

Guide cylinders, Series GPC-BV

- Ø 10-100 mm
- double-acting
- Plain bearing
- Cushioning elastic
- with magnetic piston



Working pressure min./max.	See table below
Ambient temperature min./max.	-10 ... 70 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m ³
Pressure for determining piston forces	6.3 bar
Weight	See table below

Technical data

Piston Ø	10 mm	12 mm	16 mm	20 mm	25 mm	32 mm	40 mm
Stroke 10	R402000294	0822060000	0822061000	0822062000	0822063000	-	-
20	R402000296	0822060001	0822061001	0822062001	0822063001	-	-
25	R402000297	0822060007	0822061007	0822062007	0822063007	0822064000	0822065000
30	R402000298	0822060002	0822061002	0822062002	0822063002	-	-
40	R402000300	0822060003	0822061003	0822062003	0822063003	-	-
50	R402000302	0822060004	0822061004	0822062004	0822063004	0822064001	0822065001
75	R402000307	0822060005	0822061005	0822062005	0822063005	0822064002	0822065002
100	R402000312	0822060006	0822061006	0822062006	0822063006	0822064003	0822065003
125	-	0822060024	0822061024	0822062024	0822063024	0822064004	0822065004
150	-	0822060029	0822061029	0822062029	0822063029	-	-
160	-	-	-	-	0822063031	0822064005	0822065005
200	-	-	-	-	0822063039	0822064006	0822065006

Piston Ø	50 mm	63 mm	80 mm	100 mm
Stroke 10	-	-	-	-
20	-	-	-	-
25	0822066000	0822067000	R402000914	R402000928
30	-	-	-	-

Piston Ø	50 mm	63 mm	80 mm	100 mm
40	-	-	-	-
50	0822066001	0822067001	R402000915	R402000929
75	0822066002	0822067002	R402000916	R402000930
100	0822066003	0822067003	R402000917	R402000931
125	0822066004	0822067004	R402000918	R402000932
150	-	-	-	-
160	0822066005	0822067005	R402000919	R402000933
200	0822066006	0822067006	R402000920	R402000934

Technical data

Piston Ø	10 mm	12 mm	16 mm	20 mm
Port	M5	M5	M5	M5
Working pressure min./max.	2 ... 8 bar	2 ... 8 bar	2 ... 8 bar	2 ... 8 bar
Retracting piston force	42 N	53 N	95 N	148 N
Extracting piston force	49 N	71 N	127 N	198 N
Speed max.	0,5 m/s	0,5 m/s	0,5 m/s	0,5 m/s
Impact energy	0,04 J	0,1 J	0,11 J	0,15 J

Piston Ø	25 mm	32 mm	40 mm	50 mm
Port	G 1/8	G 1/8	G 1/8	G 1/4
Working pressure min./max.	1,5 ... 8 bar	1,3 ... 8 bar	1 ... 8 bar	1 ... 8 bar
Retracting piston force	260 N	435 N	720 N	1110 N
Extracting piston force	309 N	507 N	792 N	1237 N
Speed max.	0,8 m/s	0,6 m/s	0,6 m/s	0,6 m/s
Impact energy	0,35 J	0,4 J	0,52 J	0,64 J

Piston Ø	63 mm	80 mm	100 mm
Port	G 1/4	G 1/4	G 3/8
Working pressure min./max.	1 ... 8 bar	1 ... 8 bar	1 ... 8 bar
Retracting piston force	1837 N	2969 N	4639 N
Extracting piston force	1964 N	3167 N	4948 N
Speed max.	0,6 m/s	0,4 m/s	0,4 m/s
Impact energy	0,75 J	0,75 J	1 J

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).

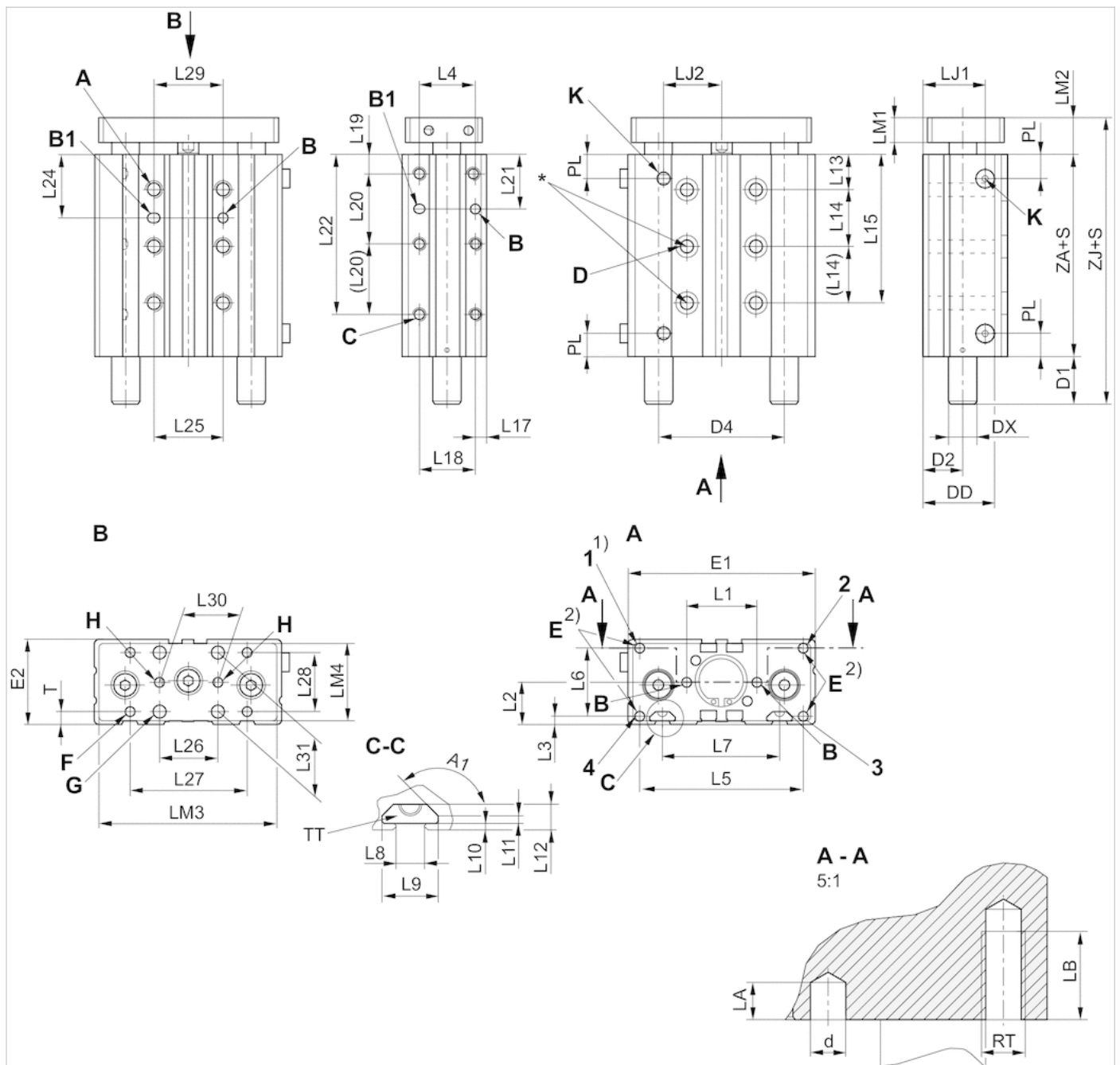
Note: Only the Ø10 variants fits to sensor series ST4. The sensor series ST6 and SN3 can be used for all other Ø variants.

Technical information

Material	
Housing	Aluminum, anodized
Seal	Polyurethane
Front plate	Steel, galvanized
Guide rod	Stainless steel
Bearing	Sintered bronze
Piston rod	Stainless steel

Dimensions

Dimensions Ø 10 ... 20



* Suitable for screws according to ISO 4762

1) Only Ø 20 threaded hole

2) M4 mounting hole for GPC-E accessories

1, 2, 3, 4: threaded holes

S = stroke

Note: Only the Ø10 variants fits to sensor series ST4. The sensor series ST6 and SN3 can be used for all other Ø variants.

Dimensions

Piston Ø	ARTxLB	A1	BØdxLA	B1ØdxDxLA	CRTxLB	DØ	D1S=10-30	D1S=40-100	D1S>100	D2	D4
10 mm	M4x6	–	4H7x4	4H7x5x4	M4x6	3.2	13.5	13.5	13.5	7	–
12 mm	M5x8	–	4H7x4	4H7x5x4	M5x8	4.2	0	17.6	32.6	14.5	40
16 mm	M5x8	135°	4H7x4	4H7x5x4	M5x8	4.2	0	20	35	15.8	47
20 mm	M6x10	135°	4H7x4	4H7x5x4	M6x10	5.2	0	20	35	16.5	54

DD	DX	ERTxLB	E1	E2	FØ 1)	GØ 2)	HØ 2)	K	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
17.4	8	M4x8	50	21	M4	–	–	M5	20 ±0,04	10.5	3	–	20	15	–	–	–	–	–
20	10	M5x8	58	30.5	M4	4.5	4H9	M5	23 ±0,04	15	4	22	50	22	–	–	–	–	–
28.5	12	M5x8	68	33	M4	5.5	4H9	M5	28 ±0,04	16.5	4	25	61	25	43	6.15	12	1.5	1.5
30.5	12	M5x10	80	36	M5	5.5	4H9	M5	30 ±0,04	18	3.5	24	70	29	50	6.15	12	1.5	1.5

L12	L13	L14S=10	L14S=20	L14S>20	L15S=40	L15S>40	L17	L18	L19	L20S=10	L20S>10	L21S=10
–	15	–	20	20	55	55	15	–	8	20	20	13
–	14.5	–	18	22	–	58.5	4	22	8	20	20	18
5.5	14	18	25	25	–	64	4	25	8	18	25	20.5
5.5	15	16	24	24	–	63	4.5	24	8	20	30	18

L21S>10	L22S≤40	L22S>40	L24S=10	L24S>10	L25	L26	L27	L28	L29	L30	L31	LJ1	LJ2	LM1
13	48	48	25	25	20	–	20	10	20	–	–	15.5	15	5
18	–	48	25.5	25.5	20	–	40	20	20	–	–	24.8	17.5	8
20.5	–	58	26.5	26.5	25	20	40	20	25	20 ±0,04	22	27	21	8
23	–	68	23	27	30	25	50	25	30	25 ±0,04	25	26.5	25	10

S = stroke

To determine the cylinder length (ZA) for intermediate strokes (i.e. stroke 10 with dia. 40), the next available standard stroke size must be used

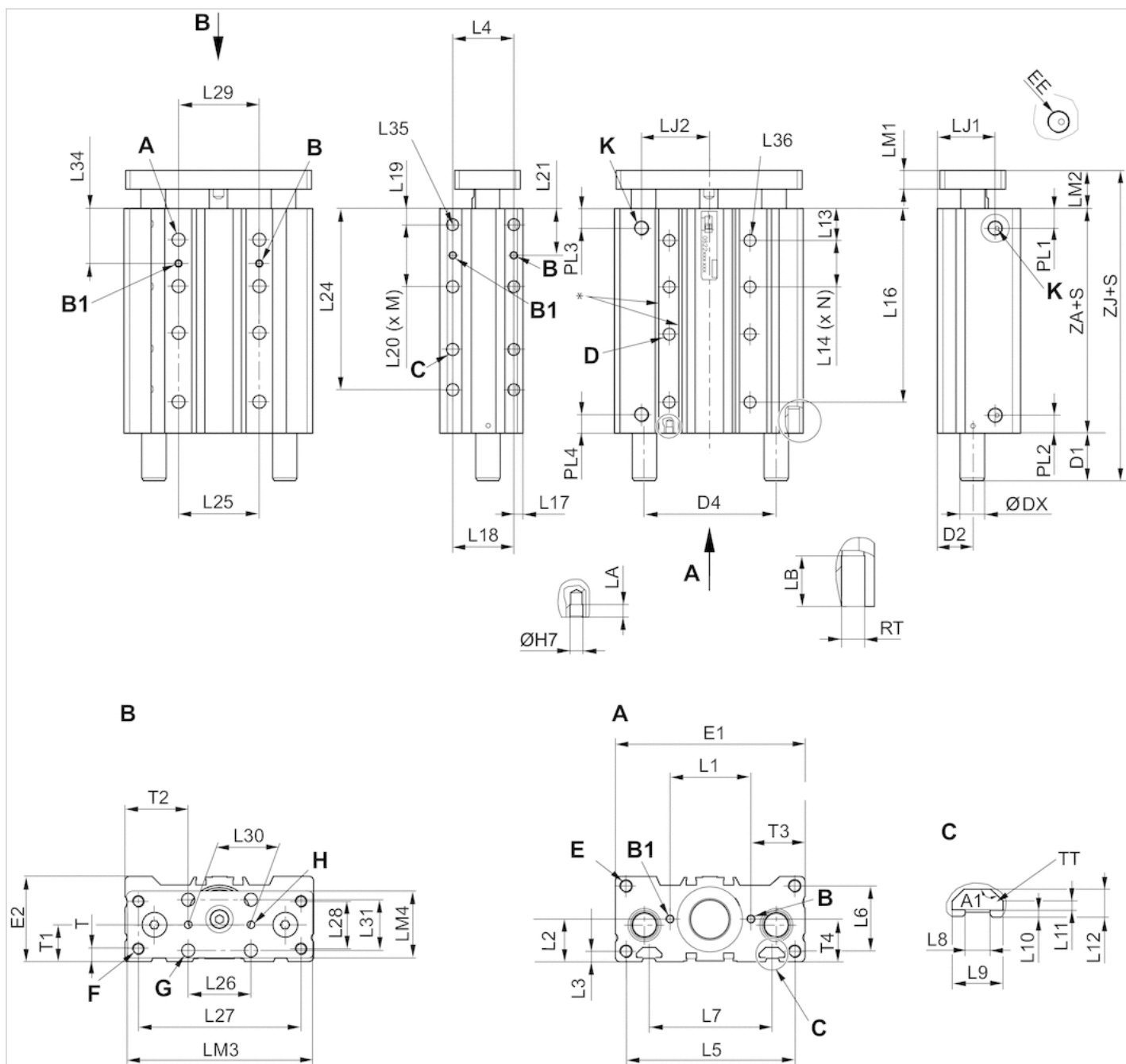
1) Through hole with thread

2) through-hole

Two holes C-C 10 mm.

Dimensions

Dimensions Ø 25 ... 100



* Suitable for screws according to ISO 4762

S = stroke

Note: Only the Ø10 variants fits to sensor series ST4. The sensor series ST6 and SN3 can be used for all other Ø variants.

Dimensions

Piston Ø	ARTxLB	A1	BØdxLA	B1ØdxD	CRTxLB	DØ 1)	D2	D4	DX	ERTxLB	E1	E2	FØ 1)
25 mm	M6x10	135°	4x4	4x5	M6x10	5.5	18	59	16	M6x12	95	43	M6
32 mm	M8x14	135°	4x4	4x5	M8x14	7.4	23	75.6	20	M6x12	114	48.5	M8
40 mm	M8x14	135°	4x4	4x5	M8x14	7.4	23	86	20	M8x16	124	54.5	M8
50 mm	M10x20	135°	5x5	5x6	M10x20	9.3	27.5	104	25	M8x16	148	64	M8
63 mm	M10x20	135°	5x5	5x6	M10x20	9.3	35	124	25	M10x20	162	78.5	M10
80 mm	M12x24	135°	6x6	6x7	M12x25	11.2	39.5	152	32	M12x25	202	91.5	M12
100 mm	M12x24	135°	6x6	6x7	M12x25	11.2	39.5	174	32	M12x25	226	111	M12

Piston Ø	GØ 2)	HØ 2)	KEE	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
25 mm	6.5	4H8	G 1/8	35 ±0,1	20.5	4.5	25 ±0,1	85	34	52	6.15	12	1.5	1.5	5.5
32 mm	6.5	4H8	G 1/8	44 ±0,1	24	5	33 ±0,1	105	26	70	8.2	16.7	2.2	2.8	9
40 mm	8.5	4H8	G 1/8	53 ±0,15	27	6	40 ±0,15	110	42	80	8.2	16.7	2.2	2.8	9
50 mm	8.5	4H8	G 1/4	66 ±0,15	32	8	48 ±0,15	133	34.5	93	8.2	16.7	2.2	2.8	9
63 mm	10.5	5H8	G 1/4	84 ±0,15	39	8	60 ±0,15	147	62	112	10.2	20.3	6	6	16
80 mm	10.5	5H8	G 1/4	100 ±0,15	46	9	60 ±0,15	182	54.5	132	10.2	20.3	6	6	16
100 mm	12.5	6H8	G 3/8	120 ±0,15	55.5	9	60 ±0,15	206	76	155	10.2	20.3	6	6	16

Piston Ø	L13	L15	L17	L18	L19	L22	L25	L26	L27	L28	L29	L30	L31	LJ1	LJ2	LM1	LM2
25 mm	16.5	25	5.5	25	8	32	32	30	81	23	32 ±0,1	30 ±0,2	24	29.6	32	10	15.5
32 mm	20.5	33	6.5	33	10	42	42	32	97	30	42 ±0,1	32 ±0,2	25	40	40.5	12	18.5
40 mm	20	40	6	40	10	53	53	42	107	30	53 ±0,15	42 ±0,2	32.5	37.8	44	12	19.5
50 mm	23	48	7.5	48	12	63	63	53	134	40	63 ±0,15	53 ±0,2	40	54.5	50.5	15	23.5
63 mm	24	60	11	60	12	80	80	63	140	48	80 ±0,15	63 ±0,2	48	57	59	15	24
80 mm	33.5	60	12	60	13	96	96	80	176	52	96 ±0,15	80 ±0,2	60	77.5	74.5	20	30
100 mm	32.5	60	12	60	13	119	119	96	204	64	119 ±0,15	96 ±0,2	60	68.5	86.5	20	31

Piston Ø	LM3	LM4	PL1	PL2	PL3	PL4	T	T1	T2	T3	T4	TT	ZA
25 mm	93	33	11	11	11	11	6.5	18 ±0,4	32,5 ±0,4	30 ±0,05	20,5 ±0,05	N6	42 3)
32 mm	112	43	13.5	13.5	13.5	13.5	8	23 ±0,4	41 ±0,4	35 ±0,05	24 ±0,05	N8	46.5
40 mm	122	43	12	12	12	12	8	23 ±0,4	41 ±0,4	35,5 ±0,1	27 ±0,1	N8	44
50 mm	146	52	13	13	13	13	7.5	27,5 ±0,4	47,5 ±0,4	41 ±0,1	32 ±0,1	N8	46
63 mm	160	67	13.7	13.7	13.7	13.7	11	35 ±0,4	49,5 ±0,5	39 ±0,1	39 ±0,1	N10	51
80 mm	200	76	23	23	23	23	13.5	39,5 ±0,45	61 ±0,5	51 ±0,2	46 ±0,2	N10	77
100 mm	224	84	21.5	21.5	21.5	21.5	18.5	50,5 ±0,45	65 ±0,5	53 ±0,2	55,5 ±0,2	N10	77

S = stroke

To determine the cylinder length (ZA) for intermediate strokes (i.e. stroke 10 with dia. 40), the next available standard stroke size must be used

1) Through hole with thread

2) through-hole

3) For stroke 10/150, ZA = 52, for stroke 25, ZA = 47

Two holes C-C 10 mm.

Dimensions

Piston Ø	S=10D1	S=20D1	S=25D1	S=30D1	S=40D1	S=50D1	S=75D1	S=100D1	S=125D1	S=150D1
25 mm	0	0	0	0	0	0	11	11	27	27
32 mm	-	-	17	17	17	17	17	17	35	35
40 mm	-	-	19	19	19	19	19	19	37	37
50 mm	-	-	25	25	25	25	25	25	55	55
63 mm	-	-	19	19	19	19	19	19	49	49
80 mm	-	-	10.5	10.5	10.5	10.5	10.5	10.5	38.5	38.5
100 mm	-	-	9.5	9.5	9.5	9.5	9.5	9.5	37.5	37.5

Piston Ø	S=160D1	S=200D1	S=10L14	S=20L14	S=25L14	S=30L14	S=40L14	S=50L14	S=75L14
25 mm	27	27	19	25	25	25	25	25	25
32 mm	35	35	30	30	30	33	33	33	33
40 mm	37	37	30	30	30	40	40	40	40
50 mm	55	55	25	25	25	48	48	48	48
63 mm	49	49	28	28	28	28	28	28	60
80 mm	38.5	38.5	35	35	35	60	60	60	60
100 mm	37.5	37.5	37	37	37	60	60	60	60

Piston Ø	S=100L14	S=125L14	S=160L14	S=200L14
25 mm	25	25	25	25
32 mm	33	33	33	33
40 mm	40	40	40	40
50 mm	48	48	48	48
63 mm	60	60	60	60
80 mm	60	60	60	60
100 mm	60	60	60	60

S = stroke

Dimensions

Piston Ø	S=10N	S=20N	S=25N	S=30N	S=40N	S=50N	S=75N	S=100N	S=125N	S=160N	S=200N	S=40L16
25 mm	1	1	1	1	1	2	3	3	3	3	3	65.5
32 mm	-	-	1	1	1	1	2	3	3	3	3	-
40 mm	-	-	1	1	1	1	2	2	3	3	3	-
50 mm	-	-	1	1	1	1	1	2	2	3	3	-
63 mm	-	-	1	1	1	1	1	1	2	2	3	-
80 mm	-	-	1	1	1	1	1	1	2	2	3	-
100 mm	-	-	1	1	1	1	1	1	2	2	3	-

Piston Ø	S=50L16	S=100L16	S=125L16	S=160L16	S=200L16
25 mm	-	125.5	150.5	185.5	225.5
32 mm	76	-	151	186	226
40 mm	-	-	-	184	224
50 mm	-	-	148	-	223
63 mm	-	127	-	187	-
80 mm	-	143.5	-	203.5	-
100 mm	-	144.5	-	204.5	-

S = stroke

Dimensions

Piston Ø	S=20L20	S=25L20	S=30L20	S=40L20	S=50L20	S=75L20	S=100L20	S=125L20	S=160L20
25 mm	22	32	32	32	32	32	32	32	32
32 mm	35	35	42	42	42	42	42	42	42
40 mm	30	30	53	53	53	53	53	53	53
50 mm	30	30	30	30	30	63	63	63	63
63 mm	30	30	30	30	30	80	80	80	80
80 mm	47	47	47	47	47	96	96	96	96
100 mm	49	49	49	49	49	49	119	119	119

Piston Ø	S=200L20	S=20L21	S=25L21	S=30L21	S=40L21	S=50L21	S=75L21	S=100L21	S=125L21
25 mm	32	19	24	24	24	24	24	24	24
32 mm	42	27.5	27.5	31	31	31	31	31	31
40 mm	53	25	25	36.5	36.5	36.5	36.5	36.5	36.5
50 mm	63	27	27	27	27	27	43.5	43.5	43.5
63 mm	80	27	27	27	27	27	52	52	52
80 mm	96	36.5	36.5	36.5	36.5	36.5	61	61	61
100 mm	119	37.5	37.5	37.5	37.5	37.5	37.5	72.5	72.5

Piston Ø	S=160L21	S=200L21
25 mm	24	24
32 mm	31	31
40 mm	36.5	36.5
50 mm	43.5	43.5
63 mm	52	52
80 mm	61	61
100 mm	72.5	72.5

S = stroke

Dimensions

Piston Ø	S10M	S20M	S25M	S30M	S40M	S50M	S75M	S100M	S125M	S160M	S200M	S40L24
25 mm	1	1	1	1	1	1	2	3	3	3	3	60
32 mm	-	-	1	1	1	1	2	2	3	3	3	-
40 mm	-	-	1	1	1	1	1	2	2	3	3	-
50 mm	-	-	1	1	1	1	1	1	2	2	3	-
63 mm	-	-	1	1	1	1	1	1	1	2	2	-
80 mm	-	-	1	1	1	1	1	1	1	1	2	-
100 mm	-	-	1	1	1	1	1	1	1	1	1	-

Piston Ø	S50L24	S75L24	S100L24	S125L24	S160L24	S200L24
25 mm	70	95	-	145	180	220
32 mm	-	-	122.5	-	182.5	222.5
40 mm	-	91	-	-	-	216
50 mm	-	-	116	-	176	-
63 mm	-	-	-	142	-	217

Piston Ø	S50L24	S75L24	S100L24	S125L24	S160L24	S200L24
80 mm	-	-	-	160	195	-
100 mm	-	-	-	-	195	235

S = stroke

Dimensions

Piston Ø	S10L34	S20L34	S25L34	S30L34	S40L34	S50L34	S75L34	S100L34	S125L34	S160L34
25 mm	26	29	29	29	29	29	29	29	29	29
32 mm	35.5	35.5	35.5	37	37	37	37	37	37	37
40 mm	35	35	35	40	40	40	40	40	40	40
50 mm	35.5	35.5	35.5	47	47	47	47	47	47	47
63 mm	38	38	38	38	38	38	54	54	54	54
80 mm	51	51	51	51	51	63.5	63.5	63.5	63.5	63.5
100 mm	51	51	51	51	51	62.5	62.5	62.5	62.5	62.5

Piston Ø	S200L34	S10L35	S20L35	S25L35	S30L35	S40L35	S50L35	S75L35	S100L35	S125L35
25 mm	29	4	4	4	4	6	6	8	8	10
32 mm	37	4	4	4	4	4	4	6	8	8
40 mm	40	4	4	4	4	4	4	6	6	6
50 mm	47	4	4	4	4	4	4	4	6	6
63 mm	54	4	4	4	4	4	4	4	4	6
80 mm	63.5	4	4	4	4	4	4	4	4	6
100 mm	62.5	4	4	4	4	4	4	4	4	4

Piston Ø	S160L35	S200L35
25 mm	10	10
32 mm	10	10
40 mm	8	10
50 mm	8	8
63 mm	6	8
80 mm	6	6
100 mm	6	6

S = stroke

Dimensions

Piston Ø	S10L36	S20L36	S25L36	S30L36	S40L36	S50L36	S75L36	S100L36	S125L36	S160L36
25 mm	4	4	4	4	6	6	8	10	10	10
32 mm	4	4	4	4	4	6	6	8	10	10
40 mm	4	4	4	4	4	4	6	6	8	10
50 mm	4	4	4	4	4	4	4	6	8	8
63 mm	4	4	4	4	4	4	4	6	6	8
80 mm	4	4	4	4	4	4	4	6	6	8
100 mm	4	4	4	4	4	4	4	6	6	8

S200L36	S10ZJ	S20ZJ	S25ZJ	S30ZJ	S40ZJ	S50ZJ	S75ZJ	S100ZJ	S125ZJ	S160ZJ	S200ZJ
10	57.5	57.5	57.5	57.5	57.5	57.5	68.5	68.5	84.5	84.5	84.5

S200L36	S10ZJ	S20ZJ	S25ZJ	S30ZJ	S40ZJ	S50ZJ	S75ZJ	S100ZJ	S125ZJ	S160ZJ	S200ZJ
10	-	-	82	-	-	82	82	82	100	100	100
10	-	-	82.6	-	-	82.6	82.6	82.6	124.5	124.5	124.5
10	-	-	94.5	-	-	94.5	94.5	94.5	124.6	124.6	124.6
10	-	-	94.6	-	-	94.6	94.6	94.6	145.5	145.5	145.5
8	-	-	117.5	-	-	117.5	117.5	117.5	145.5	145.5	145.5
8	-	-	117.5	-	-	117.5	117.5	117.5	145.5	145.5	145.5

S = stroke

Weight [kg]

Piston Ø	S	Weight kg
10 mm	10 mm	0,19 kg
10 mm	20 mm	0,22 kg
10 mm	25 mm	0,23 kg
10 mm	30 mm	0,24 kg
10 mm	40 mm	0,27 kg
10 mm	50 mm	0,29 kg
10 mm	75 mm	0,36 kg
10 mm	100 mm	0,42 kg
12 mm	10 mm	0,3 kg
12 mm	20 mm	0,34 kg
12 mm	25 mm	0,37 kg
12 mm	30 mm	0,39 kg
12 mm	40 mm	0,45 kg
12 mm	50 mm	0,49 kg
12 mm	75 mm	0,61 kg
12 mm	100 mm	0,73 kg
12 mm	125 mm	0,85 kg
12 mm	150 mm	0,97 kg
16 mm	10 mm	0,38 kg
16 mm	20 mm	0,44 kg
16 mm	25 mm	0,46 kg
16 mm	30 mm	0,49 kg
16 mm	40 mm	0,57 kg
16 mm	50 mm	0,63 kg
16 mm	75 mm	0,77 kg
16 mm	100 mm	0,91 kg
16 mm	125 mm	1,06 kg
16 mm	150 mm	1,2 kg
20 mm	10 mm	0,5 kg
20 mm	20 mm	0,57 kg
20 mm	25 mm	0,6 kg
20 mm	30 mm	0,64 kg
20 mm	40 mm	0,73 kg
20 mm	50 mm	0,8 kg
20 mm	75 mm	0,98 kg
20 mm	100 mm	1,16 kg
20 mm	125 mm	1,35 kg

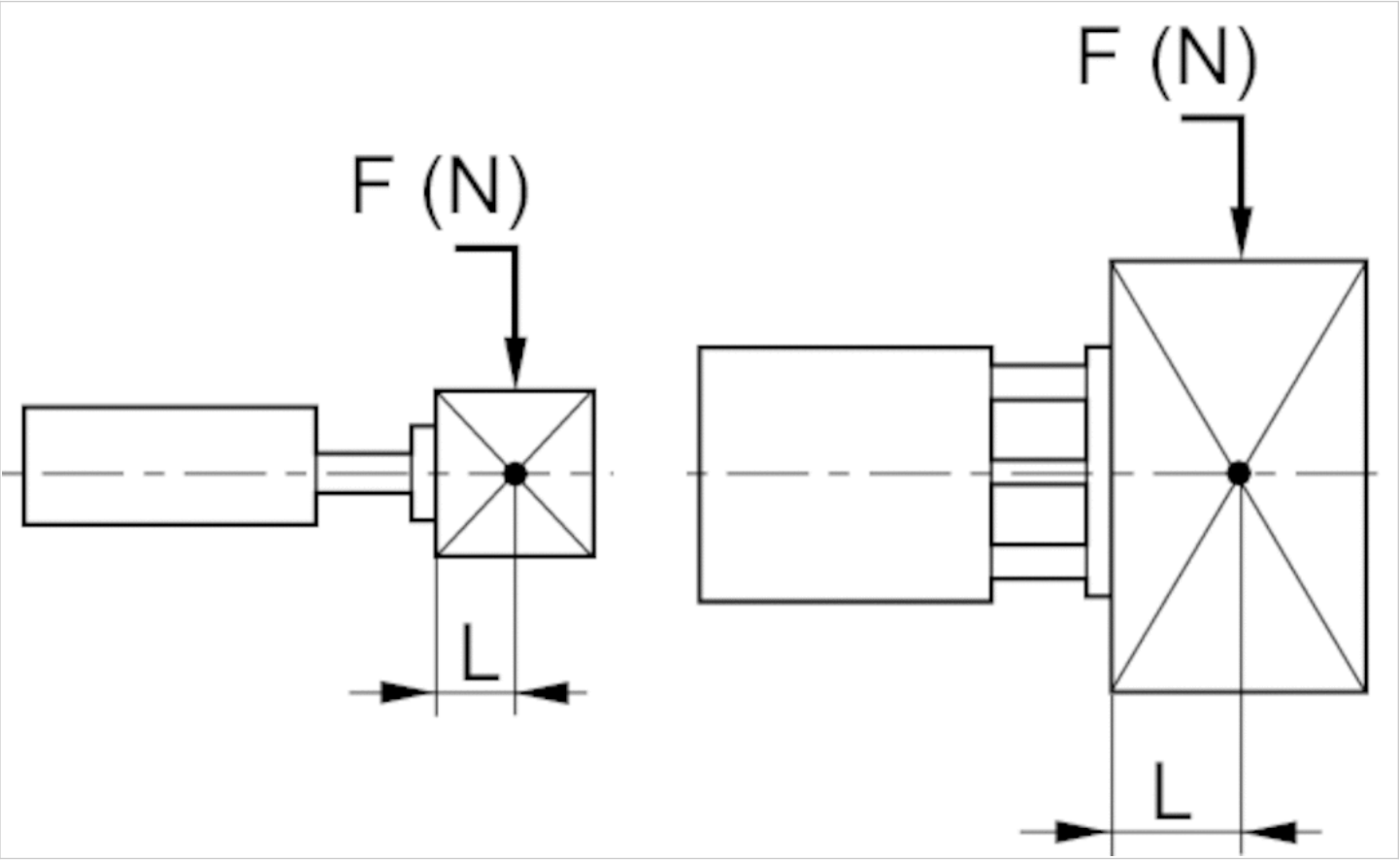
Piston Ø	S	Weight kg
20 mm	150 mm	1,52 kg
25 mm	10 mm	0,82 kg
25 mm	20 mm	0,92 kg
25 mm	25 mm	-
25 mm	30 mm	1,05 kg
25 mm	40 mm	1,14 kg
25 mm	50 mm	1,25 kg
25 mm	75 mm	1,56 kg
25 mm	100 mm	1,83 kg
25 mm	125 mm	2,15 kg
25 mm	150 mm	-
25 mm	160 mm	2,53 kg
25 mm	200 mm	2,97 kg
32 mm	25 mm	1,56 kg
32 mm	50 mm	1,93 kg
32 mm	75 mm	2,26 kg
32 mm	100 mm	2,62 kg
32 mm	125 mm	3,06 kg
32 mm	160 mm	3,57 kg
32 mm	200 mm	4,17 kg
40 mm	25 mm	1,8 kg
40 mm	50 mm	2,2 kg
40 mm	75 mm	2,6 kg
40 mm	100 mm	3,08 kg
40 mm	125 mm	3,6 kg
40 mm	160 mm	4,1 kg
40 mm	200 mm	4,8 kg
50 mm	25 mm	3 kg
50 mm	50 mm	3,6 kg
50 mm	75 mm	4,2 kg
50 mm	100 mm	4,8 kg
50 mm	125 mm	5,6 kg
50 mm	160 mm	6,4 kg
50 mm	200 mm	7,3 kg
63 mm	25 mm	3,8 kg
63 mm	50 mm	4,5 kg
63 mm	75 mm	5,2 kg
63 mm	100 mm	5,9 kg
63 mm	125 mm	6,86 kg
63 mm	160 mm	7,78 kg
63 mm	200 mm	8,9 kg
80 mm	25 mm	7,3 kg
80 mm	50 mm	8,3 kg
80 mm	75 mm	9,3 kg
80 mm	100 mm	10,3 kg
80 mm	125 mm	11,6 kg
80 mm	160 mm	12,9 kg
80 mm	200 mm	14,5 kg
100 mm	25 mm	8,8 kg

Piston Ø	S	Weight kg
100 mm	50 mm	10 kg
100 mm	75 mm	11,1 kg
100 mm	100 mm	12,2 kg
100 mm	125 mm	13,7 kg
100 mm	160 mm	15,2 kg
100 mm	200 mm	17 kg

S = stroke

Dimensions

Permissible static side load F [N] at distance L



Dimensions

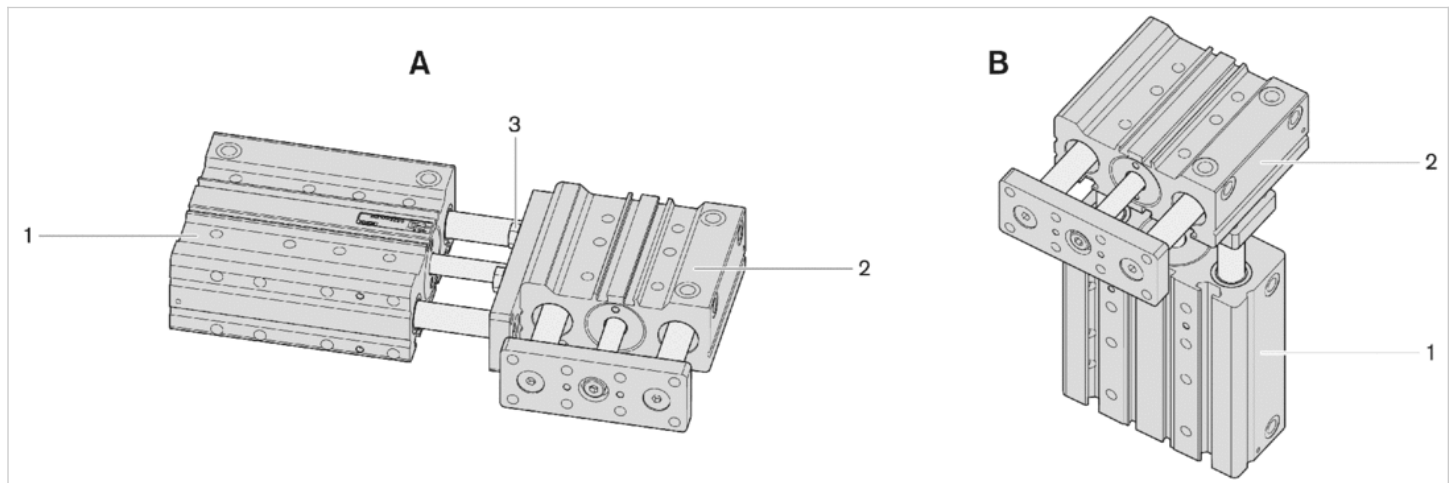
Piston Ø	L	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=150	S=160	S=200
10 mm	25	12	11	11	10	10	9	8	7	–	–	–	–
12 mm	25	28	24	23	21	31	28	22	19	16	13	–	–
16 mm	50	63	56	53	51	73	67	55	49	42	35	–	–
20 mm	50	63	56	53	51	73	67	55	49	42	35	–	–
25 mm	50	53.2	48.4	–	44.4	41	38.1	59	51.9	65.4	–	57.3	50.1
32 mm	50	–	–	139	–	–	118	103	90.8	116	–	102	90.2
40 mm	50	–	–	138	–	–	118	102	90.4	116	–	102	89.9
50 mm	50	–	–	218	–	–	187	164	146	215	–	191	169
63 mm	50	–	–	217	–	–	186	163	145	214	–	190	169
80 mm	50	–	–	392	–	–	342	304	273	356	–	318	284

Piston Ø	L	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=150	S=160	S=200
100 mm	50	–	–	390	–	–	341	302	272	354	–	318	284

S = stroke

Dimensions

GPC combinations



- 1) Cylinder 1
- 2) Cylinder 2
- 3) Screw

Minimum strokes for cylinder 1 when using 2 assembled guide cylinders

Piston Ø	S
32 mm	25
40 mm	25
50 mm	30
63 mm	30
80 mm	35
100 mm	40

S = stroke

Minimum strokes for cylinder 2 when using 2 assembled guide cylinders

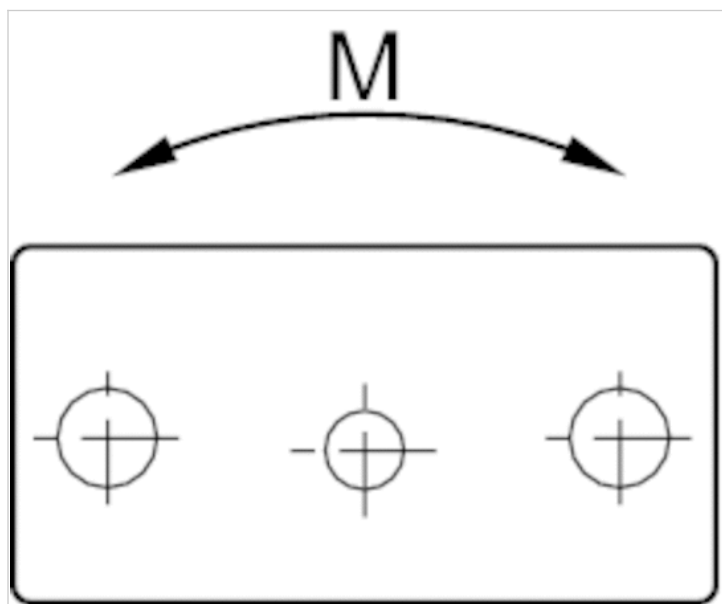
Piston Ø	Ø 2	A	B	3
10 mm	12	–	–	M4x12
12 mm	16	–	–	M5x15
16 mm	20	–	–	M5x18
20 mm	25	–	–	M6x20
25 mm	32	25	15	M6x20
32 mm	40	30	30	M8x25
40 mm	50	30	30	M8x30
50 mm	63	55	30	M10x30
63 mm	80	55	55	M10x35

Piston Ø	Ø 2	A	B	3
80 mm	100	55	30	M12x40

A = min.stroke: assembly A↔B = min.stroke: assembly B↔3 = screw

Dimensions

Permissible static moment M [Nm]



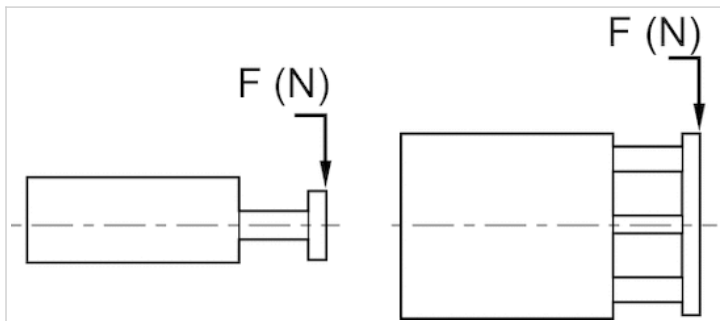
Dimensions

Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=160	S=200
10 mm	1.75	1.5	1.4	1.3	1.2	1.1	0.85	0.75	–	–	–
12 mm	0.56	0.48	0.46	0.42	0.62	0.56	0.44	0.38	0.32	0.26	–
16 mm	1.48	1.32	1.25	1.2	1.72	1.57	1.29	1.15	0.99	0.82	–
20 mm	1.7	1.51	1.43	1.38	1.97	1.81	1.49	1.32	1.13	0.95	–
25 mm	3.11	2.6	–	2.23	1.96	1.74	2.41	2.02	2.42	2.05	1.75
32 mm	–	–	8.17	–	–	6.4	5.26	4.47	5.45	4.67	4.01
40 mm	–	–	9.19	–	–	7.22	5.95	5.05	6.17	5.29	4.55
50 mm	–	–	17	–	–	13.6	11.4	9.73	13.6	11.8	10.3
63 mm	–	–	20.1	–	–	16.1	13.4	11.5	16.1	14	12.2
80 mm	–	–	42.1	–	–	34.9	29.8	26	32.4	28.5	24.9
100 mm	–	–	47.8	–	–	39.7	33.9	29.6	37	32.5	28.5

S = stroke

Dimensions

Permissible static side force F [N]



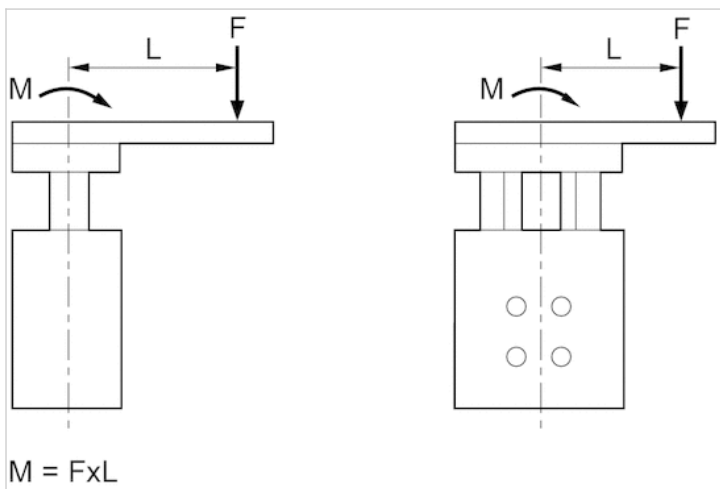
Dimensions

Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=150	S=160	S=200
25 mm	106	88	–	76	66	59	82	69	82	–	70	59
32 mm	–	–	216	–	–	169	139	118	144	–	124	106
40 mm	–	–	214	–	–	168	138	118	144	–	123	106
50 mm	–	–	327	–	–	262	218	187	261	–	227	197
63 mm	–	–	324	–	–	260	217	186	260	–	226	196
80 mm	–	–	554	–	–	459	392	342	427	–	374	328
100 mm	–	–	549	–	–	456	390	341	425	–	373	327

S = stroke

Dimensions

Permissible static moment M [Nm]



Dimensions

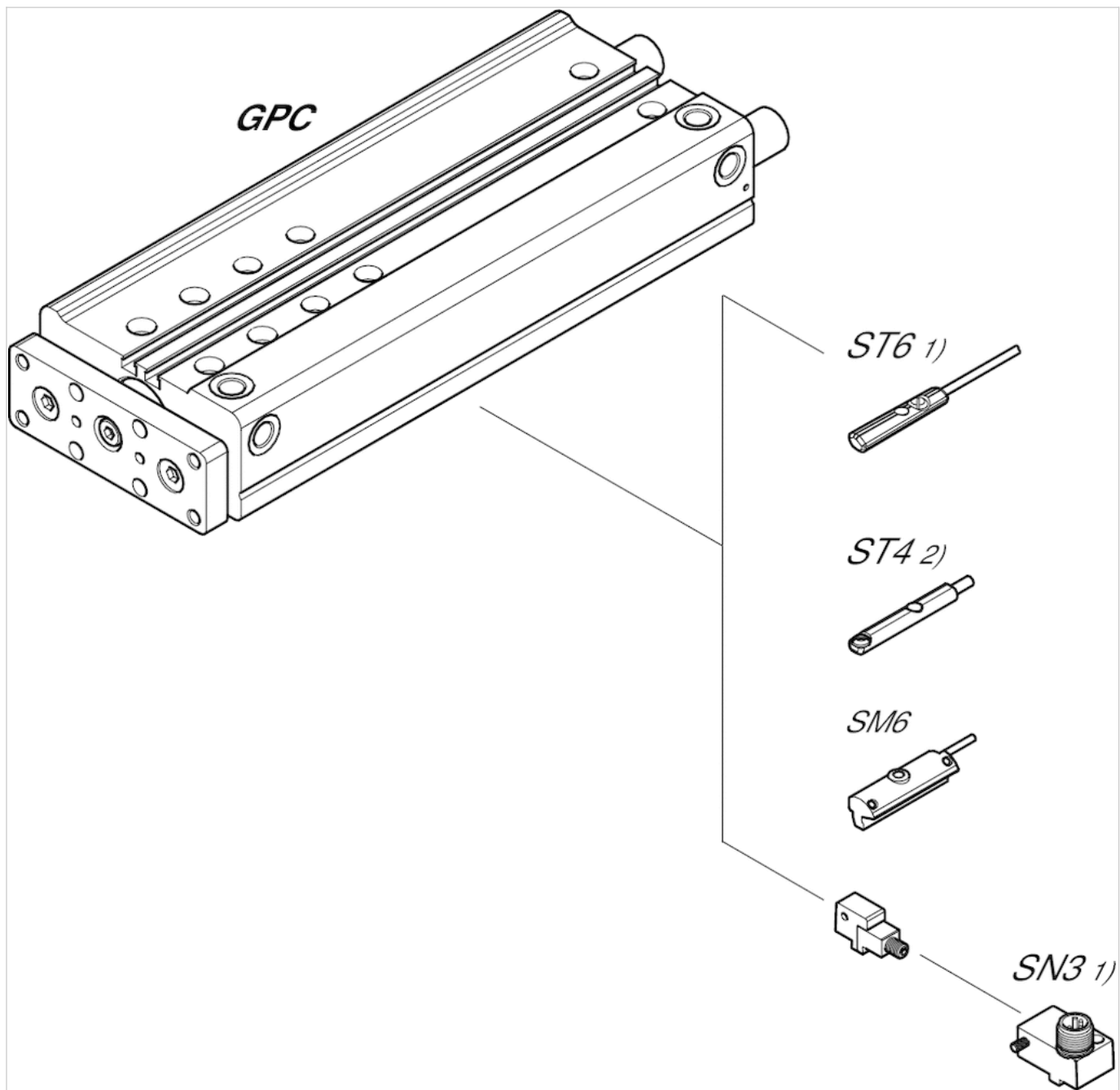
Piston Ø	S 5–30	S>30	S 35–50	S 55–100	S>100
10 mm	1,5	1,5	–	–	–
12 mm	2	3.5	–	–	–
16 mm	4.5	14	–	–	–

Piston Ø	S 5–30	S>30	S 35–50	S 55–100	S>100
20 mm	4.5	14	–	–	–
25 mm	4.6	–	4.9	9.4	14.5
32 mm	15.2	–	16.5	17.2	26.4
40 mm	15.3	–	15.3	17.2	26.4
50 mm	26	–	26	28.9	51.6
63 mm	26	–	26	28.9	51.6
80 mm	52.1	–	52.1	57.9	90.3
100 mm	52.3	–	52.3	57.9	90.4

S = stroke

Accessories overview

Overview drawing



1) $\leq \text{Ø}12 \text{ mm}$ (GPC-BV, GPC-E, GPC-TL)

2) Only for $\text{Ø}10 \text{ mm}$ (GPC-BV) and all Ø (GPC-ST)

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.

Guide cylinders, Series GPC-BV

- Ø 10-63 mm
- double-acting
- ball bearing
- Cushioning elastic
- with magnetic piston



Working pressure min./max.	See table below
Ambient temperature min./max.	-10 ... 70 °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
Weight	See table below



Technical data

Piston Ø	10 mm	12 mm	16 mm	20 mm	25 mm	32 mm	40 mm
Stroke 10	R402000314	0822060100	0822061100	0822062100	0822063100	-	-
20	R402000316	0822060101	0822061101	0822062101	0822063101	-	-
25	R402000317	0822060107	0822061107	0822062107	0822063107	0822064100	0822065100
30	R402000318	0822060102	0822061102	0822062102	0822063102	-	-
40	R402000320	0822060103	0822061103	0822062103	0822063103	-	-
50	R402000322	0822060104	0822061104	0822062104	0822063104	0822064101	0822065101
75	R402000327	0822060105	0822061105	0822062105	0822063105	0822064102	0822065102
100	R402000332	0822060106	0822061106	0822062106	0822063106	0822064103	0822065103
125	-	0822060124	0822061124	0822062124	0822063124	0822064104	0822065104
150	-	0822060129	0822061129	0822062129	0822063129	-	-
160	-	-	-	-	0822063131	0822064105	0822065105
200	-	-	-	-	0822063139	0822064106	0822065106

Piston Ø	50 mm	63 mm
Stroke 10	-	-
20	-	-
25	0822066100	0822067100
30	-	-

Piston Ø	50 mm	63 mm
40	-	-
50	0822066101	0822067101
75	0822066102	0822067102
100	0822066103	0822067103
125	0822066104	0822067104
150	-	-
160	0822066105	0822067105
200	0822066106	0822067106

Technical data

Piston Ø	10 mm	12 mm	16 mm	20 mm
Port	M5	M5	M5	M5
Working pressure min./max.	2 ... 8 bar	2 ... 8 bar	2 ... 10 bar	2 ... 10 bar
Retracting piston force	42 N	53 N	95 N	148 N
Extracting piston force	49 N	71 N	127 N	198 N
Speed max.	0,5 m/s	0,5 m/s	0,5 m/s	0,5 m/s
Impact energy	0,04 J	0,1 J	0,11 J	0,15 J

Piston Ø	25 mm	32 mm	40 mm	50 mm
Port	G 1/8	G 1/8	G 1/8	G 1/4
Working pressure min./max.	1,5 ... 10 bar	1,3 ... 10 bar	1 ... 10 bar	1 ... 10 bar
Retracting piston force	260 N	435 N	720 N	1110 N
Extracting piston force	309 N	507 N	792 N	1237 N
Speed max.	0,8 m/s	0,6 m/s	0,6 m/s	0,6 m/s
Impact energy	0,35 J	0,4 J	0,52 J	0,64 J

Piston Ø	63 mm
Port	G 1/4
Working pressure min./max.	1 ... 10 bar
Retracting piston force	1837 N
Extracting piston force	1964 N
Speed max.	0,6 m/s
Impact energy	0,75 J

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).

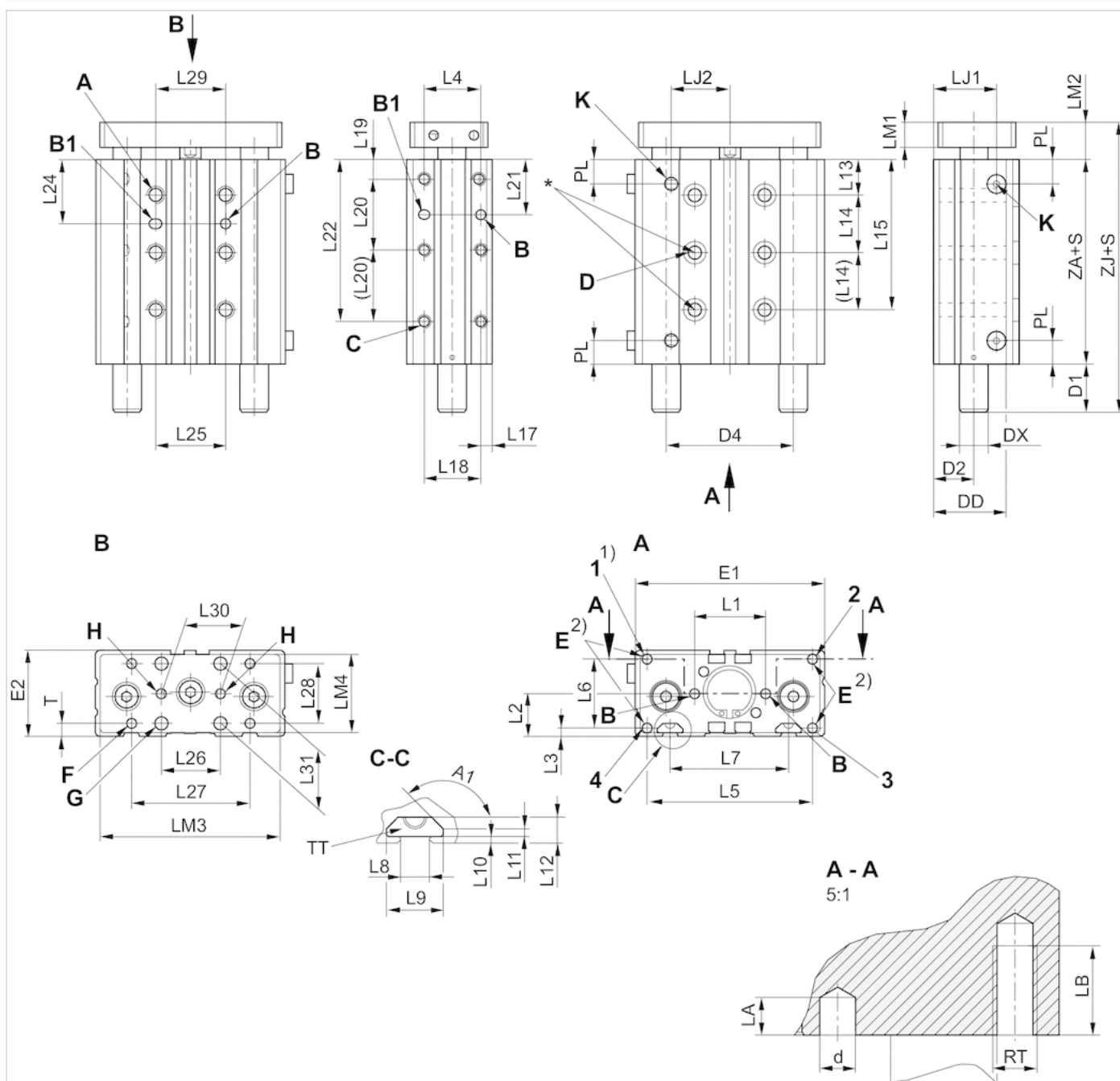
Note: Only the Ø10 variants fits to sensor series ST4. The sensor series ST6 and SN3 can be used for all other Ø variants.

Technical information

Material	
Housing	Aluminum, anodized
Seal	Polyurethane
Front plate	Steel, galvanized
Guide rod	Steel, hardened
Bearing	Steel, hardened
Piston rod	Stainless steel

Dimensions

Dimensions Ø 10 ... 20



* Suitable for screws according to ISO 4762

1) Only Ø 20 threaded hole

2) M4 mounting hole for GPC-E accessories

1, 2, 3, 4: threaded holes

S = stroke

Note: Only the Ø10 variants fits to sensor series ST4. The sensor series ST6 and SN3 can be used for all other Ø variants.

Dimensions

Piston Ø	ARTxLB	A1	BØdxLA	B1ØdxDxLA	CRTxLB	DØ	D1S=10-30	D1S=40-100	D1S>100	D2	D4
10 mm	M4x6	–	4H7x4	4H7x5x4	M4x6	3.2	13.5	13.5	13.5	7	–
12 mm	M5x8	–	4H7x4	4H7x5x4	M5x8	4.2	0	18.4	33.4	14.5	40
16 mm	M5x8	135°	4H7x4	4H7x5x4	M5x8	4.2	0	20.8	35.8	15.8	47
20 mm	M6x10	135°	4H7x4	4H7x5x4	M6x10	5.2	0	20.8	35.8	16.5	54

Piston Ø	DD	DX	ERTxLB	E1	E2	FØ 1)	GØ 2)	HØ 2)	K	L1	L2	L3	L4	L5	L6	L7	L8
10 mm	17.4	6	M4x8	50	21	M4	–	–	M5	20 ±0,04	10.5	3	–	20	15	–	–
12 mm	20	8	M5x8	58	30.5	M4	4.5	4H9	M5	23 ±0,04	15	4	22	50	22	–	–
16 mm	28.5	10	M5x8	68	33	M4	5.5	4H9	M5	28 ±0,04	16.5	4	25	61	25	43	6.15
20 mm	30.5	10	M5x10	80	36	M5	5.5	4H9	M5	30 ±0,04	18	3.5	24	70	29	50	6.15

Piston Ø	L9	L10	L11	L12	L13	L14S=10	L14S=20	L14S>20	L15S=40	L15S>40	L17	L18	L19	L20S=10
10 mm	–	–	–	–	15	–	20	20	55	55	15	–	8	20
12 mm	–	–	–	–	14.5	–	18	22	–	58.5	4	22	8	20
16 mm	12	1.5	1.5	5.5	14	18	25	25	–	64	4	25	8	18
20 mm	12	1.5	1.5	5.5	15	16	24	24	–	63	4.5	24	8	20

Piston Ø	L20S>10	L21S=10	L21S>10	L22S≤40	L22S>40	L24S=10	L24S>10	L25	L26	L27	L28	L29
10 mm	20	13 1)	13	48	48	25	25	20	–	20	10	20
12 mm	20	18	18	–	48	25.5	25.5	20	–	40	20	20
16 mm	25	20.5	20.5	–	58	26.5	26.5	25	20	40	20	25
20 mm	30	18	23	–	68	23	27	30	25	50	25	30

S = stroke

To determine the cylinder length (ZA) for intermediate strokes (i.e. stroke 10 with dia. 40), the next available standard stroke size must be used

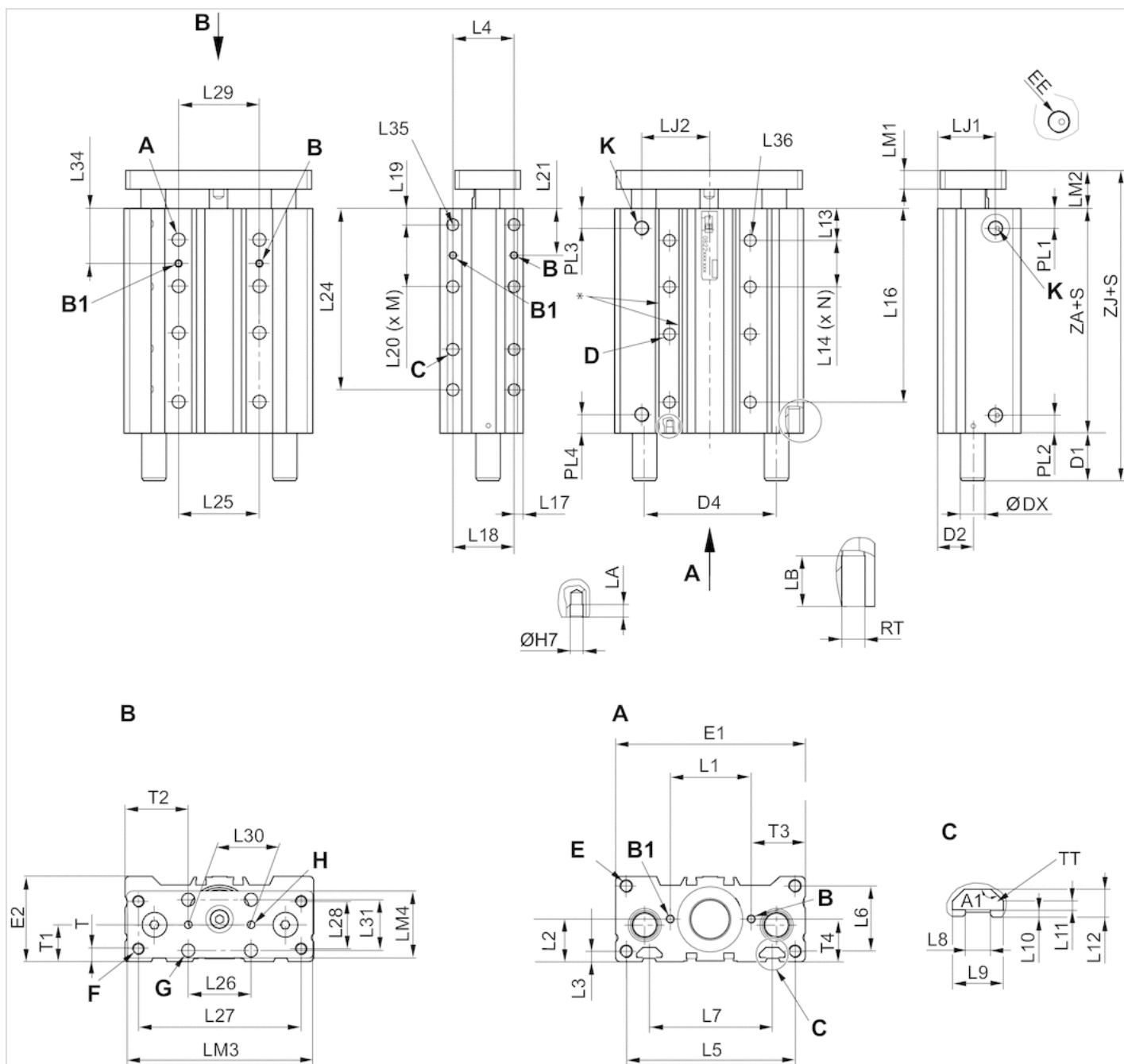
1) Through hole with thread

2) through-hole

Two holes C-C 10 mm.

Dimensions

Dimensions Ø 25 ... 100



* Suitable for screws according to ISO 4762

S = stroke

Note: Only the Ø10 variants fits to sensor series ST4. The sensor series ST6 and SN3 can be used for all other Ø variants.

Dimensions

Piston Ø	ARTxLB	A1	BØdxLA	B1ØdxD	CRTxLB	DØ 1)	D2	D4	DX	ERTxLB	E1	E2	FØ 1)
25 mm	M6x10	135°	4x4	4x5	M6x10	5.5	18	59	12	M6x12	95	43	M6
32 mm	M8x14	135°	4x4	4x5	M8x14	7.4	23	75.6	16	M6x12	114	48.5	M8
40 mm	M8x14	135°	4x4	4x5	M8x14	7.4	23	86	16	M8x16	124	54.5	M8
50 mm	M10x20	135°	5x5	5x6	M10x20	9.3	27.5	104	20	M8x16	148	64	M8
63 mm	M10x20	135°	5x5	5x6	M10x20	9.3	35	124	20	M10x20	162	78.5	M10

Piston Ø	GØ 2)	HØ 2)	KEE	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
25 mm	6.5	4H8	G 1/8	35 ±0,1	20.5	4.5	25 ±0,1	85	34	52	6.15	12	1.5	1.5	5.5
32 mm	6.5	4H8	G 1/8	44 ±0,1	24	5	33 ±0,1	105	26	70	8.2	16.7	2.2	2.8	9
40 mm	8.5	4H8	G 1/8	53 ±0,15	27	6	40 ±0,15	110	42	80	8.2	16.7	2.2	2.8	9
50 mm	8.5	4H8	G 1/4	66 ±0,15	32	8	48 ±0,15	133	34.5	93	8.2	16.7	2.2	2.8	9
63 mm	10.5	5H8	G 1/4	84 ±0,15	39	8	60 ±0,15	147	62	112	10.2	20.3	6	6	16

Piston Ø	L13	L15	L17	L18	L19	L22	L25	L26	L27	L28	L29	L30	L31	LJ1	LJ2	LM1	LM2
25 mm	16.5	25	5.5	25	8	32	32	30	81	23	32 ±0,1	30 ±0,2	24	29.6	32	10	15.5
32 mm	20.5	33	6.5	33	10	42	42	32	97	30	42 ±0,1	32 ±0,2	25	40	40.5	12	18.5
40 mm	20	40	6	40	10	53	53	42	107	30	53 ±0,15	42 ±0,2	32.5	37.8	44	12	19.5
50 mm	23	48	7.5	48	12	63	63	53	134	40	63 ±0,15	53 ±0,2	40	54.5	50.5	15	23.5
63 mm	24	60	11	60	12	80	80	63	140	48	80 ±0,15	63 ±0,2	48	57	59	15	24

Piston Ø	LM3	LM4	PL1	PL2	PL3	PL4	T	T1	T2	T3	T4	TT	ZA
25 mm	93	33	11	11	11	11	6.5	18 ±0,4	32,5 ±0,4	30 ±0,05	20,5 ±0,05	N6	42 3)
32 mm	112	43	13.5	13.5	13.5	13.5	8	23 ±0,4	41 ±0,4	35 ±0,05	24 ±0,05	N8	46.5
40 mm	122	43	12	12	12	12	8	23 ±0,4	41 ±0,4	35,5 ±0,1	27 ±0,1	N8	44
50 mm	146	52	13	13	13	13	7.5	27,5 ±0,4	47,5 ±0,4	41 ±0,1	32 ±0,1	N8	46
63 mm	160	67	13.7	13.7	13.7	13.7	11	35 ±0,4	49,5 ±0,5	39 ±0,1	39 ±0,1	N10	51

S = stroke

To determine the cylinder length (ZA) for intermediate strokes (i.e. stroke 10 with dia. 40), the next available standard stroke size must be used

1) Through hole with thread

2) through-hole

3) For stroke 10/150, ZA = 52, for stroke 25, ZA = 47

Two holes C-C 10 mm.

Dimensions

Piston Ø	S=10D1	S=20D1	S=25D1	S=30D1	S=40D1	S=50D1	S=75D1	S=100D1	S=125D1	S=150D1
25 mm	19	19	19	19	29	29	29	29	47	47
32 mm	-	-	20	20	20	20	35	35	51	51
40 mm	-	-	21.5	21.5	21.5	21.5	37	37	53	53
50 mm	-	-	20	20	20	20	46	46	64	64
63 mm	-	-	14	14	14	14	40	40	58	58

Piston Ø	S=160D1	S=200D1	S=10L14	S=20L14	S=25L14	S=30L14	S=40L14	S=50L14	S=75L14
25 mm	47	47	25	25	25	25	25	25	25
32 mm	51	51	30	30	30	33	33	33	33

Piston Ø	S=160D1	S=200D1	S=10L14	S=20L14	S=25L14	S=30L14	S=40L14	S=50L14	S=75L14
40 mm	53	53	30	30	30	40	40	40	40
50 mm	64	64	25	25	25	48	48	48	48
63 mm	58	58	28	28	28	28	28	28	60

Piston Ø	S=100L14	S=125L14	S=160L14	S=200L14
25 mm	25	25	25	25
32 mm	33	33	33	33
40 mm	40	40	40	40
50 mm	48	48	48	48
63 mm	60	60	60	60

S = stroke

Dimensions

Piston Ø	S=10N	S=20N	S=25N	S=30N	S=40N	S=50N	S=75N	S=100N	S=125N	S=160N	S=200N	S=40L16
25 mm	1	1	1	1	1	2	3	3	3	3	3	65.5
32 mm	-	-	1	1	1	1	2	3	3	3	3	-
40 mm	-	-	1	1	1	1	2	2	3	3	3	-
50 mm	-	-	1	1	1	1	1	2	2	3	3	-
63 mm	-	-	1	1	1	1	1	1	2	2	3	-

Piston Ø	S=50L16	S=100L16	S=125L16	S=160L16	S=200L16
25 mm	-	12.5	150.5	185.5	225.5
32 mm	76	-	151	186	226
40 mm	-	-	-	184	224
50 mm	-	-	148	-	223
63 mm	-	127	-	187	-

Dimensions

Piston Ø	S=10M	S=20M	S=25M	S=30M	S=40M	S=50M	S=75M	S=100M	S=125M	S=160M	S=200M
25 mm	1	1	1	1	1	1	2	3	3	3	3
32 mm	-	-	1	1	1	1	2	2	3	3	3
40 mm	-	-	1	1	1	1	1	2	2	3	3
50 mm	-	-	1	1	1	1	1	1	2	2	3
63 mm	-	-	1	1	1	1	1	1	1	2	2

Piston Ø	S=40L24	S=50L24	S=75L24	S=100L24	S=125L24	S=160L24	S=200L24
25 mm	60	70	95	-	145	180	220
32 mm	-	-	-	122.5	-	182.5	222.5
40 mm	-	-	91	-	-	-	216
50 mm	-	-	-	116	-	176	-
63 mm	-	-	-	-	140	-	217

S = stroke

Dimensions

Piston Ø	S=20L20	S=25L20	S=30L20	S=40L20	S=50L20	S=75L20	S=100L20	S=125L20	S=160L20
25 mm	22	32	32	32	32	32	32	32	32
32 mm	35	35	42	42	42	42	42	42	42
40 mm	30	30	53	53	53	53	53	53	53
50 mm	30	30	30	30	30	63	63	63	63
63 mm	30	30	30	30	30	30	30	30	30

Piston Ø	S=200L20	S=20L21	S=25L21	S=30L21	S=40L21	S=50L21	S=75L21	S=100L21	S=125L21
25 mm	32	19	24	24	24	24	24	24	24
32 mm	42	27.5	27.5	31	31	31	31	31	31
40 mm	53	25	25	36.5	36.5	36.5	36.5	36.5	36.5
50 mm	63	27	27	27	27	27	43.5	43.5	43.5
63 mm	30	27	27	27	27	27	52	52	52

Piston Ø	S=160L21	S=200L21
25 mm	24	24
32 mm	31	31
40 mm	36.5	36.5
50 mm	43.5	43.5
63 mm	52	52

S = stroke

Dimensions

Piston Ø	S=10L34	S=20L34	S=25L34	S=30L34	S=40L34	S=50L34	S=75L34	S=100L34	S=125L34
25 mm	26	29	29	29	29	29	29	29	29
32 mm	35.5	35.5	35.5	37	37	37	37	37	37
40 mm	35	35	35	40	40	40	40	40	40
50 mm	35.5	35.5	35.5	47	47	47	47	47	47
63 mm	38	38	38	38	38	38	54	54	54

Piston Ø	S=160L34	S=200L34	S=10L35	S=20L35	S=25L35	S=30L35	S=40L35	S=50L35	S=75L35
25 mm	29	29	4	4	4	4	6	6	8
32 mm	37	37	4	4	4	4	4	4	6
40 mm	40	40	4	4	4	4	4	4	6
50 mm	47	47	4	4	4	4	4	4	4
63 mm	54	54	4	4	4	4	4	4	4

Piston Ø	S=100L35	S=125L35	S=160L35	S=200L35
25 mm	8	10	10	10
32 mm	8	8	10	10
40 mm	6	6	8	10
50 mm	6	6	8	8
63 mm	4	6	6	8

S = stroke

Dimensions

Piston Ø	S=10L36	S=20L36	S=25L36	S=30L36	S=40L36	S=50L36	S=75L36	S=100L36	S=125L36
25 mm	4	4	4	4	6	6	8	10	10
32 mm	4	4	4	4	4	6	6	8	10
40 mm	4	4	4	4	4	4	6	6	8
50 mm	4	4	4	4	4	4	4	6	8
63 mm	4	4	4	4	4	4	4	6	6

Piston Ø	S=160L36	S=200L36	S=10ZJ	S=20ZJ	S=25ZJ	S=30ZJ	S=40ZJ	S=50ZJ	S=75ZJ	S=100ZJ
25 mm	10	10	76.5	76.5	76.5	76.5	86.5	86.5	86.5	86.5
32 mm	10	10	-	-	85	-	-	85	100	100
40 mm	10	10	-	-	85	-	-	85	100.5	100.5
50 mm	8	10	-	-	89.5	-	-	89.5	115.5	115.5
63 mm	8	10	-	-	89.5	-	-	89.5	115.5	115.5

Piston Ø	S=125ZJ	S=160ZJ	S=200ZJ
25 mm	104.5	104.5	104.5
32 mm	116	116	116
40 mm	116.5	116.5	116.5
50 mm	133.5	133.5	133.5
63 mm	133.5	133.5	133.5

Weight [kg]

Piston Ø	S	Weight kg
10 mm	10 mm	0,19 kg
10 mm	20 mm	0,22 kg
10 mm	25 mm	0,23 kg
10 mm	30 mm	0,24 kg
10 mm	40 mm	0,27 kg
10 mm	50 mm	0,29 kg
10 mm	75 mm	0,36 kg
10 mm	100 mm	0,42 kg
12 mm	10 mm	0,28 kg
12 mm	20 mm	0,32 kg
12 mm	25 mm	0,35 kg
12 mm	30 mm	0,35 kg
12 mm	40 mm	0,37 kg
12 mm	50 mm	0,43 kg
12 mm	75 mm	0,48 kg
12 mm	100 mm	0,7 kg
12 mm	125 mm	0,82 kg
12 mm	150 mm	0,94 kg
16 mm	10 mm	0,36 kg
16 mm	20 mm	0,41 kg
16 mm	25 mm	0,44 kg
16 mm	30 mm	0,47 kg
16 mm	40 mm	0,56 kg

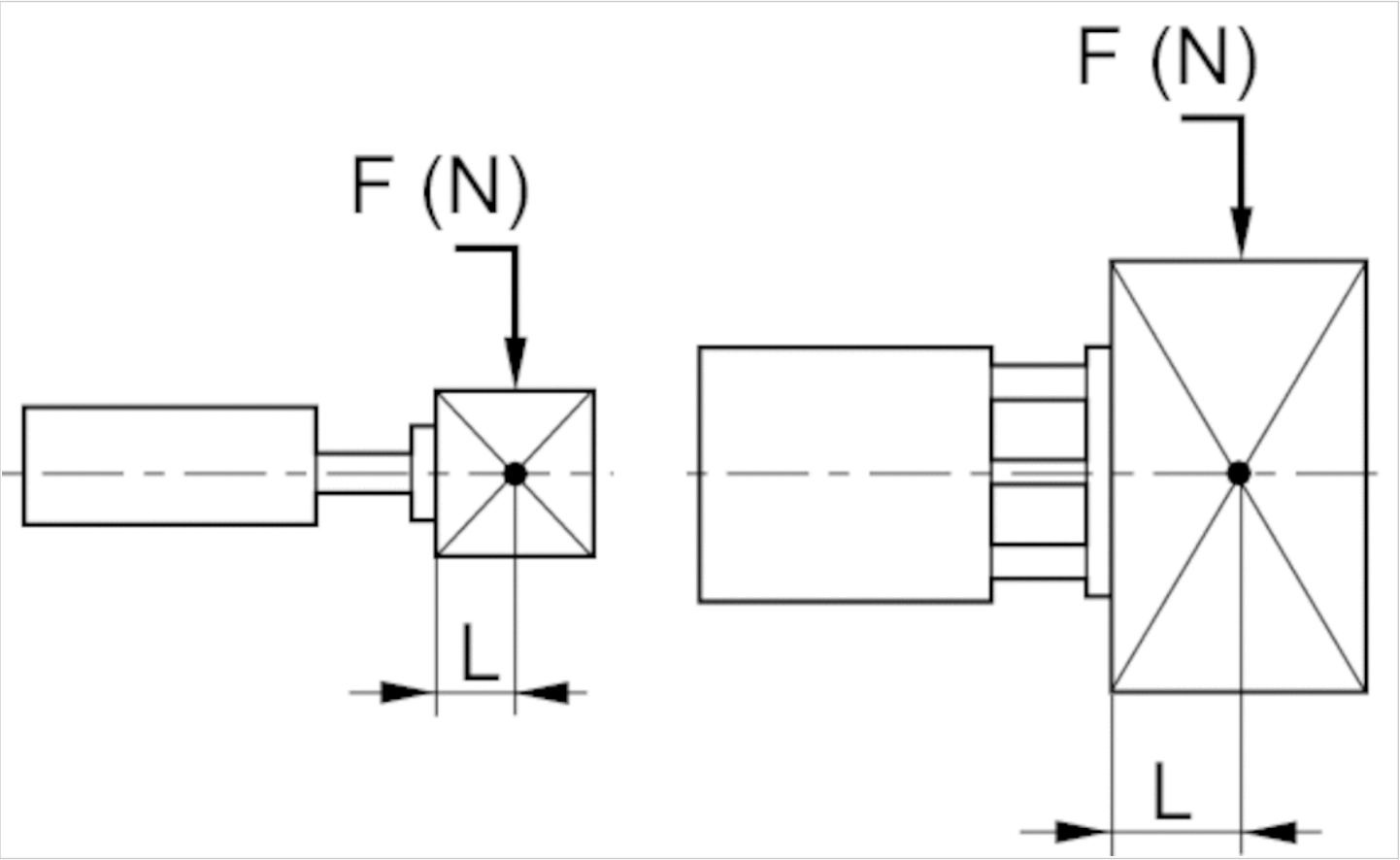
Piston Ø	S	Weight kg
16 mm	50 mm	0,61 kg
16 mm	75 mm	0,74 kg
16 mm	100 mm	0,88 kg
16 mm	125 mm	1,03 kg
16 mm	150 mm	1,16 kg
20 mm	10 mm	0,48 kg
20 mm	20 mm	0,54 kg
20 mm	25 mm	0,58 kg
20 mm	30 mm	0,61 kg
20 mm	40 mm	0,72 kg
20 mm	50 mm	0,79 kg
20 mm	75 mm	0,95 kg
20 mm	100 mm	1,12 kg
20 mm	125 mm	1,35 kg
20 mm	150 mm	1,47 kg
25 mm	10 mm	0,9 kg
25 mm	20 mm	0,93 kg
25 mm	25 mm	-
25 mm	30 mm	1,03 kg
25 mm	40 mm	1,13 kg
25 mm	50 mm	1,22 kg
25 mm	75 mm	1,45 kg
25 mm	100 mm	1,69 kg
25 mm	125 mm	1,95 kg
25 mm	150 mm	-
25 mm	160 mm	2,28 kg
25 mm	200 mm	2,67 kg
32 mm	25 mm	1,44 kg
32 mm	50 mm	1,77 kg
32 mm	75 mm	2,1 kg
32 mm	100 mm	2,41 kg
32 mm	125 mm	2,77 kg
32 mm	160 mm	3,22 kg
32 mm	200 mm	3,74 kg
40 mm	25 mm	1,72 kg
40 mm	50 mm	2,1 kg
40 mm	75 mm	2,5 kg
40 mm	100 mm	2,9 kg
40 mm	125 mm	3,3 kg
40 mm	160 mm	3,76 kg
40 mm	200 mm	4,4 kg
50 mm	25 mm	2,7 kg
50 mm	50 mm	3,2 kg
50 mm	75 mm	3,9 kg
50 mm	100 mm	4,4 kg
50 mm	125 mm	5 kg
50 mm	160 mm	5,8 kg
50 mm	200 mm	6,6 kg
63 mm	25 mm	3,55 kg

Piston Ø	S	Weight kg
63 mm	50 mm	4,2 kg
63 mm	75 mm	4,96 kg
63 mm	100 mm	5,56 kg
63 mm	125 mm	6,27 kg
63 mm	160 mm	7,1 kg
63 mm	200 mm	8 kg

S = stroke

Dimensions

Permissible static side load F [N] at distance L



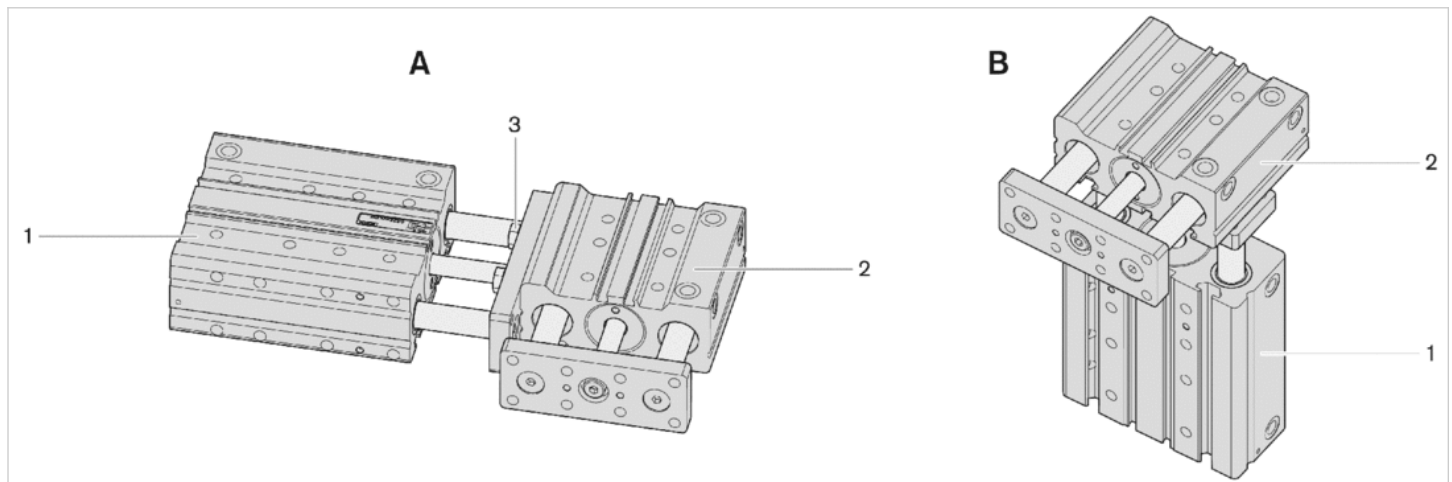
Dimensions

Piston Ø	L	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=150	S=160	S=200
10 mm	25	10	9	8	8	7	6	5	5	–	–	–	–
12 mm	25	19	17	16	15	23	22	20	19	19	17	–	–
16 mm	50	27	24	23	22	58	56	51	48	44	40	–	–
20 mm	50	27	24	23	22	58	56	51	48	44	40	–	–
25 mm	50	81.4	75	–	69.5	82.3	77.4	67.3	59.5	73.2	–	64.5	56.8
32 mm	50	–	–	89.9	–	–	76.1	93.2	83	94.9	–	84	74.3
40 mm	50	–	–	89.2	–	–	75.6	92.7	82.7	94.5	–	83.7	74.1
50 mm	50	–	–	110	–	–	94	135	121	136	–	121	108
63 mm	50	–	–	110	–	–	93.5	134	120	135	–	121	107

S = stroke

Dimensions

GPC combinations



- 1) Cylinder 1
- 2) Cylinder 2
- 3) Screw

Minimum strokes for cylinder 1 when using 2 assembled guide cylinders

Piston Ø	S
32 mm	25
40 mm	25
50 mm	30
63 mm	30

S = stroke

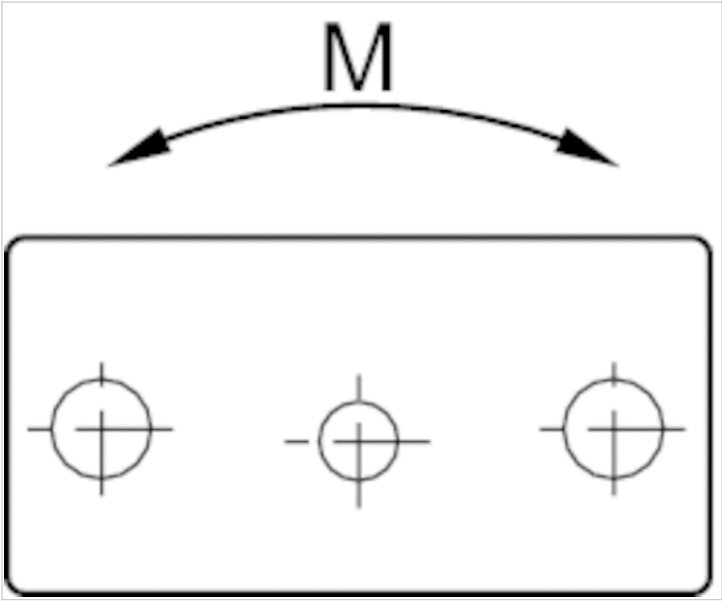
Minimum strokes for cylinder 2 when using 2 assembled guide cylinders

Piston Ø	Ø 2	A	B	3
10 mm	12	—	—	M4x12
12 mm	16	—	—	M5x15
16 mm	20	—	—	M5x18
20 mm	25	—	—	M6x20
25 mm	32	25	15	M6x20
32 mm	40	30	30	M8x25
40 mm	50	30	30	M8x30
50 mm	63	55	30	M10x30

A = min.stroke: assembly A↔B = min.stroke: assembly B↔3 = screw

Dimensions

Permissible static moment M [Nm]



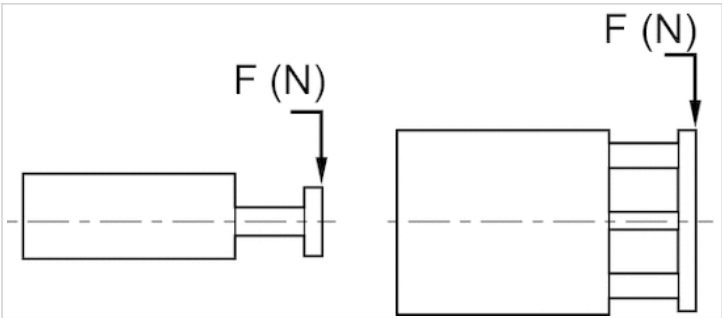
Dimensions

Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=160	S=200
10 mm	0.35	0.31	0.29	0.27	0.25	0.23	0.17	0.14	–	–	–
12 mm	0.38	0.34	0.32	0.3	0.46	0.44	0.4	0.38	0.36	0.34	–
16 mm	0.63	0.56	0.54	0.52	1.36	1.32	1.2	1.13	1.03	0.94	–
20 mm	0.73	0.65	0.62	0.59	1.57	1.51	1.38	1.3	1.19	1.08	–
25 mm	4.19	3.65	3.23	3.23	3.56	3.26	2.68	2.28	2.67	2.29	1.97
32 mm	–	–	5.33	–	–	4.15	4.67	4.02	4.4	3.8	3.28
40 mm	–	–	5.99	–	–	4.68	5.27	4.54	4.99	4.3	3.72
50 mm	–	–	8.83	–	–	6.96	9.07	7.91	8.55	7.45	6.5
63 mm	–	–	10.4	–	–	8.23	10.8	9.38	10.2	8.85	7.72

S = stroke

Dimensions

Permissible static side force F [N]

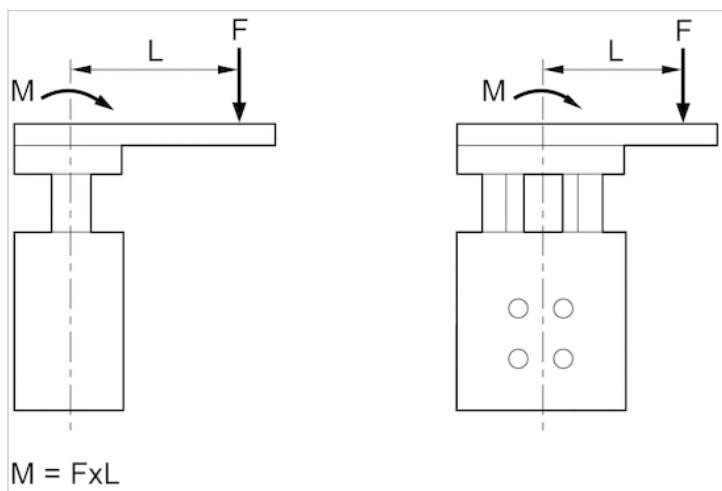


Dimensions

Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=150	S=160	S=200
25 mm	142	124	–	109	121	110	91	77	90	–	77	66
32 mm	–	–	141	–	–	110	123	106	116	–	100	86
40 mm	–	–	139	–	–	109	123	106	116	–	100	86
50 mm	–	–	170	–	–	134	175	152	164	–	143	125
63 mm	–	–	168	–	–	133	173	151	164	–	143	125

Dimensions

Permissible static moment M [Nm]



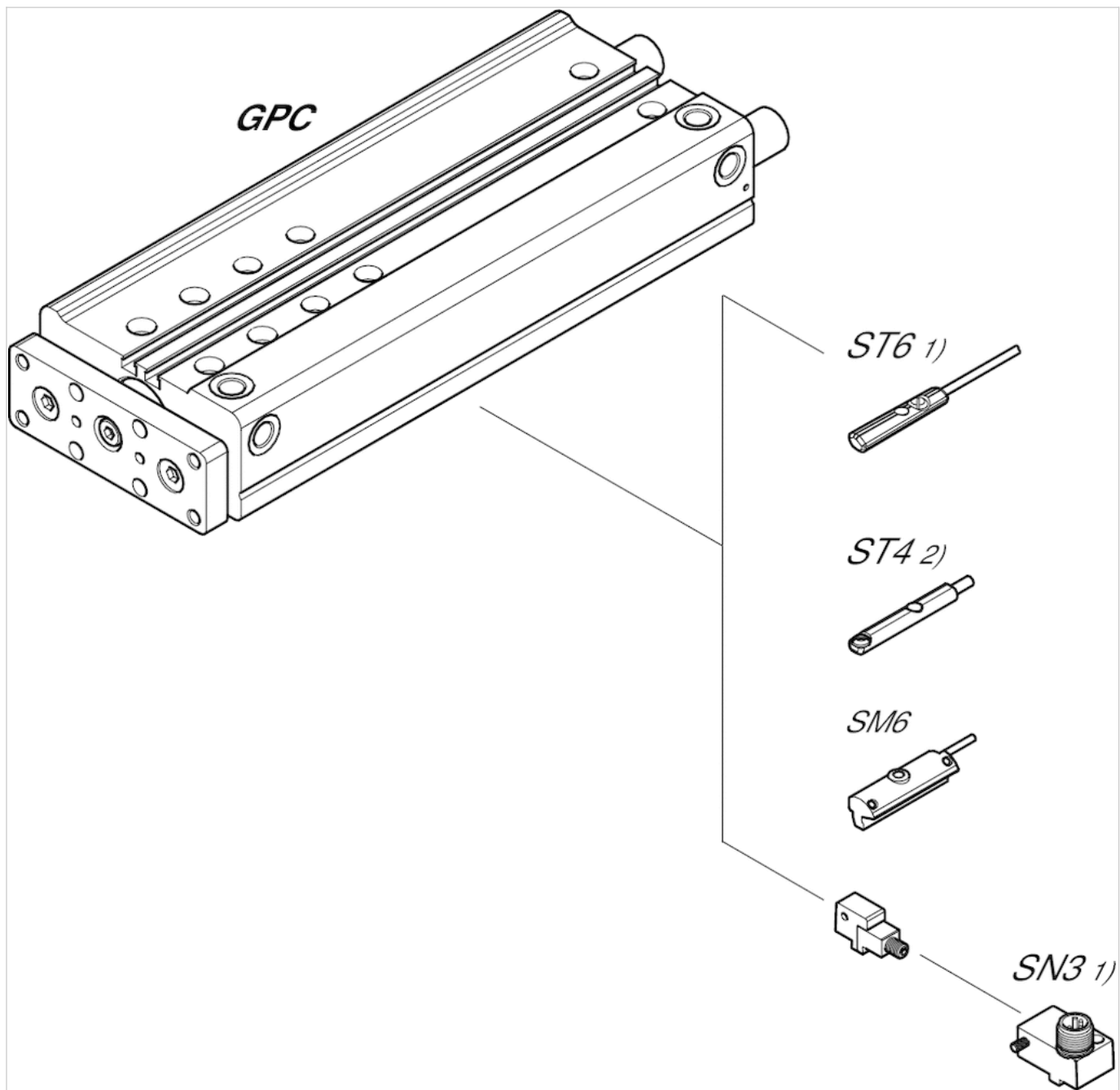
Dimensions

Piston Ø	S=5–30	S>30	S=35–50	S=55–100	S>100
10 mm	0.8	0.8	–	–	–
12 mm	1.5	2	–	–	–
16 mm	2	5	–	–	–
20 mm	2	5	–	–	–
25 mm	7.5	–	10.6	10.8	16.5
32 mm	9.9	–	10.6	16.2	22
40 mm	9.9	9.9	9.9	16.2	22
50 mm	12.8	12.8	12.8	24.6	32.9
63 mm	12.8	12.8	12.8	24.6	32.9

S = stroke

Accessories overview

Overview drawing



1) $\leq \text{Ø}12 \text{ mm}$ (GPC-BV, GPC-E, GPC-TL)

2) Only for $\text{Ø}10 \text{ mm}$ (GPC-BV) and all Ø (GPC-ST)

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.

Guide cylinders, Series GPC-E

- Ø 12-20 mm
- double-acting
- Plain bearing
- Cushioning hydraulic, non-adjustable
- with magnetic piston
- Easy2Combine capable with connection kit



Working pressure min./max.	See table below
Ambient temperature min./max.	0 ... 65 °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
Weight	See table below



Technical data

Piston Ø	12 mm	16 mm	20 mm
Stroke 25	0822060407	0822061407	0822062407
50	0822060404	0822061404	0822062404
75	0822060405	0822061405	0822062405
100	0822060406	0822061406	0822062406
125	0822060424	0822061424	0822062424
150	0822060429	0822061429	0822062429

Technical data

Piston Ø	12 mm	16 mm	20 mm
Port	M5	M5	M5
Working pressure min./max.	2 ... 8 bar	2 ... 10 bar	2 ... 10 bar
Retracting piston force	53 N	95 N	148 N
Extracting piston force	71 N	127 N	198 N
Speed max.	0,5 m/s	0,5 m/s	0,5 m/s
Impact energy	0,1 J	0,11 J	0,15 J

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).

Note: Hydraulic shock absorber on rear side are included in scope of delivery

Technical information

Material	
Housing	Aluminum, anodized
Seal	Polyurethane
Front plate	Steel, galvanized
Guide rod	Stainless steel
Bearing	Sintered bronze
Piston rod	Stainless steel

Dimensions



Dimensions

Piston Ø	A 1)	Ø A1	A2 2)	A2 3)	A3	B 1)	D	D1	D3	D4	E1	E2	F	G	H	L 4)	L13
12 mm	M5x8	M8	5	19	13.5	4 H7x4	M5	19.2	10	40	58	30.5	M4	4.5	M4	14	14.5
16 mm	M5x8	M10	5	29	14.8	4 H7x4	M5	25.8	12	47	68	33	M4	5.5	M4	24	14
20 mm	M6x10	M10	5	28	18.5	4 H7x4	M5	26.8	12	54	80	36	M5	5.5	M5	23	15

L14	L15S=50-150	L17	L18	L19	L20	L21	L22S=50-150	L24	L25	L26	LJ1	LM1	LM2	LM3	LM4	P1
22	58.5	4	22	8	20	18	48	25.5	20	19	24.8	8	12.7	55	27	40
25	64	4	25	8	25	20.5	58	26.5	25	21.5	27	8	13.5	65	30	40
24	63	4.5	24	8	30	23	68	27	30	25	26.5	10	15.5	77	33	50

P2	P3	P4	P5	P6	P7	P8	P9	PL1	PL2	PL3	R8	S1 1)	S3	S4	S6	TT	ZJ	ZA
20	3.5	–	–	–	–	1.5	1.5	8.5	8.5	11.5	–	M5x8	4.2	20.3	7.6	–	66.3	34.4
20	5	20	22	4	15	1.5	1.5	8.8	8.8	13	43	M5x8	4.2	28.5	7.6	N6	75.3	36
25	4	25	25	4	16.5	1.5	1.5	10	10	15	50	M6x10	5.2	30.5	9.5	N6	78.3	36

S = stroke

1) Dimension x depth

2) Min.

3) Max.

4) Adjustment length L = A2 max. ... A2 min.

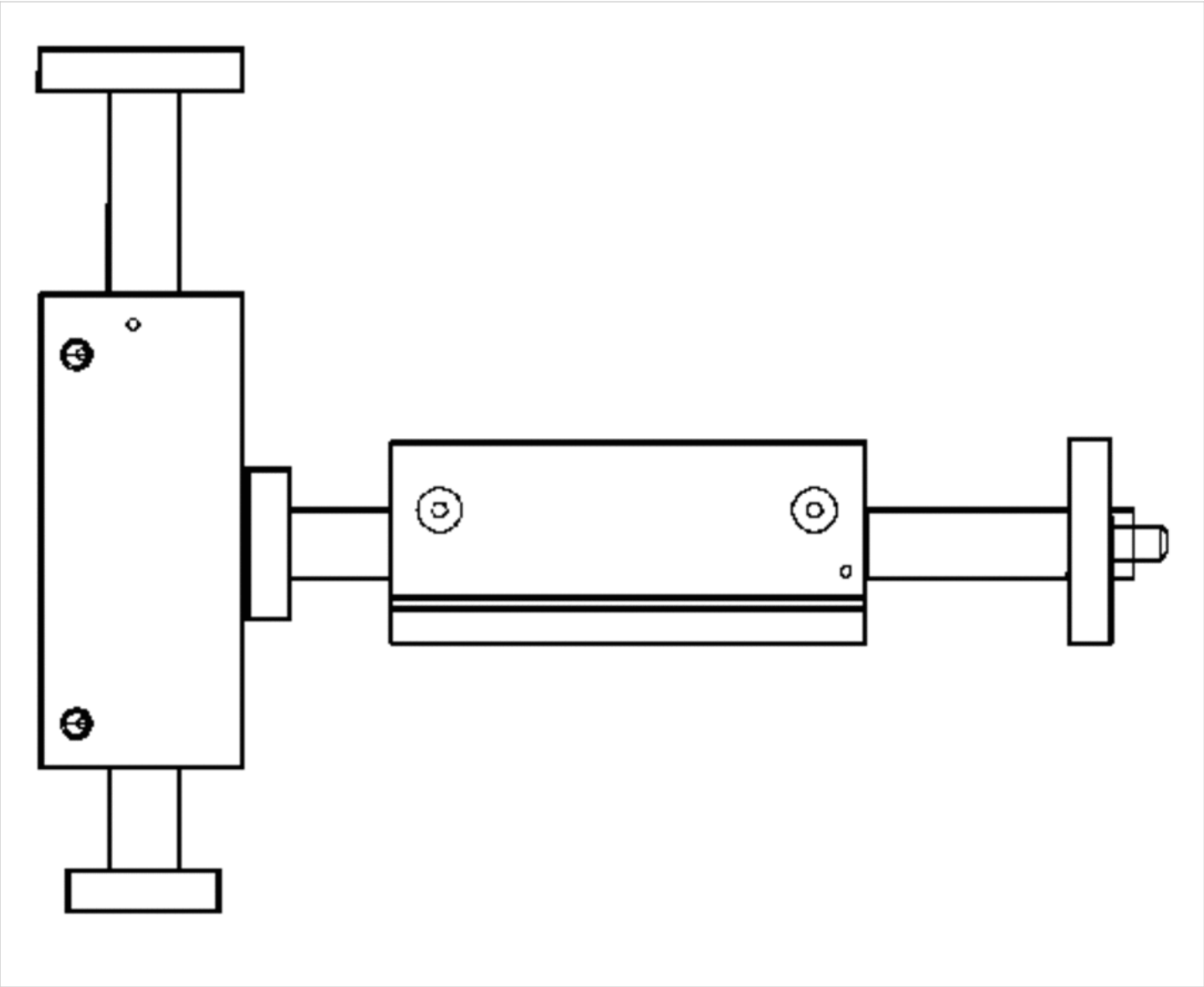
Weight [kg]

Piston Ø	S	Weight kg
12 mm	25 mm	0,49 kg
12 mm	50 mm	0,64 kg
12 mm	75 mm	0,78 kg
12 mm	100 mm	0,93 kg
12 mm	125 mm	1,07 kg
12 mm	150 mm	1,22 kg
16 mm	25 mm	0,64 kg
16 mm	50 mm	0,84 kg
16 mm	75 mm	1,02 kg
16 mm	100 mm	1,19 kg
16 mm	125 mm	1,38 kg
16 mm	150 mm	1,55 kg
20 mm	25 mm	0,79 kg
20 mm	50 mm	1,02 kg
20 mm	75 mm	1,23 kg
20 mm	100 mm	1,44 kg
20 mm	125 mm	1,66 kg
20 mm	150 mm	1,86 kg

S = stroke

Dimensions

GPC combinations



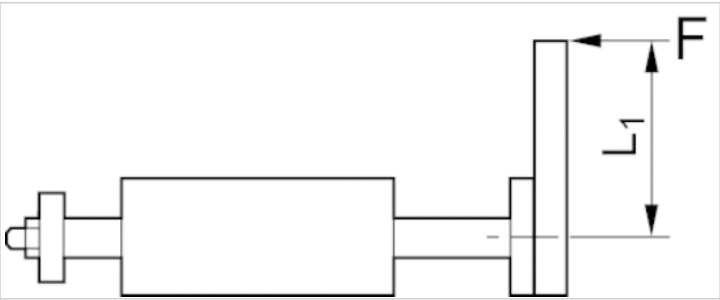
The GPC-E can be directly mounted on the front plate of next bigger standard GPC or GPC-E in radial direction.

Dimensions

Piston Ø		GPC 16, GPC-E 16	GPC 20, GPC-E 20	GPC 25
12 mm	GPC-E 12	M5x15 1)	–	–
16 mm	GPC-E 16	–	M5x15 1)	–
20 mm	GPC-E 20	–	–	M6x15 1)

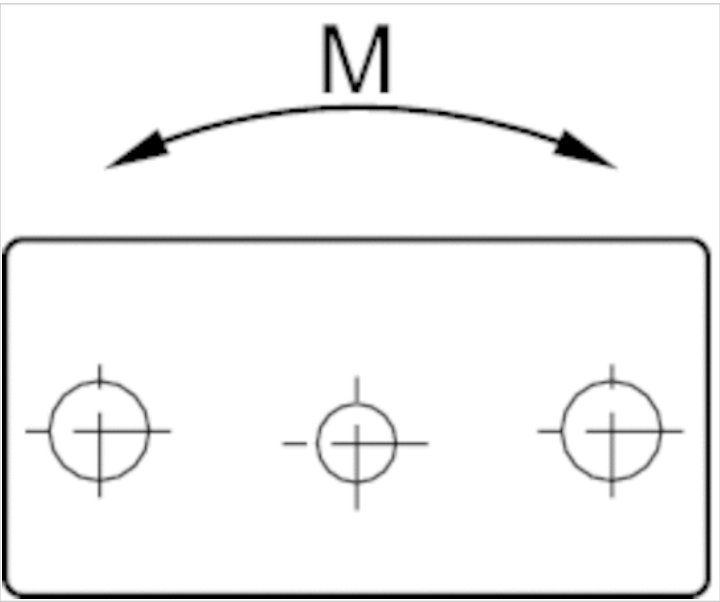
1) Screw according to ISO 4762 - M4x25

Permissible lever arm length L1 at 6 bar with static load



Dimensions

Permissible static moment M [Nm]



Dimensions

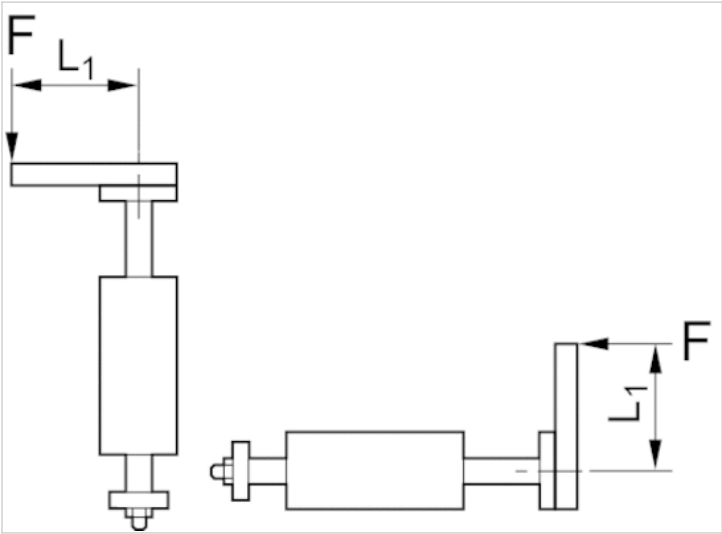
Piston Ø	S=25	S=50	S=75	S=100	S=125	S=150
12 mm	0.46	0.56	0.44	0.38	0.32	0.26
16 mm	1.25	1.57	1.29	1.15	0.99	0.82
20 mm	1.43	1.81	1.49	1.32	1.13	0.95

Dimensions

Piston Ø	F [N]	L1	L2
12 mm	67	290	22
16 mm	120	215	23.7
20 mm	180	140	27

Dimensions

Permissible lever arm length L1 at 6 bar with dynamic load

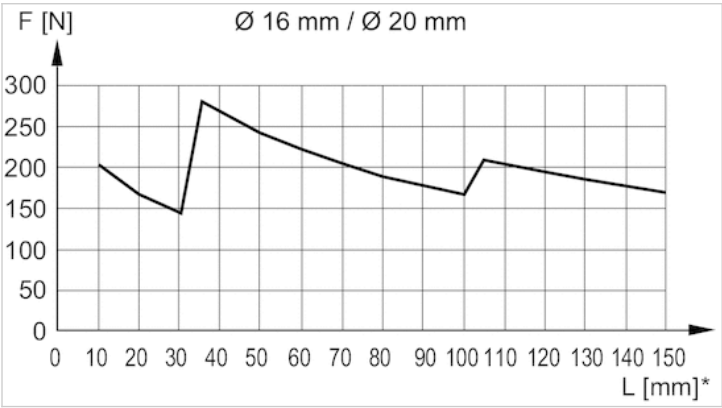


Dimensions

Piston Ø	F [N]	F [N] 1)	L1	L2
12 mm	67	23	250	22
16 mm	120	40	200	23,7
20 mm	180	65	125	27

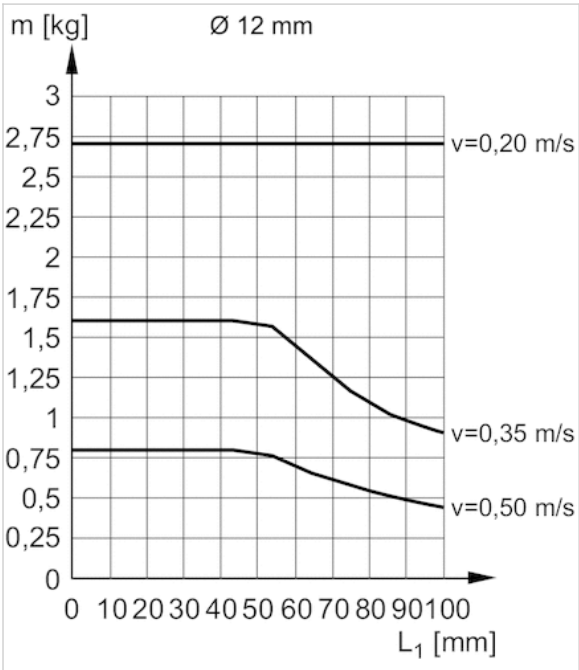
1) Horizontal situation max. force [N]

Permissible static side force F [N] Ø 16 mm and 20 mm

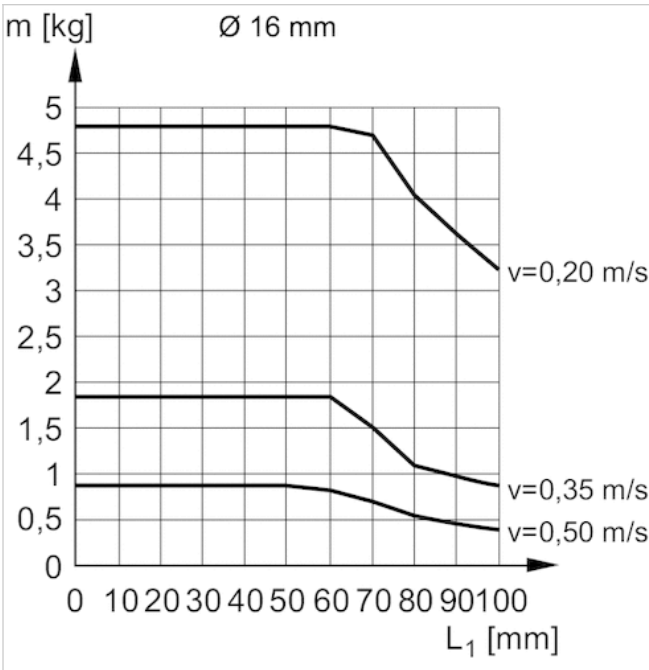


Diagrams

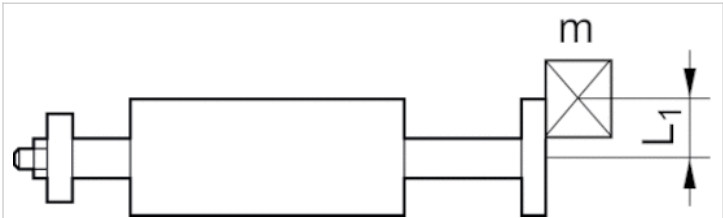
Permissible dynamic load m [kg] Ø12 mm



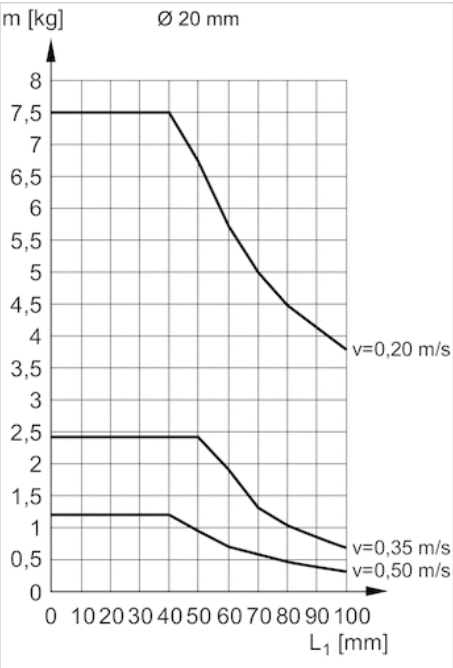
Permissible dynamic load m [kg] Ø 16 mm



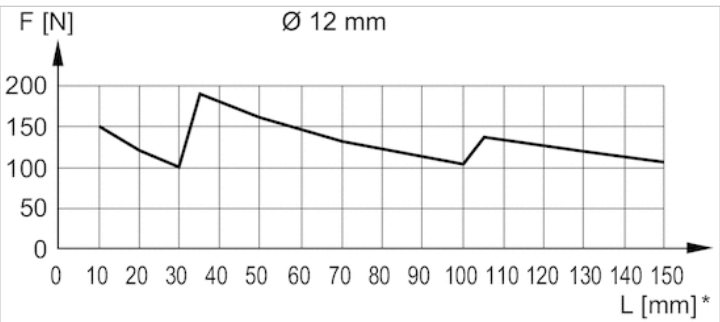
Permissible dynamic load m [kg]



Permissible dynamic load m [kg] Ø 20 mm

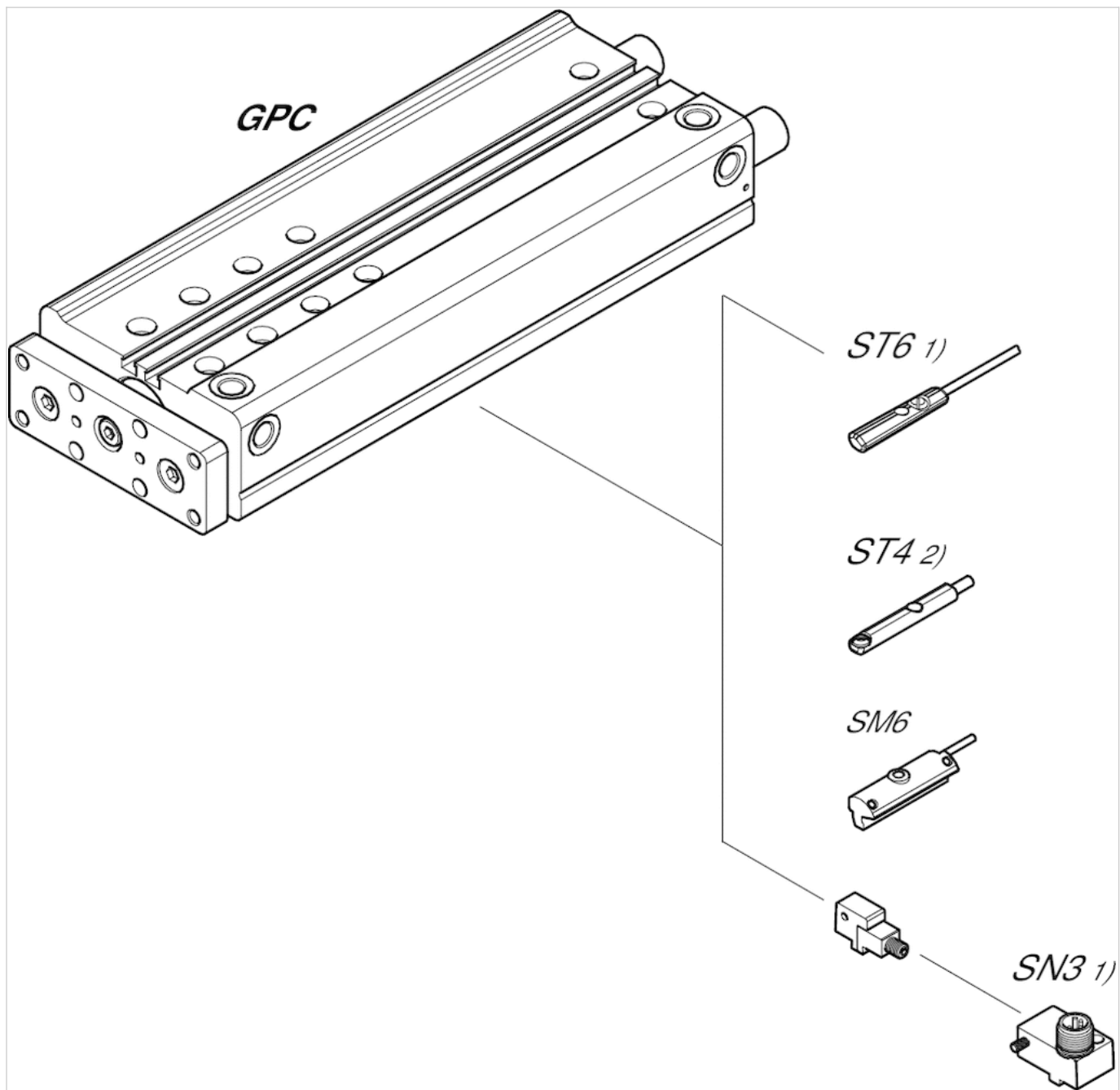


Permissible static side force F [N] Ø12 mm



Accessories overview

Overview drawing



1) $\leq \text{Ø}12 \text{ mm}$ (GPC-BV, GPC-E, GPC-TL)

2) Only for $\text{Ø}10 \text{ mm}$ (GPC-BV) and all Ø (GPC-ST)

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.

Guide cylinders, Series GPC-E

- Ø 12-20 mm
- double-acting
- ball bearing
- Cushioning hydraulic, non-adjustable
- with magnetic piston
- Easy2Combine capable with connection kit



Working pressure min./max.	See table below
Ambient temperature min./max.	0 ... 65 °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
Weight	See table below



Technical data

Piston Ø	12 mm	16 mm	20 mm
Stroke 25	0822060507	0822061507	0822062507
50	0822060504	0822061504	0822062504
75	0822060505	0822061505	0822062505
100	0822060506	0822061506	0822062506
125	0822060524	0822061524	0822062524
150	0822060529	0822061529	0822062529

Technical data

Piston Ø	12 mm	16 mm	20 mm
Port	M5	M5	M5
Working pressure min./max.	2 ... 8 bar	2 ... 10 bar	2 ... 10 bar
Retracting piston force	53 N	95 N	148 N
Extracting piston force	71 N	127 N	198 N
Speed max.	0,5 m/s	0,5 m/s	0,5 m/s
Impact energy	0,1 J	0,11 J	0,15 J

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).

Note: Hydraulic shock absorber on rear side are included in scope of delivery

Technical information

Material	
Housing	Aluminum, anodized
Seal	Polyurethane
Front plate	Steel, galvanized
Guide rod	Steel, hardened
Bearing	Steel, hardened
Piston rod	Stainless steel

Dimensions



Dimensions

Piston Ø	A 1)	Ø A1	A2 2)	A2 3)	A3	B 1)	D	D1	D3	D4	E1	E2	F	G	H	L 4)	L13
12 mm	M5x8	M8	5	19	13.5	4 H7x4	M5	19.2	8	40	58	30.5	M4	4.5	M4	14	14.5
16 mm	M5x8	M10	5	29	14.8	4 H7x4	M5	25.8	10	47	68	33	M4	5.5	M4	24	14
20 mm	M6x10	M10	5	28	18.5	4 H7x4	M5	26.8	10	54	80	36	M5	5.5	M5	23	15

Piston Ø	L14	L15S=50-150	L17	L18	L19	L20	L21	L22S=50-150	L24	L25	L26	LJ1	LM1	LM2	LM3
12 mm	22	58.5	4	22	8	20	18	48	25.5	20	19	24.8	8	12.7	55
16 mm	25	64	4	25	8	25	20.5	58	26.5	25	21.5	27	8	13.5	65
20 mm	24	63	4.5	24	8	30	23	68	27	30	25	26.5	10	15.5	77

Piston Ø	LM4	P1	P2	P3	P4	P5	P6	P7	P8	P9	PL1	PL2	PL3	R8	S1 1)	S3	S4	S6	TT	ZA	ZJ
12 mm	27	40	20	3.5	–	–	–	–	1.5	1.5	8.5	8.5	11.5	–	M5x8	4.2	20.3	7.6	–	34.4	66.3
16 mm	30	40	20	5	20	22	4	15	1.5	1.5	8.8	8.8	13	43	M5x8	4.2	28.5	7.6	N6	36	75.3
20 mm	33	50	25	4	25	25	4	16.5	1.5	1.5	10	10	15	50	M6x10	5.2	30.5	9.5	N6	36	78.3

S = stroke

1) Dimension x depth

2) Min.

3) Max.

4) Adjustment length L = A2 max. ... A2 min.

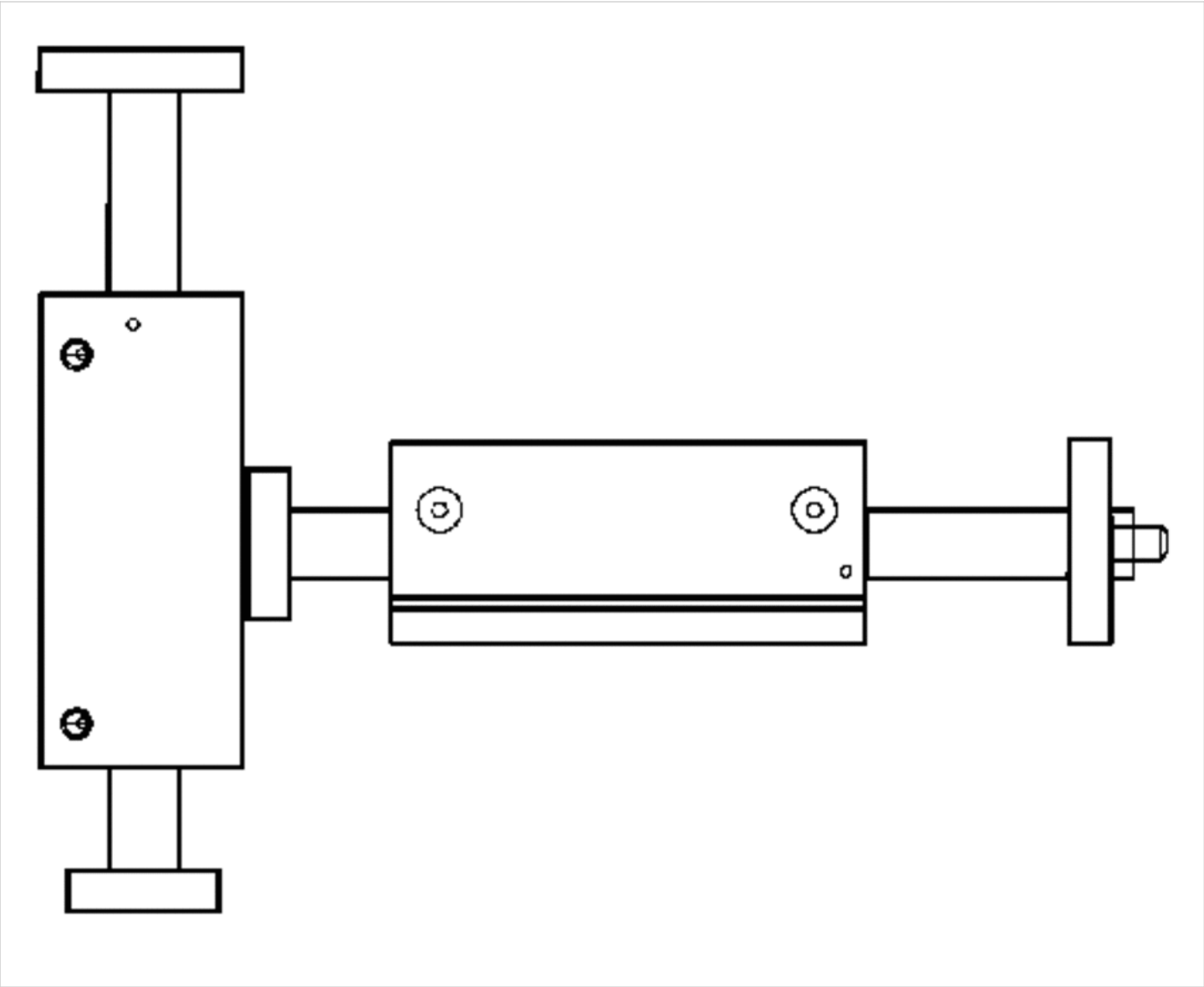
Weight [kg]

Piston Ø	S	Weight kg
12 mm	25 mm	0,43 kg
12 mm	50 mm	0,58 kg
12 mm	75 mm	0,7 kg
12 mm	100 mm	0,82 kg
12 mm	125 mm	0,95 kg
12 mm	150 mm	1,07 kg
16 mm	25 mm	0,57 kg
16 mm	50 mm	0,76 kg
16 mm	75 mm	0,91 kg
16 mm	100 mm	1,07 kg
16 mm	125 mm	1,23 kg
16 mm	150 mm	1,38 kg
20 mm	25 mm	0,72 kg
20 mm	50 mm	0,95 kg
20 mm	75 mm	1,12 kg
20 mm	100 mm	1,31 kg
20 mm	125 mm	1,5 kg
20 mm	150 mm	1,69 kg

S = stroke

Dimensions

GPC combinations



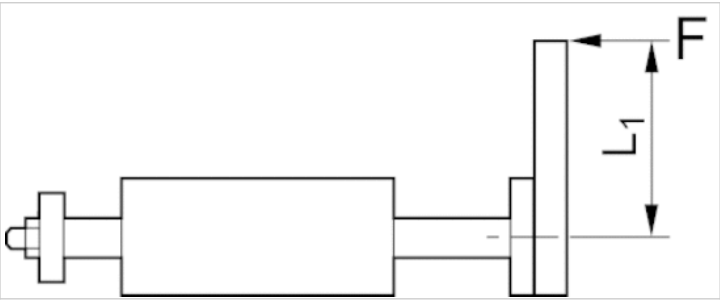
The GPC-E can be directly mounted on the front plate of next bigger standard GPC or GPC-E in radial direction.

Dimensions

Piston Ø		GPC 16, GPC-E 16	GPC 20, GPC-E 20	GPC 25
12 mm	GPC-E 12	M5x15 1)	–	–
16 mm	GPC-E 16	–	M5x15 1)	–
20 mm	GPC-E 20	–	–	M6x15 1)

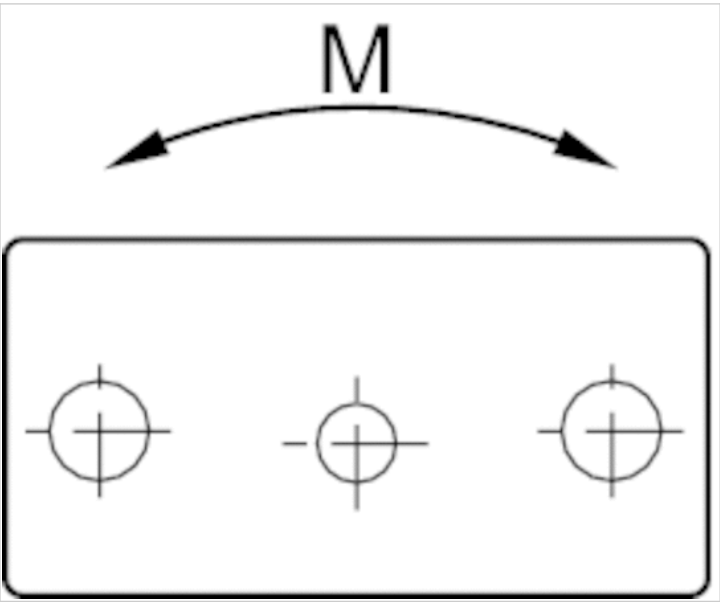
1) Screw according to ISO 4762 - M4x25

Permissible lever arm length L_1 at 6 bar with static load



Dimensions

Permissible static moment M [Nm]

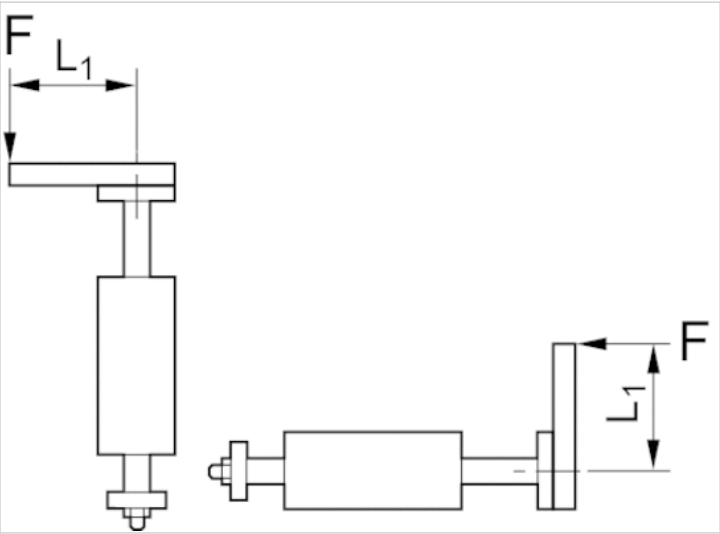


Dimensions

Piston Ø	F [N]	L1
12 mm	67	115
16 mm	120	80
20 mm	180	55

Dimensions

Permissible lever arm length L1 at 6 bar with dynamic load

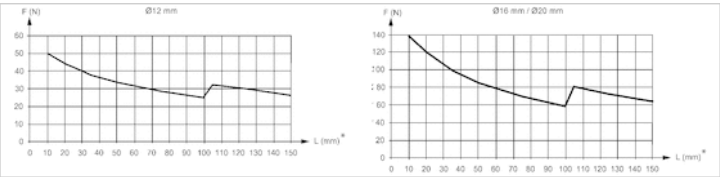


Dimensions

Piston Ø	F [N]	F [N] 1)	L1
12 mm	67	23	100
16 mm	120	40	75
20 mm	180	65	50

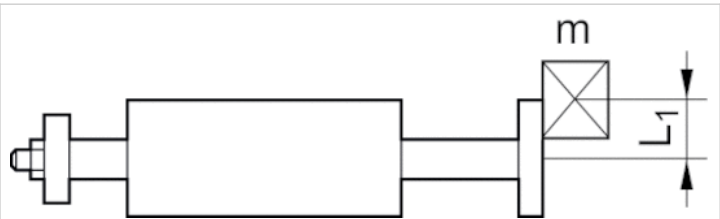
1) Horizontal situation max. force [N]

Permissible static side force F [N]

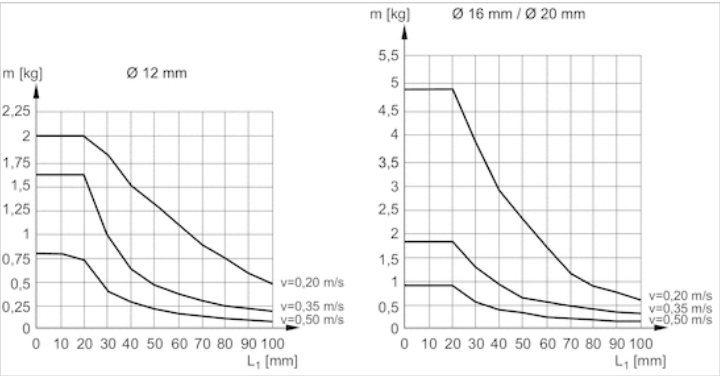


Diagrams

Permissible dynamic load m [kg]

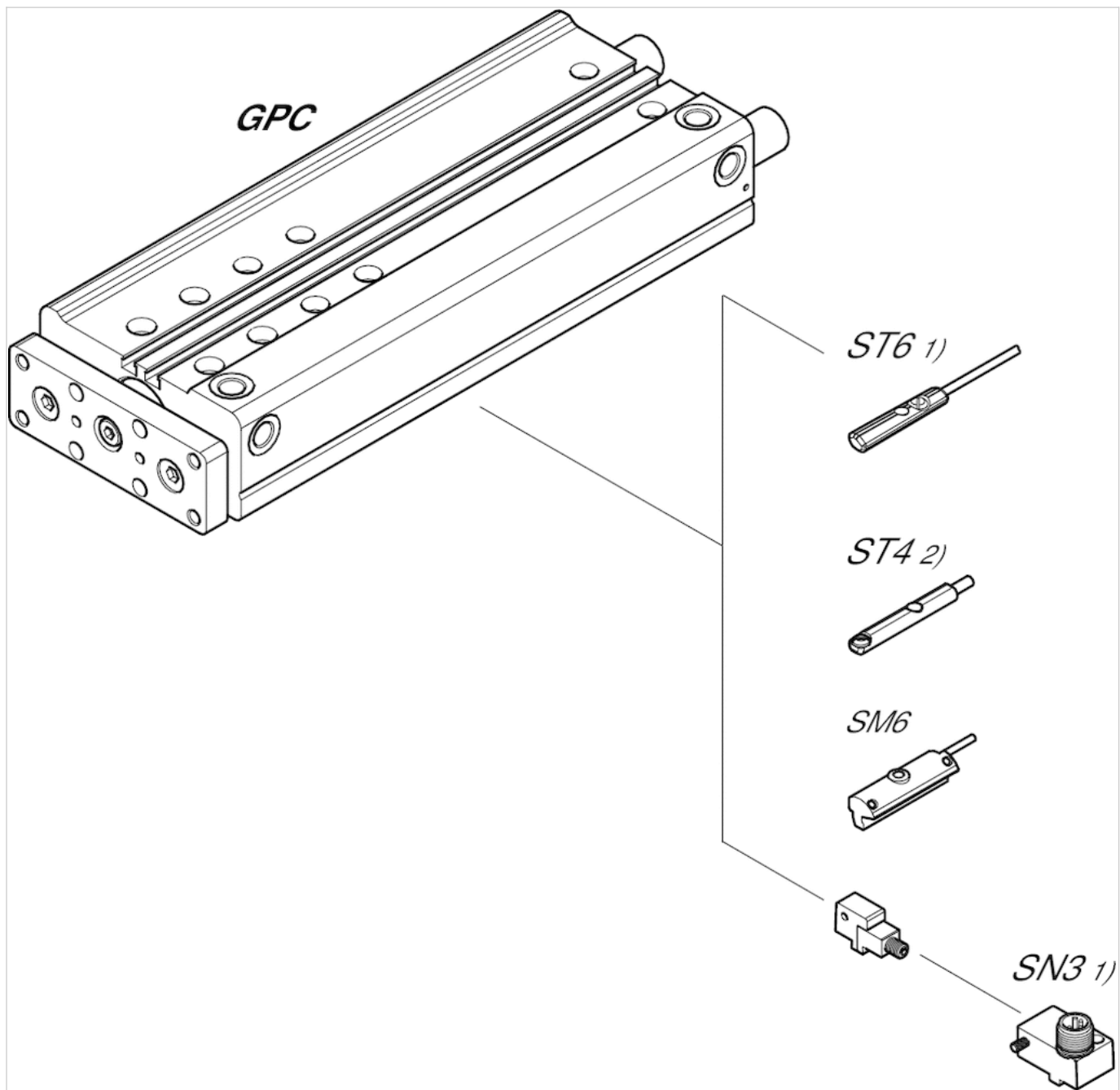


Permissible dynamic load m [kg]



Accessories overview

Overview drawing



1) $\leq \text{Ø}12 \text{ mm}$ (GPC-BV, GPC-E, GPC-TL)

2) Only for $\text{Ø}10 \text{ mm}$ (GPC-BV) and all Ø (GPC-ST)

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.

Guide cylinders, Series GPC-ST

- Ø 12-20 mm
- double-acting
- ball bearing
- Cushioning hydraulic, non-adjustable
- with magnetic piston
- Easy2Combine capable with connection kit



Working pressure min./max.	See table below
Ambient temperature min./max.	0 ... 65 °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
Weight	See table below

Technical data

Piston Ø	12 mm	20 mm
Stroke 35	R402000243	R402000249
50	R402000244	R402000250
75	R402000245	R402000251
100	R402000246	R402000252
125	R402000247	R402000253
150	R402000248	R402000254

Technical data

Piston Ø	12 mm	20 mm
Port	M5	M5
Working pressure min./max.	2 ... 8 bar	2 ... 10 bar
Retracting piston force	53 N	148 N
Extracting piston force	71 N	198 N
Speed max.	0,5 m/s	0,5 m/s
Impact energy	0,1 J	0,15 J
Max. play with locked end position	0,08 mm	0,07 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.

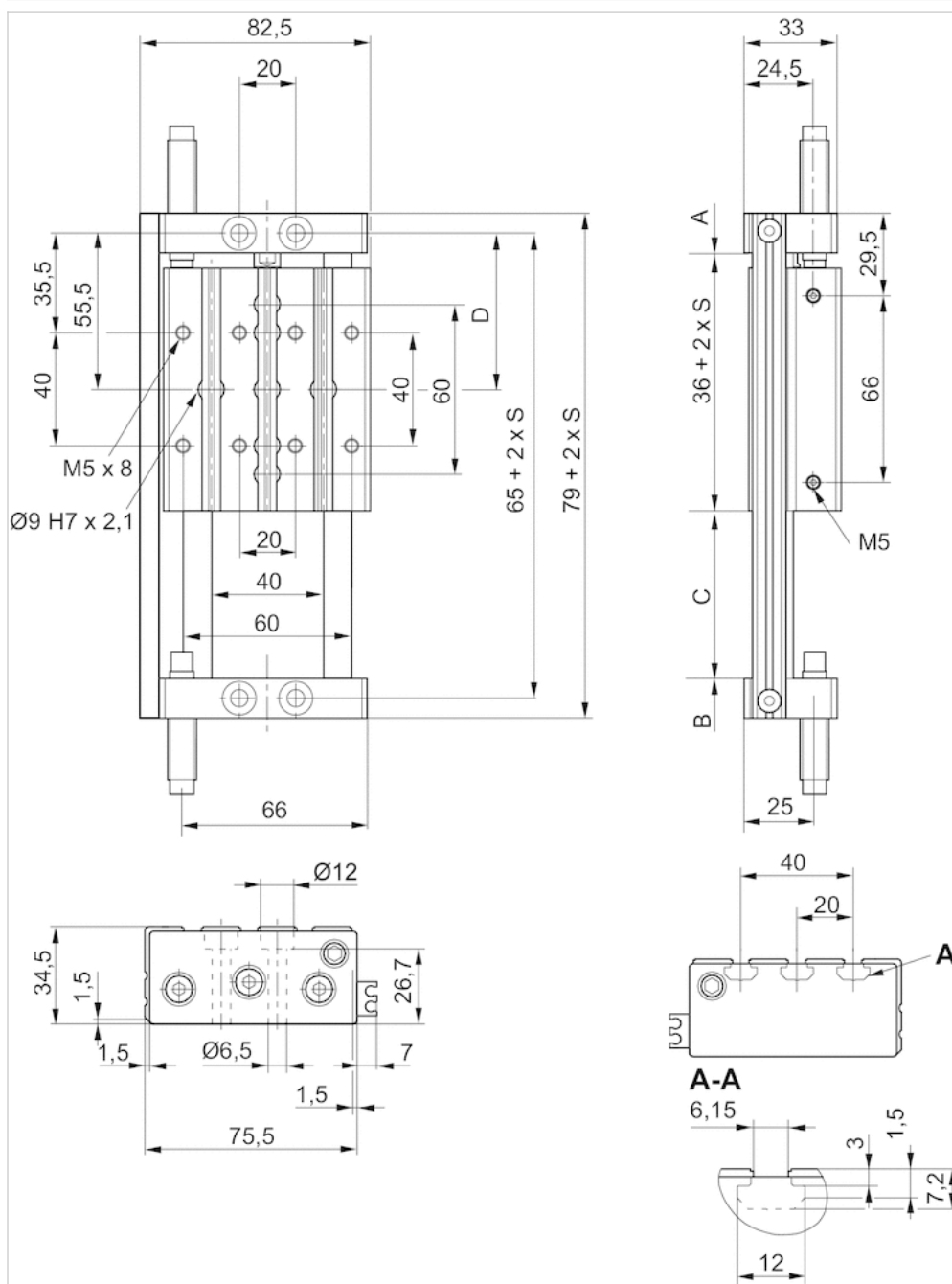
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

Technical information

Material	
Housing	Aluminum, anodized
Seal	Polyurethane
Front plate	Steel, galvanized
Guide rod	Steel, hardened
Bearing	Steel, hardened
Piston rod	Stainless steel

Dimensions

Ø 20



S = stroke

Dimensions

Piston Ø	A 1)	A 2)	B 1)	B 2)	C 1)	C 2)	D 1)	D 2)
20 mm	5.5	35.5	9.5	35.5	S-56	S	30,5+0,5xS	60,5+0,5xS

1) Min. ↔ 2) Max. ↔ S = stroke

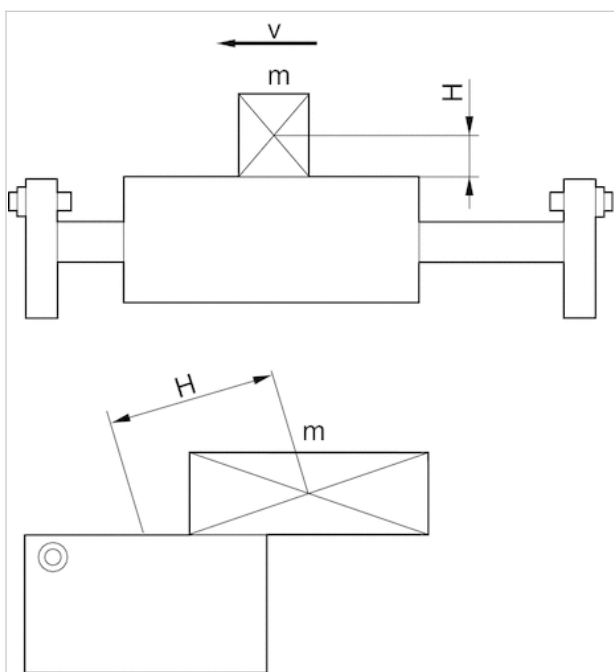
Weight [kg]

Piston Ø	S	Weight kg
12 mm	35 mm	0,43 kg
12 mm	50 mm	0,58 kg
12 mm	75 mm	0,7 kg
12 mm	100 mm	0,82 kg
12 mm	125 mm	0,95 kg
12 mm	150 mm	1,07 kg
20 mm	35 mm	0,72 kg
20 mm	50 mm	0,95 kg
20 mm	75 mm	1,12 kg
20 mm	100 mm	1,31 kg
20 mm	125 mm	1,5 kg
20 mm	150 mm	1,69 kg

S = stroke

Dimensions

Permissible dynamic load m [kg]



The load creates a high moment on the unit when reaching the end positions. It is therefore necessary not to exceed the limitations showed below. Following parameters must be considered: velocity, distance to center of mass and size of GPC-ST. When multiplying the mass m [kg] with the distance H [mm] the result must not exceed the values below. Example: A load of 2,3 kg shall be mounted with L 52 mm on a GPC-ST dia. 20 stroke 50. $m \times H$; $2,3 \times 52 = 120$. From the table below we can see that this is allowed for a velocity of 0,3 m/s.

Dimensions

Piston Ø	S	0,2 [m/s]	0,3 [m/s]	0,4 [m/s]	0,5 [m/s]
12 mm	35	155	75	60	50

Piston Ø	S	0,2 [m/s]	0,3 [m/s]	0,4 [m/s]	0,5 [m/s]
12 mm	50	225	100	90	60
12 mm	75	310	160	110	85
12 mm	100	350	170	130	105
12 mm	125	450	250	180	140
12 mm	150	600	300	200	160

S = stroke

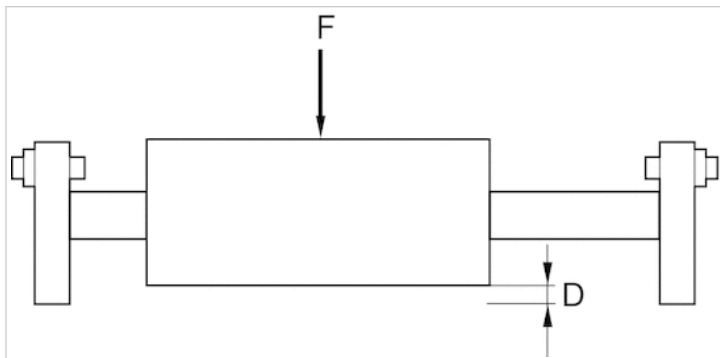
Dimensions

Piston Ø	S	0,2 [m/s]	0,3 [m/s]	0,4 [m/s]	0,5 [m/s]
20 mm	35	195	95	75	95
20 mm	50	28	125	110	75
20 mm	75	390	200	140	110
20 mm	100	440	210	160	130
20 mm	125	560	310	225	175
20 mm	150	750	375	250	200

S = stroke

Dimensions

Maximum permissible force F and deflection D with static load



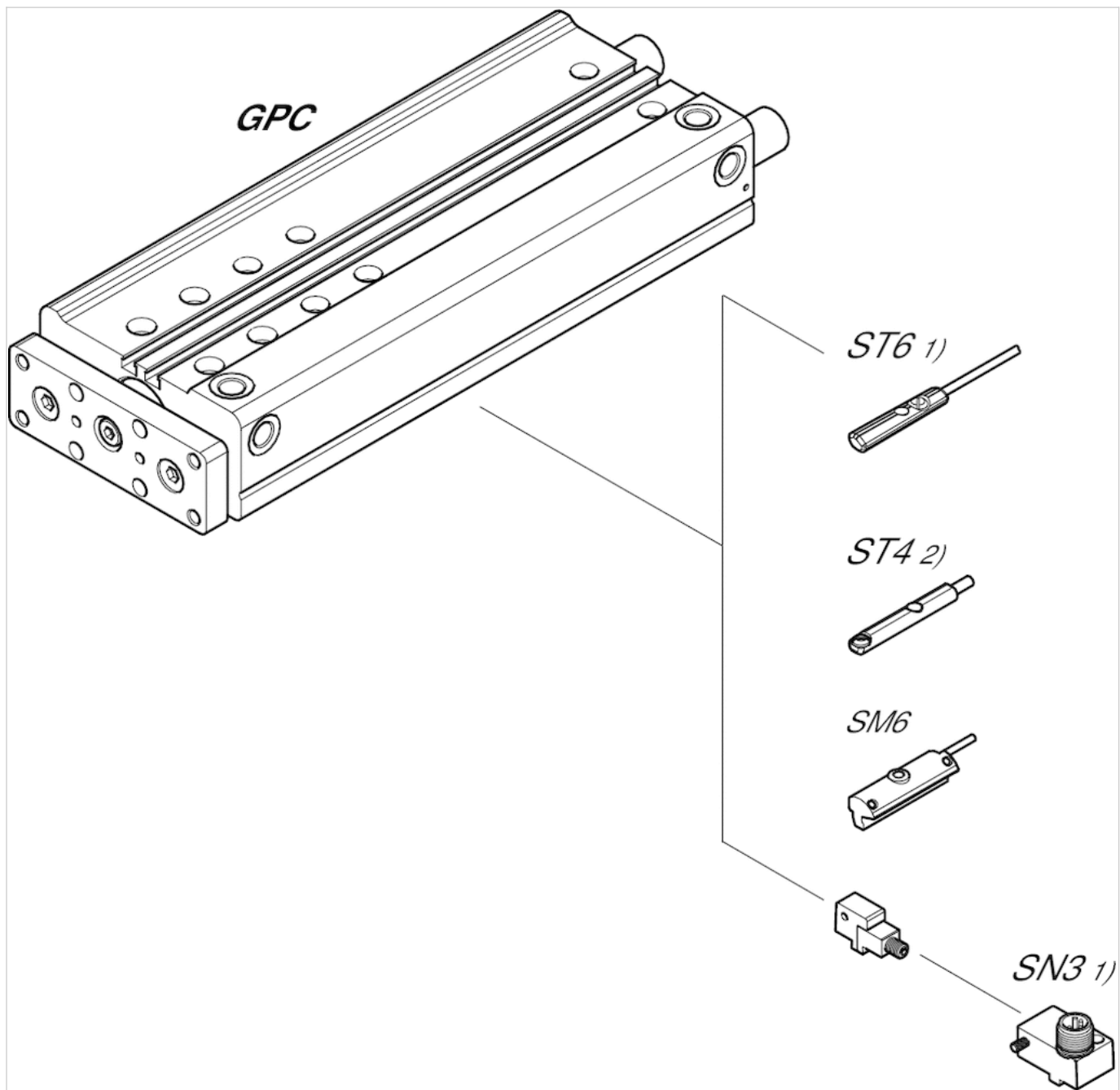
Dimensions

Piston Ø	F [N]	S=35D	S=50D	S=75D	S=100D	S=125D	S=150D
12 mm	170	0.02	0.02	0.05	0.09	0.15	0.23
20 mm	260	0.01	0.02	0.04	0.07	0.12	0.19

S = stroke

Accessories overview

Overview drawing



1) $\leq \text{Ø}12 \text{ mm}$ (GPC-BV, GPC-E, GPC-TL)

2) Only for $\text{Ø}10 \text{ mm}$ (GPC-BV) and all Ø (GPC-ST)

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.

Guide cylinders, Series GPC-TL

- Ø 12-20 mm
- double-acting
- Plain bearing
- Cushioning elastic
- with magnetic piston



Working pressure min./max.	See table below
Ambient temperature min./max.	-10 ... 70 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m ³
Pressure for determining piston forces	6.3 bar
Weight	See table below



Technical data

Piston Ø	12 mm	16 mm	20 mm
Stroke 10	0822060600	0822061600	0822062600
20	0822060601	0822061601	0822062601
25	0822060607	0822061607	0822062607
30	0822060602	0822061602	0822062602
40	0822060603	0822061603	0822062603
50	0822060604	0822061604	0822062604
75	0822060605	0822061605	0822062605
100	0822060606	0822061606	0822062606

Technical data

Piston Ø	12 mm	16 mm	20 mm
Port	M5	M5	M5
Working pressure min./max.	2 ... 8 bar	2 ... 10 bar	2 ... 10 bar
Retracting piston force	53 N	95 N	148 N
Extracting piston force	71 N	127 N	198 N
Speed max.	0,5 m/s	0,5 m/s	0,5 m/s
Impact energy	0,1 J	0,11 J	0,15 J

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.

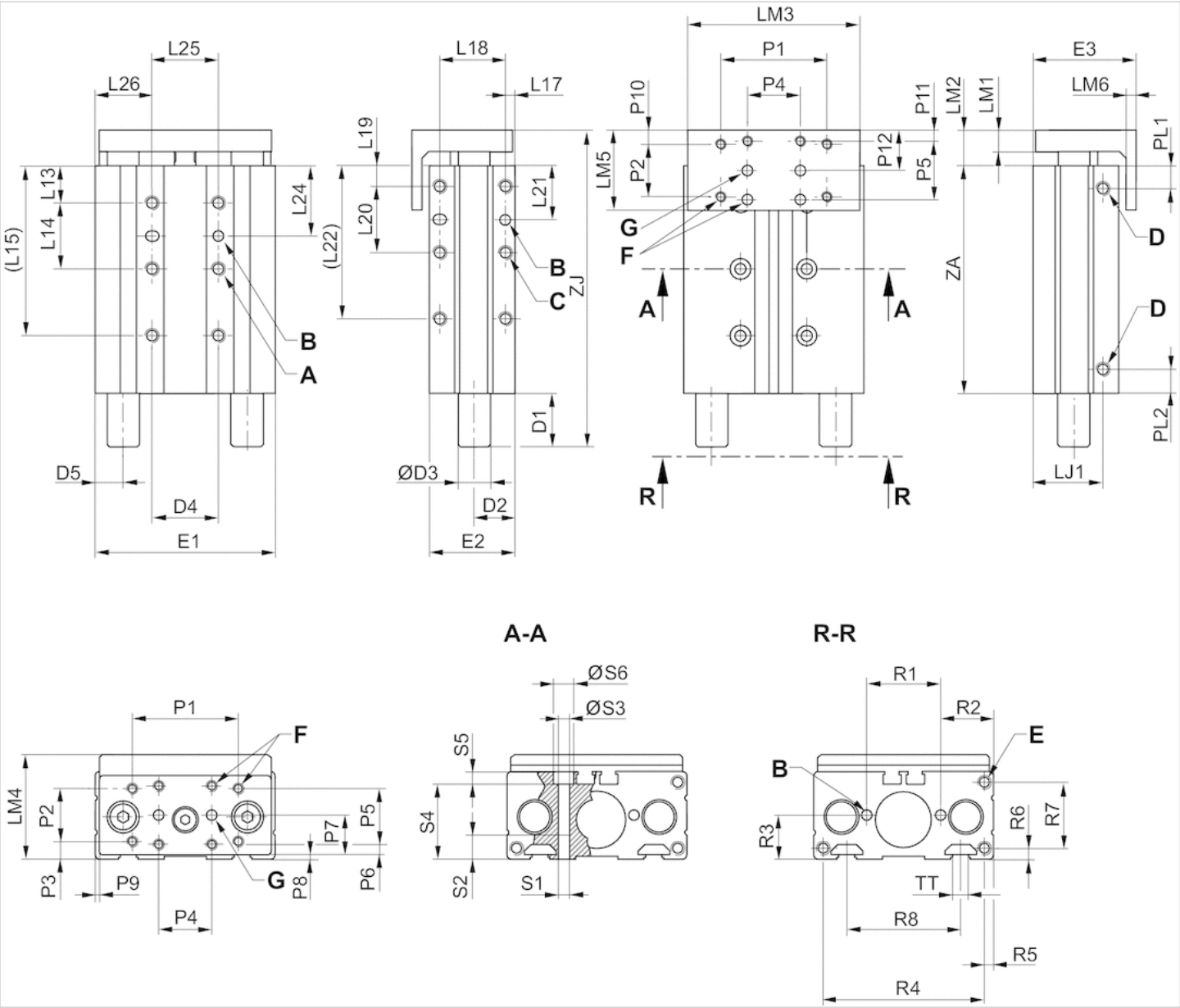
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

Technical information

Material	
Housing	Aluminum, anodized
Seal	Polyurethane
Front plate	Steel, galvanized
Guide rod	Stainless steel
Bearing	Sintered bronze
Piston rod	Stainless steel

Dimensions

Dimensions



Dimensions

Piston Ø	A 1)	B 1)	C 1)	D	D1S>30	D2	D3	D4	D5	E 1)	E1	E2	E3	F	G	L13
12 mm	M5x8	4 H7x4	M5x8	M5	17.6	14.5	10	40	9	M5x8	58	30.5	36.5	M4	4 H9	14.5
16 mm	M5x8	4 H7x4	M5x8	M5	20	15.8	12	47	10.5	M5x8	68	33	39.5	M4	4 H9	14
20 mm	M6x10	4 H7x4	M5x10	M5	20	16.5	12	54	13	M5x10	80	36	43.5	M5	4 H9	15

Piston Ø	L14S=10	L14S=20	L14S>20	L15S=50-150	L17	L18	L19	L20S=10	L20S=20-150	L21S=10
12 mm	-	18	22	58.5	4	22	8	20	20	18
16 mm	18	25	25	64	4	25	8	18	25	20.5
20 mm	16	24	24	63	4.5	24	8	20	30	18

Piston Ø	L21S>10	L22S=50-150	L24S=10	L24S>10	L25	L26	LJ1	LM1	LM2	LM3	LM4	LM5	LM6	P1
12 mm	18	48	25.5	25.5	20	19	24.8	8	12.7	55	35	28	4	40
16 mm	20.5	58	26.5	26.5	25	21.5	27	8	13.5	65	38	30	4	40
20 mm	23	68	23	27	30	25	26.5	10	15.5	77	42	35	5	50

Piston Ø	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	PL1	PL2	R1±0,04	R2	R3	R4	R5	R6	R7	R8
12 mm	20	3.5	20	20	3.5	13.5	1.5	1.5	4	4	14	8.5	8.5	23	17.5	15	50	4	4	22	-
16 mm	20	5	20	22	4	15	1.5	1.5	5	4	15	8.8	8.8	28	20	16.5	61	3.5	4	25	43
20 mm	25	4	25	25	4	16.5	1.5	1.5	5	5	17.5	10	10	30	25	18	70	5	3.5	29	50

S = stroke

1) Dimension x depth

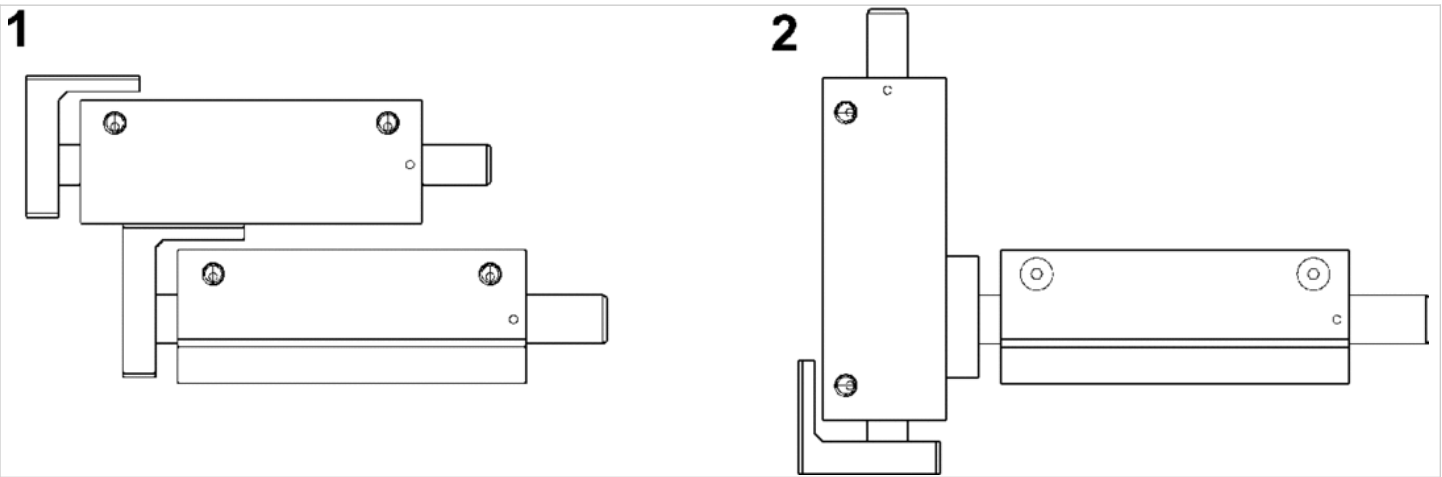
Weight [kg]

Piston Ø	S	Weight kg
12 mm	10 mm	0,48 kg
12 mm	20 mm	0,48 kg
12 mm	25 mm	0,48 kg
12 mm	30 mm	0,48 kg
12 mm	40 mm	0,45 kg
12 mm	50 mm	0,49 kg
12 mm	75 mm	0,61 kg
12 mm	100 mm	0,73 kg
16 mm	10 mm	0,49 kg
16 mm	20 mm	0,49 kg
16 mm	25 mm	0,49 kg
16 mm	30 mm	0,49 kg
16 mm	40 mm	0,57 kg
16 mm	50 mm	0,63 kg
16 mm	75 mm	0,77 kg
16 mm	100 mm	0,91 kg
20 mm	10 mm	0,6 kg
20 mm	20 mm	0,6 kg
20 mm	25 mm	0,6 kg

Piston Ø	S	Weight kg
20 mm	30 mm	0,64 kg
20 mm	40 mm	0,73 kg
20 mm	50 mm	0,8 kg
20 mm	75 mm	0,98 kg
20 mm	100 mm	1,16 kg

S = stroke

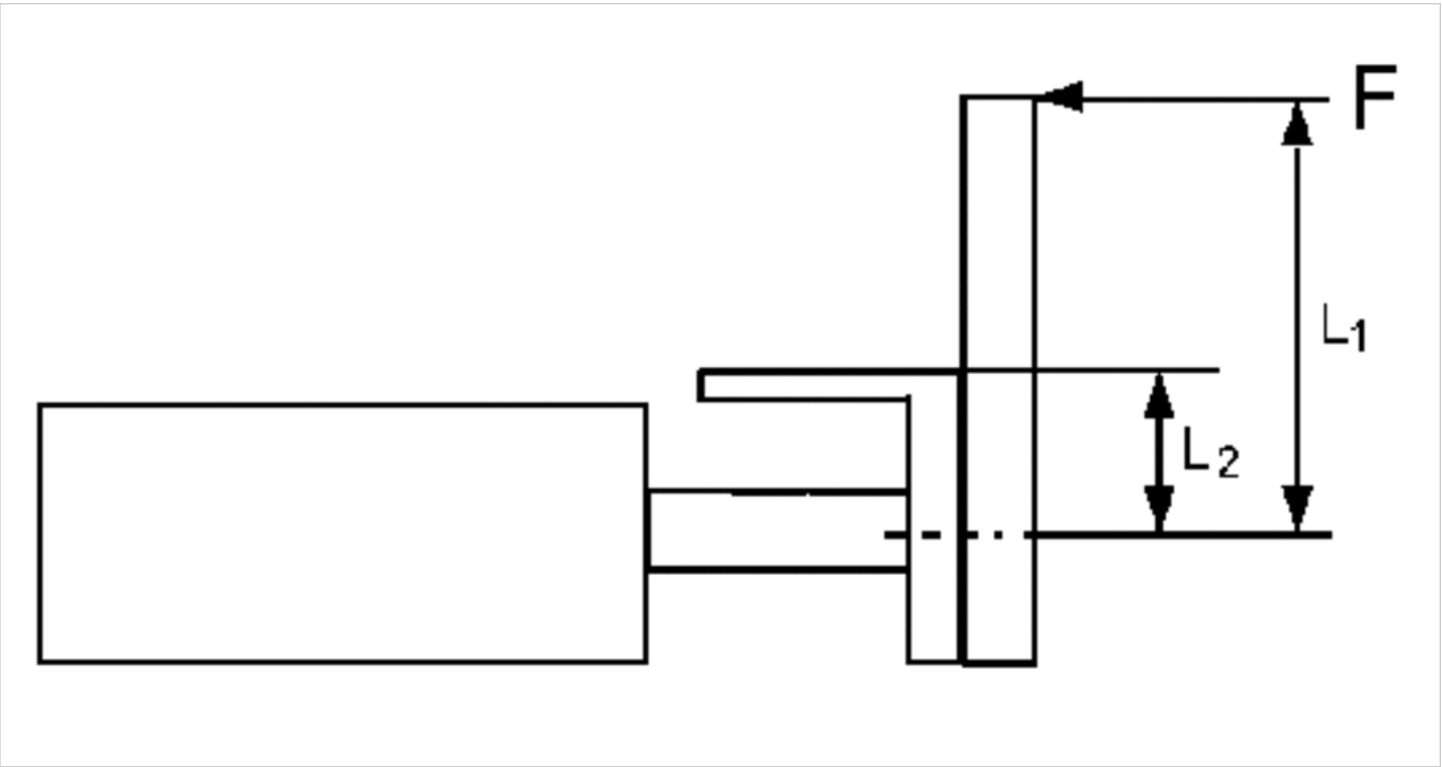
GPC combinations



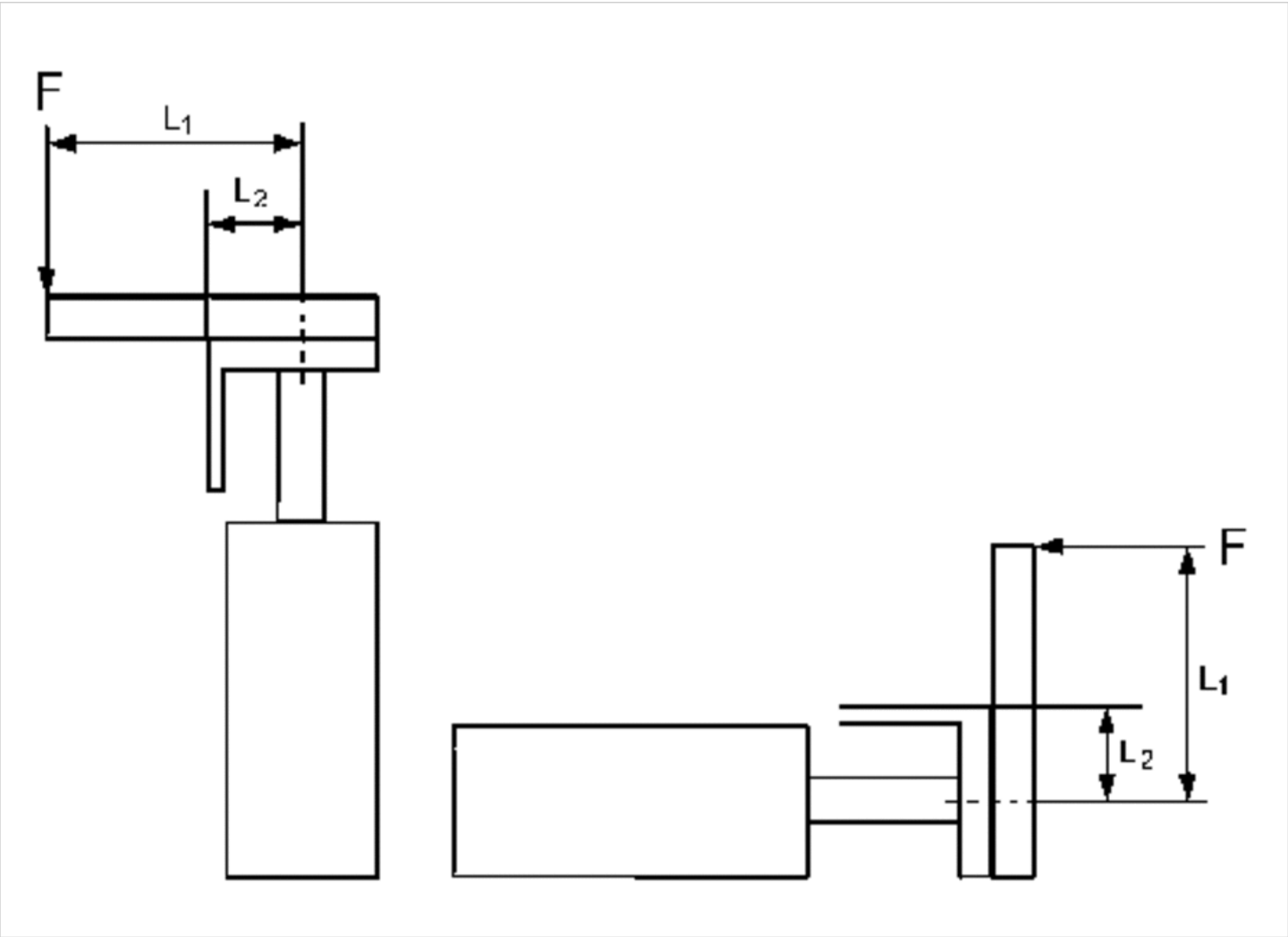
The GPC-TL can be directly mounted on the front plate of next bigger standard GPC in radial direction, and on next bigger GPC-TL in axial direction.

Dimensions

Permissible lever arm length L1 at 6 bar with static load



Permissible lever arm length L_1 at 6 bar with dynamic load



Combination radial direction (2)

Piston Ø		GPC 16	GPC 20	GPC 25
12 mm	GPC-TL 12	M5x15 1)	–	–
16 mm	GPC-TL 16	–	M5x15 1)	–
20 mm	GPC-TL 20	–	–	M6x15 1)

1) Screw according to ISO 4762 - M4x25

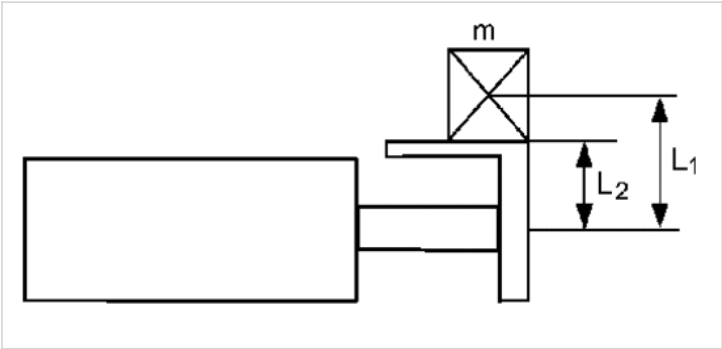
Combination in axial direction (1)

Piston Ø		GPC-TL 16	GPC-TL 20
16 mm	GPC-TL 12	M4x25 1)	–
20 mm	GPC-TL 16	–	M5x35 1)

1) Screw according to ISO 4762 - M4x25

Dimensions

Permissible dynamic load m [kg]

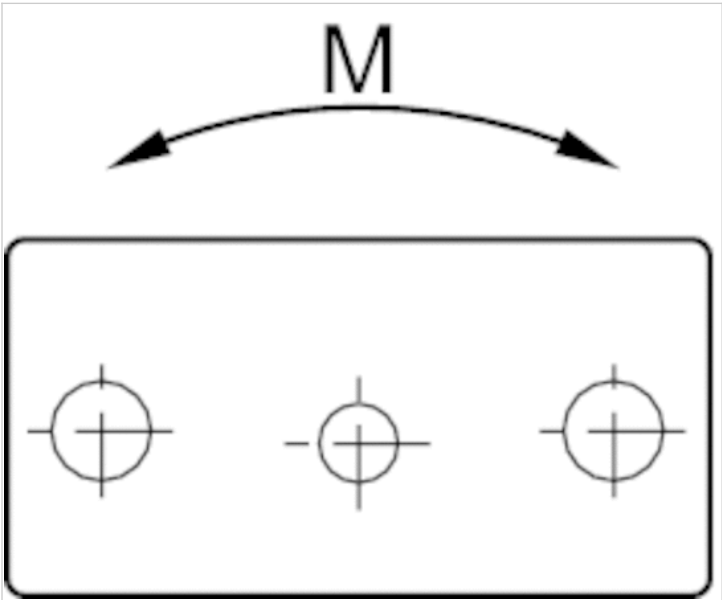


Dimensions

Piston Ø	L2
12 mm	22
16 mm	23.7
20 mm	27

Dimensions

Permissible static moment M [Nm]

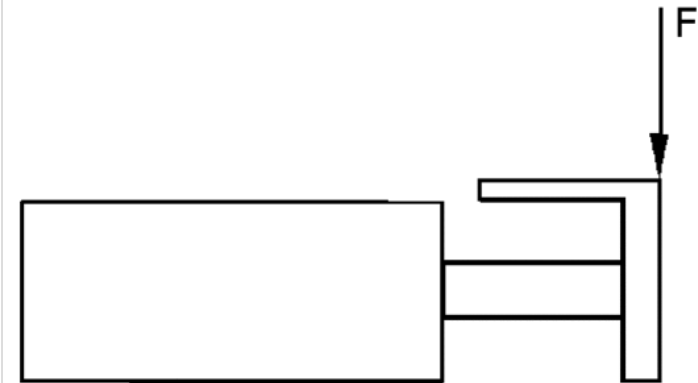


Dimensions

Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100
12 mm	0.56	0.48	0.46	0.42	0.62	0.56	0.44	0.38
16 mm	1.48	1.32	1.25	1.2	1.72	1.57	1.29	1.15
20 mm	1.7	1.51	1.43	1.38	1.97	1.81	1.49	1.32

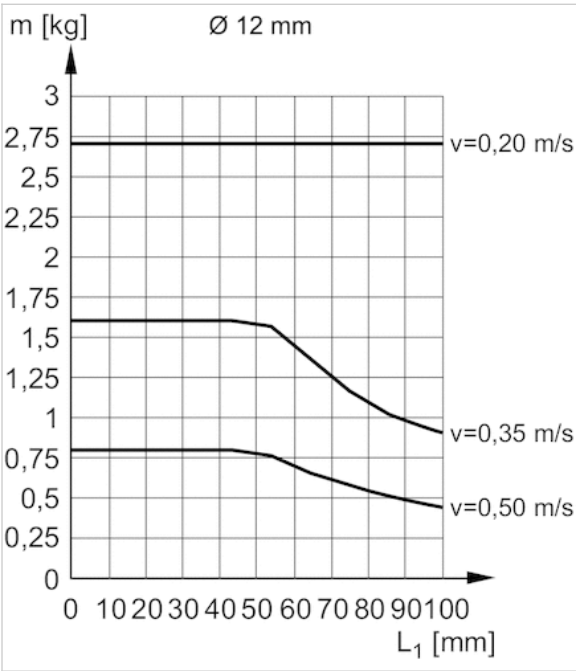
S = stroke

Permissible static side force F [N]

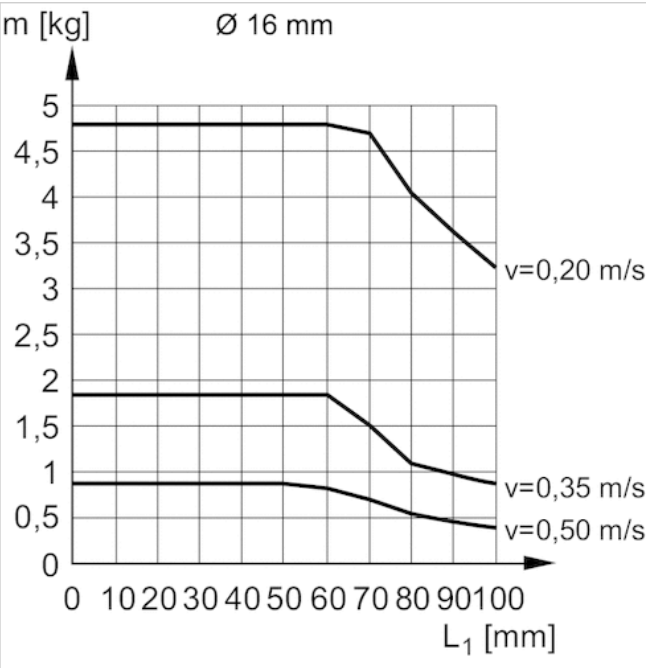


Diagrams

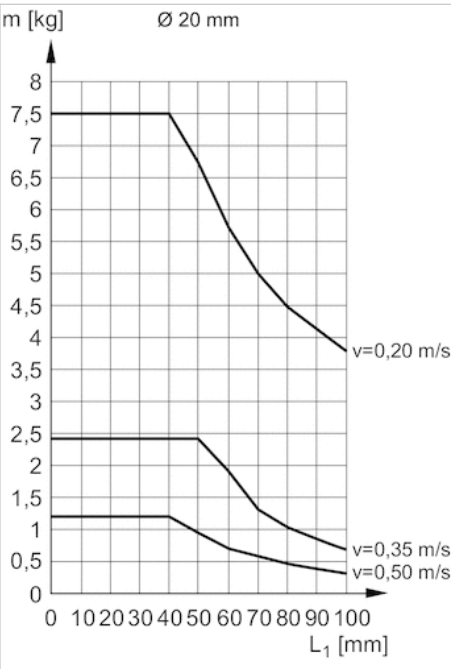
Permissible dynamic load m [kg] Ø12 mm



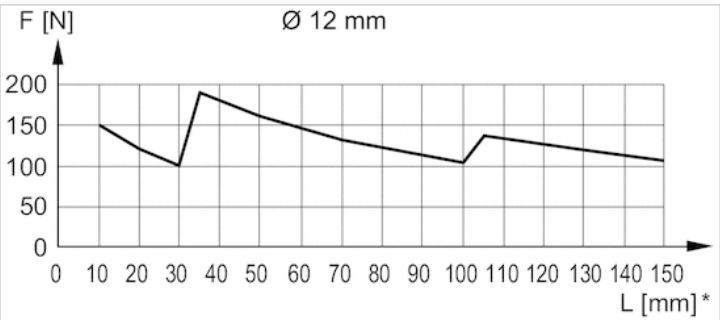
Permissible dynamic load m [kg] Ø 16 mm



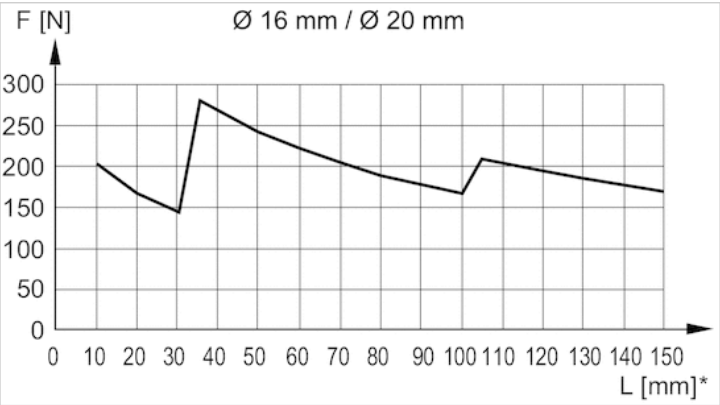
Permissible dynamic load m [kg] Ø 20 mm



Permissible static side force F [N] Ø12 mm

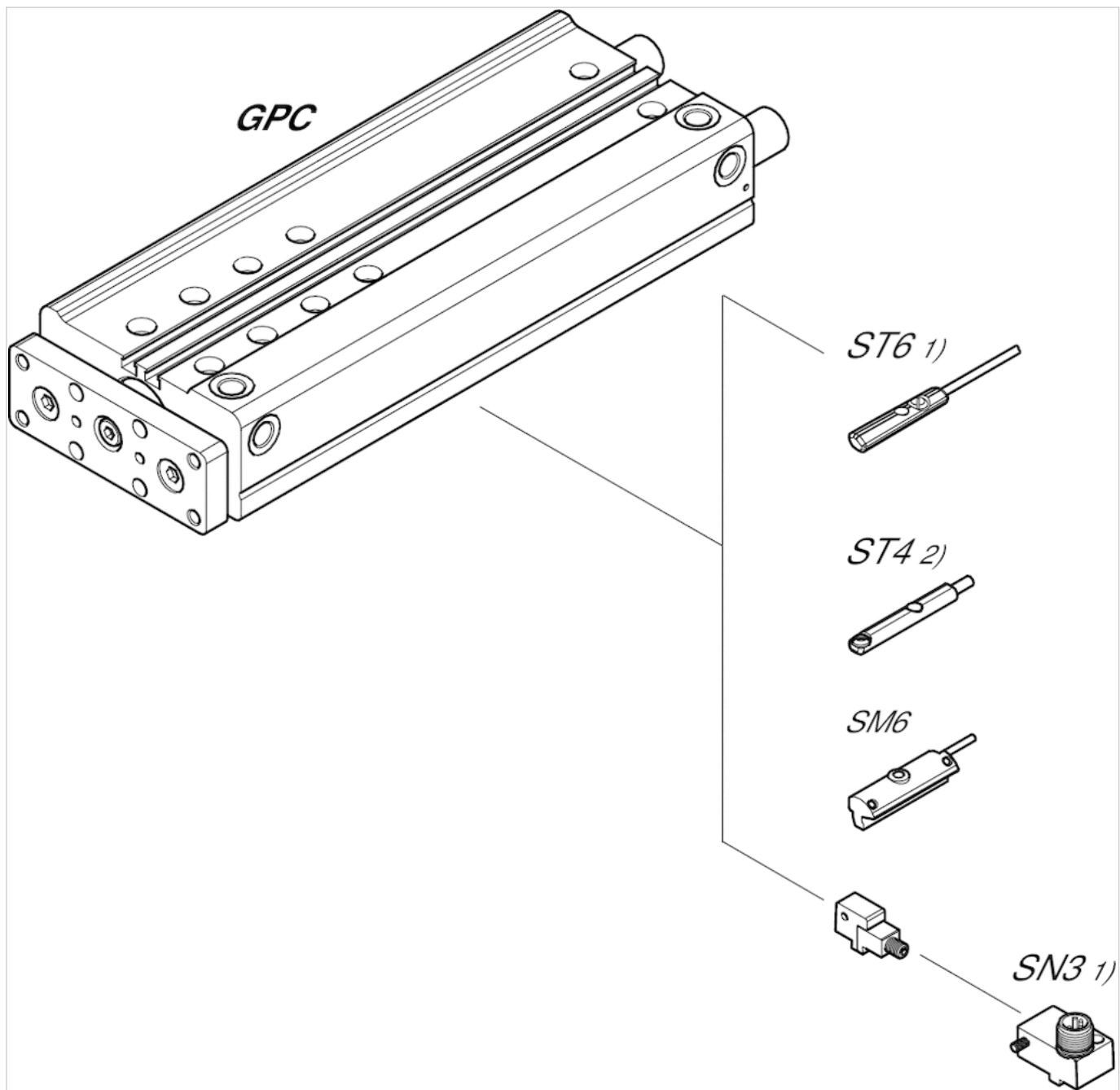


Permissible static side force F [N] Ø 16 mm and 20 mm



Accessories overview

Overview drawing



1) $\leq \text{Ø}12 \text{ mm}$ (GPC-BV, GPC-E, GPC-TL)

2) Only for $\text{Ø}10 \text{ mm}$ (GPC-BV) and all Ø (GPC-ST)

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.

Guide cylinders, Series GPC-TL

- Ø 12-20 mm
- double-acting
- ball bearing
- Cushioning elastic
- with magnetic piston



Working pressure min./max.	See table below
Ambient temperature min./max.	-10 ... 70 °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
Weight	See table below



Technical data

Piston Ø	12 mm	16 mm	20 mm
Stroke 10	0822060700	0822061700	0822062700
20	0822060701	0822061701	0822062701
25	0822060707	0822061707	0822062707
30	0822060702	0822061702	0822062702
40	0822060703	0822061703	0822062703
50	0822060704	0822061704	0822062704
75	0822060705	0822061705	0822062705
100	0822060706	0822061706	0822062706

Technical data

Piston Ø	12 mm	16 mm	20 mm
Port	M5	M5	M5
Working pressure min./max.	2 ... 8 bar	2 ... 10 bar	2 ... 10 bar
Retracting piston force	53 N	95 N	148 N
Extracting piston force	71 N	127 N	198 N
Speed max.	0,5 m/s	0,5 m/s	0,5 m/s
Impact energy	0,1 J	0,11 J	0,15 J

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).

Technical information

Material	
Housing	Aluminum, anodized
Seal	Polyurethane
Front plate	Steel, galvanized
Guide rod	Steel, hardened
Bearing	Steel, hardened
Piston rod	Stainless steel

Dimensions

Piston Ø	A 1)	B 1)	C 1)	D	D1	D2	D3	D4	D5	E 1)	E1	E2	E3	F	G	L13
12 mm	M5x8	4 H7x4	M5x8	M5	19	14.5	8	40	9	M5x8	58	30.5	36.5	M4	4 H9	14.5
16 mm	M5x8	4 H7x4	M5x8	M5	21	15.8	10	47	10.5	M5x8	68	33	39.5	M4	4 H9	14
20 mm	M6x10	4 H7x4	M6x10	M5	21	16.5	10	54	13	M5x10	80	36	43.5	M5	4 H9	15

Piston Ø	L14S=10	L14S=20	L14S>20	L15S=50-150	L17	L18	L19	L20S=10	L20S=20-150	L21S=10
12 mm	-	18	22	58.5	4	22	8	20	20	18
16 mm	18	25	25	64	4	25	8	18	25	20.5
20 mm	16	24	24	63	4.5	24	8	20	30	18

Piston Ø	L21S>10	L22S=50-150	L24S=10	L24S>10	L25	L26	LJ1	LM1	LM2	LM3	LM4	LM5	LM6	P1
12 mm	18	48	25.5	25.5	20	19	24.8	8	12.7	55	35	28	4	40
16 mm	20.5	58	26.5	26.5	25	21.5	27	8	13.5	65	38	30	4	40
20 mm	23	68	23	27	30	25	26.5	10	15.5	77	42	35	5	50

Piston Ø	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	PL1	PL2	R1±0,04	R2	R3	R4	R5	R6	R7	R8
12 mm	20	3.5	20	20	3.5	13.5	1.5	1.5	4	4	14	8.5	8.5	23	17.5	15	50	4	4	22	-
16 mm	20	5	20	22	4	15	1.5	1.5	5	4	15	8.8	8.8	28	20	16.5	61	3.5	4	25	43
20 mm	25	4	25	25	4	16.5	1.5	1.5	5	5	17.5	10	10	30	25	18	70	5	3.5	29	50

S = stroke

1) Dimension x depth

Weight [kg]

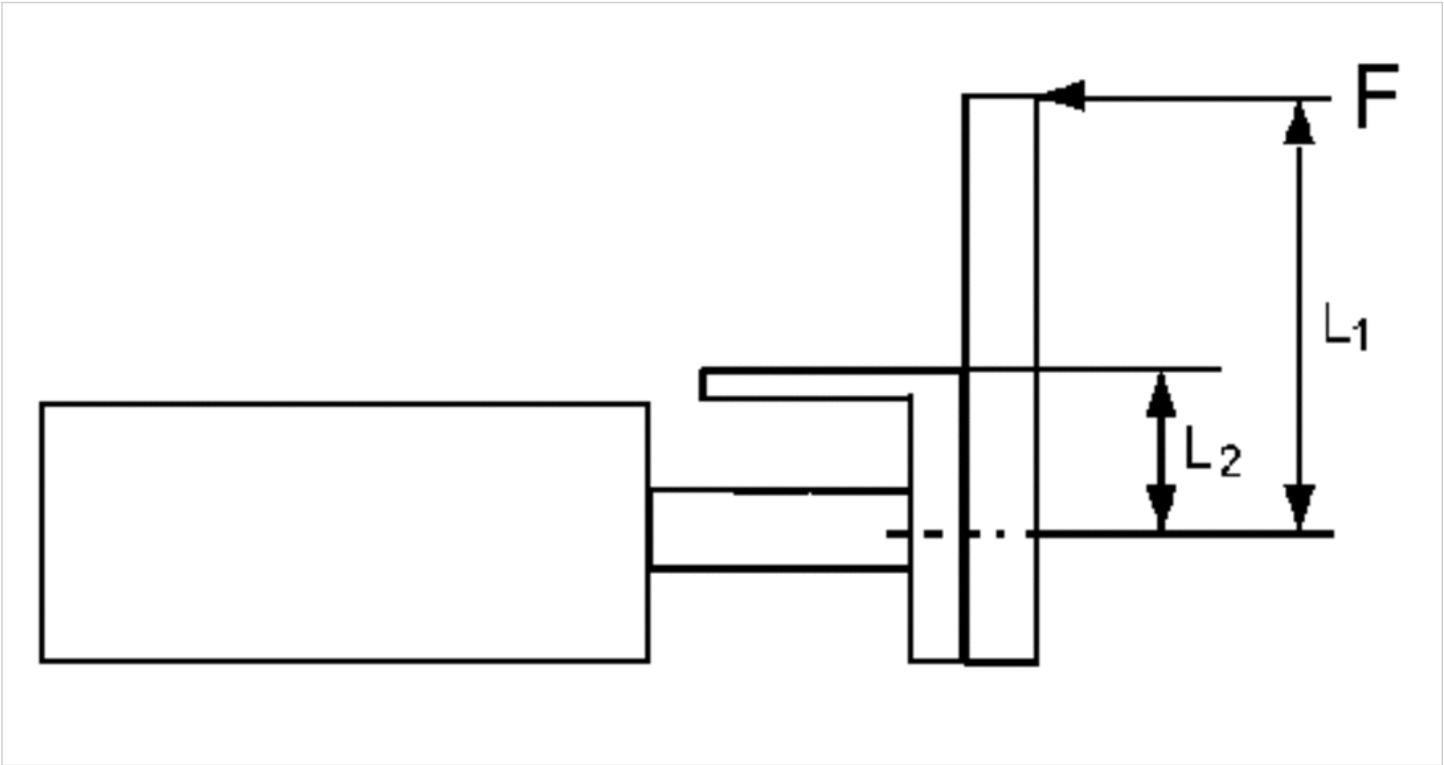
Piston Ø	S	Weight kg
12 mm	10 mm	0,45 kg
12 mm	20 mm	0,45 kg
12 mm	25 mm	0,35 kg
12 mm	30 mm	0,45 kg
12 mm	40 mm	0,43 kg
12 mm	50 mm	0,48 kg
12 mm	75 mm	0,59 kg
12 mm	100 mm	0,7 kg
16 mm	10 mm	0,47 kg
16 mm	20 mm	0,47 kg
16 mm	25 mm	0,44 kg
16 mm	30 mm	0,47 kg
16 mm	40 mm	0,56 kg
16 mm	50 mm	0,61 kg
16 mm	75 mm	0,74 kg
16 mm	100 mm	0,88 kg
20 mm	10 mm	0,61 kg
20 mm	20 mm	0,61 kg
20 mm	25 mm	0,58 kg

Piston Ø	S	Weight kg
20 mm	30 mm	0,61 kg
20 mm	40 mm	0,72 kg
20 mm	50 mm	0,79 kg
20 mm	75 mm	0,95 kg
20 mm	100 mm	1,12 kg

S = stroke

Dimensions

Permissible lever arm length L1 at 6 bar with static load

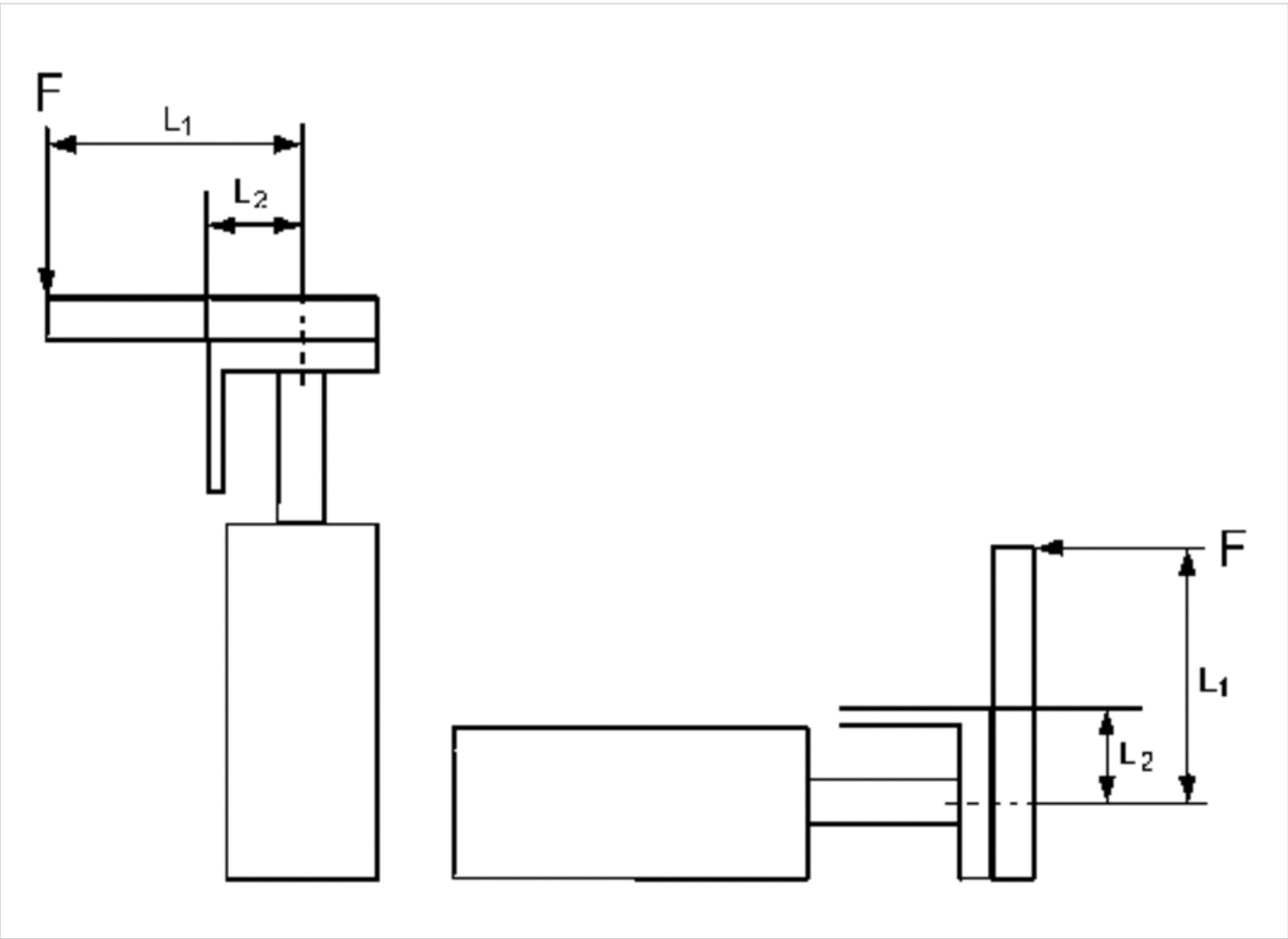


Dimensions

Piston Ø	F [N]	L1	L2
12 mm	67	115	22
16 mm	120	80	23.7
20 mm	180	55	27

Dimensions

Permissible lever arm length L1 at 6 bar with dynamic load



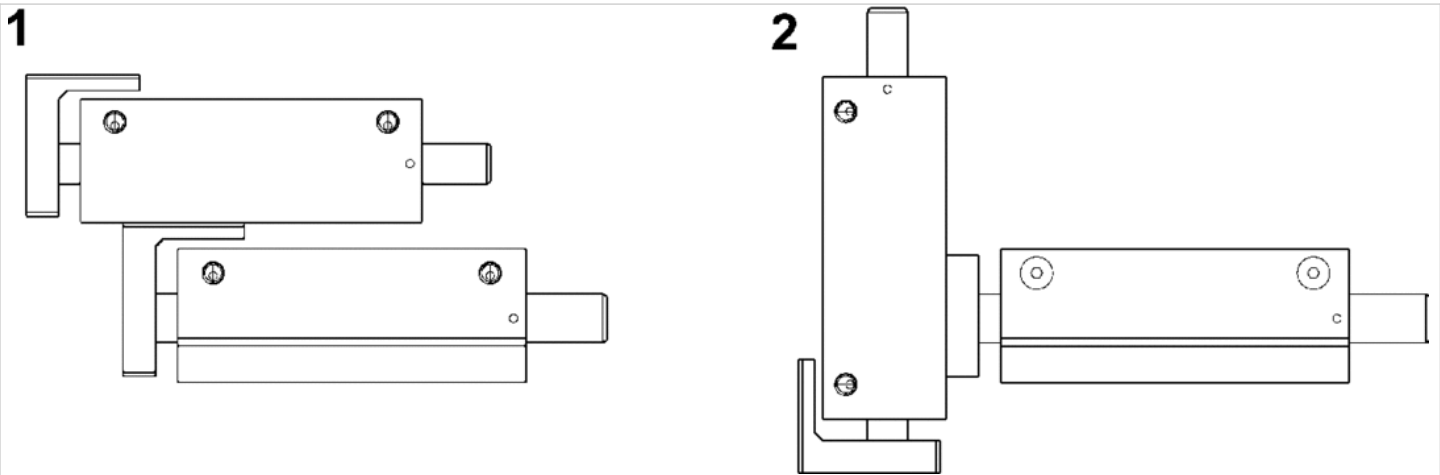
Dimensions

Piston Ø	F [N]	F [N] 1)	L1	L2
12 mm	67	23	100	22
16 mm	120	40	75	23.7
20 mm	180	65	50	27

1) Horizontal situation max. force [N]

Dimensions

GPC combinations



The GPC-TL can be directly mounted on the front plate of next bigger standard GPC in radial direction, and on next bigger GPC-TL in axial direction.

Combination radial direction (2)

Piston Ø		GPC 16	GPC 20	GPC 25
12 mm	GPC-TL 12	M5x15 1)	–	–
16 mm	GPC-TL 16	–	M5x15 1)	–
20 mm	GPC-TL 20	–	–	M6x15 1)

1) Screw according to ISO 4762 - M4x25

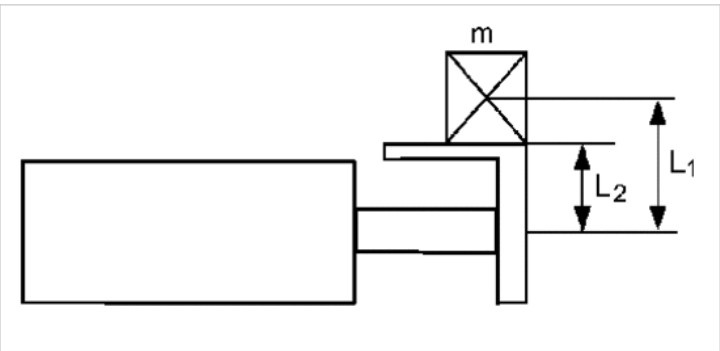
Combination in axial direction (1)

Piston Ø		GPC-TL 16	GPC-TL 20
12 mm	GPC-TL 12	M4x25 1)	–
16 mm	GPC-TL 16	–	M5x35 1)

1) Screw according to ISO 4762 - M4x25

Dimensions

Permissible dynamic load m [kg]

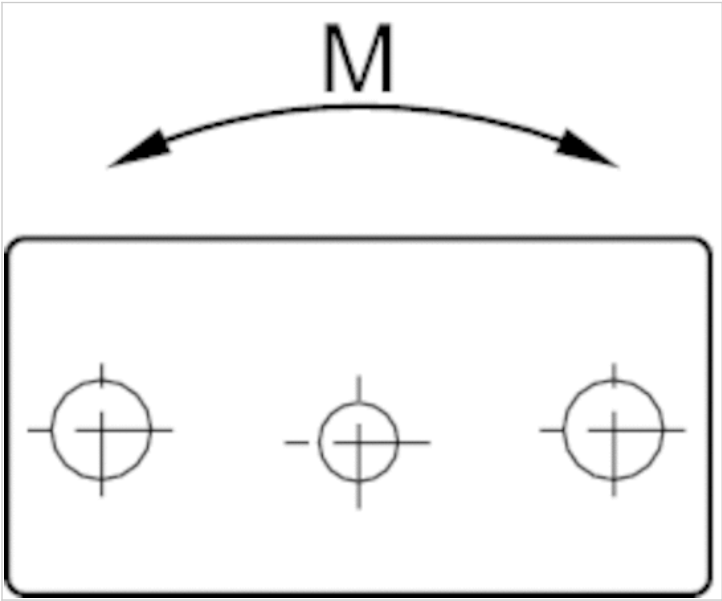


Dimensions

Piston Ø	L2
12 mm	22
16 mm	23.7
20 mm	27

Dimensions

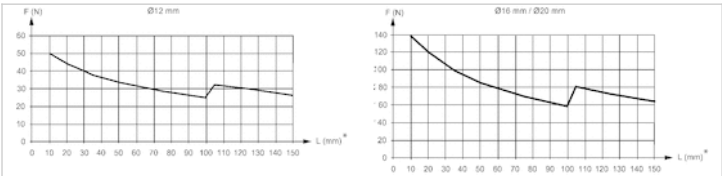
Permissible static moment M [Nm]



Dimensions

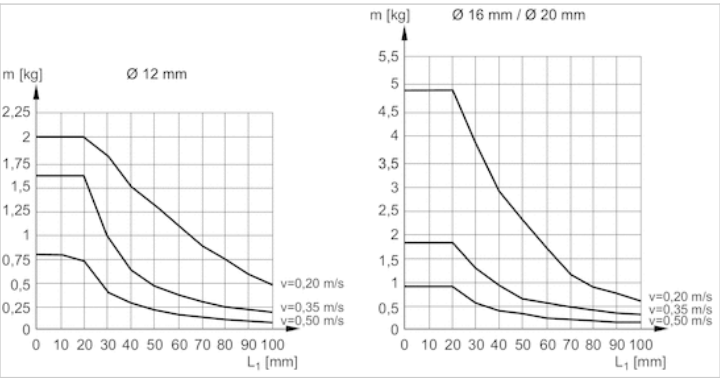
Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100
12 mm	0.38	0.34	0.32	0.3	0.46	0.44	0.4	0.38
16 mm	0.63	0.56	0.54	0.52	1.36	1.32	1.2	1.13
20 mm	0.73	0.65	0.62	0.59	1.57	1.51	1.38	1.3

Permissible static side force F [N]

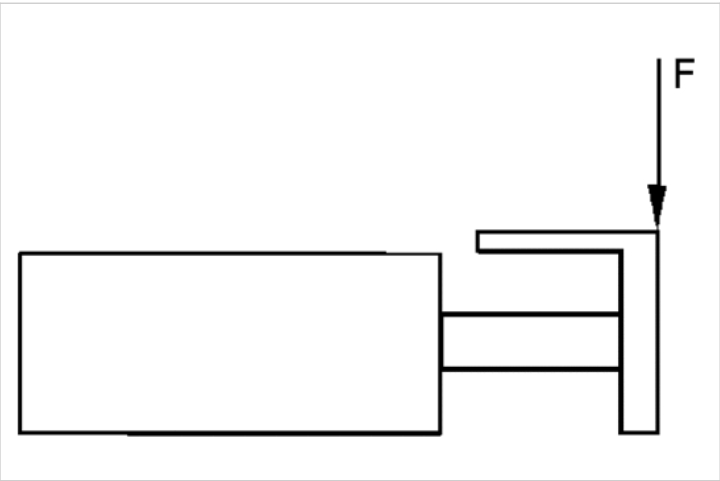


Diagrams

Permissible dynamic load m [kg]

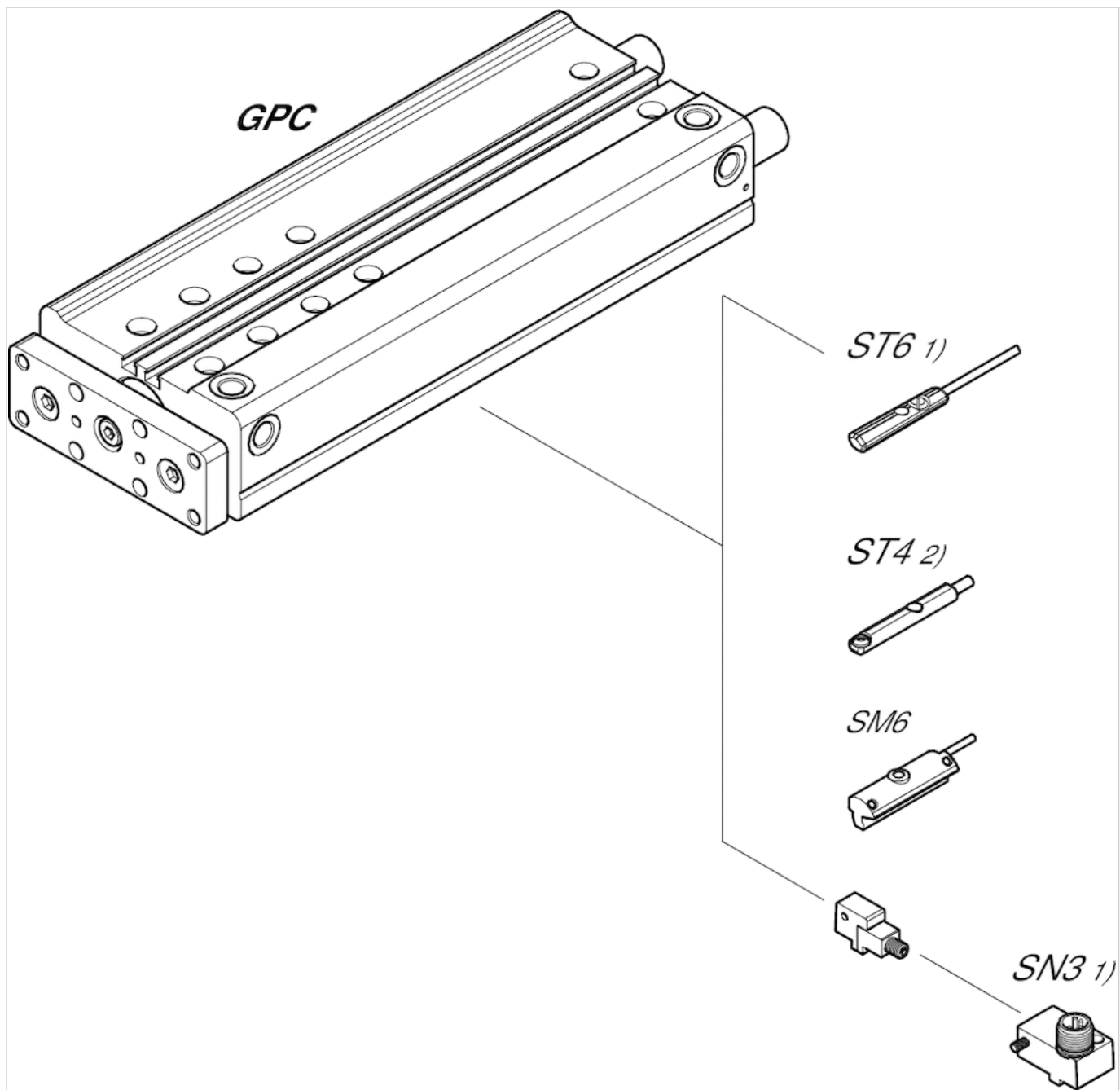


Permissible static side force F [N]



Accessories overview

Overview drawing



1) $\leq \text{Ø}12 \text{ mm}$ (GPC-BV, GPC-E, GPC-TL)

2) Only for $\text{Ø}10 \text{ mm}$ (GPC-BV) and all Ø (GPC-ST)

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.

Sensor, Series ST4

- 4 mm C-slot
- with cable
- Plug, M8, 3-pin
- UL certification
- Reed, electronic PNP, electronic NPN
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



Certificates

Ambient temperature min./max.

Protection class

Switching point precision

Min./max. DC operating voltage

Switching logic

Display

LED status display

Vibration resistance

Shock resistance

Mounting screw

UL (Underwriters Laboratories), cULus, RoHS

-30 ... 80 °C

IP65, IP67

±0,1 mT

See table below

NO (make contact)

LED

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

Combination: slotted and hexagon socket

Technical data

Part No.		for
R412019682		PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI
R412019683		PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI
R412019694		PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI

Part No.	Type of contact	Cable length L	Min./max. DC operating voltage
R412019682	Reed	0,3 m	5 ... 30 V DC
R412019683	electronic PNP	0,3 m	10 ... 30 V DC
R412019694	electronic NPN	0,3 m	10 ... 30 V DC

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412019682	≤ 0,5 V	0,13 A
R412019683	≤ 2,5 V	0,1 A
R412019694	≤ 2,5 V	0,1 A

Part No.	AC switching current, max.	Switching capacity
R412019682	0,13 A	3 W / 3 VA
R412019683	-	-
R412019694	-	-

Part No.	Version
R412019682	Protected against polarity reversal
R412019683	short circuit resistant, Protected against polarity reversal
R412019694	short circuit resistant, Protected against polarity reversal

Technical information

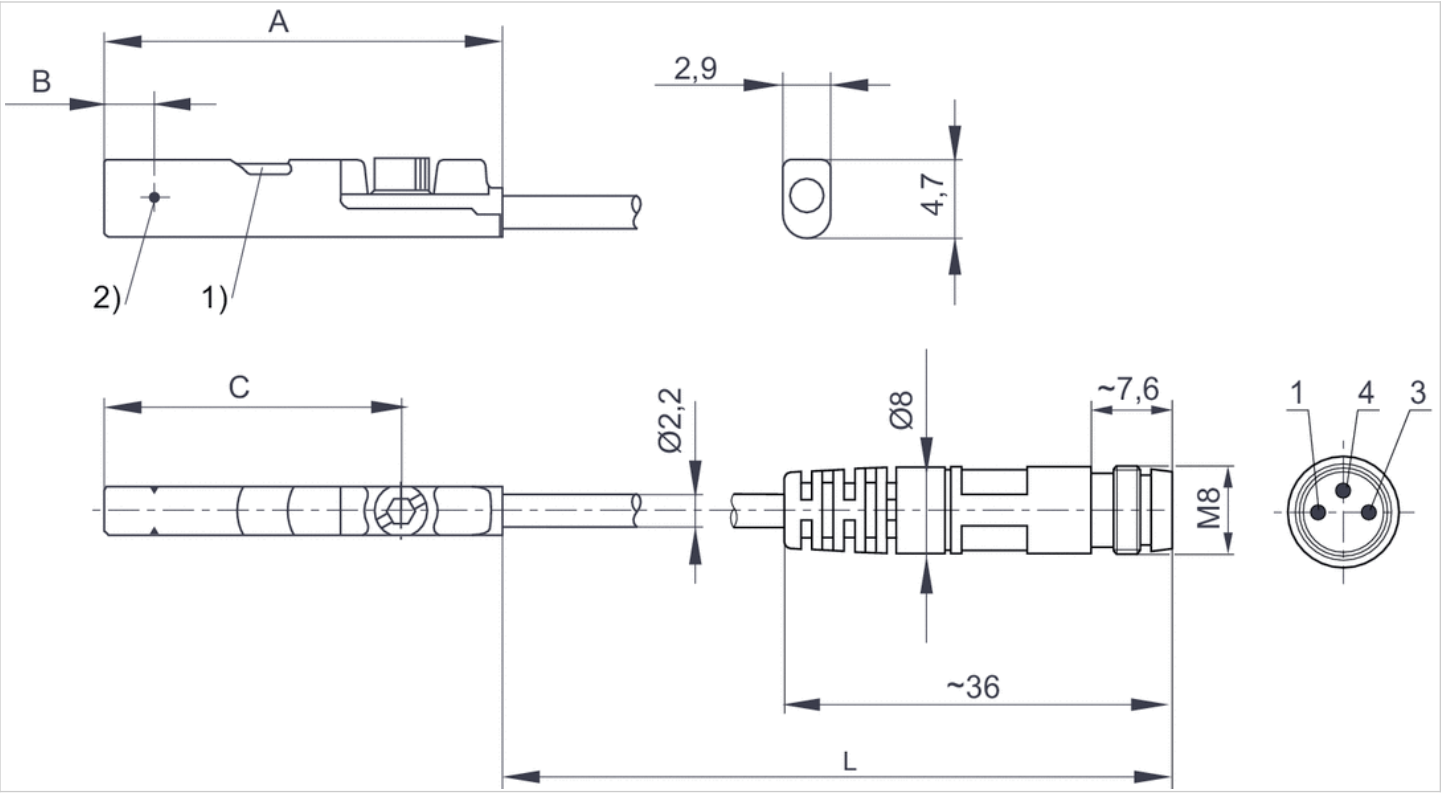
The max. switching capacity must not be exceeded.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

Dimensions



Dimensions

Part No.	A	B	C
R412019682	26.3	6.3	20.3
R412019683	23.7	2.8	17.7
R412019694	23.7	2.8	17.7

Sensor, Series ST4

- 4 mm C-slot
- with cable
- Plug, M8, 3-pin, with knurled screw
- UL certification
- Reed, electronic PNP
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



Certificates

Ambient temperature min./max.

Protection class

Switching point precision

Min./max. DC operating voltage

Switching logic

Display

LED status display

Vibration resistance

Shock resistance

Mounting screw

UL (Underwriters Laboratories), cULus, RoHS

-30 ... 80 °C

IP65, IP67

±0,1 mT

See table below

NO (make contact)

LED

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

Combination: slotted and hexagon socket

Technical data

Part No.		for
R412019490		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019686		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019493		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019687		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI

Part No.	Type of contact	Cable length L	Min./max. DC operating voltage
R412019490	Reed	0,3 m	5 ... 30 V DC
R412019686	Reed	0,5 m	5 ... 30 V DC
R412019493	electronic PNP	0,3 m	10 ... 30 V DC
R412019687	electronic PNP	0,5 m	10 ... 30 V DC

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412019490	≤ 0,5 V	0,13 A
R412019686	≤ 0,5 V	0,13 A
R412019493	≤ 2,5 V	0,1 A
R412019687	≤ 2,5 V	0,1 A

Part No.	AC switching current, max.	Switching capacity
R412019490	0,13 A	3 W / 3 VA

Part No.	AC switching current, max.	Switching capacity
R412019686	0,13 A	3 W / 3 VA
R412019493	-	-
R412019687	-	-

Part No.	Version
R412019490	Protected against polarity reversal
R412019686	Protected against polarity reversal
R412019493	short circuit resistant, Protected against polarity reversal
R412019687	short circuit resistant, Protected against polarity reversal

Technical information

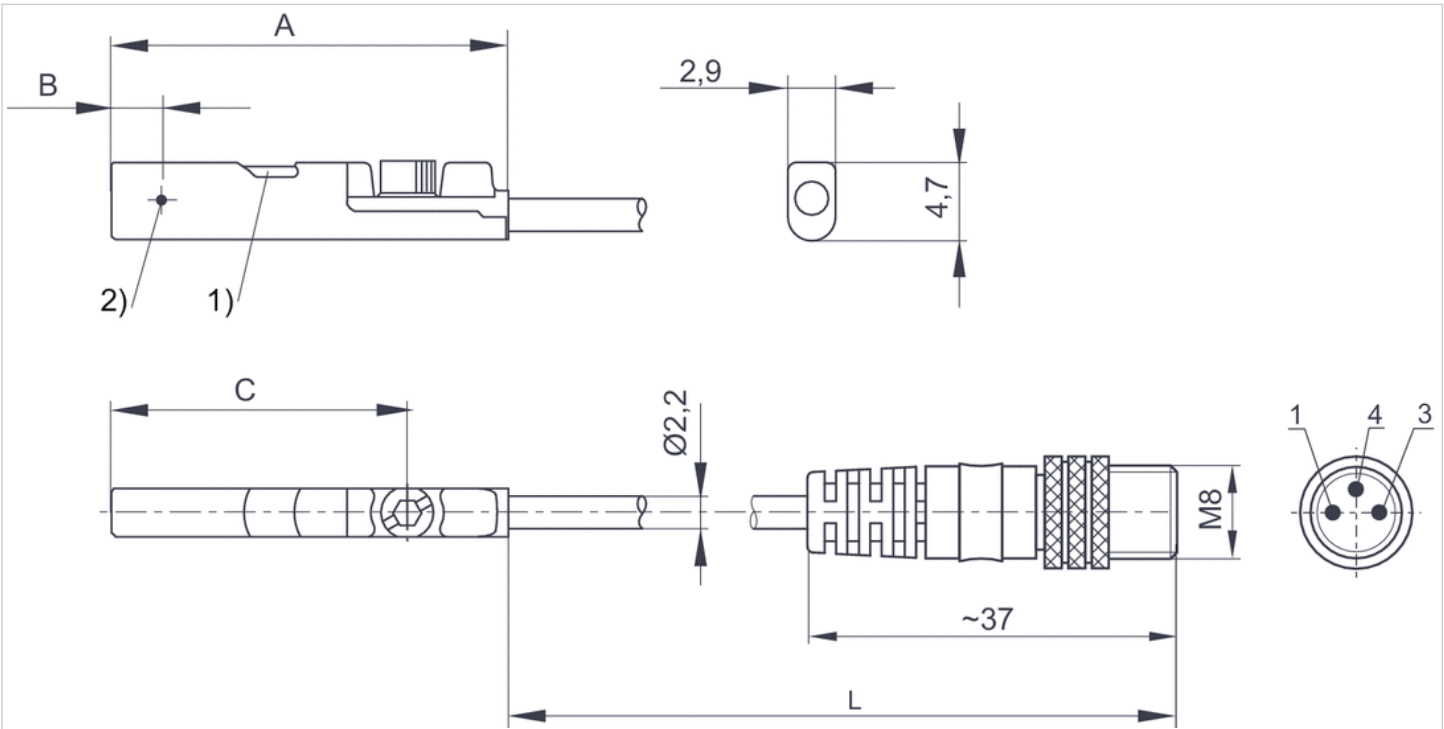
The max. switching capacity must not be exceeded.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

Dimensions



1) LED 2) Switching point
 L = cable length

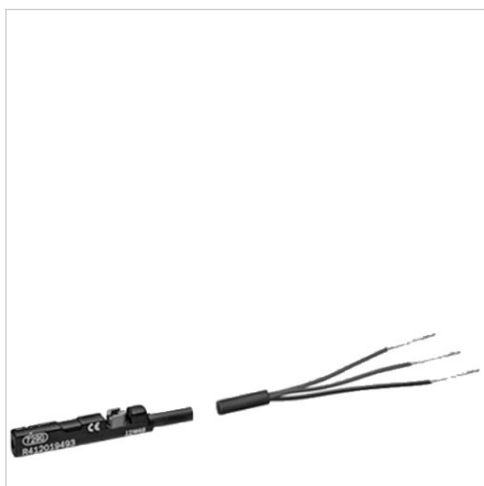
Pin assignment: 1 = (+) 3 = (-) 4 = (OUT)

Dimensions

Part No.	A	B	C
R412019490	26.3	6.3	20.3
R412019686	26.3	6.3	20.3
R412019493	23.7	2.8	17.7
R412019687	23.7	2.8	17.7

Sensor, Series ST4

- 4 mm C-slot
- with cable
- open cable ends, 3-pin
- UL certification
- Reed, electronic PNP, electronic NPN
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



Certificates

Ambient temperature min./max.

Protection class

Switching point precision

Min./max. DC operating voltage

Switching logic

Display

LED status display

Vibration resistance

Shock resistance

Mounting screw

UL (Underwriters Laboratories), cULus, RoHS

-30 ... 80 °C

IP65, IP67

±0,1 mT

See table below

NO (make contact)

LED

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

Combination: slotted and hexagon socket

Technical data

Part No.		for
R412019488		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019489		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019680		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019681		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019684		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019685		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI

Part No.	Type of contact	Cable length L	Min./max. DC operating voltage
R412019488	Reed	3 m	5 ... 30 V DC
R412019489	Reed	5 m	5 ... 30 V DC
R412019680	electronic PNP	3 m	10 ... 30 V DC
R412019681	electronic PNP	5 m	10 ... 30 V DC
R412019684	electronic NPN	3 m	10 ... 30 V DC
R412019685	electronic NPN	5 m	10 ... 30 V DC

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412019488	≤ 0,5 V	0,13 A
R412019489	≤ 0,5 V	0,13 A
R412019680	≤ 2,5 V	0,1 A
R412019681	≤ 2,5 V	0,1 A

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412019684	≤ 2,5 V	0,1 A
R412019685	≤ 2,5 V	0,1 A

Part No.	AC switching current, max.	Switching capacity
R412019488	0,13 A	3 W / 3 VA
R412019489	0,13 A	3 W / 3 VA
R412019680	-	-
R412019681	-	-
R412019684	-	-
R412019685	-	-

Part No.	Version
R412019488	Protected against polarity reversal
R412019489	Protected against polarity reversal
R412019680	short circuit resistant, Protected against polarity reversal
R412019681	short circuit resistant, Protected against polarity reversal
R412019684	short circuit resistant, Protected against polarity reversal
R412019685	short circuit resistant, Protected against polarity reversal

Technical information

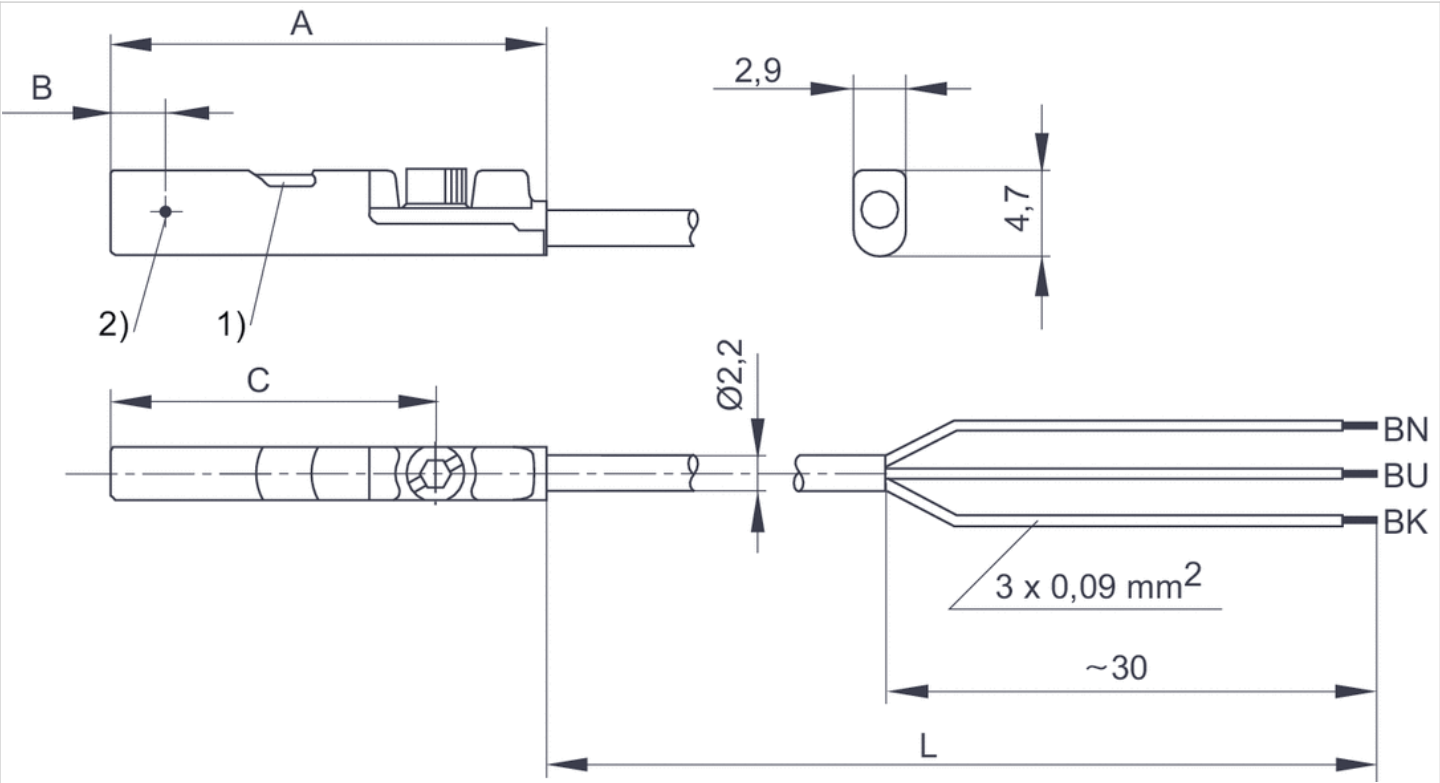
The max. switching capacity must not be exceeded.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

Dimensions



1) LED 2) Switching point
L = cable lengthBN = brown, BK = black, BU = blue

Dimensions

Part No.	A	B	C
R412019488	26.3	6.3	20.3
R412019489	26.3	6.3	20.3
R412019680	23.7	2.8	17.7
R412019681	23.7	2.8	17.7
R412019684	23.7	2.8	17.7
R412019685	23.7	2.8	17.7

Sensor, Series ST4

- 4 mm C-slot
- with cable
- Plug, M12, 3-pin, with knurled screw
- UL certification
- Reed, electronic PNP
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



Certificates

Ambient temperature min./max.

Protection class

Switching point precision

Min./max. DC operating voltage

Switching logic

Display

LED status display

Vibration resistance

Shock resistance

Mounting screw

UL (Underwriters Laboratories), cULus, RoHS

-30 ... 80 °C

IP65, IP67

±0,1 mT

See table below

NO (make contact)

LED

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

Combination: slotted and hexagon socket

Technical data

Part No.		for
R412019688		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019689		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI

Part No.	Type of contact	Cable length L	Min./max. DC operating voltage
R412019688	Reed	0,3 m	5 ... 30 V DC
R412019689	electronic PNP	0,3 m	10 ... 30 V DC

Part No.	Voltage drop U at I _{max}	DC switching current, max.
R412019688	≤ 0,5 V	0,13 A
R412019689	≤ 2,5 V	0,1 A

Part No.	AC switching current, max.	Switching capacity
R412019688	0,13 A	3 W / 3 VA
R412019689	-	-

Part No.	Version
R412019688	Protected against polarity reversal
R412019689	short circuit resistant, Protected against polarity reversal

Technical information

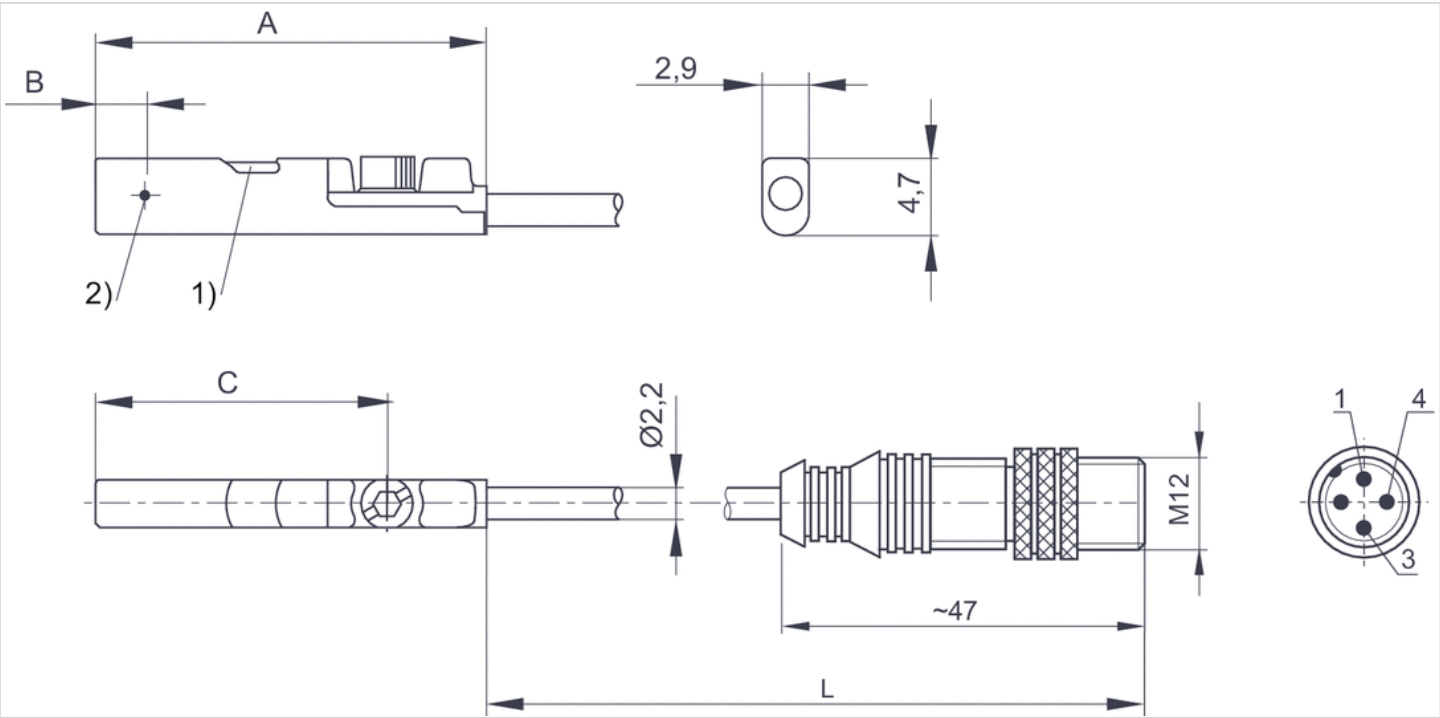
The max. switching capacity must not be exceeded.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

Dimensions



Dimensions

Part No.	A	B	C
R412019688	26.3	6.3	20.3
R412019689	23.7	2.8	17.7

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, 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

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

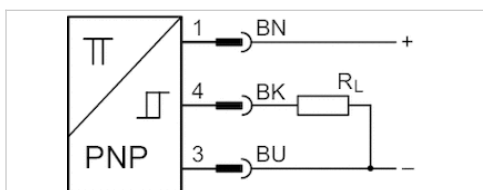
10 ... 30 V DC

NO (make contact)

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms



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

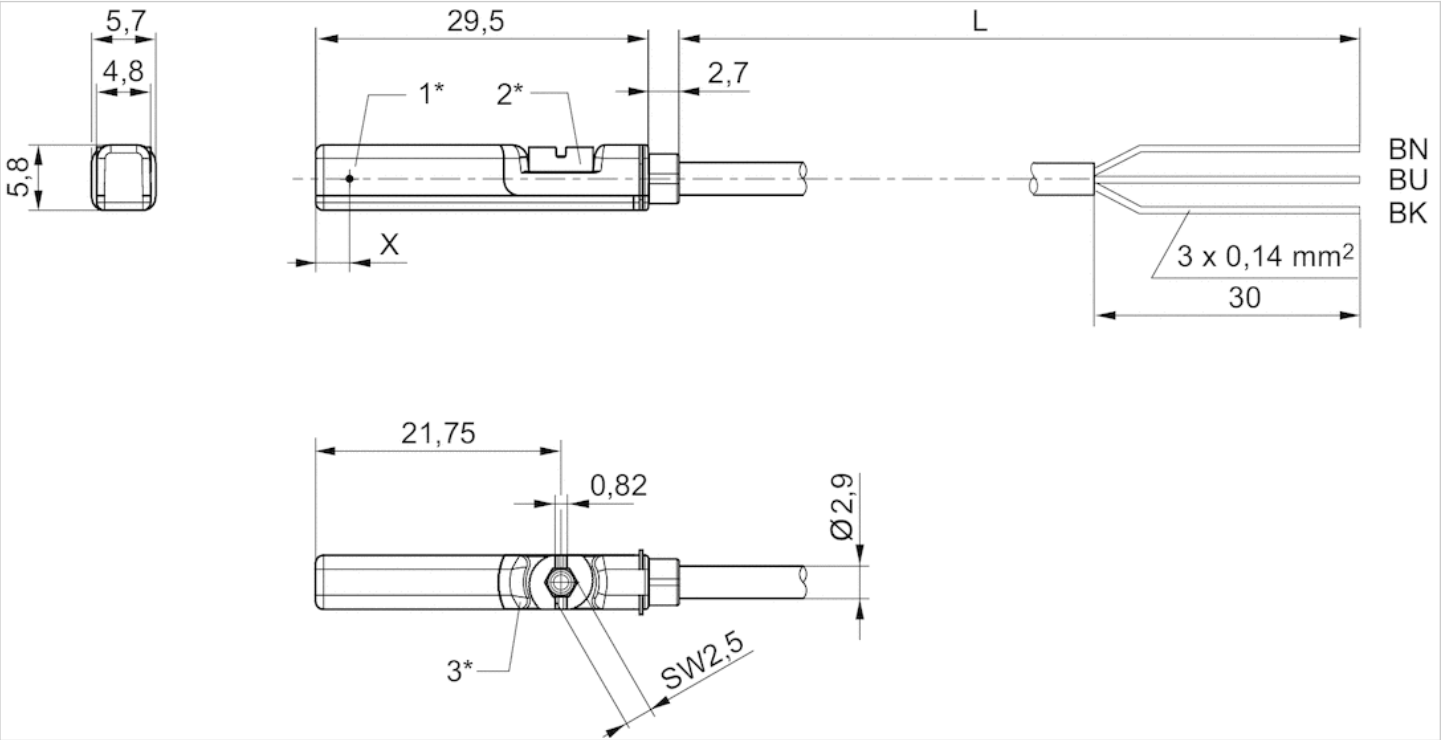
Part No.	Version
R412022856	short circuit resistant, Protected against polarity reversal

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, ICM, KHZ, TRR



Certificates	CE declaration of conformity, cULus, RoHS
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

Technical data

Part No.		for	Type of contact
R412022866		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
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
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, Reed, 3-pin: max. 6 W
R412022869	0,5 A	Reed, 2-pin: max. 10 W, Reed, 3-pin: max. 6 W
R412022870	0,5 A	Reed, 2-pin: max. 10 W, Reed, 3-pin: max. 6 W
R412022871	0,5 A	Reed, 2-pin: max. 10 W, Reed, 3-pin: max. 6 W
R412022853	-	-
R412022855	-	-
R412022857	-	-
R412022849	-	-

Part No.	AC switching current, max.	Switching capacity
R412022850	-	-

Part No.	Max. switching frequency	Operating current, not switched
R412022866	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	-
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)
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	2)
R412022855	short circuit resistant, Protected against polarity reversal	Fig. 2	2)
R412022857	short circuit resistant, Protected against polarity reversal	Fig. 2	2)
R412022849	short circuit resistant, Protected against polarity reversal	Fig. 2	2)
R412022850	short circuit resistant, Protected against polarity reversal	Fig. 2	2)

1) open cable ends, 2-pin

2) open cable ends, 3-pin

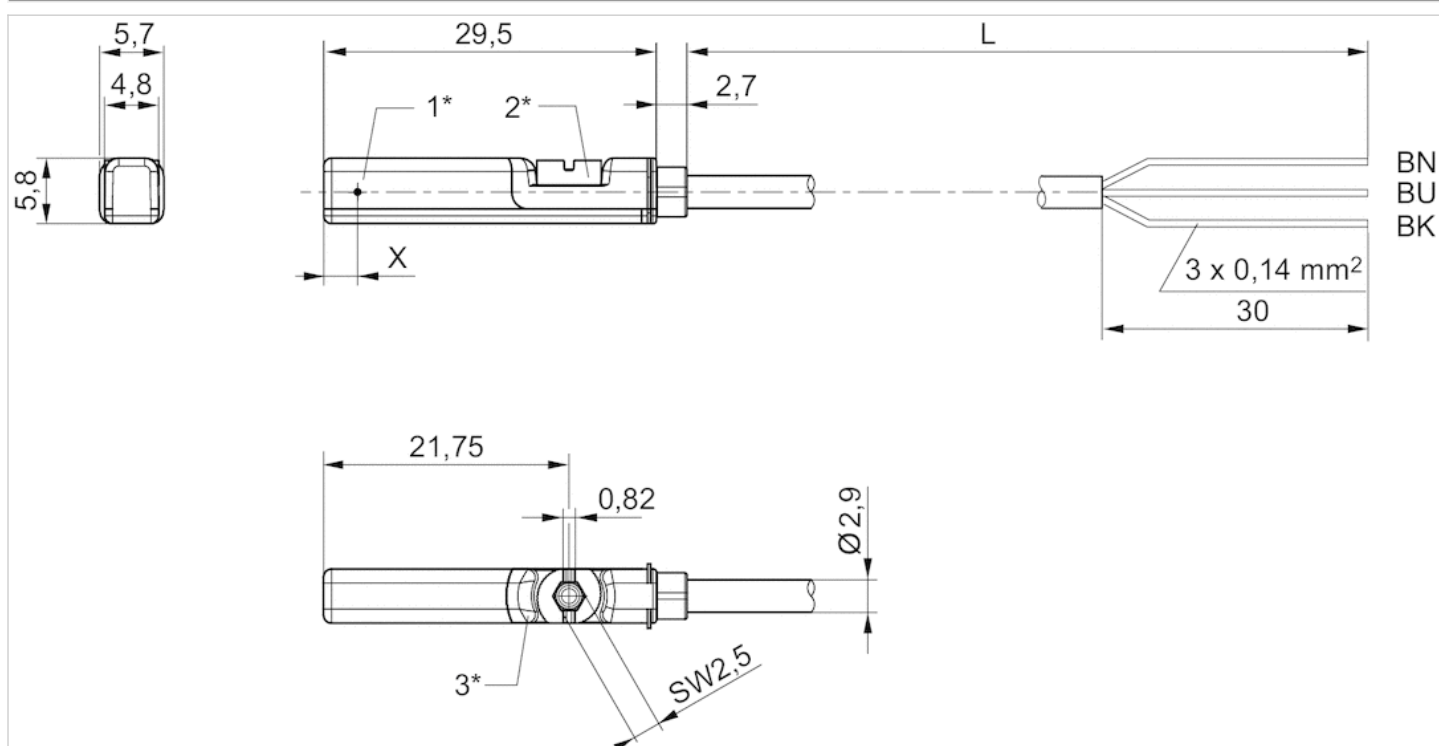
Technical information

No cULus certification for 230 V variant.

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Fig. 2



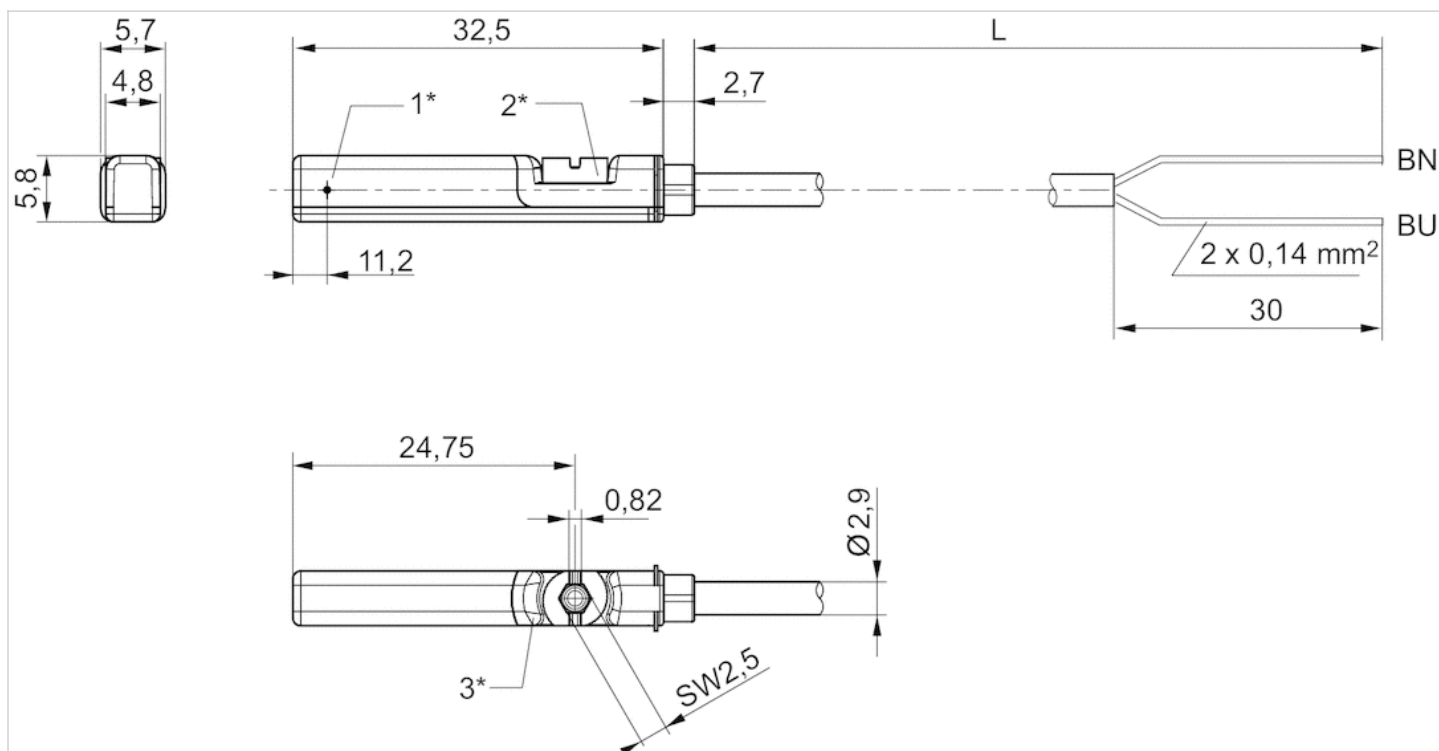
1* = switching point 2* = locking screw 3* = LED window, transparent

L = cable length BN = brown, BK = black, BU = blue

X = electronic: 11.6 mm

Dimensions

Fig. 1



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

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M8, 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, ICM, KHZ, TRR



Certificates

Ambient temperature min./max.

Protection class

Switching point precision

Nominal current, actuated state

Quiescent current (without load)

Min./max. DC operating voltage

Min./max. AC operating voltage

Hysteresis

Switching logic

Switching capacity

LED status display

Vibration resistance

Shock resistance

CE declaration of conformity, cULus, RoHS

-30 ... 80 °C

IP65, IP67

±0,1 mT

30 mA

8 mA

10 ... 30 V DC

See table below

≥ 0,2 mT

NO (make contact)

Reed, 2-pin: max. 10 W, Reed, 3-pin: max. 6 W

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

Technical data

Part No.		for	Type of contact
R412022868		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
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
R412022872	0,3 A	0,5 A
R412022858	0,13 A	-
R412022851	0,13 A	-

Part No.	Max. switching frequency	Operating current, not switched
R412022868	400 Hz	-
R412022872	400 Hz	-
R412022858	1000 Hz	8 mA
R412022851	1000 Hz	8 mA

Part No.	Operating current, switched
R412022868	-
R412022872	-
R412022858	30 mA
R412022851	30 mA

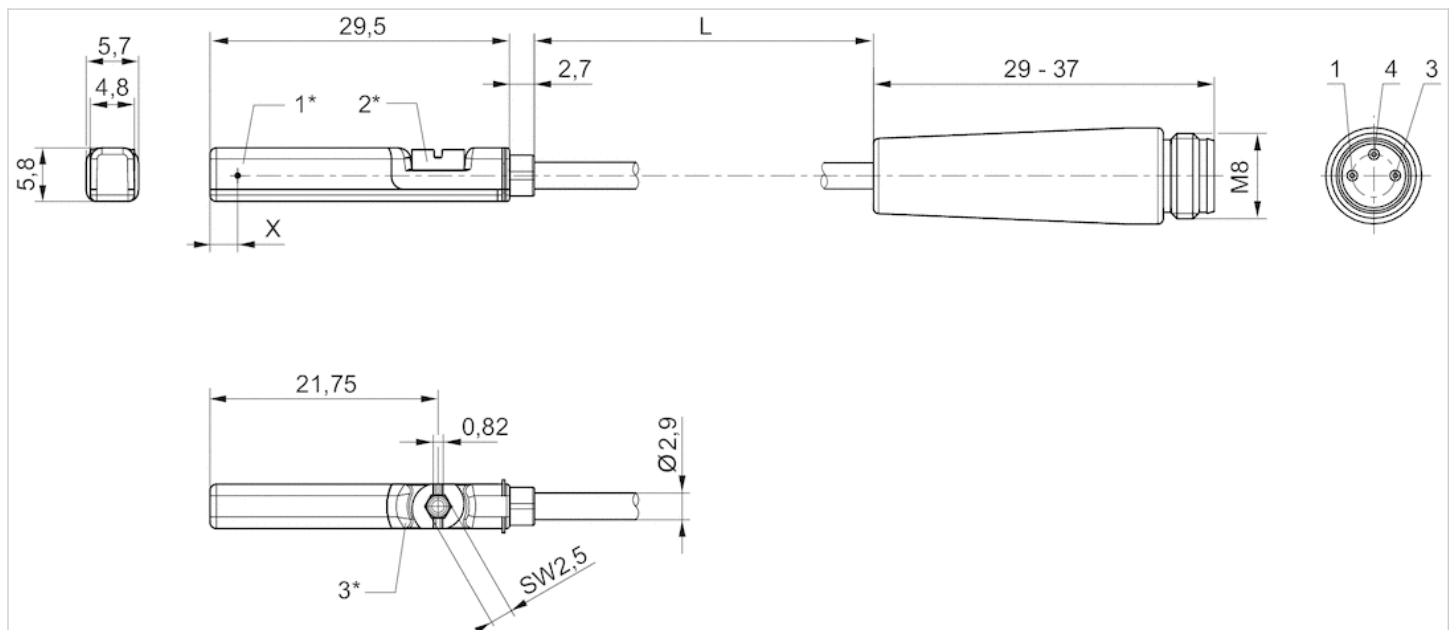
Part No.	Version
R412022868	Protected against polarity reversal
R412022872	Protected against polarity reversal
R412022858	short circuit resistant, Protected against polarity reversal
R412022851	short circuit resistant, Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

Dimensions



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

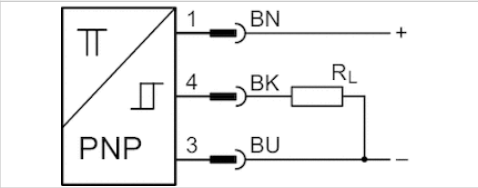
L = cable length

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

Pin assignment: 1 = (+) 3 = (-) 4 = (OUT)

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, ICM, KHZ, TRR



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

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

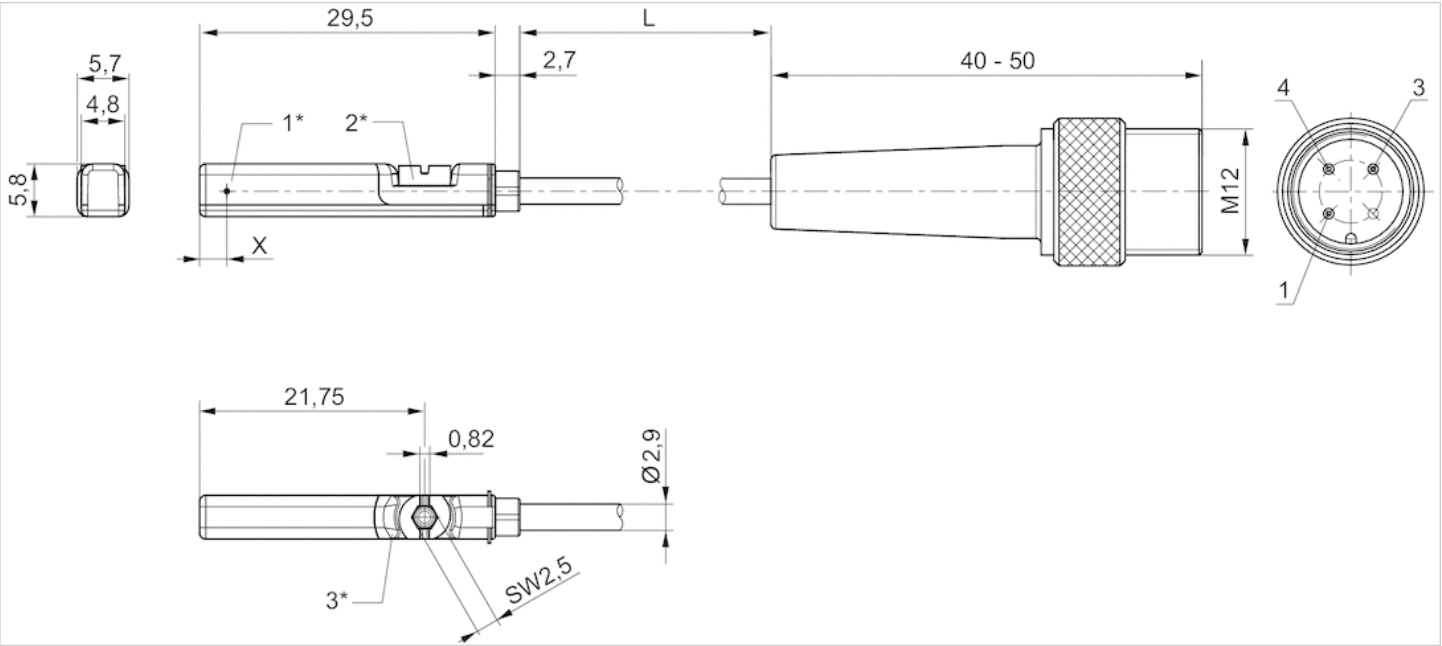
Part No.	Version
R412022864	short circuit resistant, Protected against polarity reversal

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
 Pin assignment: 1 = (+) 3 = (-) 4 = (OUT)

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M12, 3-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, ICM, KHZ, TRR



Certificates

Ambient temperature min./max.

Protection class

Switching point precision

Nominal current, actuated state

Quiescent current (without load)

Min./max. DC operating voltage

Min./max. AC operating voltage

Hysteresis

Switching logic

Switching capacity

LED status display

Vibration resistance

Shock resistance

CE declaration of conformity, cULus, RoHS

-30 ... 80 °C

See table below

±0,1 mT

30 mA

8 mA

10 ... 30 V DC

See table below

≥ 0,2 mT

NO (make contact)

Reed, 3-pin: max. 6 W

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

Technical data

Part No.		for	Type of contact	Cable length L
R412022876		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed	0,3 m
R412022879		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	0,1 m
R412022863		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	0,3 m
R412022877		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	3 m
R412022878		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	5 m

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

Part No.	DC switching current, max.	AC switching current, max.
R412022876	0,3 A	0,5 A
R412022879	0,13 A	-
R412022863	0,13 A	-
R412022877	0,13 A	-

Part No.	DC switching current, max.	AC switching current, max.
R412022878	0,13 A	-

Part No.	Max. switching frequency	Operating current, not switched
R412022876	400 Hz	-
R412022879	1000 Hz	8 mA
R412022863	1000 Hz	8 mA
R412022877	1000 Hz	8 mA
R412022878	1000 Hz	8 mA

Part No.	Operating current, switched	Protection class
R412022876	-	IP65, IP67
R412022879	30 mA	IP65, IP67
R412022863	30 mA	IP65, IP67, IP69K
R412022877	30 mA	IP65, IP67
R412022878	30 mA	IP65, IP67

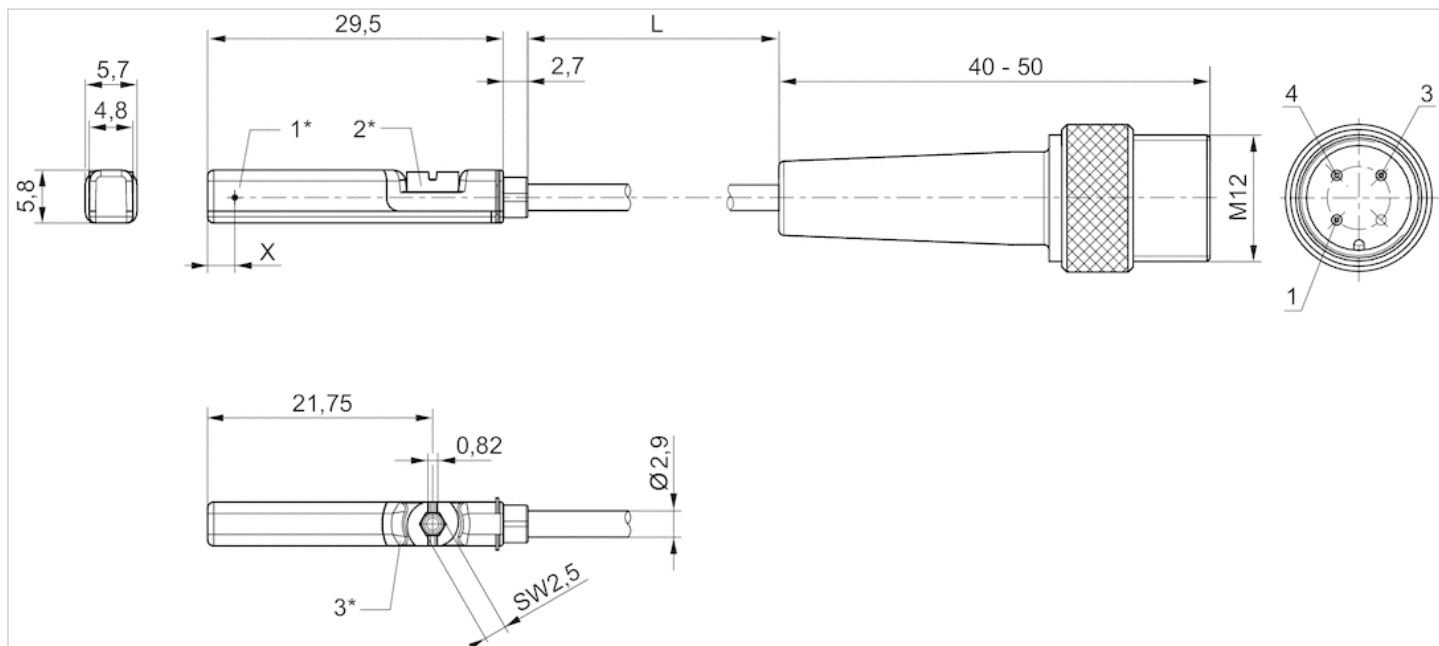
Part No.	Version
R412022876	Protected against polarity reversal
R412022879	short circuit resistant, Protected against polarity reversal
R412022863	short circuit resistant, Protected against polarity reversal
R412022877	short circuit resistant, Protected against polarity reversal
R412022878	short circuit resistant, Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

Dimensions



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

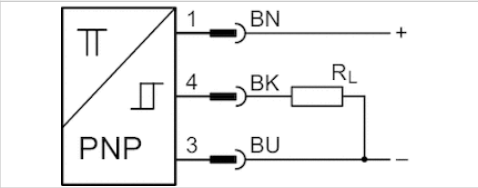
L = cable length

X = PNP: 11,6 mm

Pin assignment: 1 = (+) 3 = (-) 4 = (OUT)

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, ICM, KHZ, TRR



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

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

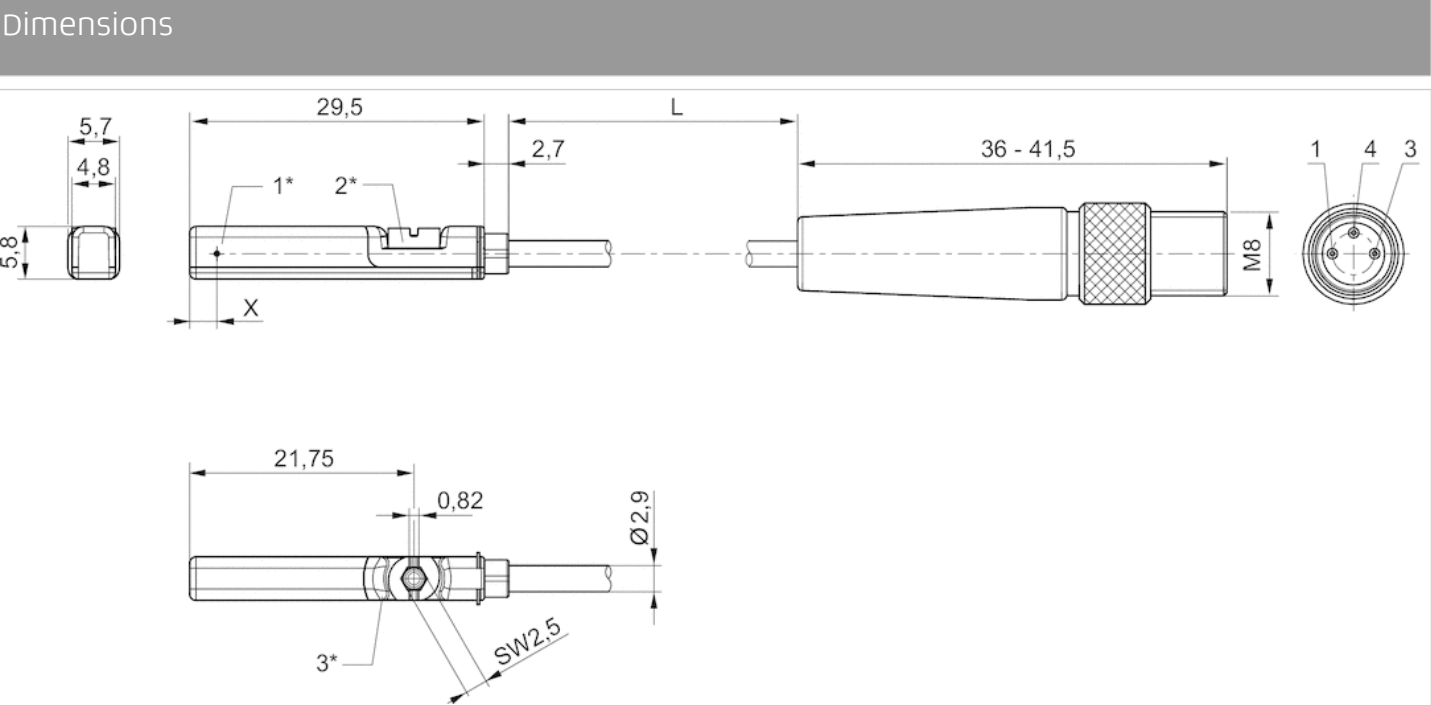
Part No.	Max. switching frequency
R412022860	1000 Hz

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

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
 L = cable length
 X = electronic: 11,6 mm, Reed: 8,3 mm
 Pin assignment: 1 = (+) 3 = (-) 4 = (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, ICM, KHZ, TRR



Certificates

Ambient temperature min./max.

Protection class

Switching point precision

Nominal current, actuated state

Quiescent current (without load)

Min./max. DC operating voltage

Min./max. AC operating voltage

Hysteresis

Switching logic

Switching capacity

LED status display

Vibration resistance

Shock resistance

CE declaration of conformity, cULus, RoHS

-30 ... 80 °C

IP65, IP67

±0,1 mT

30 mA

8 mA

10 ... 30 V DC

See table below

≥ 0,2 mT

NO (make contact)

Reed, 3-pin: max. 6 W

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

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

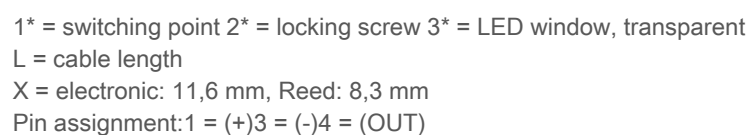
Part No.	Operating current, not switched	Operating current, switched
R412022873	-	-
R412022875	-	-
R412022874	-	-
R412022859	8 mA	30 mA
R412022862	8 mA	30 mA
R412022861	8 mA	30 mA
R412022852	8 mA	30 mA

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

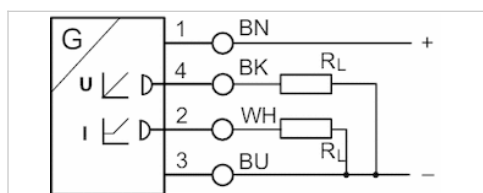
Material	
Housing	Polyamide
Cable sheath	Polyurethane, Polyvinyl chloride
Locking screw	Stainless steel

Dimensions



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

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

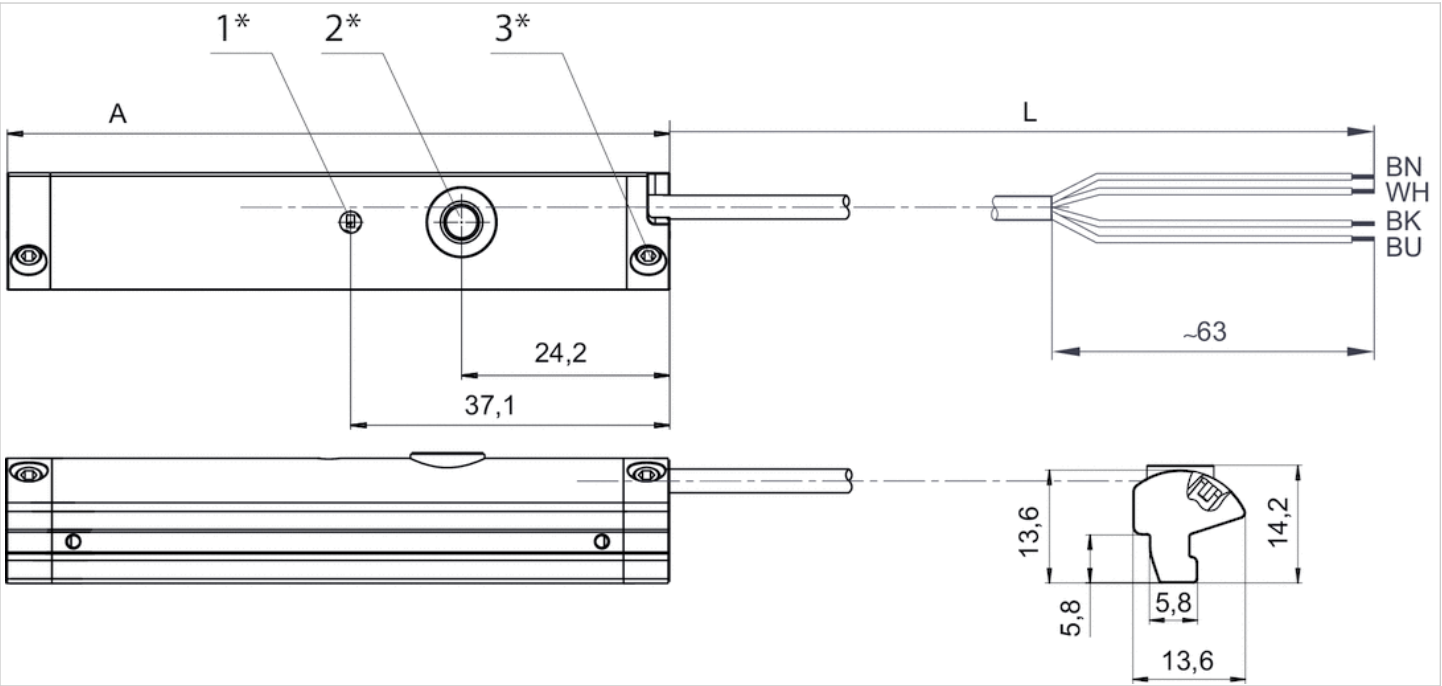
Part No.	Version
R412010141	short circuit resistant, Protected against polarity reversal, Overload protection
R412010143	short circuit resistant, Protected against polarity reversal, Overload protection
R412010262	short circuit resistant, Protected against polarity reversal, Overload protection
R412010264	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

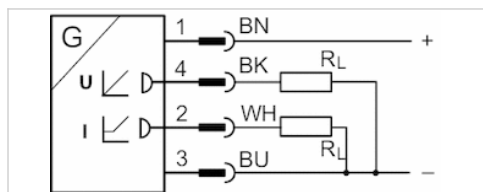
Dimensions



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

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

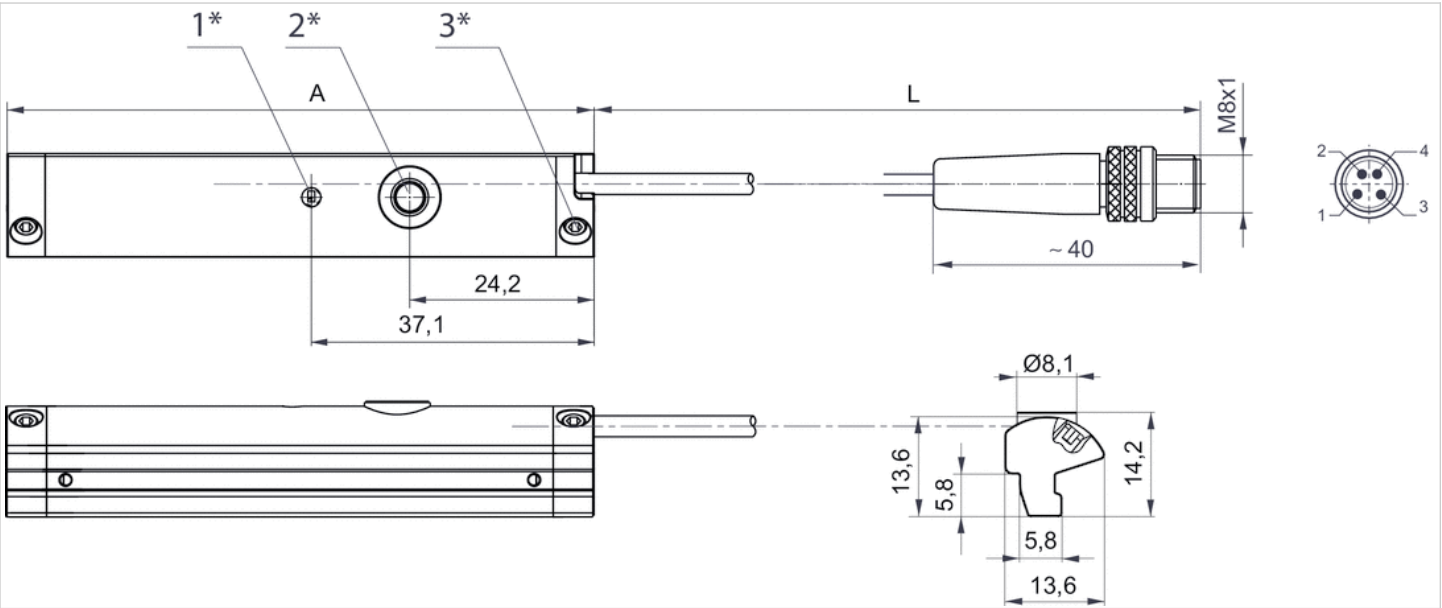
Part No.	Version
R412010142	short circuit resistant, Protected against polarity reversal, Overload protection
R412010144	short circuit resistant, Protected against polarity reversal, Overload protection
R412010263	short circuit resistant, Protected against polarity reversal, Overload protection
R412010265	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



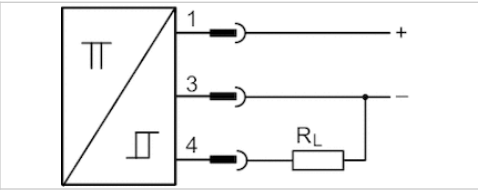
1* = LED 2* = teach button 3* = threaded pin M3x11
 L = cable length
 Pin assignment: 1 = (+), 2 = (OUT 1) 3 = (GND), 4 = (OUT 2), EN 60947-5-7
 A = sensor length

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

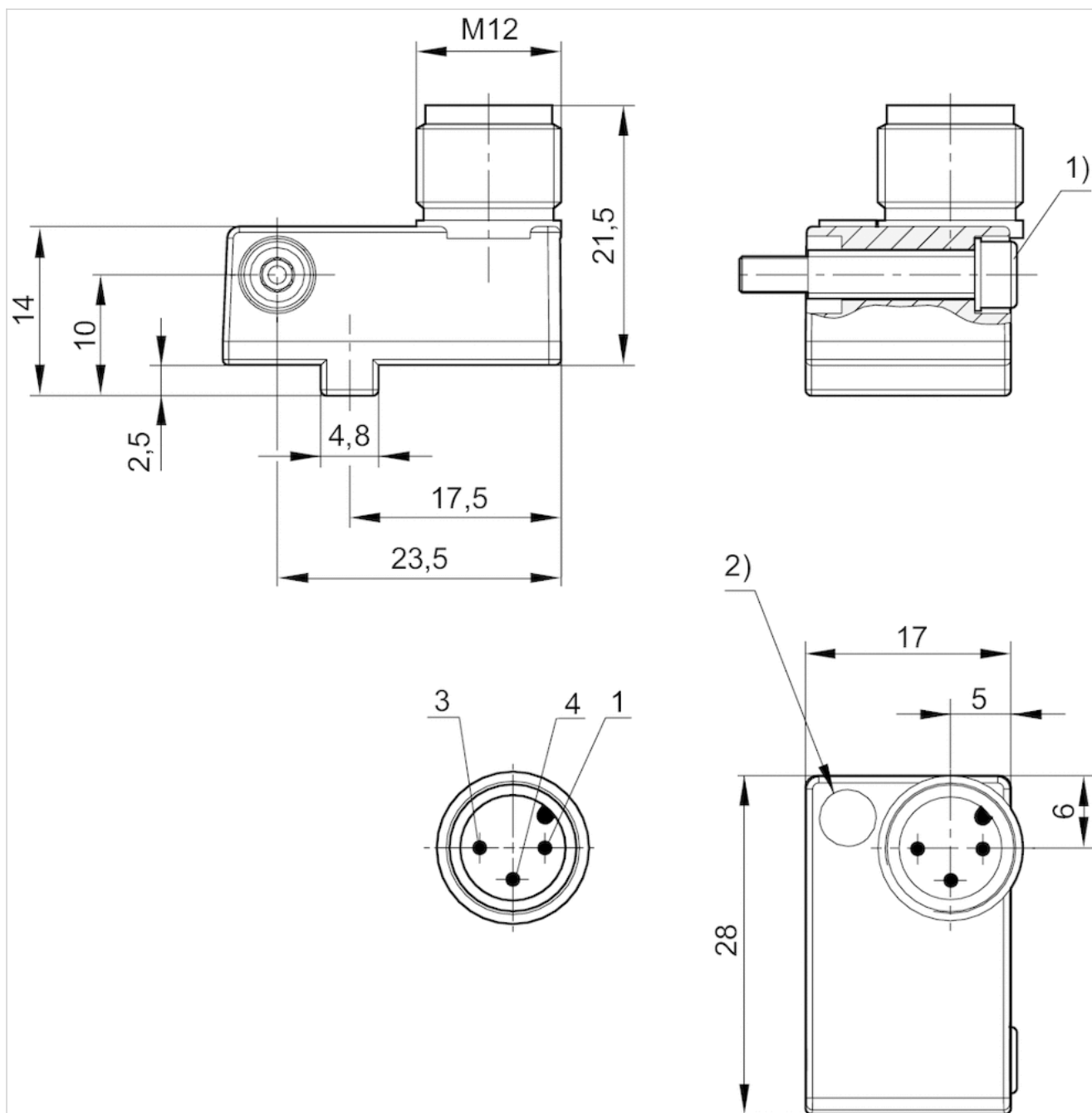
Part No.	Version	welding-proof
0830100438	short circuit resistant, Protected against polarity reversal	welding-proof

Technical information

Material	
Housing	Polyamide

Dimensions

Dimensions



1) Clamping screw

2) LED

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

Sensor mounting, Series CB1

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



Weight

0,007 kg

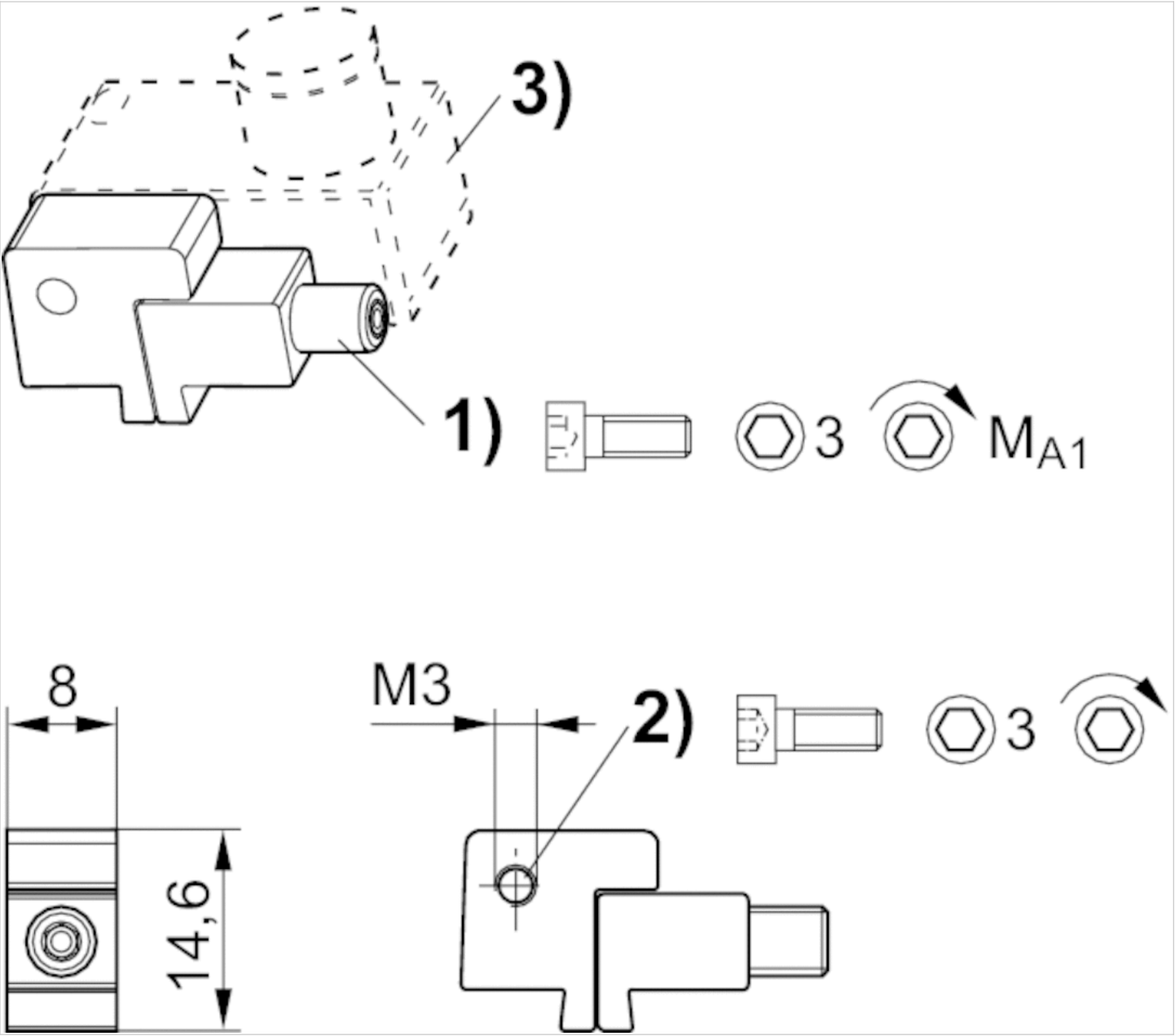
Technical data

Part No.	for series
1827020386	SN3

Technical information

Material
Aluminum

Dimensions



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

Dimensions

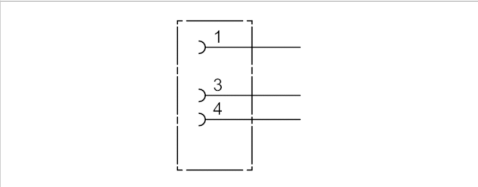
Part No.	1)	MA1 [Nm]
1827020386	M3x25	1,8 +0,4

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
Operationalvoltage	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 mm

Technical information

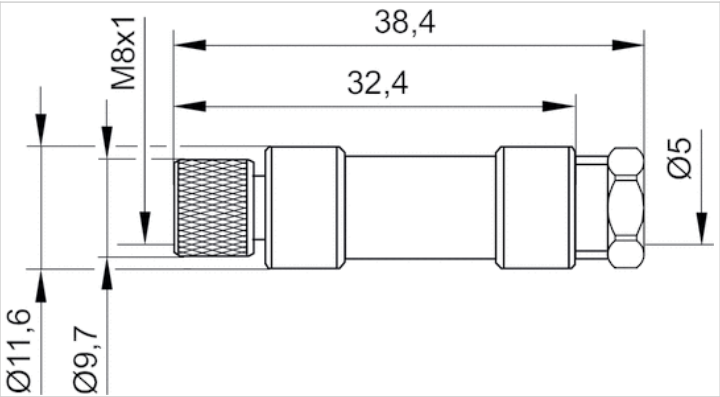
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyamide

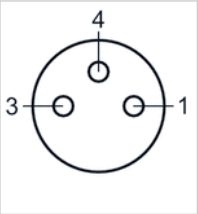
Dimensions

Dimensions



Pin assignments

Pin assignment socket

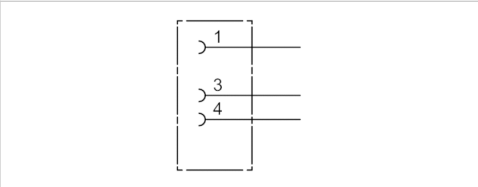


Round plug connector, Series CON-RD

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



Connection type	Soldering
Ambient temperature min./max.	-40 ... 85 °C
Operationalvoltage	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

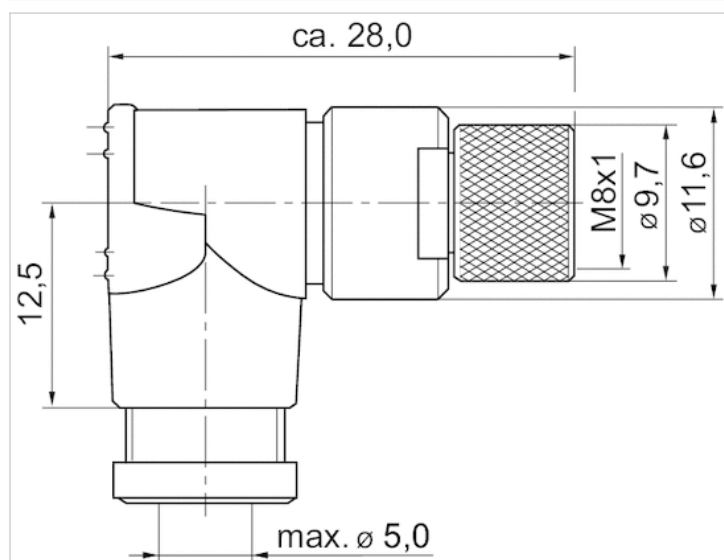
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyamide

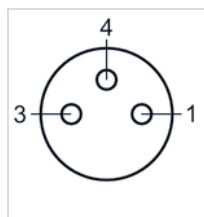
Dimensions

Dimensions



Pin assignments

Pin assignment socket



T-groove nut

- for series CKP, GPC, RTC



Weight

See table below

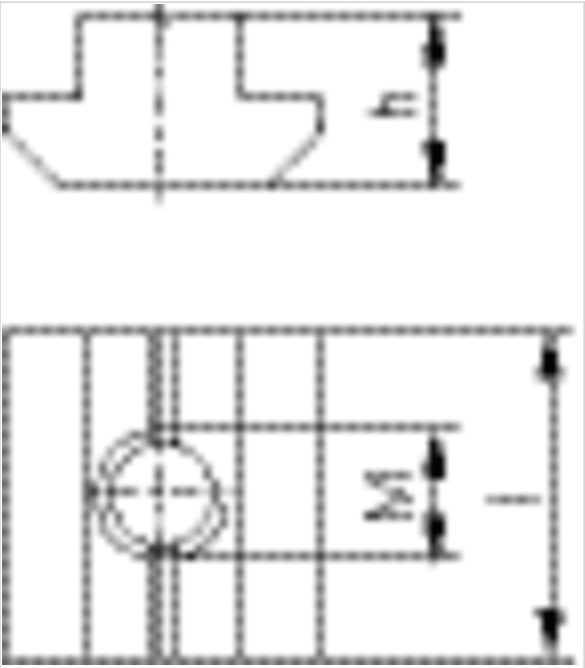
Technical data

Part No.	Type	for series	Material	Scope of delivery	Weight
3842523142	N6	CKP, GPC, RTC	Stainless steel	10 piece	0,003 kg
3842514931	N8	CKP, GPC, RTC	Steel	100 piece	0,007 kg

Technical information

Material	
Housing	Stainless steel, Steel, galvanized

Dimensions



Dimensions

Part No.	Type	M	h	l
3842523142	N6	M5	4	20
3842514931	N8	M8	6	16

For N4 grooves on CKP 16 a square nut according to DIN 557 can be used.

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
Operationalvoltage	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	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

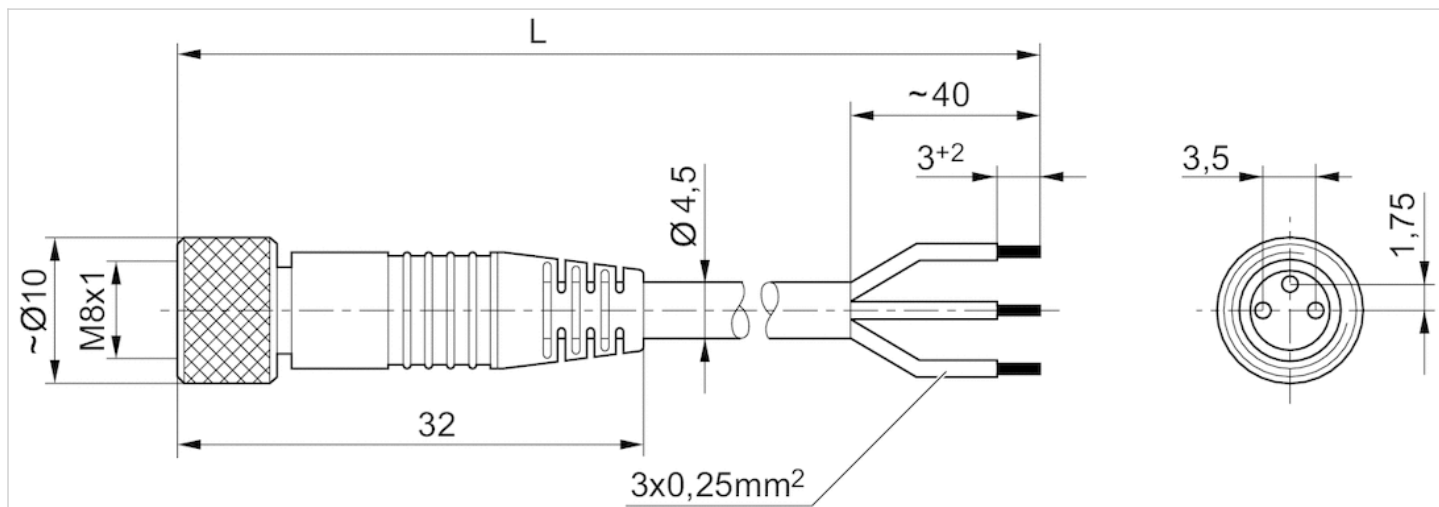
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

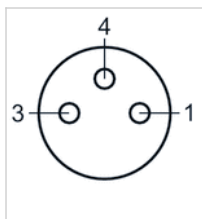
Dimensions



L = length

Pin assignments

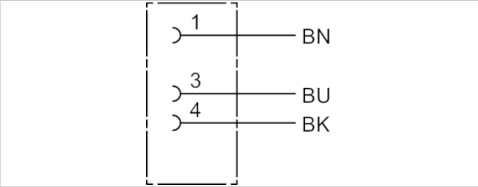
Pin assignment socket



(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
Operationalvoltage	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

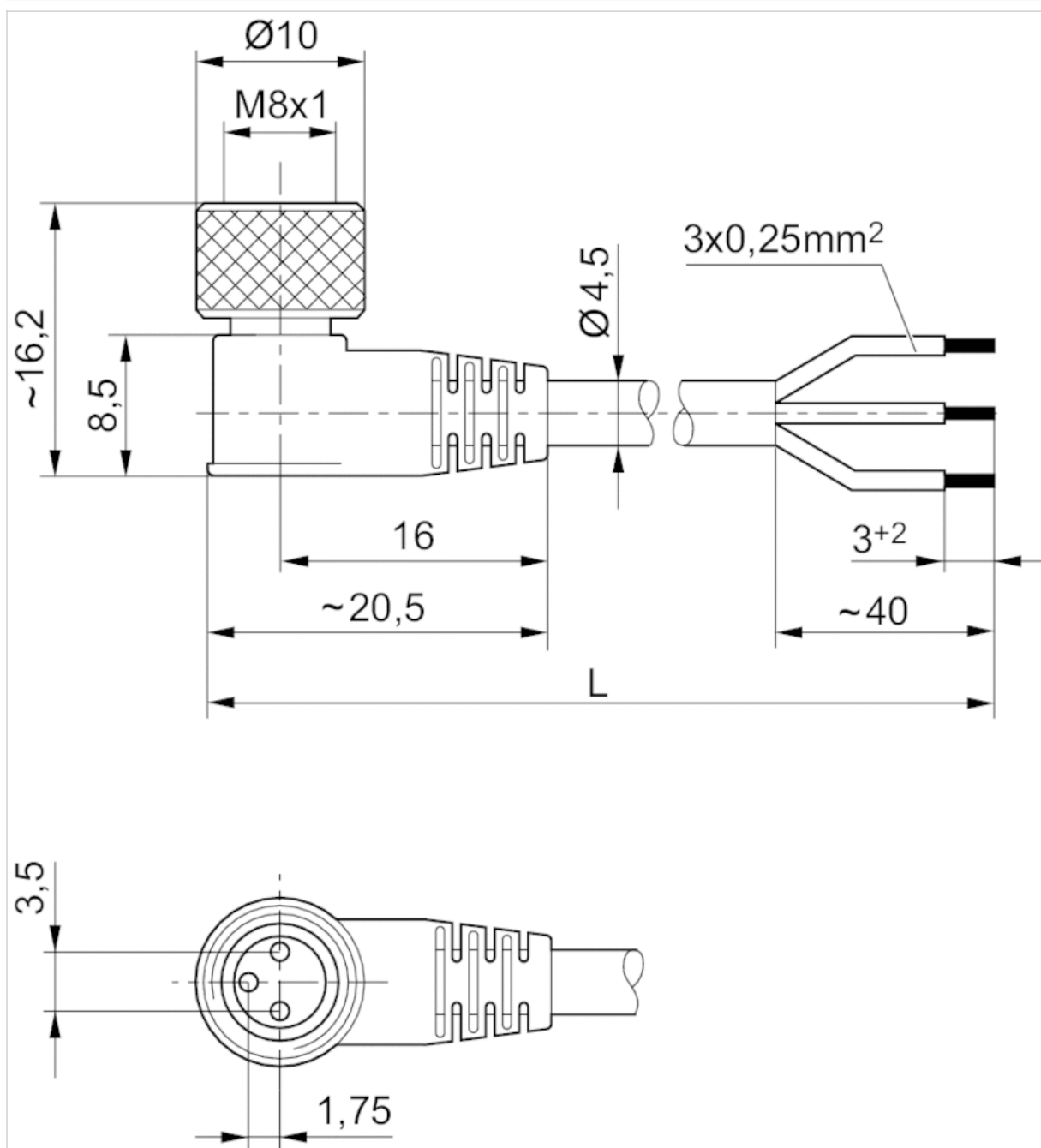
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

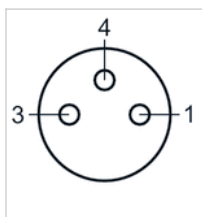
Dimensions



L = length

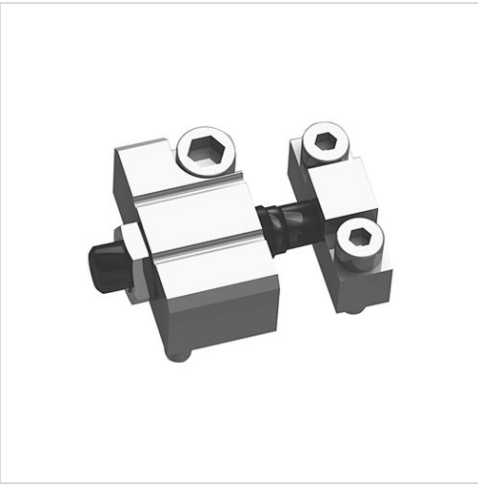
Pin assignments

Pin assignment socket



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

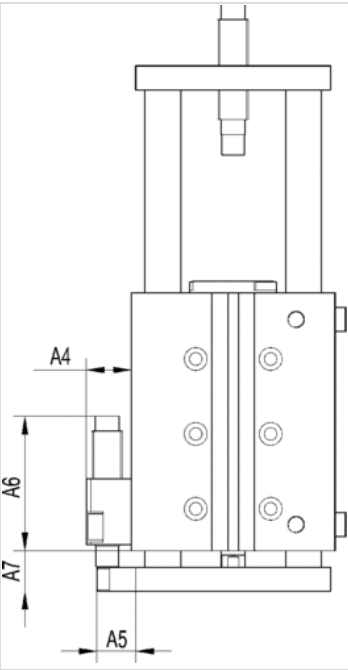
Kit for stroke length adjustment



Technical data

Part No.
R402000134
R402000135
R402000136

Dimensions



Dimensions

Part No.	Ø	A4	A5	A6 1)	A6 2)	A7 1)	A7 2)	L 3)
R402000134	12	13	13	21	29	13	25	12
R402000135	16	15	13	24	45	13.5	43.5	30

Part No.	Ø	A4	A5	A6 1)	A6 2)	A7 1)	A7 2)	L 3)
R402000136	20	15	13	26	44	15.5	45.5	30

1) Min.

2) Max.

3) Adjustment length L = A7 max. ... A7 min.

4) Shock absorber 0821005002 included in scope of delivery

5) Shock absorber 0821005013 included in scope of delivery