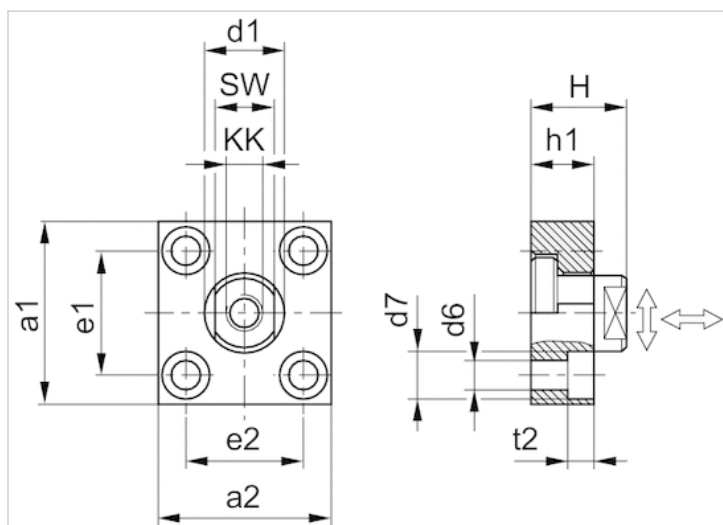
Technical data

Part No.	Suitable piston rod thread	for	Weight
1827001629	M10x1,25	PRA TRB CCL-IS CCL-IC CCI SSI KPZ RPC 167	0.3 kg
1827001630	M12x1,25	PRA TRB CCL-IS CCL-IC CCI SSI KPZ RPC 167	0.4 kg
1827001631	M16x1,5	PRA TRB CCL-IS CCL-IC CCI SSI KPZ RPC 167	0.9 kg
1827001632	M20x1,5	PRA TRB CCL-IS SSI KPZ CVI 167	1.15 kg

Technical information

Material	
	Steel
	galvanized

Dimensions



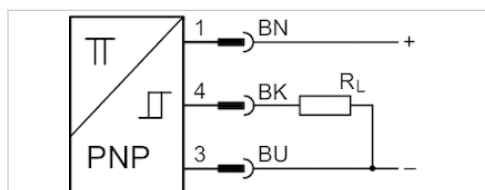
Dimensions

Part No.	a1	a2	d1 h11	d6 H13	d7 H13	e1 H13	e2	h1	t2	H	SW
1827001629	60	37	20	6.6	11	36 ±0,15	23 ±0,15	15	7	24	17
1827001630	60	56	25	9	15	42 ±0,2	38 ±0,2	20	9	30	19
1827001631	80	80	30	11	18	58 ±0,2	58 ±0,2	20	11	32	24
1827001632	90	90	40	14	20	65 ±0,3	65 ±0,3	20	13	35	36

Tightening torque for the coupling pin $M_a \pm 5\%$	Axial play min./max.	Radial play min./max.
17 Nm	0.4 0.8 mm	1.9 2.3 mm
29 Nm	0.4 0.8 mm	1.9 2.3 mm
71 Nm	0.4 0.8 mm	1.9 2.3 mm
138 Nm	0.4 0.8 mm	1.9 2.3 mm

Sensor, Series ST6

- 6 mm T-slot
- with cable
- open cable ends, 3-pin
- ATEX
- UL certification, ATEX
- electronic PNP
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Certificates

ATEX class G
 ATEX class D
 Ambient temperature min./max.
 Protection class
 Switching point precision
 Quiescent current (without load)
 Min./max. DC operating voltage
 Switching logic
 LED status display
 Vibration resistance
 Shock resistance
 Cable length L

ATEX CE declaration of conformity cULus
 RoHS
 II 3G Ex nA IIC T4 Gc X
 II 3D Ex tc IIIC T135°C Dc X
 -20 ... 50 °C
 IP67
 ±0,1 mT
 10 mA
 10 ... 30 V DC
 NO (make contact)
 Yellow
 10 - 55 Hz, 1 mm
 30 g / 11 ms
 3 5 m

Technical data

Part No.	for	Type of contact	Cable length L
R412022854	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	3 m
R412022856	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	5 m

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412022854	≤ 2,5 V	0.1 A
R412022856	≤ 2,5 V	0.1 A

Part No.	Max. switching frequency
R412022854	1000 Hz
R412022856	1000 Hz

Part No.	Version
R412022854	short circuit resistant Protected against polarity reversal

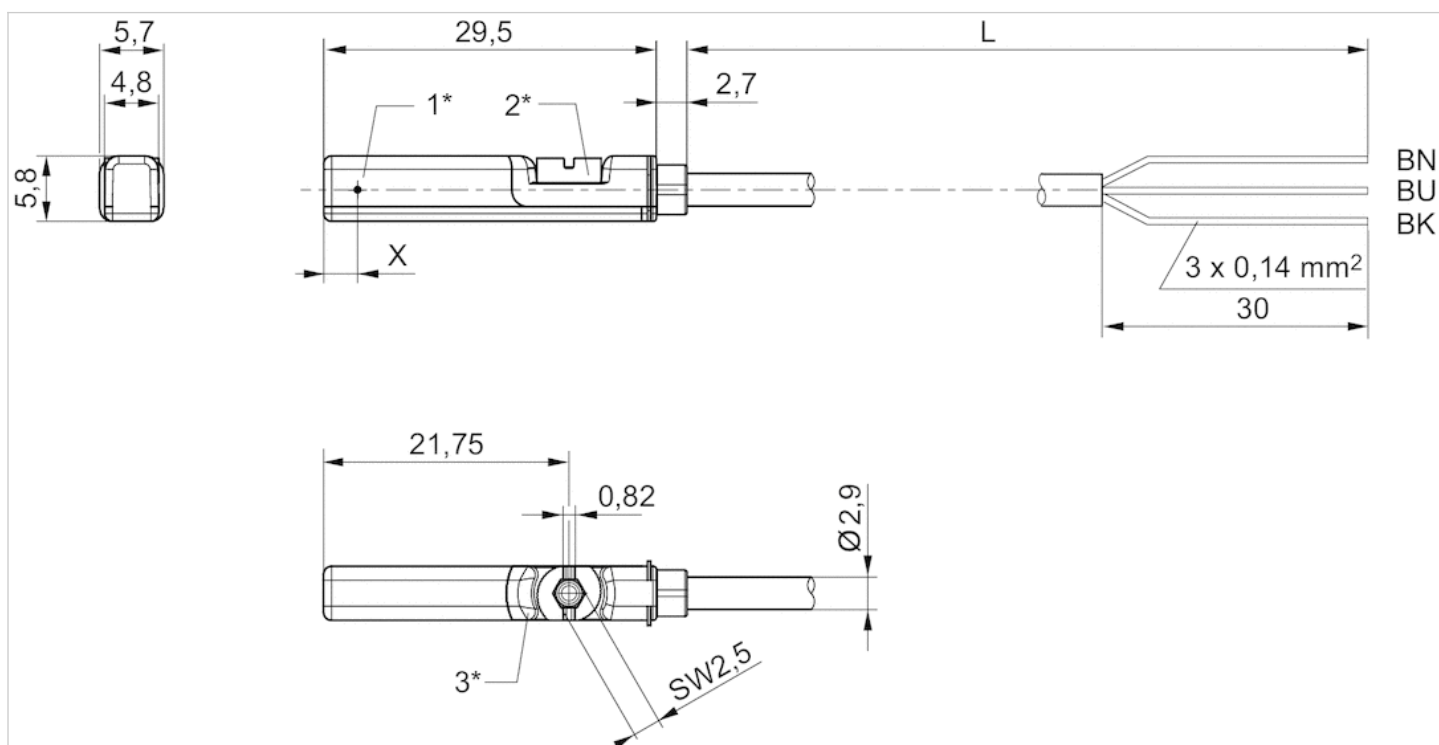
Part No.	Version
R412022856	short circuit resistant Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

Fig. 2



1* = switching point 2* = locking screw 3* = LED window, transparent

L = cable length

BN = brown, BK = black, BU = blue

X = electronic: 11.6 mm

Sensor, Series ST6

- 6 mm T-slot
- with cable
- open cable ends, 2-pin open cable ends, 3-pin
- UL certification
- Reed electronic PNP electronic NPN
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Ambient temperature min./max.	-30 ... 80 °C
Protection class	IP65, IP67, IP69K
Switching point precision	±0,1 mT
Nominal current, actuated state	30 mA
Quiescent current (without load)	8 mA
Min./max. DC operating voltage	See table below
Min./max. AC operating voltage	See table below
Hysteresis	≥ 0,2 mT
Switching logic	NO (make contact)
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	3 5 10 m

Technical data

Part No.		for	Type of contact
R412022866		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412027170		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022869		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022870		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022871		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022853		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022855		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022857		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022849		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic NPN
R412022850		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic NPN

Part No.	Cable length L	Min./max. DC operating voltage	Min./max. AC operating voltage
R412022866	3 m	10 ... 230 V DC	10 ... 230 V AC
R412027170	5 m	10 ... 230 V DC	10 ... 230 V AC
R412022869	3 m	10 ... 30 V DC	10 ... 30 V AC
R412022870	5 m	10 ... 30 V DC	10 ... 30 V AC
R412022871	10 m	10 ... 30 V DC	10 ... 30 V AC
R412022853	3 m	10 ... 30 V DC	-
R412022855	5 m	10 ... 30 V DC	-
R412022857	10 m	10 ... 30 V DC	-
R412022849	3 m	10 ... 30 V DC	-
R412022850	5 m	10 ... 30 V DC	-

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412022866	≤ 3,5 V	0.13 A
R412027170	≤ 3,5 V	0.13 A
R412022869	I*Rs	0.3 A
R412022870	≤ 0,1 V	0.3 A
R412022871	I*Rs	0.3 A
R412022853	≤ 2,5 V	0.13 A
R412022855	≤ 2,5 V	0.13 A
R412022857	≤ 2,5 V	0.13 A
R412022849	≤ 2,5 V	0.13 A
R412022850	≤ 2,5 V	0.13 A

Part No.	AC switching current, max.	Switching capacity
R412022866	0.13 A	Reed, 2-pin: max. 10 W
R412027170	0.13 A	Reed, 2-pin: max. 10 W
R412022869	0.5 A	Reed, 3-pin: max. 6 W
R412022870	0.5 A	Reed, 3-pin: max. 6 W
R412022871	0.5 A	Reed, 3-pin: max. 6 W

Part No.	AC switching current, max.	Switching capacity
R412022853	-	-
R412022855	-	-
R412022857	-	-
R412022849	-	-
R412022850	-	-

Part No.	Max. switching frequency	Operating current, not switched
R412022866	400 Hz	-
R412027170	400 Hz	-
R412022869	400 Hz	-
R412022870	400 Hz	-
R412022871	400 Hz	-
R412022853	1000 Hz	8 mA
R412022855	1000 Hz	8 mA
R412022857	1000 Hz	8 mA
R412022849	1000 Hz	8 mA
R412022850	1000 Hz	8 mA

Part No.	Operating current, switched
R412022866	-
R412027170	-
R412022869	-
R412022870	-
R412022871	-
R412022853	30 mA
R412022855	30 mA
R412022857	30 mA
R412022849	30 mA
R412022850	30 mA

Part No.	Version	Fig.	
R412022866	Protected against polarity reversal	Fig. 1	1)
R412027170	Protected against polarity reversal	Fig. 1	1)
R412022869	Protected against polarity reversal	Fig. 2	2)
R412022870	Protected against polarity reversal	Fig. 2	2)
R412022871	Protected against polarity reversal	Fig. 2	2)
R412022853	short circuit resistant Protected against polarity reversal	Fig. 2	3)
R412022855	short circuit resistant Protected against polarity reversal	Fig. 2	3)
R412022857	short circuit resistant Protected against polarity reversal	Fig. 2	3)
R412022849	short circuit resistant Protected against polarity reversal	Fig. 2	3)
R412022850	short circuit resistant Protected against polarity reversal	Fig. 2	3)

1) open cable ends, 2-pin, The product of operating voltage and continuous current must not exceed the maximum switching capacity.

2) open cable ends, 3-pin, The product of operating voltage and continuous current must not exceed the maximum switching capacity.

3) open cable ends, 3-pin

Technical information

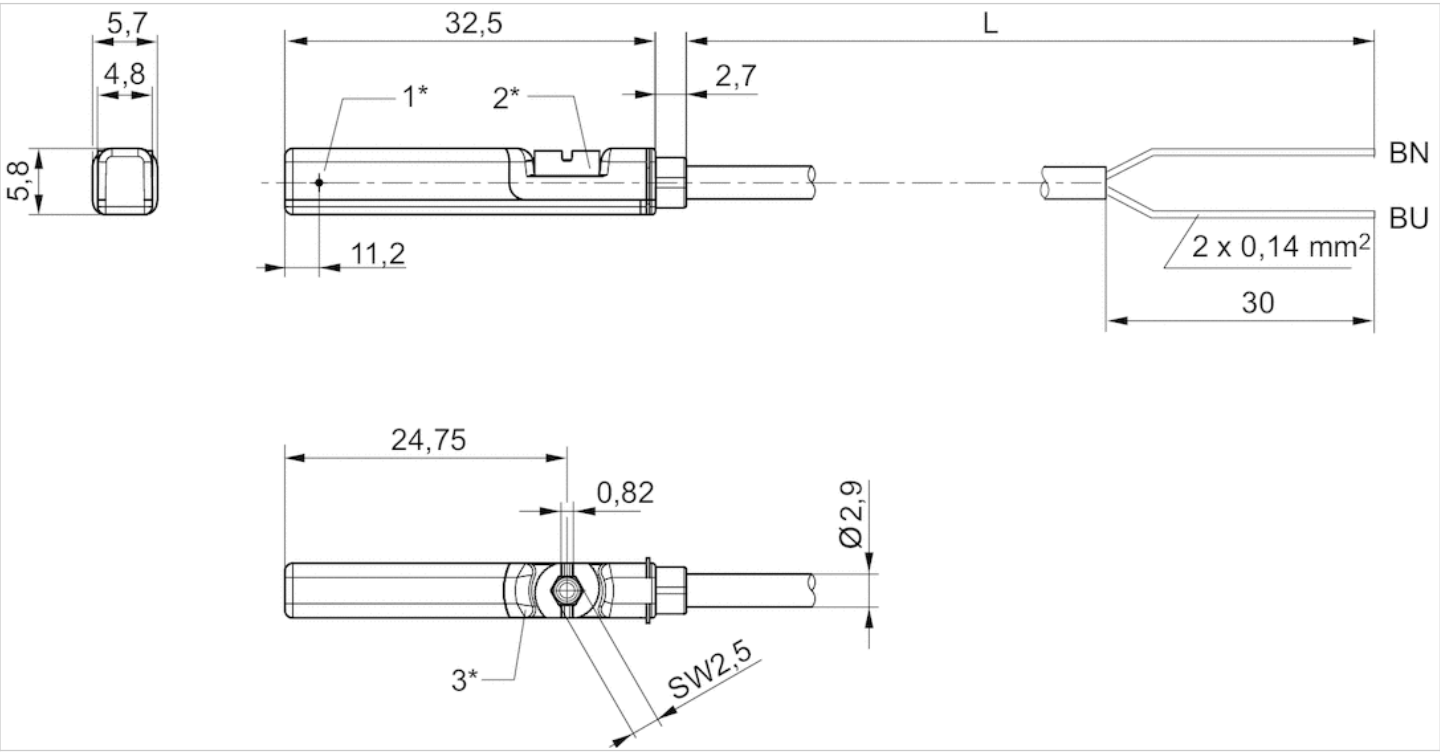
No cULus certification for 230 V variant.

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

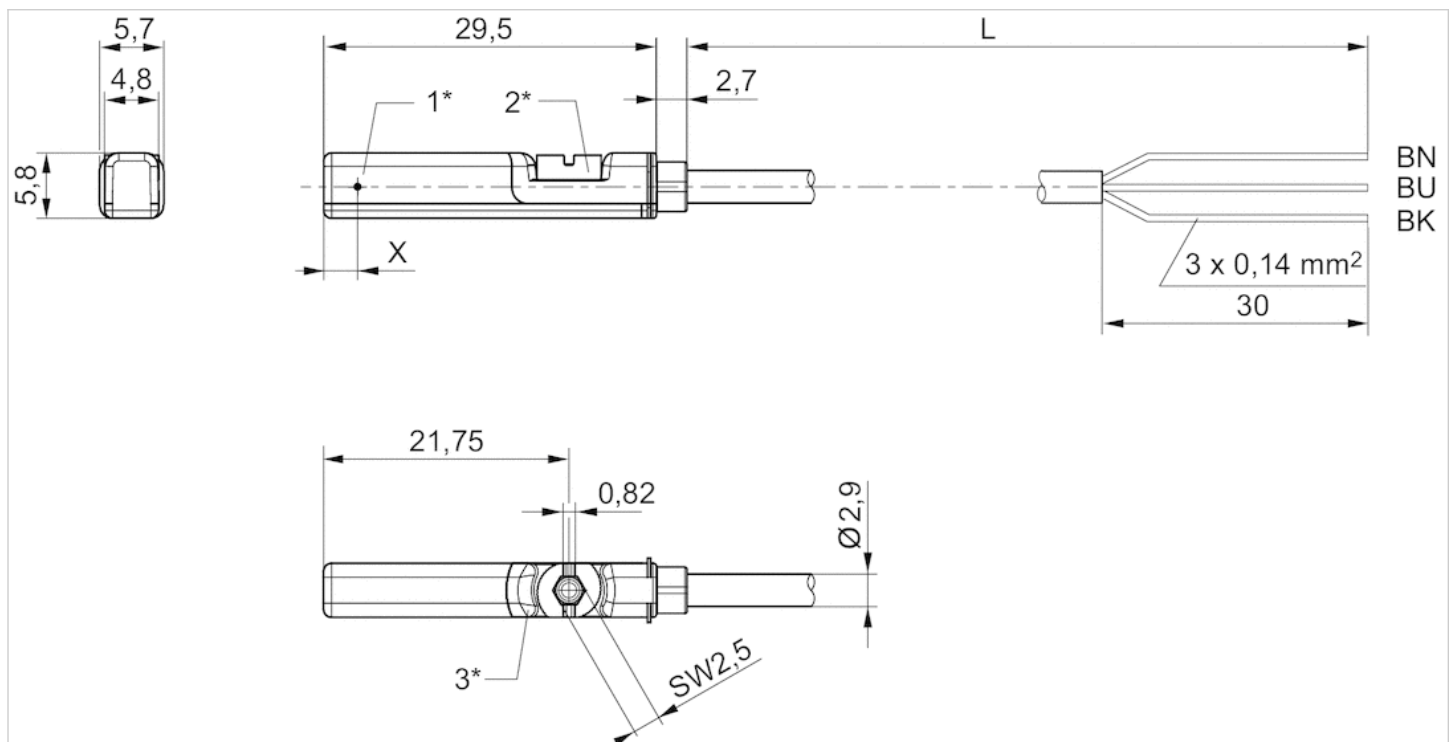
Dimensions

Fig. 1



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

Fig. 2



1* = switching point 2* = locking screw 3* = LED window, transparent

L = cable length

BN = brown, BK = black, BU = blue

X = electronic: 11.6 mm

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M8, 3-pin Plug, M8, 2-pin
- UL certification
- Reed electronic PNP electronic NPN
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Certificates	CE declaration of conformity cULus RoHS
Ambient temperature min./max.	-30 ... 80 °C
Protection class	IP65, IP67
Switching point precision	±0,1 mT
Nominal current, actuated state	30 mA
Quiescent current (without load)	8 mA
Min./max. DC operating voltage	10 ... 30 V DC
Min./max. AC operating voltage	See table below
Hysteresis	≥ 0,2 mT
Switching logic	NO (make contact)
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 m

Technical data

Part No.		for	Type of contact
R412022868		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412027172		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022872		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022858		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022851		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic NPN

Part No.	Cable length L	Min./max. AC operating voltage	Voltage drop U at I _{max}
R412022868	0.3 m	10 ... 30 V AC	≤ 3,5 V
R412027172	0.3 m	10 ... 30 V AC	≤ 3,5 V
R412022872	0.3 m	10 ... 30 V AC	≤ 0,1 V
R412022858	0.3 m	-	≤ 2,5 V
R412022851	0.3 m	-	≤ 2,5 V

Part No.	DC switching current, max.	AC switching current, max.
R412022868	0.13 A	0.13 A
R412027172	0.13 A	0.13 A
R412022872	0.3 A	0.5 A
R412022858	0.13 A	-

Part No.	DC switching current, max.	AC switching current, max.
R412022851	0.13 A	-

Part No.	Switching capacity	Max. switching frequency
R412022868	Reed, 2-pin: max. 10 W	400 Hz
R412027172	Reed, 2-pin: max. 10 W	400 Hz
R412022872	Reed, 3-pin: max. 6 W	400 Hz
R412022858	-	1000 Hz
R412022851	-	1000 Hz

Part No.	Operating current, not switched	Operating current, switched
R412022868	-	-
R412027172	-	-
R412022872	-	-
R412022858	8 mA	30 mA
R412022851	8 mA	30 mA

Part No.	Version	
R412022868	Protected against polarity reversal	1)
R412027172	Protected against polarity reversal	1)
R412022872	Protected against polarity reversal	1)
R412022858	short circuit resistant Protected against polarity reversal	-
R412022851	short circuit resistant Protected against polarity reversal	-

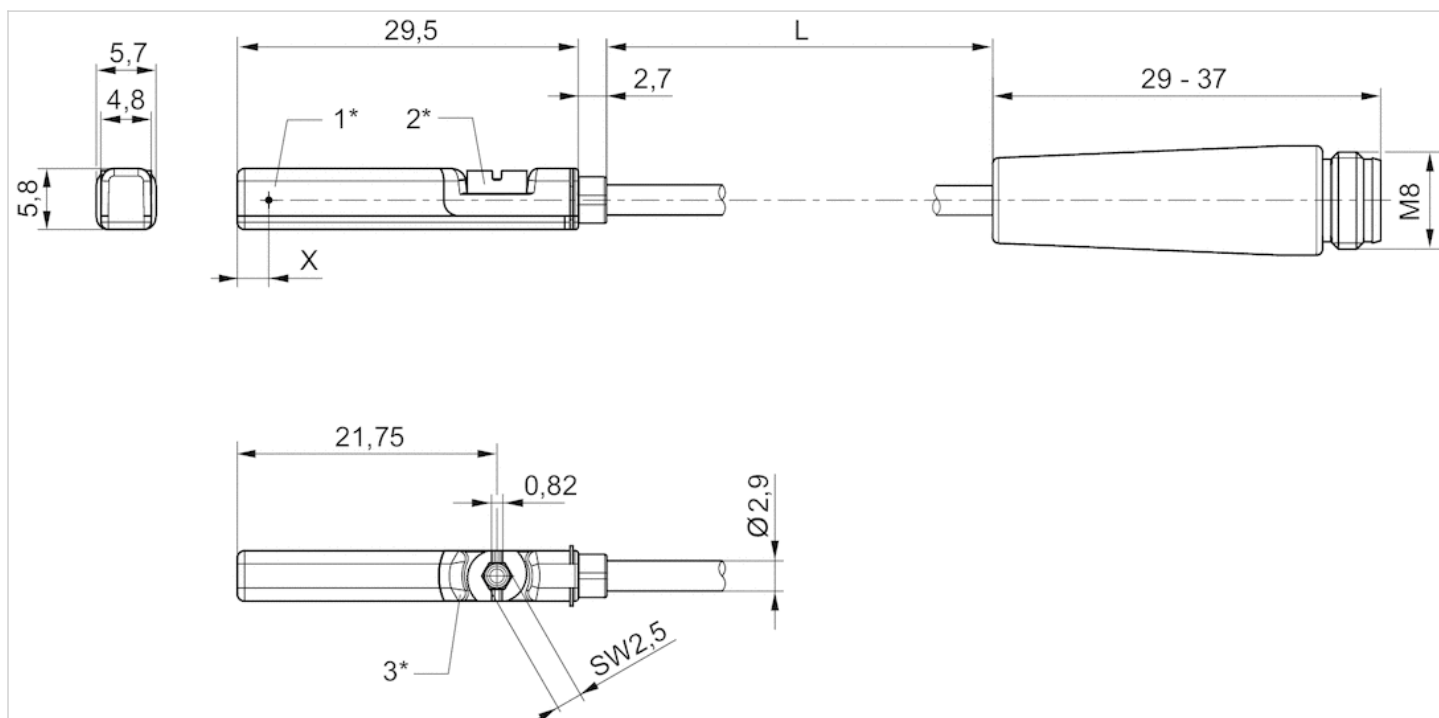
1) The product of operating voltage and continuous current must not exceed the maximum switching capacity.

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

Dimensions



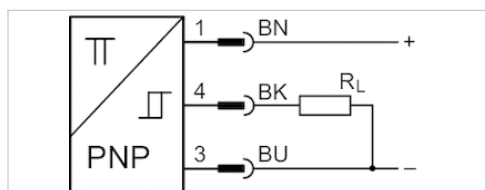
1* = switching point 2* = locking screw 3* = LED window, transparent

L = cable length

X = electronic: 11,6 mm, Reed: 8,3 mm

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M12, 3-pin, with knurled screw
- ATEX
- UL certification, ATEX
- electronic PNP
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Certificates

ATEX class G	ATEX CE declaration of conformity cULus
ATEX class D	RoHS
Ambient temperature min./max.	II 3G Ex nA IIC T4 Gc X
Protection class	II 3D Ex tc IIIC T135°C Dc X
Switching point precision	-20 ... 50 °C
Quiescent current (without load)	IP67
Min./max. DC operating voltage	±0,1 mT
Switching logic	10 mA
LED status display	10 ... 30 V DC
Vibration resistance	NO (make contact)
Shock resistance	Yellow Yellow
Cable length L	10 - 55 Hz, 1 mm
	30 g / 11 ms
	0.3 m

Technical data

Part No.	for	Type of contact	Cable length L
R412022864	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	0.3 m

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412022864	≤ 2,5 V	0.1 A

Part No.	Max. switching frequency
R412022864	1000 Hz

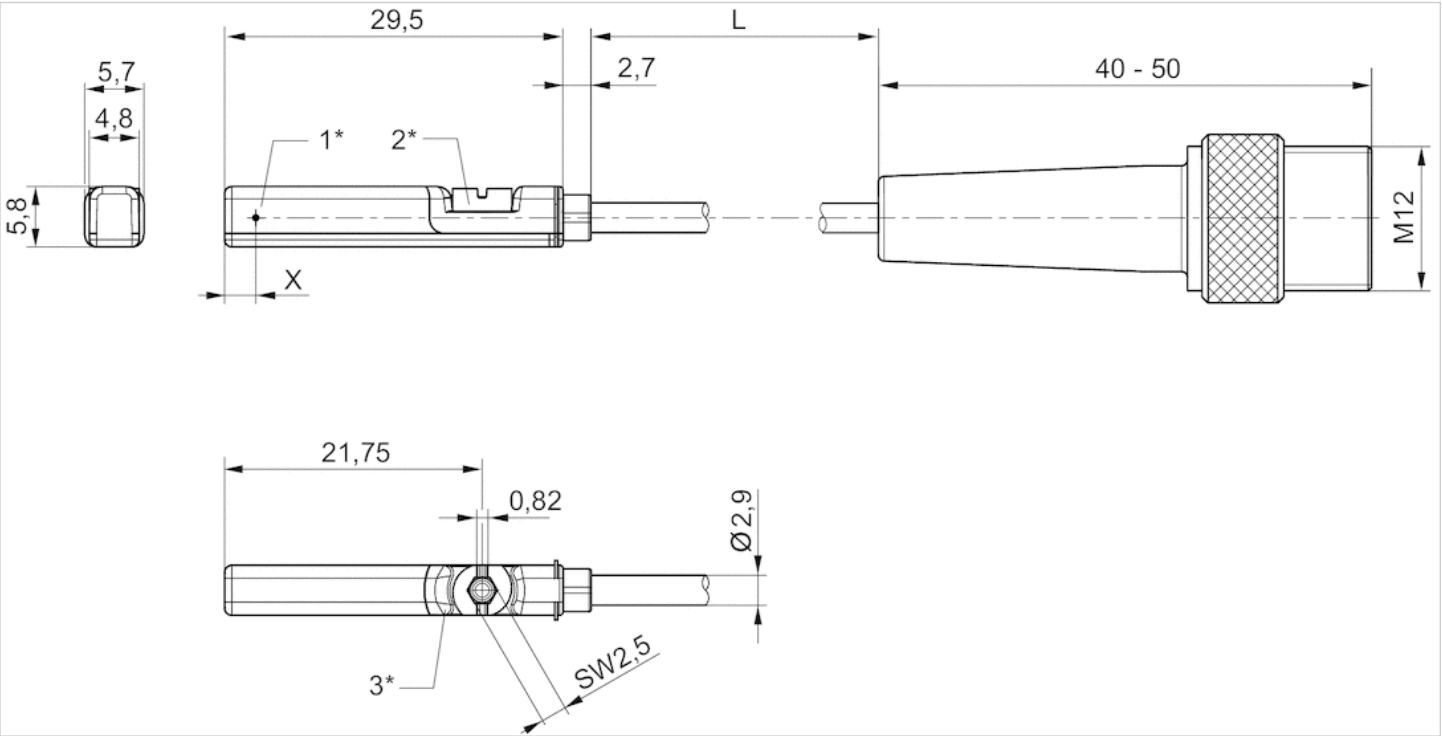
Part No.	Version
R412022864	short circuit resistant Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

Dimensions



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

Pin assignments

Pin assignments



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

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M12, 2-pin, with knurled screw Plug, M12, 4-pin, with knurled screw
- UL certification
- Reed electronic PNP
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Certificates	CE declaration of conformity cULus RoHS
Ambient temperature min./max.	-30 ... 80 °C
Protection class	See table below
Switching point precision	±0,1 mT
Nominal current, actuated state	30 mA
Quiescent current (without load)	8 mA
Min./max. DC operating voltage	10 ... 30 V DC
Min./max. AC operating voltage	See table below
Hysteresis	≥ 0,2 mT
Switching logic	NO (make contact)
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 0.1 3 5 m

Technical data

Part No.		for	Type of contact
R412027171		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022876		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022879		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022863		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022877		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022878		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP

Part No.	Cable length L	Min./max. AC operating voltage	Voltage drop U at I _{max}
R412027171	0.3 m	10 ... 30 V AC	≤ 3,5 V
R412022876	0.3 m	10 ... 30 V AC	≤ 0,1 V
R412022879	0.1 m	-	≤ 2,5 V
R412022863	0.3 m	-	≤ 2,5 V
R412022877	3 m	-	≤ 2,5 V
R412022878	5 m	-	≤ 2,5 V

Part No.	DC switching current, max.	AC switching current, max.
R412027171	0.13 A	0.13 A
R412022876	0.3 A	0.5 A

Part No.	DC switching current, max.	AC switching current, max.
R412022879	0.13 A	-
R412022863	0.13 A	-
R412022877	0.13 A	-
R412022878	0.13 A	-

Part No.	Switching capacity	Max. switching frequency
R412027171	Reed, 2-pin: max. 10 W	400 Hz
R412022876	Reed, 3-pin: max. 6 W	400 Hz
R412022879	-	1000 Hz
R412022863	-	1000 Hz
R412022877	-	1000 Hz
R412022878	-	1000 Hz

Part No.	Operating current, not switched	Operating current, switched	Protection class
R412027171	-	-	IP65, IP67
R412022876	-	-	IP65, IP67
R412022879	8 mA	30 mA	IP65, IP67
R412022863	8 mA	30 mA	IP65, IP67, IP69K
R412022877	8 mA	30 mA	IP65, IP67
R412022878	8 mA	30 mA	IP65, IP67

Part No.	Version	
R412027171	Protected against polarity reversal	1)
R412022876	Protected against polarity reversal	1)
R412022879	short circuit resistant Protected against polarity reversal	-
R412022863	short circuit resistant Protected against polarity reversal	-
R412022877	short circuit resistant Protected against polarity reversal	-
R412022878	short circuit resistant Protected against polarity reversal	-

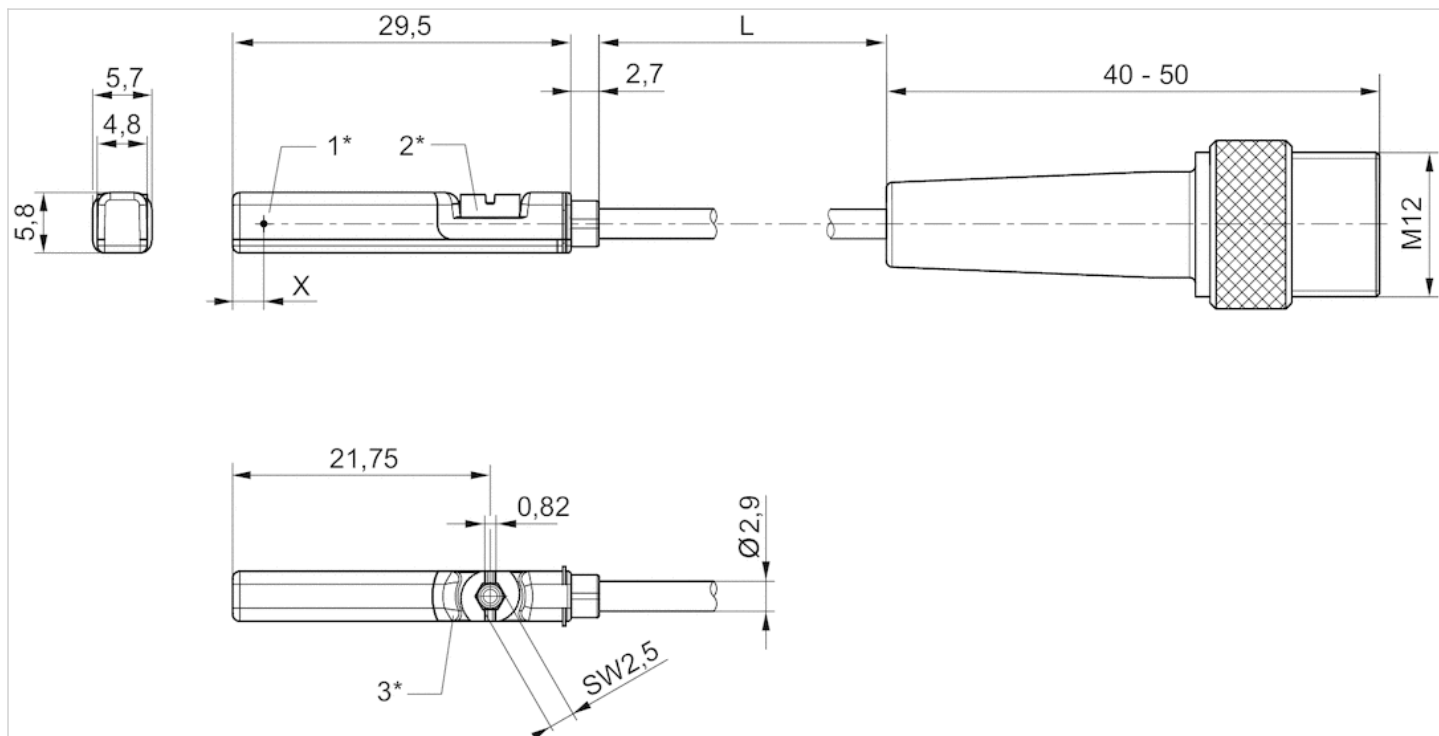
1) The product of operating voltage and continuous current must not exceed the maximum switching capacity.

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

Dimensions



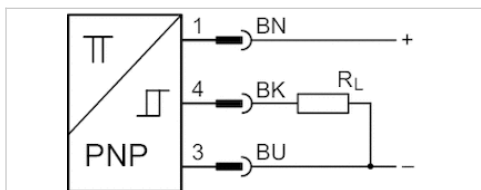
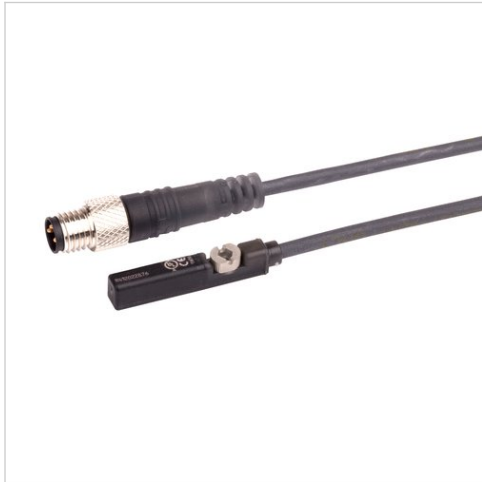
1* = switching point 2* = locking screw 3* = LED window, transparent

L = cable length

X = PNP: 11,6 mm, reed: 8,3 mm

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M8, 3-pin, with knurled screw
- ATEX
- UL certification, ATEX
- electronic PNP
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Certificates

ATEX class G	ATEX CE declaration of conformity cULus
ATEX class D	RoHS
Ambient temperature min./max.	II 3G Ex nA IIC T4 Gc X
Protection class	II 3D Ex tc IIIC T135°C Dc X
Switching point precision	-20 ... 50 °C
Quiescent current (without load)	IP65, IP67
Min./max. DC operating voltage	±0,1 mT
Switching logic	10 mA
LED status display	10 ... 30 V DC
Vibration resistance	NO (make contact)
Shock resistance	Yellow Yellow
Cable length L	10 - 55 Hz, 1 mm
	30 g / 11 ms
	0.3 m

Technical data

Part No.	for	Type of contact	Cable length L
R412022860	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	0.3 m

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412022860	≤ 2,5 V	0.1 A

Part No.	Max. switching frequency
R412022860	1000 Hz

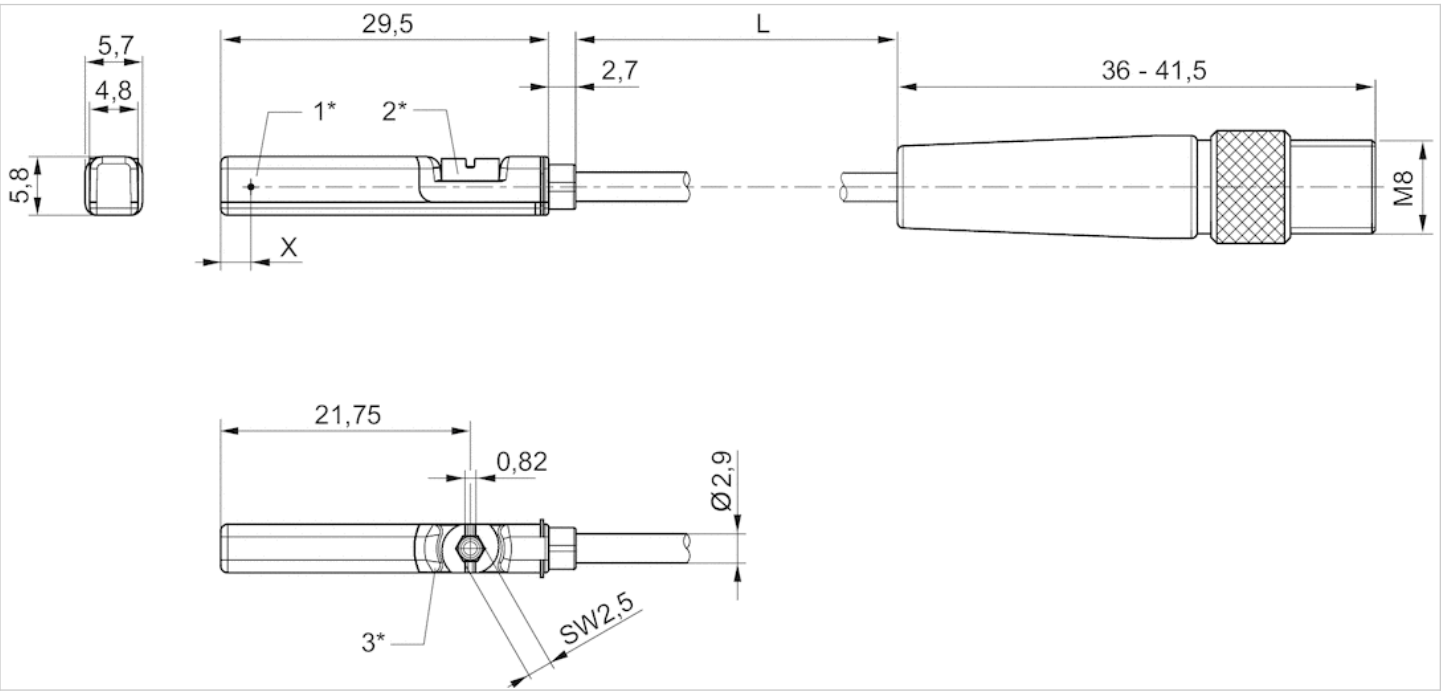
Part No.	Version
R412022860	short circuit resistant Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

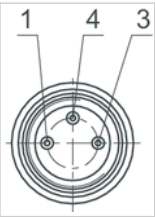
Dimensions



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

Pin assignments

Pin assignments



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

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M8, 3-pin, with knurled screw
- UL certification
- Reed electronic PNP electronic NPN
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Certificates	CE declaration of conformity cULus RoHS
Ambient temperature min./max.	-30 ... 80 °C
Protection class	IP65, IP67
Switching point precision	±0,1 mT
Nominal current, actuated state	30 mA
Quiescent current (without load)	8 mA
Min./max. DC operating voltage	10 ... 30 V DC
Min./max. AC operating voltage	See table below
Hysteresis	≥ 0,2 mT
Switching logic	NO (make contact)
Switching capacity	Reed, 3-pin: max. 6 W
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 0.5 m

Technical data

Part No.		for	Type of contact
R412022873		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022875		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022874		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022859		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022862		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022861		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022852		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic NPN

Part No.	Cable sheath	Cable length L	Min./max. AC operating voltage
R412022873	Polyurethane	0.3 m	10 ... 30 V AC
R412022875	Polyvinyl chloride	0.3 m	10 ... 30 V AC
R412022874	Polyurethane	0.5 m	10 ... 30 V AC
R412022859	Polyurethane	0.3 m	-
R412022862	Polyvinyl chloride	0.3 m	-
R412022861	Polyurethane	0.5 m	-
R412022852	Polyurethane	0.3 m	-

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412022873	I*Rs	0.3 A
R412022875	I*Rs	0.3 A
R412022874	I*Rs	0.3 A
R412022859	≤ 2,5 V	0.13 A
R412022862	≤ 2,5 V	0.13 A
R412022861	≤ 2,5 V	0.13 A
R412022852	≤ 2,5 V	0.13 A

Part No.	AC switching current, max.	Max. switching frequency
R412022873	0.5 A	400 Hz
R412022875	0.5 A	400 Hz
R412022874	0.5 A	400 Hz
R412022859	-	1000 Hz
R412022862	-	1000 Hz
R412022861	-	1000 Hz
R412022852	-	1000 Hz

Part No.	Operating current, not switched	Operating current, switched
R412022873	-	-
R412022875	-	-
R412022874	-	-
R412022859	8 mA	30 mA
R412022862	8 mA	30 mA
R412022861	8 mA	30 mA
R412022852	8 mA	30 mA

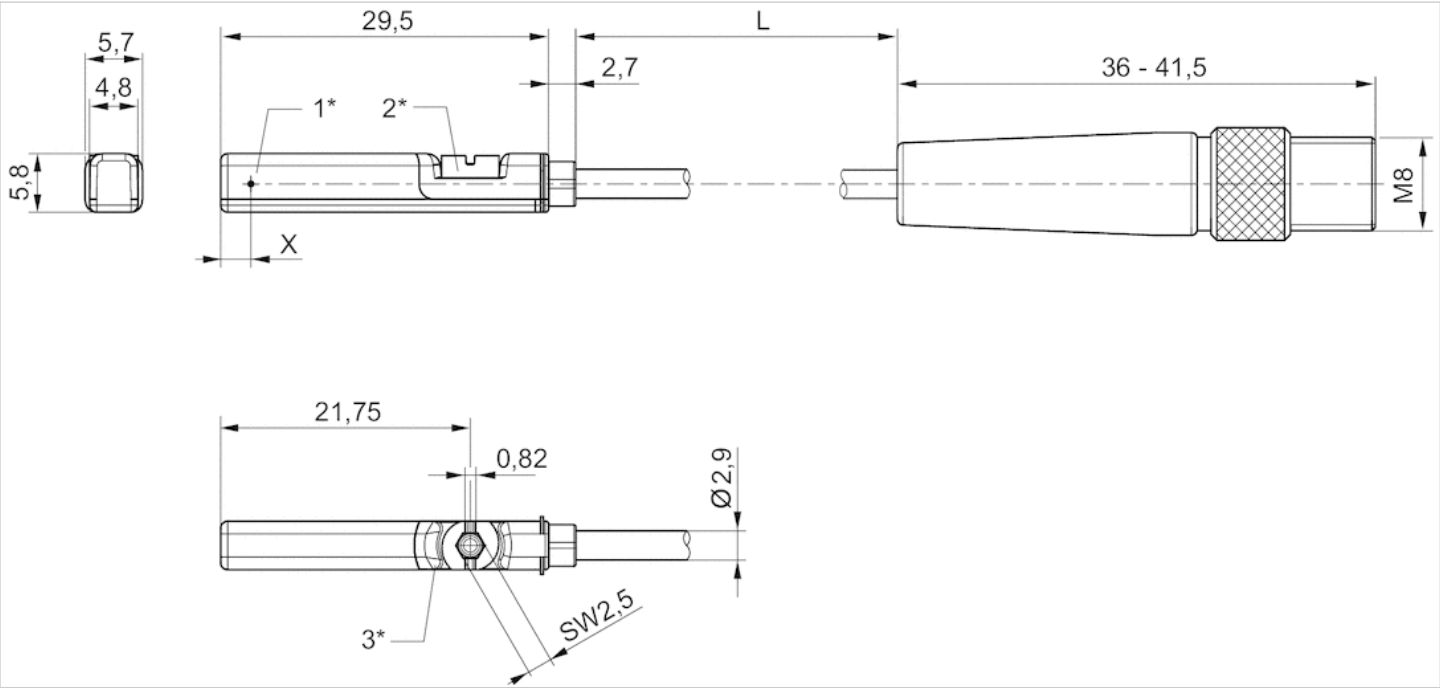
Part No.	Version
R412022873	Protected against polarity reversal
R412022875	Protected against polarity reversal
R412022874	Protected against polarity reversal
R412022859	short circuit resistant Protected against polarity reversal
R412022862	short circuit resistant Protected against polarity reversal
R412022861	short circuit resistant Protected against polarity reversal
R412022852	short circuit resistant Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane Polyvinyl chloride
Locking screw	Stainless steel

Dimensions

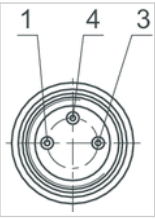
Dimensions



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

Pin assignments

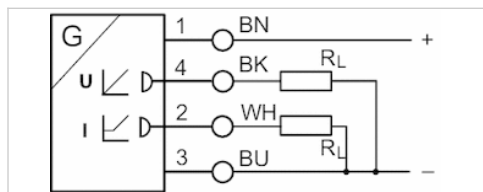
Pin assignments



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

Sensors, Series SM6

- 6 mm groove
- with cable
- without wire end ferrule, tin-plated, 4-pin
- with distance measuring sensor, measurement range 32 ... 256 mm
- Analog
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, 167, MNI, ICM, TRR



Certificates	cULus
Ambient temperature min./max.	-20 ... 70 °C
Protection class	IP67
Output signal	0 - 10 V DC, 4 - 20 mA
Quiescent current (without load)	25 mA
Maximum load (analog current output)	500 Ω
Residual ripple	≤ 10 %
sampling interval	1 ms
Resolution max. measuring range	0,05 mm
Repetitive precision max. measuring range	0.1 mm
Linearity deviation	0,3 mm
Sampling speed	3 m/s
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	2 m

Technical data

Part No.	for	Type of contact	Cable length L
R412010141	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010143	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010262	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010264	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010411	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010413	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010415	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010417	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m

Part No.	max. measuring range	Overall length Sensor A
R412010141	32 mm	45 mm
R412010143	64 mm	77 mm
R412010262	96 mm	109 mm
R412010264	128 mm	141 mm
R412010411	160 mm	173 mm
R412010413	192 mm	205 mm

Part No.	max. measuring range	Overall length Sensor A
R412010415	224 mm	237 mm
R412010417	256 mm	269 mm

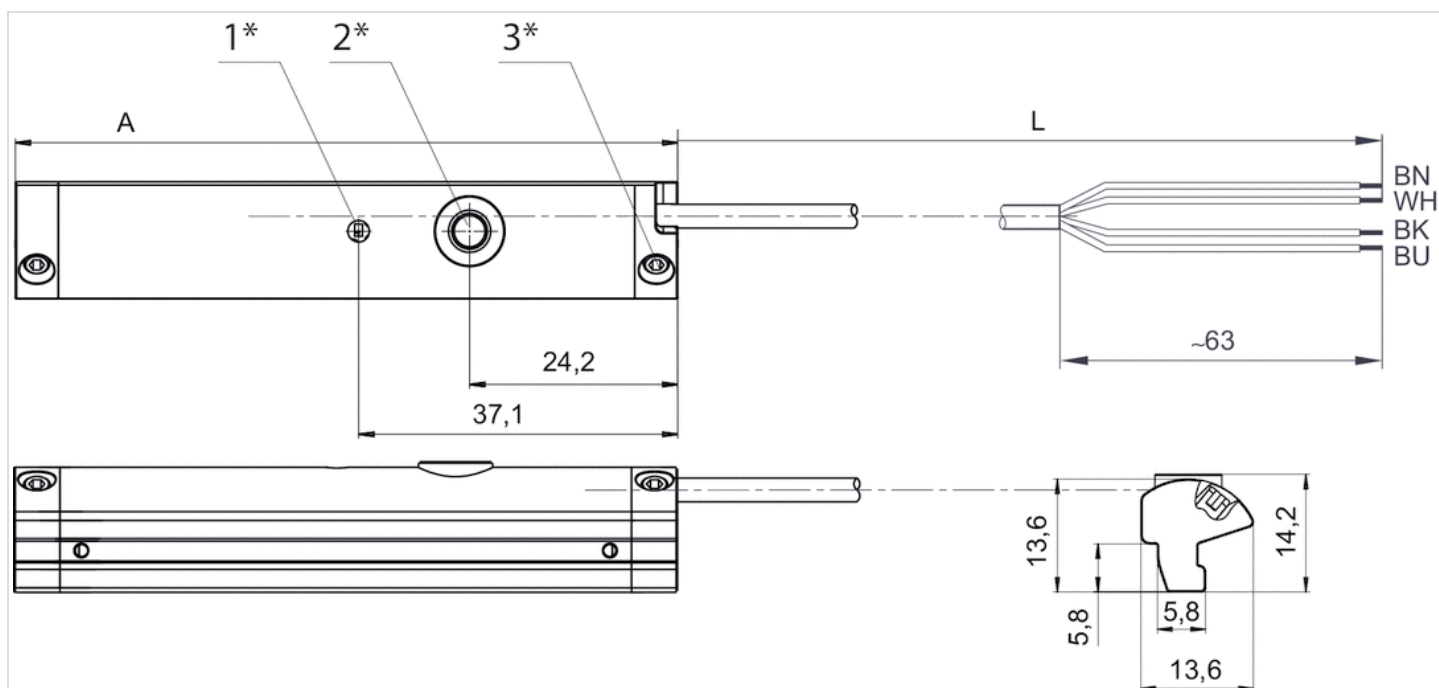
Part No.	Version
R412010141	short circuit resistant Protected against polarity reversal Overload protection
R412010143	short circuit resistant Protected against polarity reversal Overload protection
R412010262	short circuit resistant Protected against polarity reversal Overload protection
R412010264	short circuit resistant Protected against polarity reversal Overload protection
R412010411	short circuit resistant Protected against polarity reversal Overload protection
R412010413	short circuit resistant Protected against polarity reversal Overload protection
R412010415	short circuit resistant Protected against polarity reversal Overload protection
R412010417	short circuit resistant Protected against polarity reversal Overload protection

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

Dimensions



1* = LED 2* = teach button 3* = threaded pin M3x11

L = cable length

(1) BN=brown

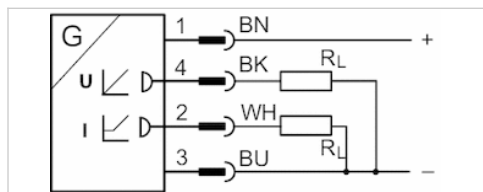
(2) WH=white

(3) BU=blue

(4) BK=black
A = sensor length

Sensors, Series SM6

- 6 mm groove
- with cable
- Plug, M8x1, 4-pin, with knurled screw
- with distance measuring sensor, measurement range 32 ... 256 mm
- Analog
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, 167, MNI, ICM, TRR



Certificates	cULus
Ambient temperature min./max.	-20 ... 70 °C
Protection class	IP67
Output signal	0 - 10 V DC, 4 - 20 mA
Quiescent current (without load)	25 mA
Min./max. DC operating voltage	15 ... 30 V DC
sampling interval	1 ms
Resolution max. measuring range	0,05 mm
Repetitive precision max. measuring range	0.1 mm
Linearity deviation	0,3 mm
Sampling speed	3 m/s
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 m

Technical data

Part No.	for	Type of contact	Cable length L
R412010142	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010144	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010263	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010265	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010410	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010412	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010414	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010416	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m

Part No.	max. measuring range	Overall length Sensor A
R412010142	32 mm	45 mm
R412010144	64 mm	77 mm
R412010263	96 mm	109 mm
R412010265	128 mm	141 mm
R412010410	160 mm	173 mm
R412010412	192 mm	205 mm

Part No.	max. measuring range	Overall length Sensor A
R412010414	224 mm	237 mm
R412010416	256 mm	269 mm

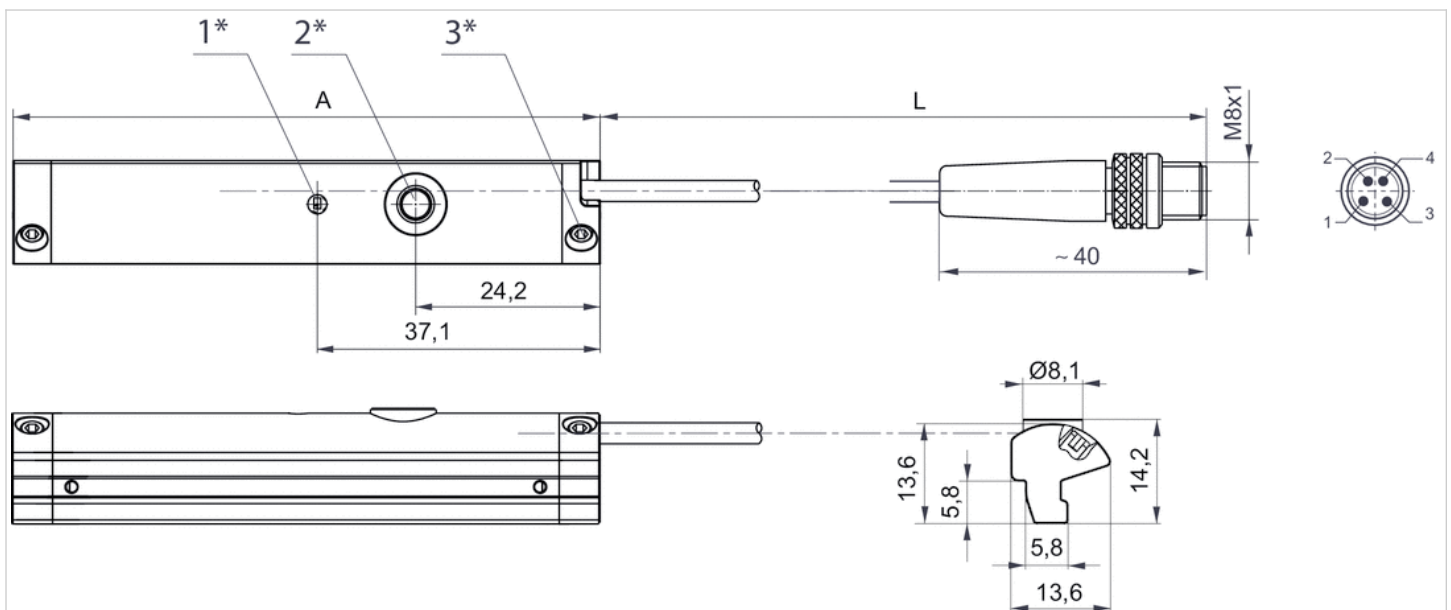
Part No.	Version
R412010142	short circuit resistant Protected against polarity reversal Overload protection
R412010144	short circuit resistant Protected against polarity reversal Overload protection
R412010263	short circuit resistant Protected against polarity reversal Overload protection
R412010265	short circuit resistant Protected against polarity reversal Overload protection
R412010410	short circuit resistant Protected against polarity reversal Overload protection
R412010412	short circuit resistant Protected against polarity reversal Overload protection
R412010414	short circuit resistant Protected against polarity reversal Overload protection
R412010416	short circuit resistant Protected against polarity reversal Overload protection

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

Dimensions



1* = LED 2* = teach button 3* = threaded pin M3x11

L = cable length

Pin assignment: 1 = (+), 2 = (OUT 1) 3 = (GND), 4 = (OUT 2), EN 60947-5-7

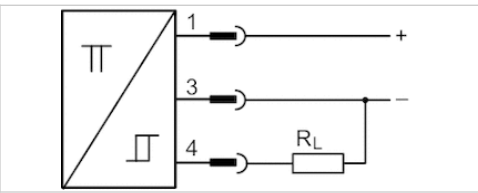
A = sensor length

Sensor, Series SN3

- welding-proof
- Plug, M12, 3-pin
- welding-proof
- electronic PNP
- Indirect mounting for series PRA, PRE, CCI, KPZ, KHZ, FLT, GPC, CVI



Ambient temperature min./max.	-25 ... 70 °C
Protection class	IP67, IP65
Switching point precision	±0,1 mT
Nominal current, actuated state	≤ 10 mA
Quiescent current (without load)	≤ 5 mA
Min./max. DC operating voltage	10 V DC
LED status display	Yellow
Vibration resistance	55 Hz, 1 mm
Shock resistance	30 g / 11 ms



Technical data

Part No.	Type of contact	Voltage drop U at I _{max}	DC switching current, max.
0830100438	electronic PNP	≤ 1,8 V	0.2 A

Part No.	Max. switching frequency
0830100438	20 Hz

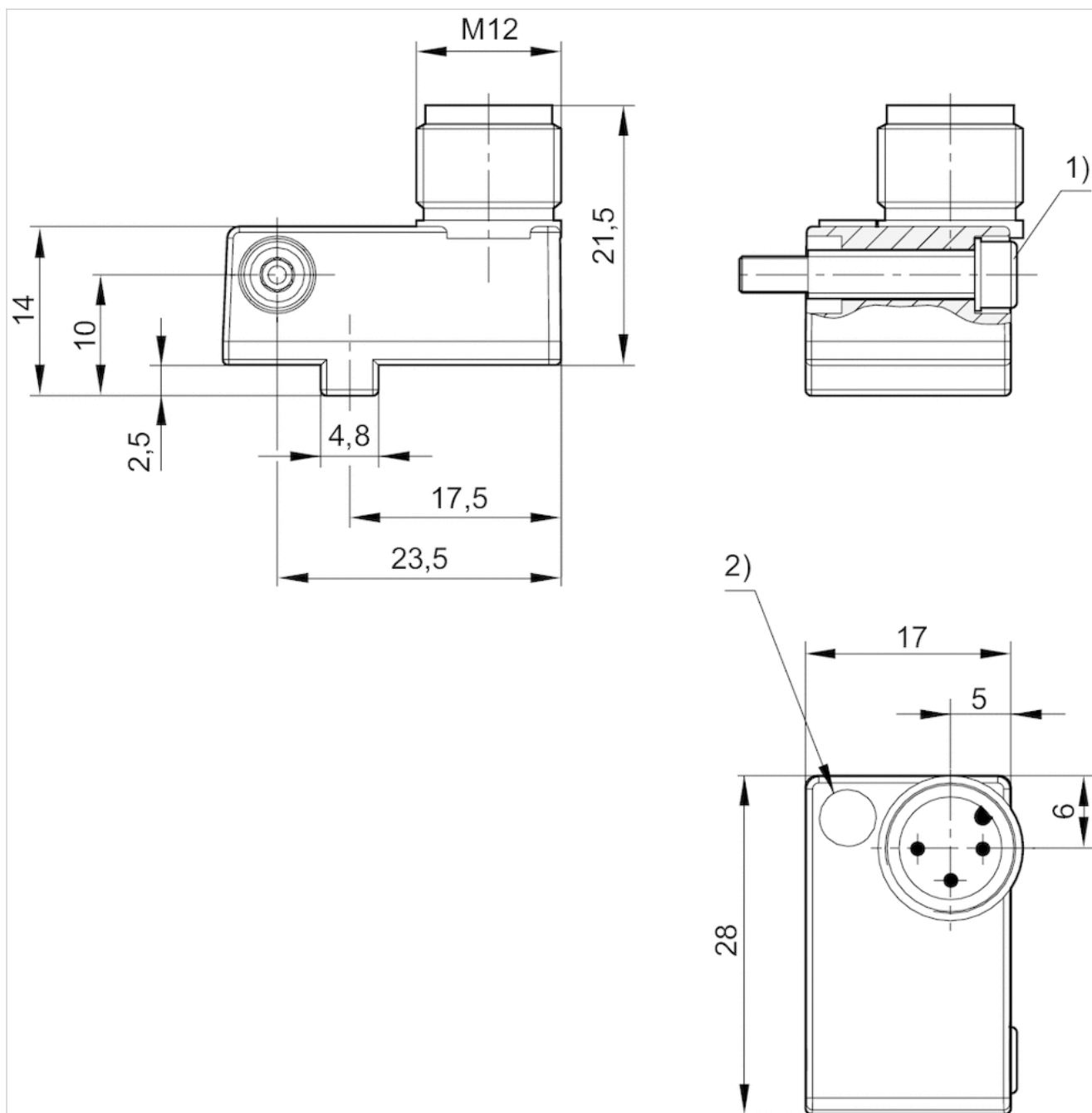
Part No.	Version	welding-proof
0830100438	short circuit resistant Protected against polarity reversal	welding-proof

Technical information

Material	
Housing	Polyamide

Dimensions

Dimensions



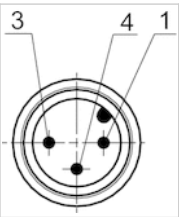
1) Clamping screw

2) LED

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

Pin assignments

Pin assignments



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

Sensor, Series ST6-HT

- 6 mm T-slot
- with cable
- open cable ends, 2-pin
- Heat resistant
- UL certification
- Reed
- Direct mounting for series PRA, PRE, CCI, KPZ
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC



Certificates

Ambient temperature min./max.

Protection class

Switching point precision

Min./max. DC operating voltage

Min./max. AC operating voltage

Switching logic

Switching capacity

Vibration resistance

Shock resistance

Cable length L

CE declaration of conformity RoHS

-20 ... 120 °C

IP65, IP67

±0,1 mT

0 ... 30 V DC

0 ... 30 V AC

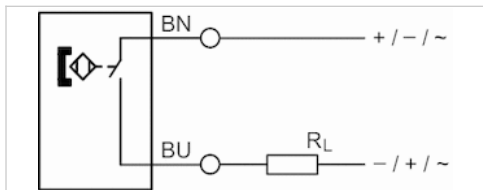
NO (make contact)

Reed, 2-pin: max. 10 W

10 - 55 Hz, 1 mm

30 g / 11 ms

3 10 m



Technical data

Part No.	for	Type of contact	Cable length L	Voltage drop U at I _{max}
R412022865	PRA, PRE, CCI, KPZ	Reed	3 m	≤ 3,5 V
R412022867	PRA, PRE, CCI, KPZ	Reed	10 m	≤ 3,5 V

Part No.	DC switching current, max.	AC switching current, max.
R412022865	0.13 A	0.13 A
R412022867	0.13 A	0.13 A

Part No.	Max. switching frequency	Version
R412022865	400 Hz	Protected against polarity reversal
R412022867	400 Hz	Protected against polarity reversal

Part No.	Temperature resistance
R412022865	Heat resistant

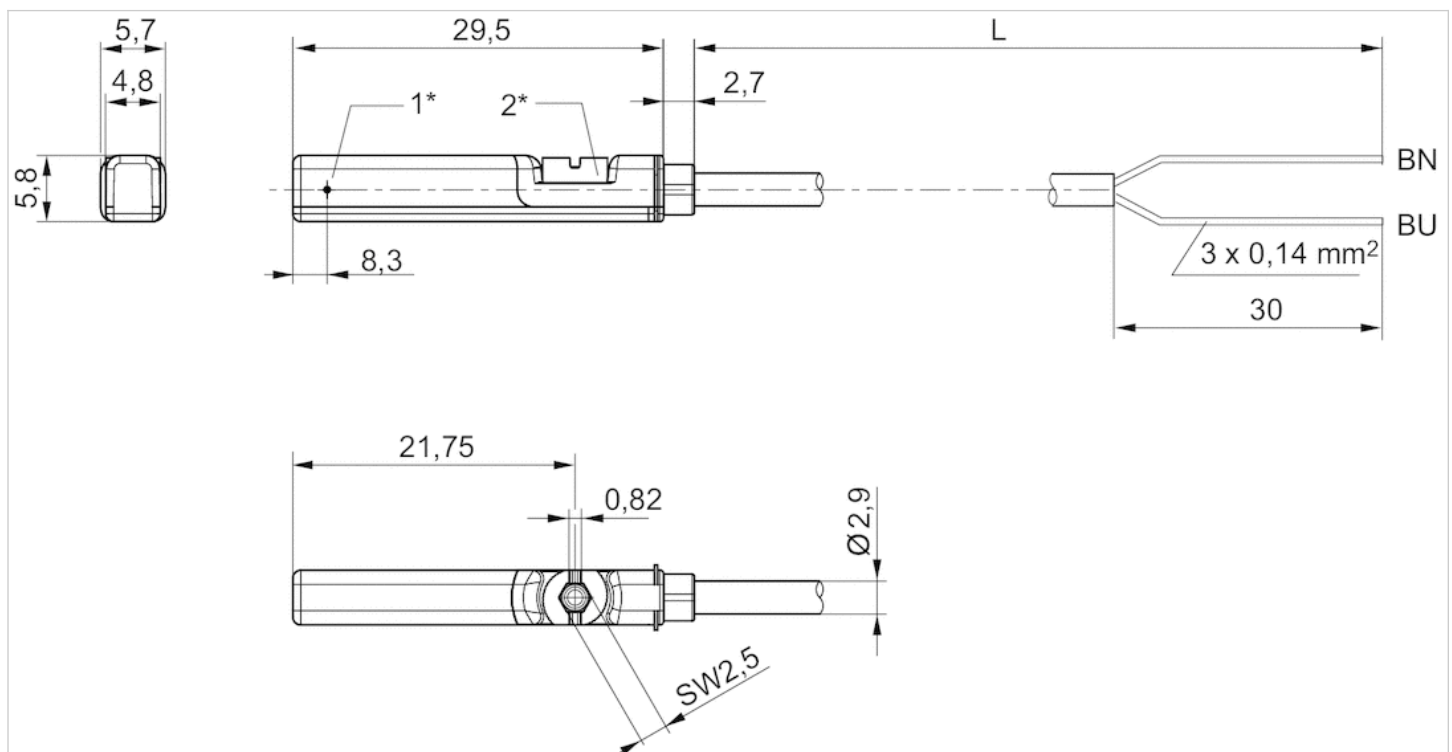
Part No.	Temperature resistance
R412022867	Heat resistant

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

Dimensions



1* = switching point 2* = locking screw

L = cable length

BN=brown, BU=blue

Sensor mounting, Series CB1

- for series SN3
- to mount on cylinder PRA, KPZ, GPC, CCI, KHZ



Weight

0.007 kg

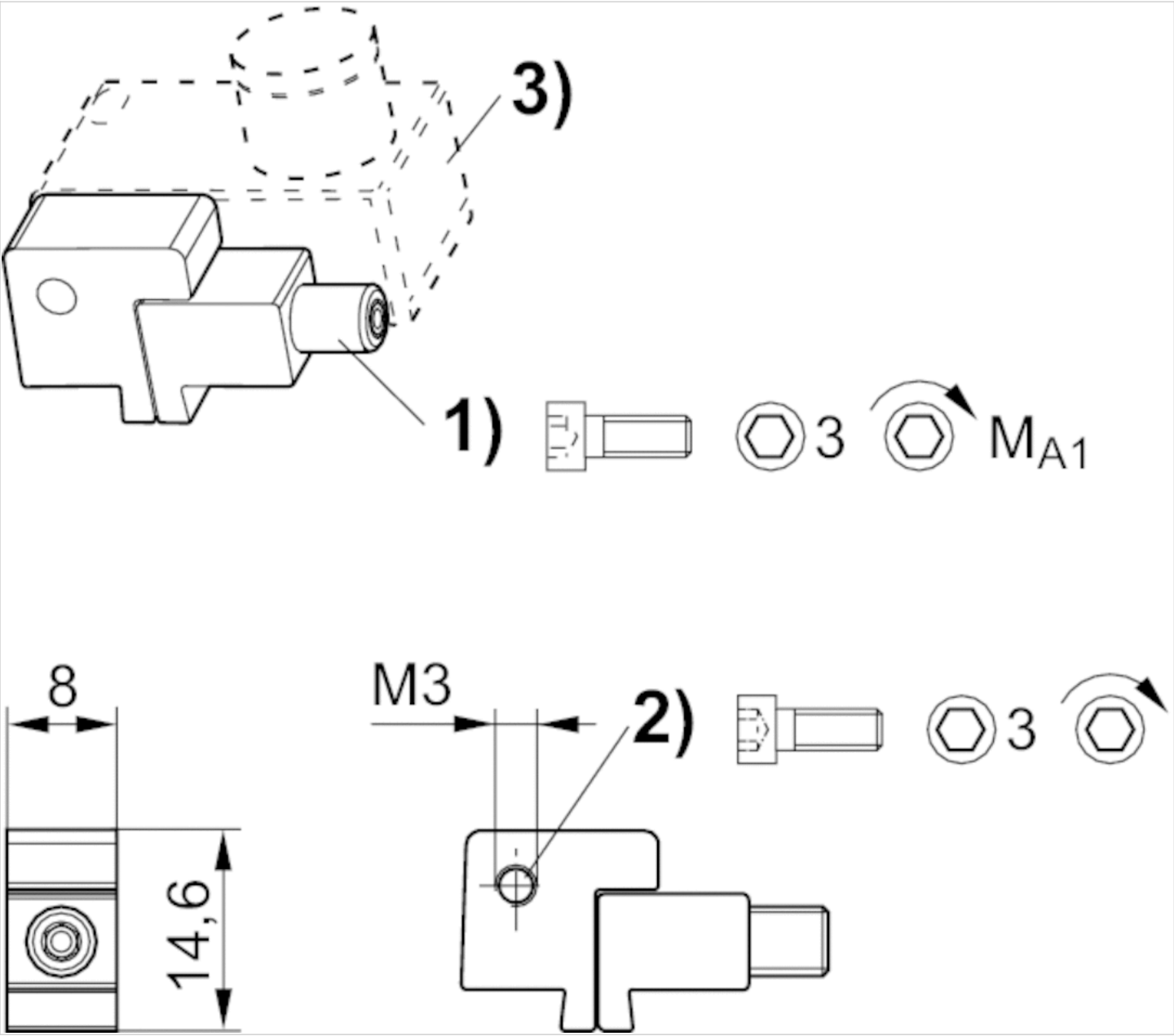
Technical data

Part No.	for series
1827020386	SN3

Technical information

Material
Aluminum

Dimensions



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

Dimensions

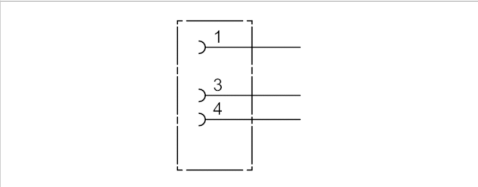
Part No.	1)	MA1 [Nm]
1827020386	M3x25	1,8 +0,4

Round plug connector, Series CON-RD

- Socket, M8x1, 3-pin, A-coded, straight, 180°
- UL (Underwriters Laboratories)
- unshielded



Connection type	Soldering
Ambient temperature min./max.	-25 ... 80 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Weight	0.009 kg



Technical data

Part No.	Max. current	suitable cable-Ø min./max
1834484173	4 A	3.5 / 5 mm

Technical information

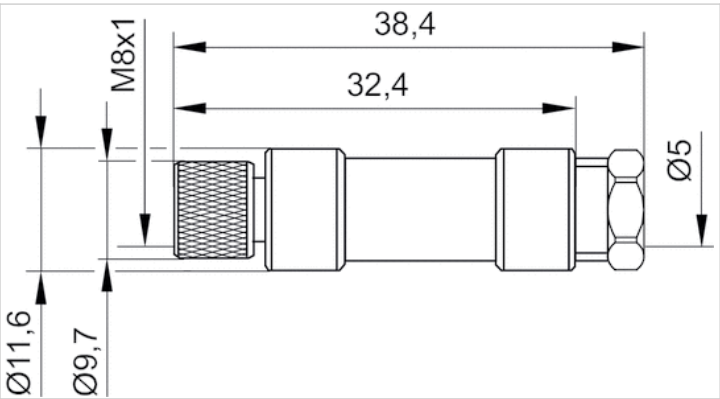
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyamide

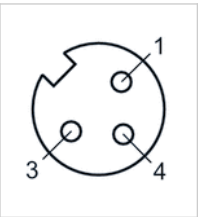
Dimensions

Dimensions



Pin assignments

Pin assignment, socket

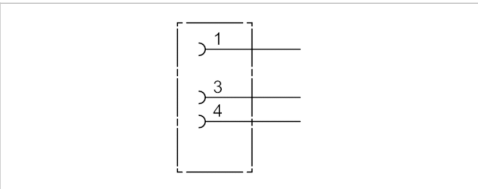


Round plug connector, Series CON-RD

- Socket, M8x1, 3-pin, A-coded, angled, 90°
- UL (Underwriters Laboratories)
- unshielded



Connection type	Soldering
Ambient temperature min./max.	-40 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Weight	0.01 kg



Technical data

Part No.	Max. current	Contact assignment	suitable cable-Ø min./max
1834484174	4 A	3	3.5 / 5 mm

Technical information

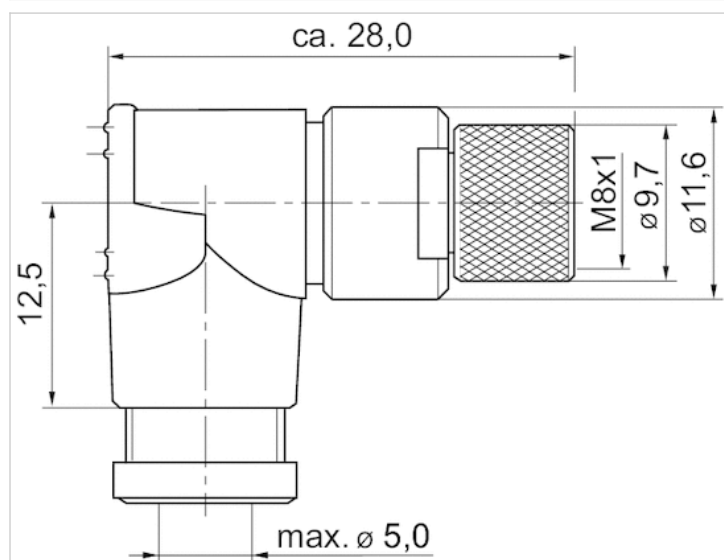
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyamide

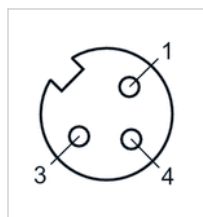
Dimensions

Dimensions



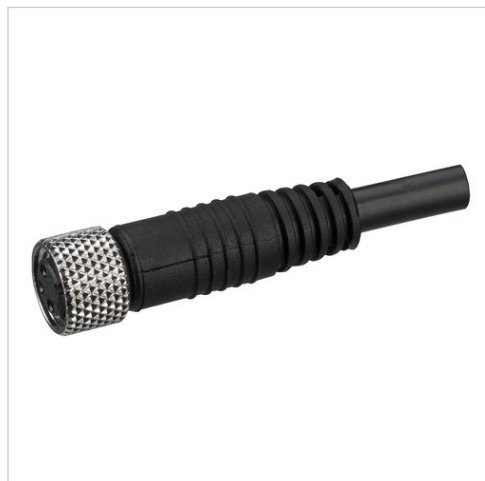
Pin assignments

Pin assignment, socket

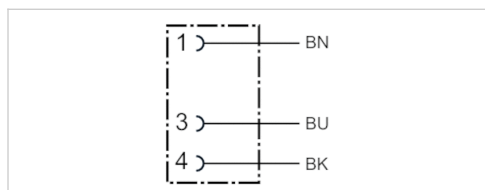


Round plug connector, Series CON-RD

- Socket M8x1 3-pin A-coded straight 180°
- open cable ends
- with cable
- UL (Underwriters Laboratories)
- unshielded



Ambient temperature min./max.	-25 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Wire cross-section	0.24 mm ²
Weight	See table below



Technical data

Part No.	Max. current	Number of wires	Cable-Ø	Cable length	Certification	Weight
1834484166	4 A	3	4.5 mm	3 m	UL (Underwriters Laboratories)	0.087 kg
1834484168	4 A	3	4.5 mm	5 m	UL (Underwriters Laboratories)	0.141 kg
1834484247	4 A	3	4.5 mm	10 m	UL (Underwriters Laboratories)	0.277 kg

Technical information

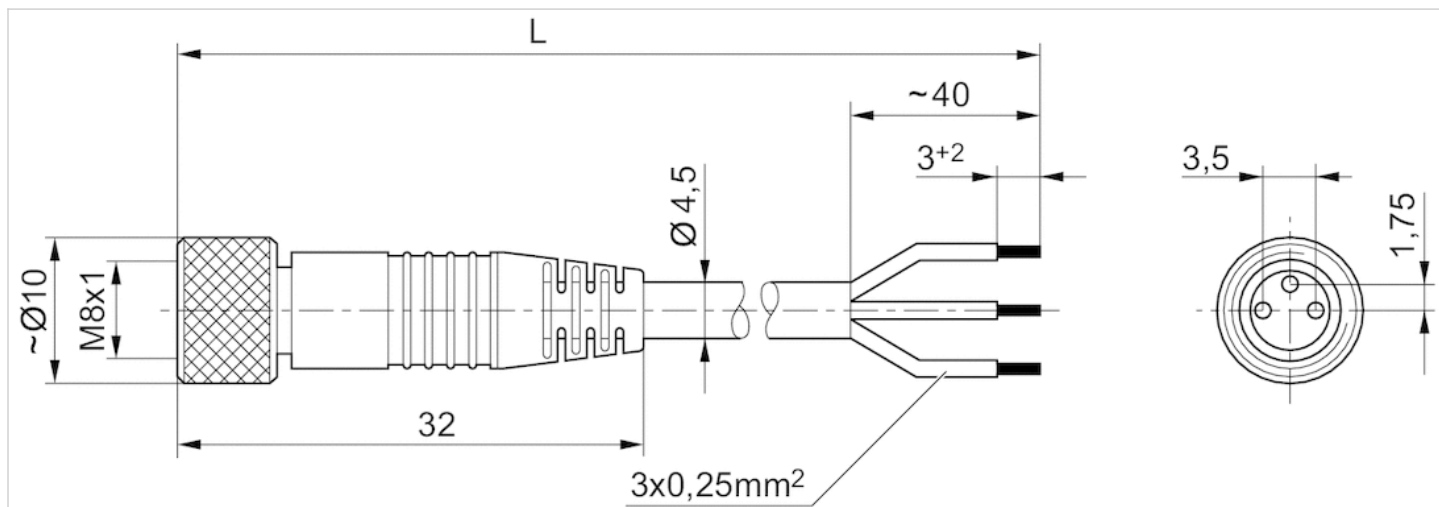
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

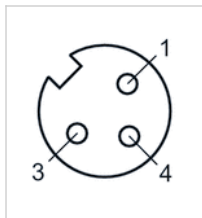
Dimensions



L = length

Pin assignments

Pin assignment, socket



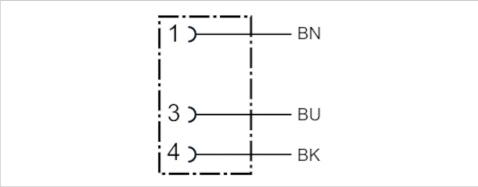
- (1) BN=brown
- (3) BU=blue
- (4) BK=black

Round plug connector, Series CON-RD

- Socket M8x1 3-pin A-coded angled 90°
- open cable ends
- with cable
- unshielded



Ambient temperature min./max.	-40 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Wire cross-section	0.24 mm²
Weight	See table below



Technical data

Part No.	Max. current	Number of wires	Cable-Ø	Cable length	Weight
1834484167	4 A	3	4.5 mm	3 m	0.087 kg
1834484169	4 A	3	4.5 mm	5 m	0.139 kg
1834484248	4 A	3	4.5 mm	10 m	0.279 kg

Technical information

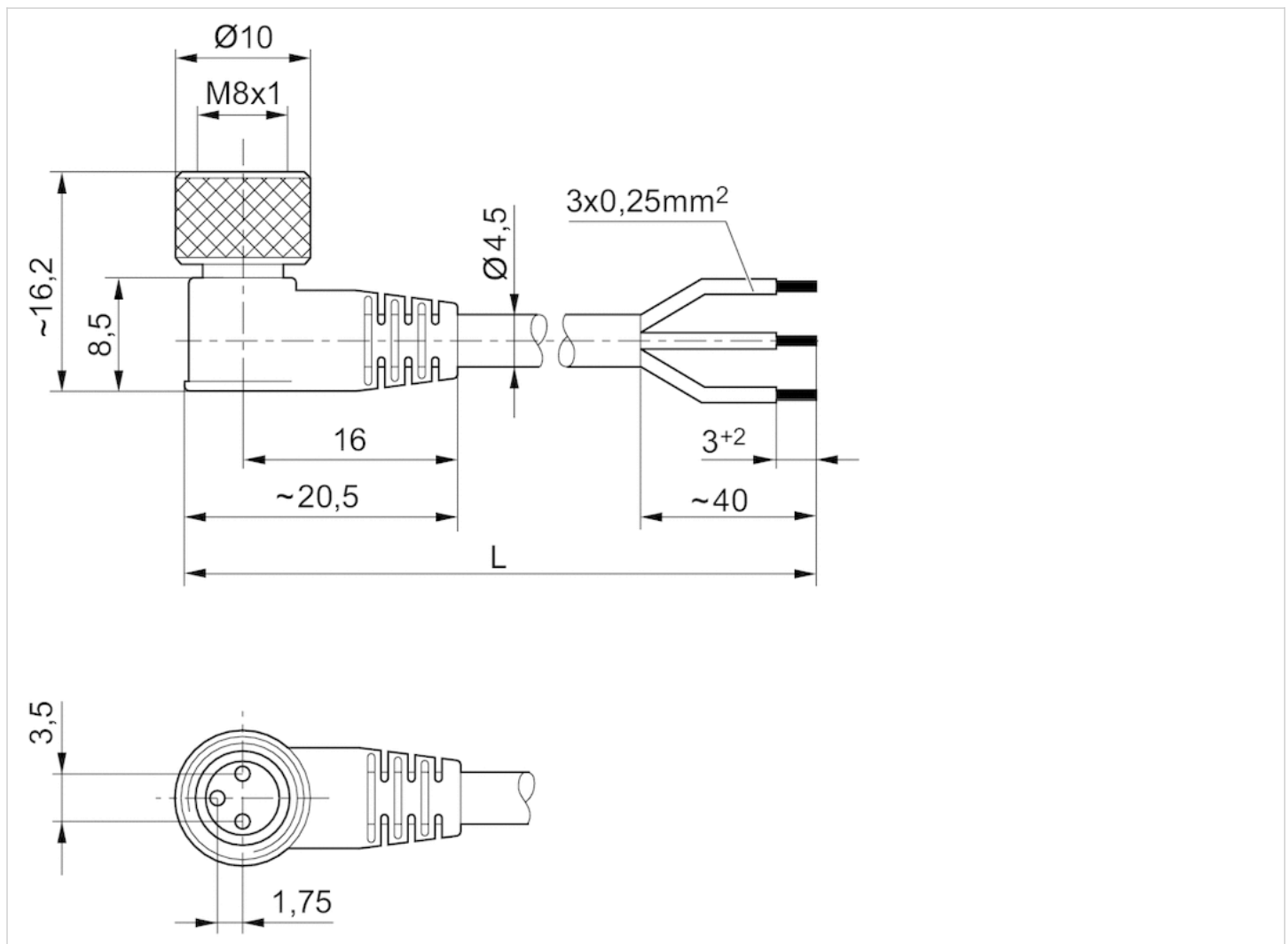
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

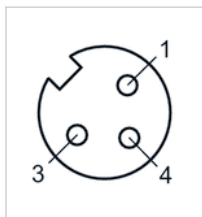
Dimensions



L = length

Pin assignments

Pin assignment, socket



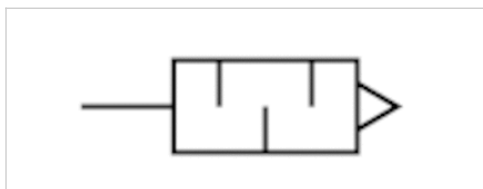
- (1) BN=brown
- (3) BU=blue
- (4) BK=black

Silencers, series SI1

- M5
- Sintered bronze



Working pressure min./max.	0 ... 10 bar
Ambient temperature min./max.	-25 ... 80 °C
Medium	Compressed air
Sound pressure level	72 dB
Weight	0.004 kg
Comment	Flow characteristic curves can be found under "Diagrams".



Technical data

Part No.	Compressed air connection	Flow	Delivery unit
		Qn	
1827000006	M5	398 l/min	10 piece

Weight per piece

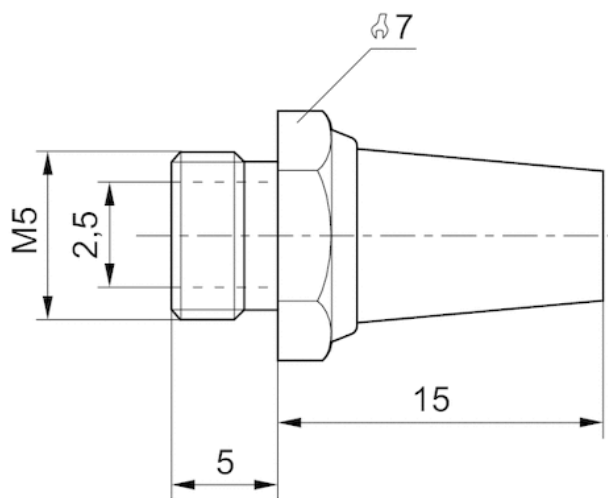
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

Technical information

Material	
Silencer	Sintered bronze
Thread	Brass

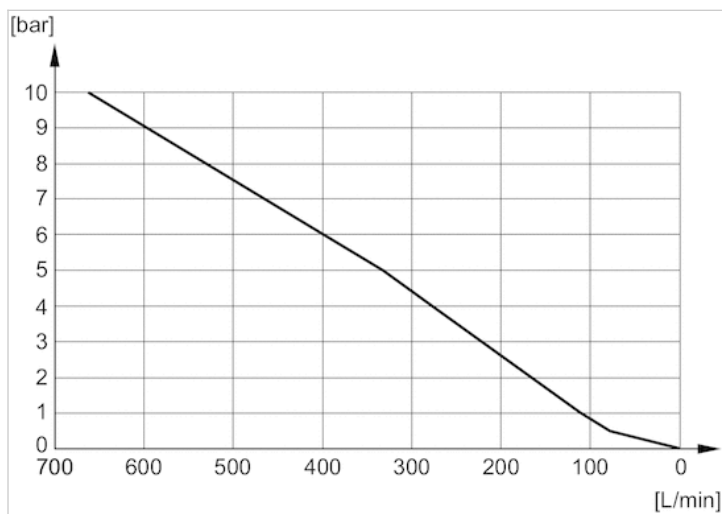
Dimensions

Dimensions in mm



Diagrams

Flow diagram, 1827000006

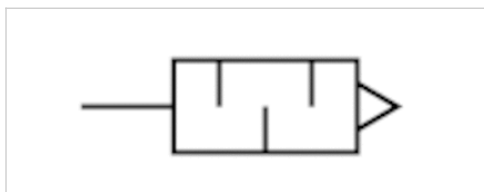


Silencers, series SI1

- G 1/8
- Sintered bronze



Working pressure min./max.	0 ... 10 bar
Ambient temperature min./max.	-25 ... 80 °C
Medium	Compressed air
Sound pressure level	75 dB
Weight	0.01 kg
Comment	Flow characteristic curves can be found under "Diagrams".



Technical data

Part No.	Compressed air connection	Flow	Delivery unit
		Qn	
1827000000	G 1/8	1623 l/min	10 piece

Weight per piece

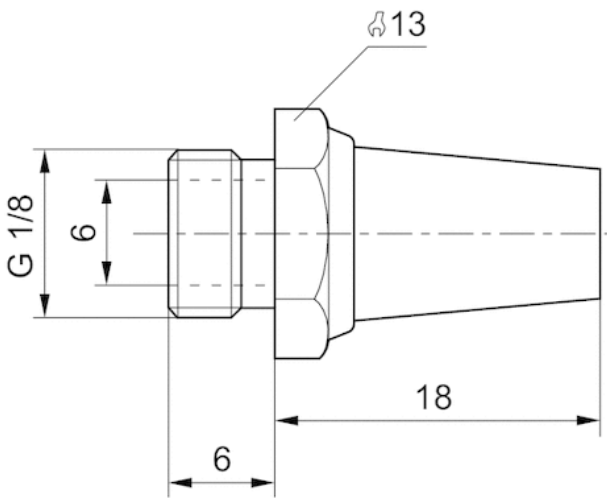
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

Technical information

Material	
Silencer	Sintered bronze
Thread	Brass

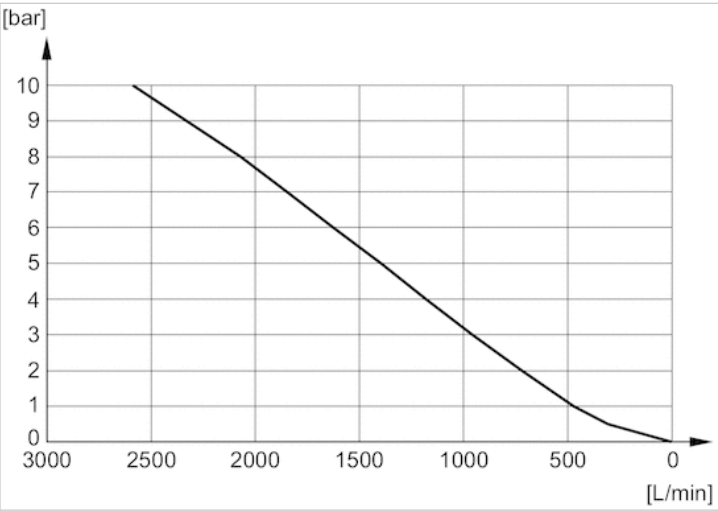
Dimensions

Dimensions in mm



Diagrams

Flow diagram, 1827000000



Silencers, series SI1

- M5 G 1/8
- Sintered bronze



Working pressure min./max.

0 ... 10 bar

Ambient temperature min./max.

-25 ... 80 °C

Medium

Compressed air

Sound pressure level

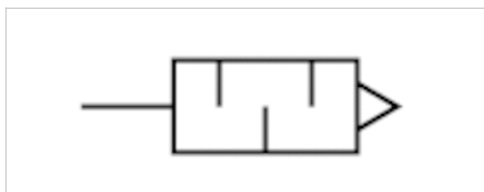
See table below

Weight

See table below

Comment

Flow characteristic curves can be found under "Diagrams".



Technical data

Part No.	Compressed air connection	Sound pressure level	Flow	Delivery unit	Weight
			Qn		
1827000032	M5	79 dB	252 l/min	10 piece	0.005 kg
1827000031	G 1/8	85 dB	700 l/min	10 piece	0.001 kg

Weight per piece

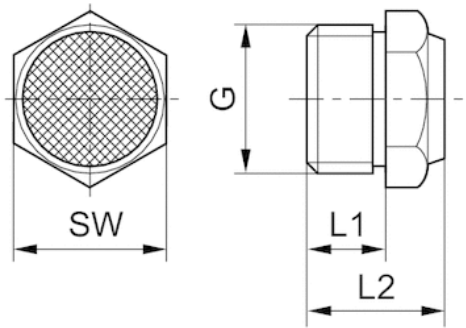
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

Technical information

Material	
Silencer	Sintered bronze
Thread	Brass

Dimensions

Dimensions



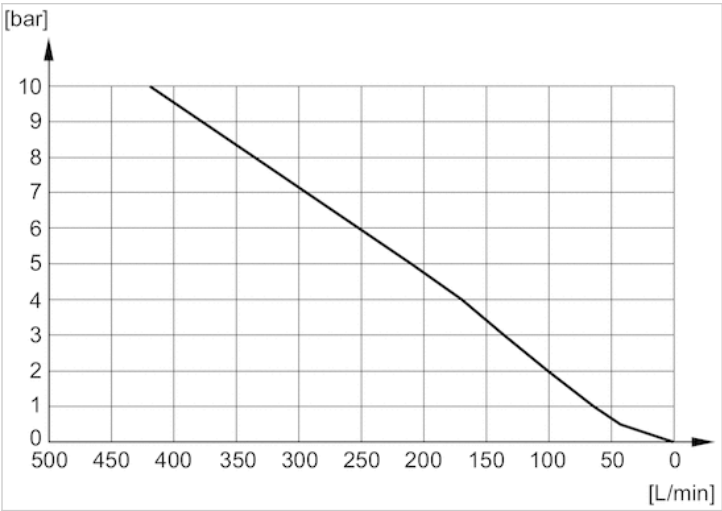
Dimensions

Part No.	Port G	L1	L2	SW
1827000032	M5	5	10.3	7
1827000031	G 1/8	6	11.5	13

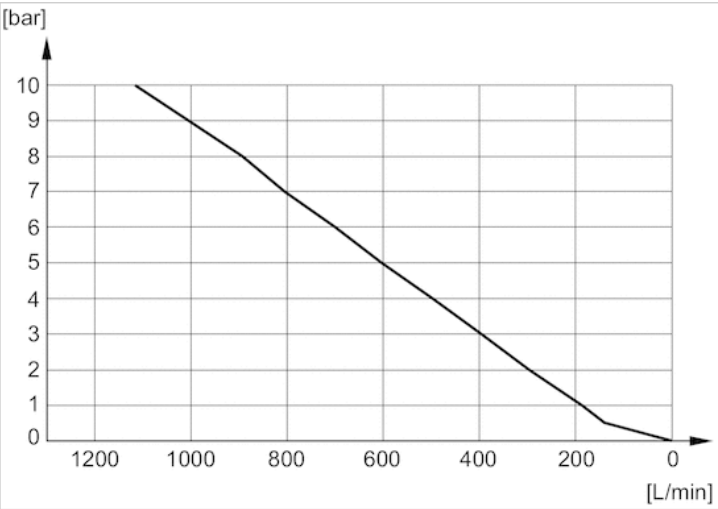
Sound pressure level measured at 6 bar at 1 m distance

Diagrams

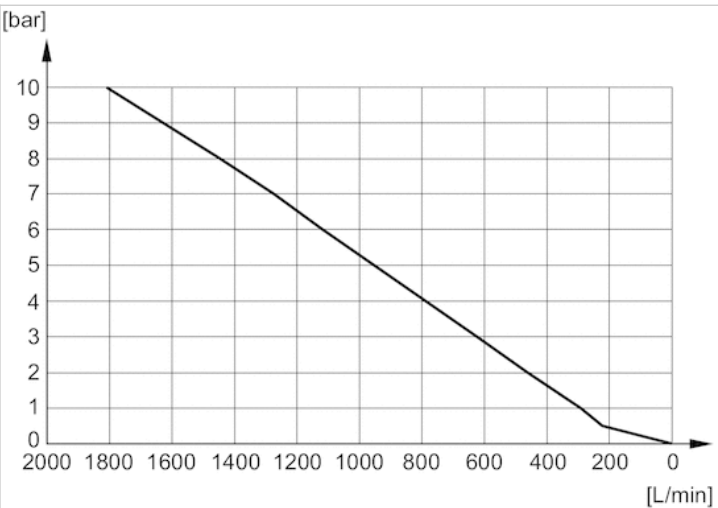
Flow diagram, 1827000032



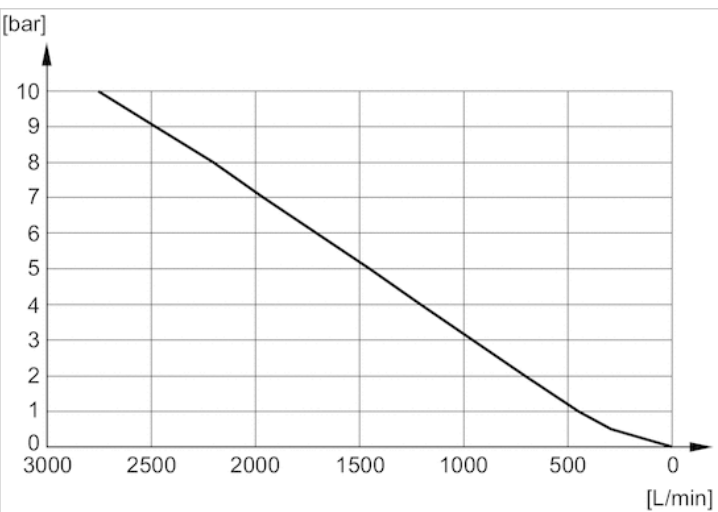
Flow diagram, 1827000031



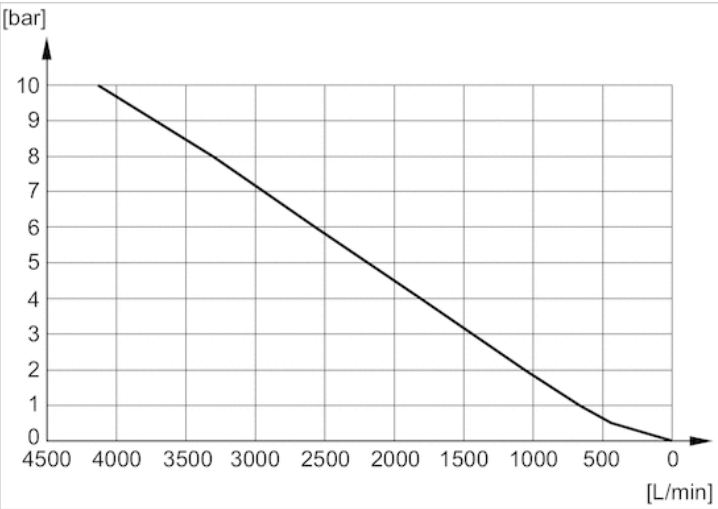
Flow diagram, 1827000033



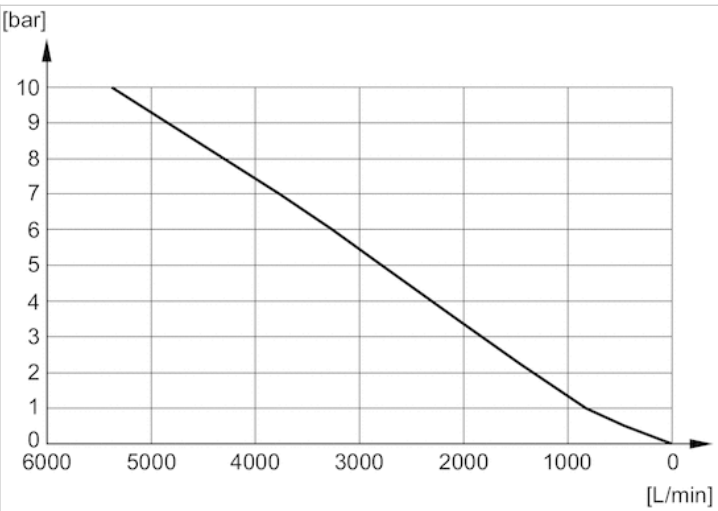
Flow diagram, 1827000034



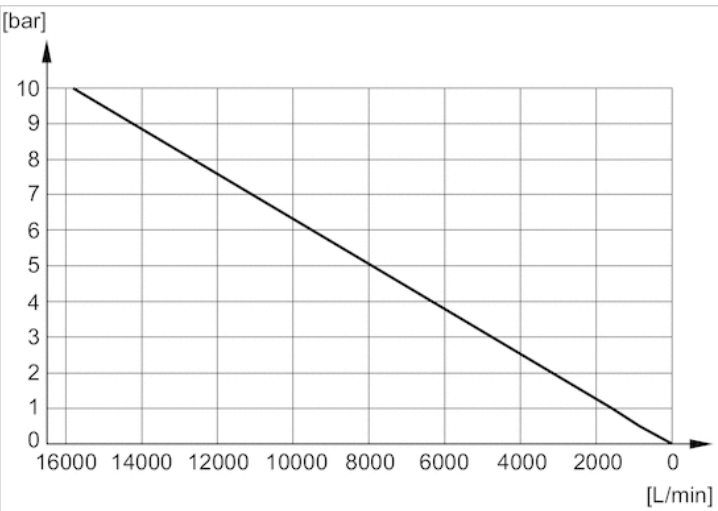
Flow diagram, 1827000035



Flow diagram, 8145003400



Flow diagram, 8145001000



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