

# CNOMO NFE 49-001, Series C12P

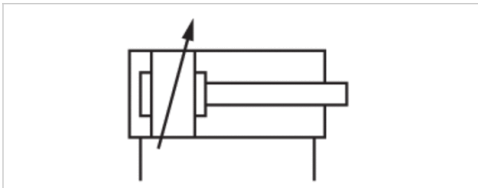


AVENTICS™ CNOMO NFE 49-001, Series C12P



# Tie rod cylinder, CNOMO NFE 49-001, Series C12P

- Ø 25-200 mm
- Ports G 1/8 G 1/4 G 3/8 G 1/2 G 3/4
- double-acting
- Cushioning pneumatically adjustable
- Piston rod External thread
- Optionally heat-resistant



Standards	CNOMO / NFE 49-001
Compressed air connection	Internal thread
Working pressure min./max.	2 ... 10 bar
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m <sup>3</sup>
Pressure for determining piston forces	6.3 bar

## Technical data

Piston Ø Piston rod thread Ports Piston rod Ø	25 mm M10x1,5 G 1/8 12 mm	32 mm M10x1,5 G 1/8 12 mm	40 mm M16x1,5 G 1/4 18 mm	50 mm M16x1,5 G 1/4 18 mm	63 mm M20x1,5 G 3/8 22 mm	80 mm M20x1,5 G 3/8 22 mm
Stroke 25	7472021375	7472022357	7472406622	7472409225	R422700862	R422702161
50	7471323938	7472407255	7471323782	7472022353	7472408333	7472407308
75	7471326291	7471323019	7471323635	7471314844	7471323636	7472413875
80	-	-	-	7472410143	7471325687	R422702930
100	7472021306	7472022359	7471323351	7471325013	7471323565	R422711132
125	7472021423	7472415023	R422701702	7472406738	7471323564	R422701689
150	7471325225	7472020278	7472406392	7472020771	7472405191	7472407112
200	7472021307	7472406069	7471327025	7472406297	7471317716	7471325322
250	7472021425	7472408135	7472408589	7472406739	7471324119	7472406380
300	7472410994	7472407872	7471323634	7472410346	7472409996	R422710660
350	7472021270	7472415302	7472411100	R422701688	-	7472408586
400	7472401648	-	7472407010	7472409603	7472409320	7472407310
450	-	-	7471324059	-	-	R422702463
500	7472415190	7471323208	7472409157	7472409483	R422702553	-

Piston Ø Piston rod thread Ports Piston rod Ø	100 mm M27x2 G 1/2 30 mm	125 mm M27x2 G 1/2 30 mm	160 mm M36x2 G 3/4 40 mm	200 mm M36x2 G 3/4 40 mm
Stroke 25	7472407578	R422709969	-	-
50	7472406603	7472408335	7472408336	7472408337
75	7471322980	7471325478	7472406019	7471326900
80	R422706127	7472409363	-	-
100	7472406081	7472023817	7472408334	7472408338
125	7471323871	7471323873	7471323872	7472020636
150	7472406273	7471325104	7472407361	7471305476
200	7472407023	R422705433	R422705841	7472408625
250	7471325321	7471323026	7471315415	-
300	7472025400	7472406294	7472411971	-
350	7471323563	7472410120	-	-
400	7472406082	R422703534	R422705879	7472023503
450	7472022334	7472408587	-	-
500	7471326316	7471323826	7472414254	7472406281

Other versions can be ordered from AVENTICS sales offices.

## Technical data

Piston Ø	25 mm	32 mm	40 mm	50 mm	63 mm	80 mm	100 mm
Retracting piston force	238 N	435 N	600 N	1077 N	1724 N	2927 N	4503 N
Extracting piston force	309 N	507 N	792 N	1237 N	1964 N	3167 N	4948 N
Weight 0 mm stroke	0.33 kg	0.38 kg	0.75 kg	1.1 kg	1.93 kg	2.03 kg	4.2 kg
Weight +10 mm stroke	0.028 kg	0.035 kg	0.055 kg	0.068 kg	0.086 kg	0.137 kg	0.183 kg
Stroke max.	1600 mm	1600 mm	1900 mm	2100 mm	2500 mm	2600 mm	2600 mm

Piston Ø	125 mm	160 mm	200 mm
Retracting piston force	7286 N	11875 N	19000 N
Extracting piston force	7731 N	12667 N	19792 N
Weight 0 mm stroke	5.06 kg	11.6 kg	14.5 kg
Weight +10 mm stroke	0.202 kg	0.352 kg	0.54 kg
Stroke max.	2600 mm	2600 mm	2600 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).

Optional heat-resistant variants are suitable for applications at temperatures up to 120 °C and do not have a magnetic piston.

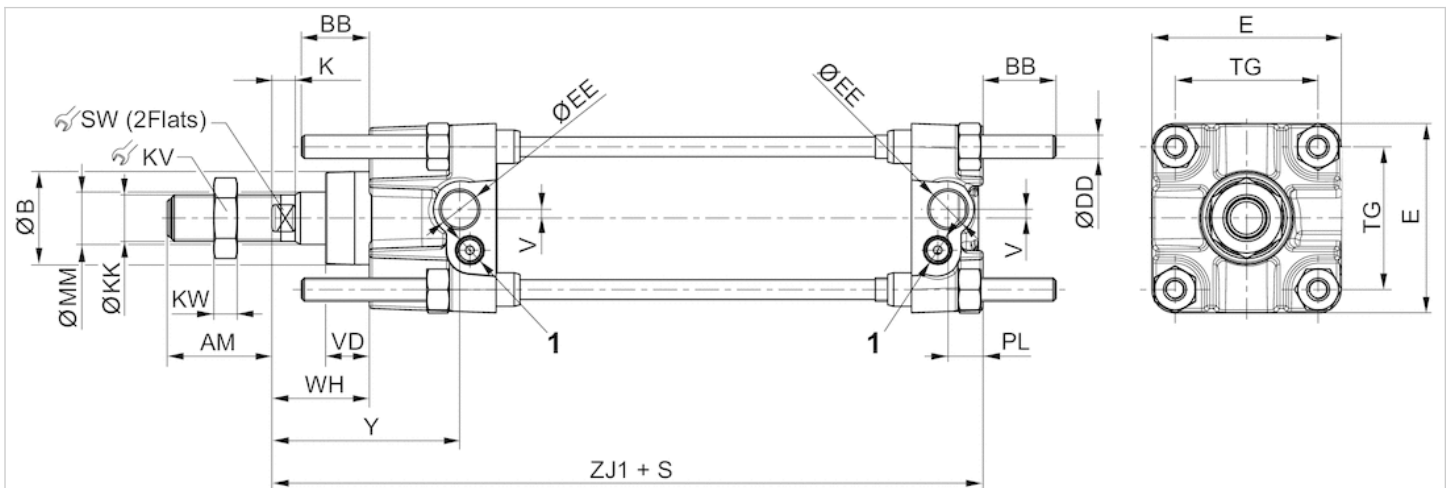
You will find the order key and all valid configurations (customer information) in the Media Centre.

## Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Tie-rods	Stainless steel

## Dimensions

### Dimensions



1) Flow control screw  
S=stroke

### Dimensions

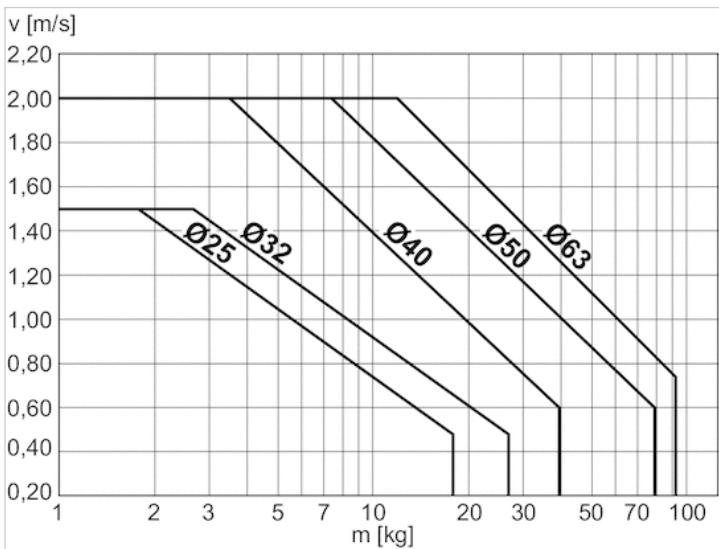
Piston Ø	AM	BB	Ø B e9	Ø DD	E	Ø EE	K	Ø KK	KV	KW	Ø MM	PL	SW	TG	V	VD	WH	Y
25 mm	20	17	25	M6	40	G1/8	6	M10x1,5	17	5	12	9	8	28	-	15	25	44
32 mm	20	17	25	M6	45	G1/8	6	M10x1,5	17	5	12	9	8	33	-	15	25	44
40 mm	36	17	32	M6	52	G1/4	8	M16x1,5	24	8	18	12	13	40	3	15	34	65
50 mm	36	23	32	M8	65	G1/4	8	M16x1,5	24	8	18	12	13	49	3	15	34	65
63 mm	46	23	45	M8	75	G3/8	10	M20x1,5	30	10	22	14	17	59	5	20	39	71
80 mm	46	28	45	M10	95	G3/8	10	M20x1,5	30	10	22	14	17	75	9	20	39	71
100 mm	63	28	55	M10	115	G1/2	16	M27x2	41	13,5	30	18	22	90	-	20	47	84
125 mm	63	34	55	M12	140	G1/2	16	M27x2	41	13,5	30	18	22	110	-	20	47	84
160 mm	85	42	65	M16	180	G3/4	16	M36x2	55	18	40	25	32	140	-	25	50	95
200 mm	85	42	65	M16	220	G3/4	16	M36x2	55	18	40	25	32	175	-	25	50	95

Piston Ø	ZJ1
25 mm	105

Piston Ø	ZJ1
32 mm	105
40 mm	144
50 mm	144
63 mm	164
80 mm	164
100 mm	192
125 mm	192
160 mm	230
200 mm	230

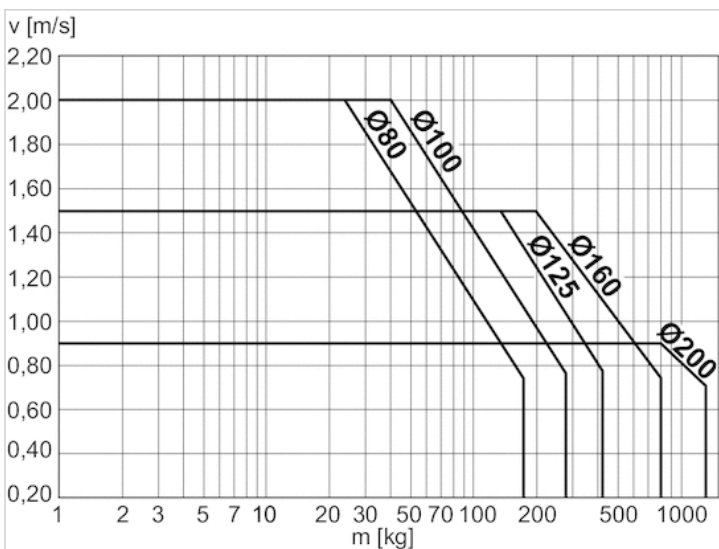
## Diagrams

### Cushioning diagram



v = Piston velocity [m/s]  
 m = Cushionable mass [kg]

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v = Piston velocity [m/s]  
 m = Cushionable mass [kg]

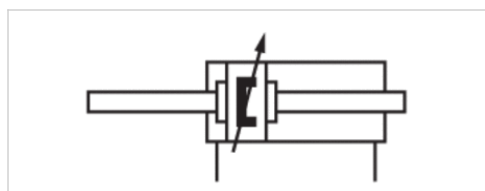


# Tie rod cylinder, CNOMO NFE 49-001, Series C12P

- Ø 32-200 mm
- Ports G 1/8 G 1/4 G 3/8 G 1/2 G 3/4
- double-acting
- with magnetic piston
- Cushioning pneumatically adjustable
- Piston rod External thread
- Piston rod through
- Optionally heat-resistant



Standards	CNOMO / NFE 49-001
Compressed air connection	Internal thread
Working pressure min./max.	2 ... 10 bar
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m <sup>3</sup>
Pressure for determining piston forces	6.3 bar



## Technical data

Piston Ø Piston rod thread Ports Piston rod Ø	32 mm M10x1,5 G 1/8 12 mm	40 mm M16x1,5 G 1/4 18 mm	50 mm M16x1,5 G 1/4 18 mm	63 mm M16x1,5 G 1/4 22 mm	80 mm M20x1,5 G 3/8 22 mm	100 mm M27x2 G 1/2 30 mm
Stroke 25	7472402181	7472023529	R422703905	-	-	-
50	7472021550	7472022041	7471324420	7471326289	7472406150	R422708943
75	7471317888	7472022042	7471310083	-	-	7471324896
80	7472023405	7472023994	-	-	-	-
100	7471312799	7472022040	7471317521	7472023562	-	7471311782
125	R422702965	-	R422700407	7471325319	-	-
150	-	7471317115	7471324774	7471321341	7471317054	7471323790
200	R422710055	7472025980	7471322385	7472023563	7471315154	7472022039
250	R422711629	-	7471320419	-	7471314450	7471326059
300	-	R422703040	7471321031	-	R422710174	-
350	-	-	R422703927	-	7472414071	-
400	-	7471325091	7471318216	R422705208	7471323908	7472411264
450	7472020401	-	-	7471326742	-	-

Piston Ø	32 mm	40 mm	50 mm	63 mm	80 mm	100 mm
Piston rod thread	M10x1,5	M16x1,5	M16x1,5	M16x1,5	M20x1,5	M27x2
Ports	G 1/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/2
Piston rod Ø	12 mm	18 mm	18 mm	22 mm	22 mm	30 mm
500	-	-	R422709680	7471321871	7472024901	-

Piston Ø	125 mm	160 mm	200 mm
Piston rod thread	M27x2	M36x2	M36x2
Ports	G 1/2	G 3/4	G 3/4
Piston rod Ø	30 mm	40 mm	40 mm
Stroke 25	-	-	-
50	-	R422715098	R422715100
75	-	-	-
80	-	-	-
100	7471326797	R422715099	R422715101
125	-	-	-
150	7471326351	-	-
200	7472020130	-	-
250	R422702924	-	-
300	7471313096	-	-
350	-	-	-
400	-	-	-
450	-	-	-
500	-	-	-

Other versions can be ordered from AVENTICS sales offices.

## Technical data

Piston Ø	32 mm	40 mm	50 mm	63 mm	80 mm	100 mm	125 mm
Retracting piston force	435 N	600 N	1077 N	1724 N	2927 N	4503 N	7286 N
Extracting piston force	435 N	600 N	1077 N	1724 N	2927 N	4503 N	7286 N
Weight 0 mm stroke	0.45 kg	1 kg	1.35 kg	2.37 kg	2.47 kg	5.2 kg	6.05 kg
Weight +10 mm stroke	0.035 kg	0.055 kg	0.068 kg	0.086 kg	0.137 kg	0.183 kg	0.202 kg
Stroke max.	1600 mm	1900 mm	2100 mm	2500 mm	2600 mm	2600 mm	2600 mm

Piston Ø	160 mm	200 mm
Retracting piston force	11875 N	19000 N
Extracting piston force	11875 N	19000 N
Weight 0 mm stroke	12.9 kg	16.3 kg
Weight +10 mm stroke	0.352 kg	0.54 kg
Stroke max.	2600 mm	2600 mm

## Technical information

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

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

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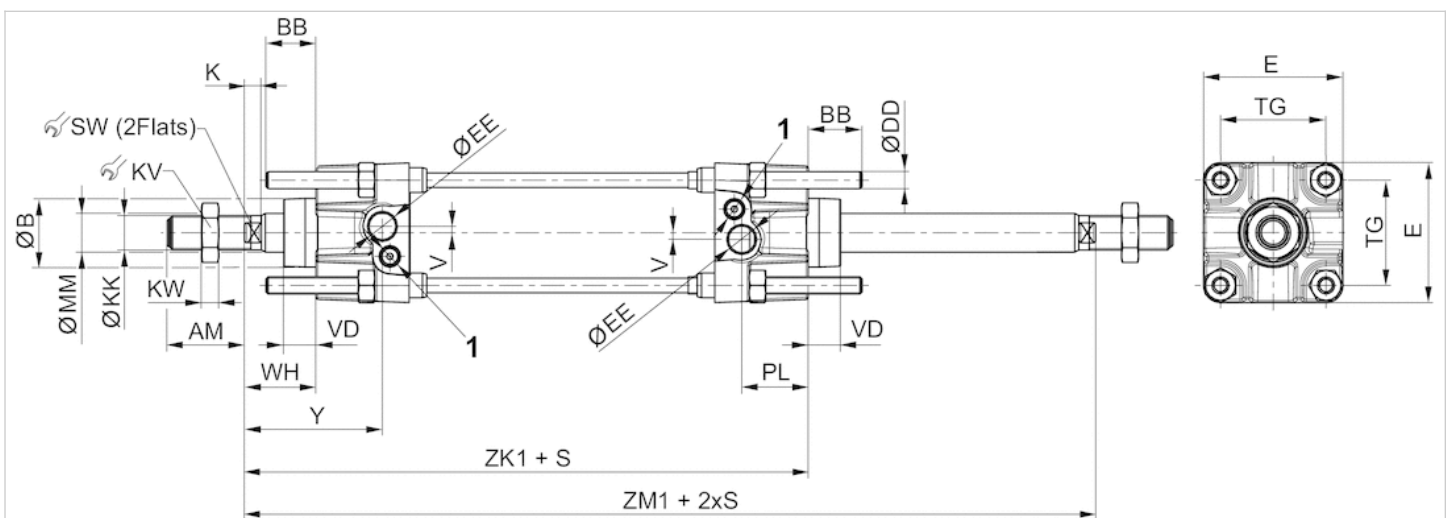
Optional heat-resistant variants are suitable for applications at temperatures up to 120 °C and do not have a magnetic piston. You will find the order key and all valid configurations (customer information) in the Media Centre.

## Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Tie-rods	Stainless steel

## Dimensions

### Dimensions



1) Flow control screw  
S=stroke

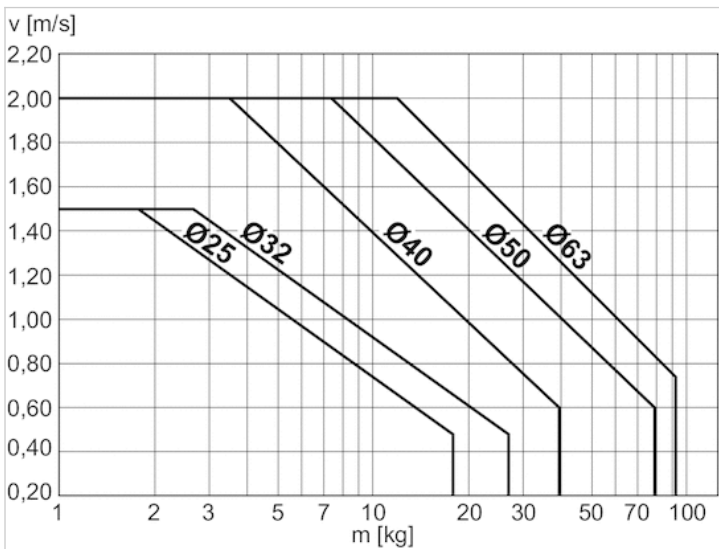
### Dimensions

Piston Ø	AM	BB	Ø B e9	Ø DD	E	Ø EE	K	Ø KK	KV	KW	Ø MM	PL	SW	TG	V	VD	WH	Y
32 mm	20	17	25	M6	45	G1/8	6	M10x1,5	17	5	12	15	8	33	-	15	25	44
40 mm	36	17	32	M6	52	G1/4	8	M16x1,5	24	8	18	31	13	40	3	15	34	65
50 mm	36	23	32	M8	65	G1/4	8	M16x1,5	24	8	18	31	13	49	3	15	34	65
63 mm	46	23	45	M8	75	G3/8	10	M20x1,5	30	10	22	32	17	59	5	20	39	71
80 mm	46	28	45	M10	95	G3/8	10	M20x1,5	30	10	22	32	17	75	9	20	39	71
100 mm	63	28	55	M10	115	G1/2	16	M27x2	41	13.5	30	37	22	90	-	20	47	84
125 mm	63	34	55	M12	140	G1/2	16	M27x2	41	13.5	30	37	22	110	-	20	47	84
160 mm	85	42	65	M16	180	G3/4	16	M36x2	55	18	40	45	32	140	-	25	50	95
200 mm	85	42	65	M16	220	G3/4	16	M36x2	55	18	40	45	32	175	-	25	50	95

Piston Ø	ZK1	ZM1
32 mm	115	140
40 mm	163	197
50 mm	163	197
63 mm	182	221
80 mm	182	221
100 mm	211	258
125 mm	211	258
160 mm	250	300
200 mm	250	300

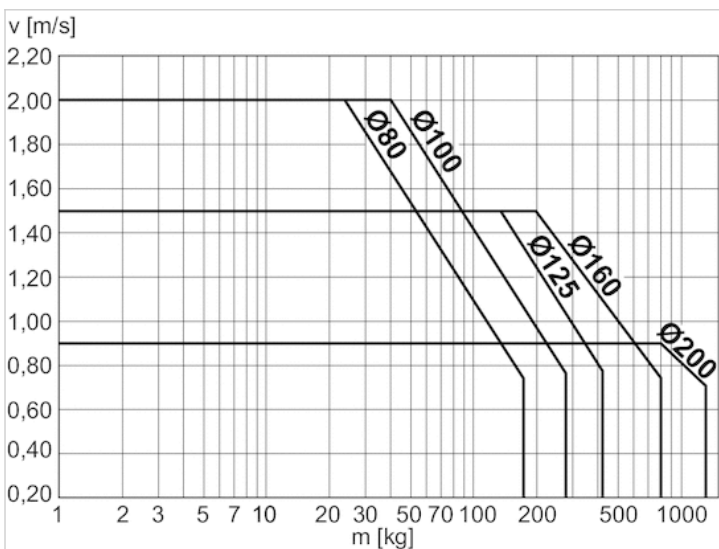
## Diagrams

### Cushioning diagram



$v$  = Piston velocity [m/s]  
 $m$  = Cushionable mass [kg]

### Cushioning diagram



$v$  = Piston velocity [m/s]  
 $m$  = Cushionable mass [kg]

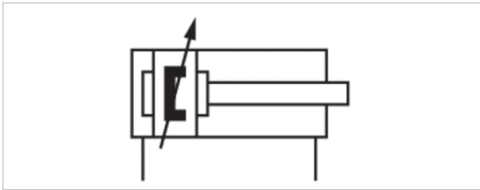


# Tie rod cylinder, CNOMO NFE 49-001, Series C12P

- Ø 32-200 mm
- Ports G 1/8 G 1/4 G 3/8 G 1/2 G 3/4
- double-acting
- with magnetic piston
- Cushioning pneumatically adjustable
- Piston rod External thread



Standards	CNOMO / NFE 49-001
Compressed air connection	Internal thread
Working pressure min./max.	2 ... 10 bar
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m <sup>3</sup>
Pressure for determining piston forces	6.3 bar



## Technical data

Piston Ø Piston rod thread Ports Piston rod Ø	32 mm M10x1,5 G 1/8 12 mm	40 mm M16x1,5 G 1/4 18 mm	50 mm M16x1,5 G 1/4 18 mm	63 mm M20x1,5 G 3/8 22 mm	80 mm M20x1,5 G 3/8 22 mm	100 mm M27x2 G 1/2 30 mm
Stroke 25	7472404382	7472414609	7472408174	R422702945	7472408202	7471316187
50	7472020373	7471322877	7471310407	7471315000	7472408249	7472408250
75	7472011002	7472012002	7472013002	7472014002	7472015001	7472016000
80	7471318835	R422702911	7471311603	R422705004	7472408200	-
100	7472023181	7471321388	7471313232	7472407475	7472408362	7472408141
125	7472408151	7471315903	7472020079	-	7472415199	R422701648
150	R422702876	7472408158	7471315002	7472408187	7472406097	-
200	R422701368	7471318717	R422701344	7471318262	R422709529	7471314208
250	-	R422702877	7472408176	-	7471318287	-
300	7471312499	7471326645	R422702811	7472414341	7471314123	-
350	7471314851	7471326094	7471319643	7472405557	7472408196	7472415026
400	7471313425	7472408161	7472408179	7472408189	7471326646	-
450	-	7472403842	7472404259	7472404354	-	7472020146
500	-	7471320525	7472411255	R422703385	7472407113	R422709968

Piston Ø Piston rod thread Ports Piston rod Ø	125 mm M27x2 G 1/2 30 mm	160 mm M36x2 G 3/4 40 mm	200 mm M36x2 G 3/4 40 mm
Stroke 25	R422703160	-	-
50	7472408219	7472408208	7472408361
75	7472017000	7472018014	7472019014
80	-	-	-
100	7471316303	7472408363	7472408364
125	7472408214	7472411000	7472408203
150	R422709768	7472408207	-
200	7472408217	-	R422702875
250	-	-	-
300	7471314424	7472408137	7472409554
350	7472411257	-	-
400	7472408218	7472406567	7472408205
450	-	-	-
500	R422703390	7472408209	7472408206

Other versions can be ordered from AVENTICS sales offices.

## Technical data

Piston Ø	32 mm	40 mm	50 mm	63 mm	80 mm	100 mm	125 mm
Retracting piston force	435 N	600 N	1077 N	1724 N	2927 N	4503 N	7286 N
Extracting piston force	507 N	792 N	1237 N	1964 N	3167 N	4948 N	7731 N
Weight 0 mm stroke	0.38 kg	0.75 kg	1.1 kg	1.93 kg	2.03 kg	4.2 kg	5.06 kg
Weight +10 mm stroke	0.035 kg	0.055 kg	0.068 kg	0.086 kg	0.137 kg	0.183 kg	0.202 kg
Stroke max.	1600 mm	1900 mm	2100 mm	2500 mm	2600 mm	2600 mm	2600 mm

Piston Ø	160 mm	200 mm
Retracting piston force	11875 N	19000 N
Extracting piston force	12667 N	19792 N
Weight 0 mm stroke	11.6 kg	14.5 kg
Weight +10 mm stroke	0.352 kg	0.54 kg
Stroke max.	2600 mm	2600 mm

## Technical information

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

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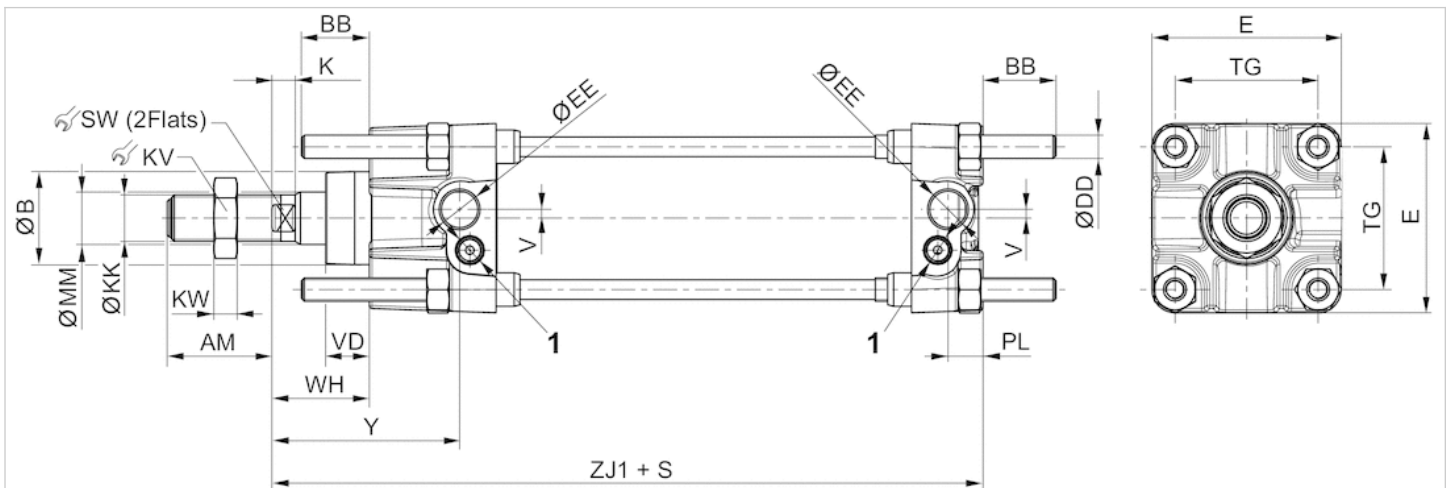
You will find the order key and all valid configurations (customer information) in the Media Centre.

## Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Tie-rods	Stainless steel

## Dimensions

### Dimensions



1) Flow control screw  
S=stroke

### Dimensions

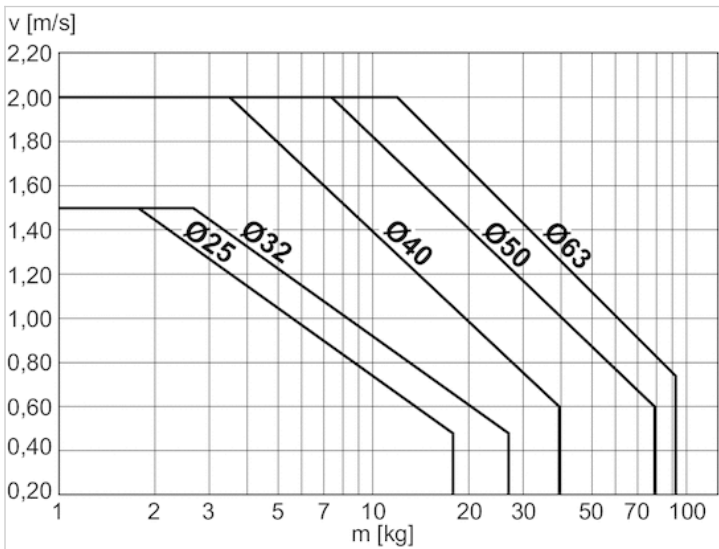
Piston Ø	AM	BB	Ø B e9	Ø DD	E	Ø EE	K	Ø KK	KV	KW	Ø MM	PL	SW	TG	V	VD	WH	Y
32 mm	20	17	25	M6	45	G1/8	6	M10x1,5	17	5	12	9	8	33	-	15	25	44
40 mm	36	17	32	M6	52	G1/4	8	M16x1,5	24	8	18	12	13	40	3	15	34	65
50 mm	36	23	32	M8	65	G1/4	8	M16x1,5	24	8	18	12	13	49	3	15	34	65
63 mm	46	23	45	M8	75	G3/8	10	M20x1,5	30	10	22	14	17	59	5	20	39	71
80 mm	46	28	45	M10	95	G3/8	10	M20x1,5	30	10	22	14	17	75	9	20	39	71
100 mm	63	28	55	M10	115	G1/2	16	M27x2	41	13.5	30	18	22	90	-	20	47	84
125 mm	63	34	55	M12	140	G1/2	16	M27x2	41	13.5	30	18	22	110	-	20	47	84
160 mm	85	42	65	M16	180	G3/4	16	M36x2	55	18	40	25	32	140	-	25	50	95
200 mm	85	42	65	M16	220	G3/4	16	M36x2	55	18	40	25	32	175	-	25	50	95

Piston Ø	ZJ1
32 mm	105
40 mm	144

Piston Ø	ZJ1
50 mm	144
63 mm	164
80 mm	164
100 mm	192
125 mm	192
160 mm	230
200 mm	230

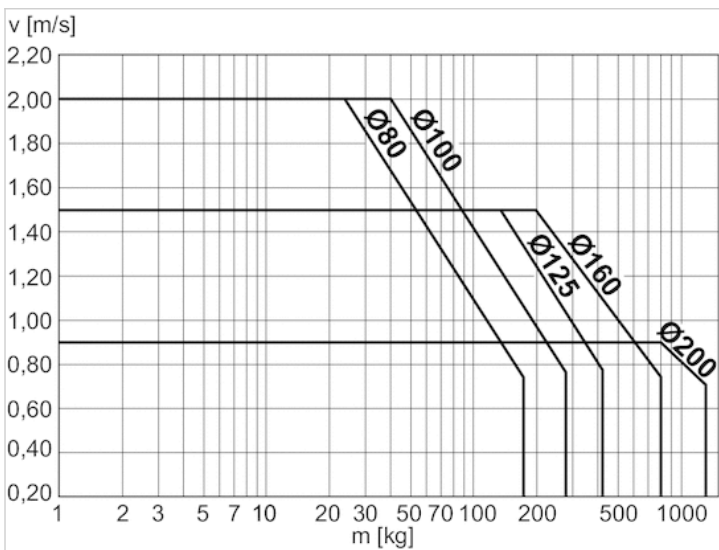
## Diagrams

### Cushioning diagram



v = Piston velocity [m/s]  
 m = Cushionable mass [kg]

### Cushioning diagram



v = Piston velocity [m/s]  
 m = Cushionable mass [kg]

# Tie rod cylinder, CNOMO NFE 49-001, Series C12P

- Ø 25-200 mm
- Ports G 1/8 G 1/4 G 3/8 G 1/2 G 3/4
- double-acting
- with magnetic piston
- Cushioning pneumatically adjustable
- with trunnion mounting MT4
- Piston rod External thread
- Optionally heat-resistant



Standards  
 Compressed air connection  
 Working pressure min./max.  
 Ambient temperature min./max.  
 Medium temperature min./max.  
 Medium  
 Max. particle size  
 Oil content of compressed air  
 Pressure for determining piston forces

CNOMO / NFE 49-001

Internal thread

2 ... 10 bar

-20 ... 80 °C

-20 ... 80 °C

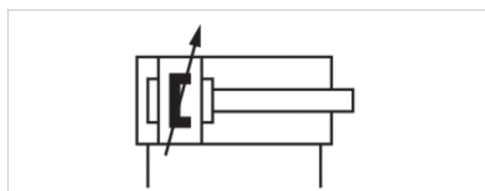
Compressed air

50 µm

0 ... 5 mg/m<sup>3</sup>

6.3 bar

The delivered product may vary from that in the illustration.



## Technical data

Piston Ø Piston rod thread Ports Piston rod Ø	25 mm M10x1,5 G 1/8 12 mm	32 mm M10x1,5 G 1/8 12 mm	40 mm M16x1,5 G 1/4 18 mm	50 mm M16x1,5 G 1/4 18 mm	63 mm M20x1,5 G 3/8 22 mm	80 mm M20x1,5 G 3/8 22 mm
Stroke 25	R422715102	R422715104	R422715106	R422715108	R422715110	-
50	R422715103	R422715105	R422715107	R422715109	R422715111	R422715112
100	-	-	-	-	-	R422715113

Piston Ø Piston rod thread Ports Piston rod Ø	100 mm M27x2 G 1/2 30 mm	125 mm M27x2 G 1/2 30 mm	160 mm M36x2 G 3/4 40 mm	200 mm M36x2 G 3/4 40 mm
Stroke 25	-	-	-	-
50	R422715114	R422715116	R422715118	R422715120
100	R422715115	R422715117	R422715119	R422715121



Other versions can be ordered from AVENTICS sales offices.

## Technical data

Piston Ø	25 mm	32 mm	40 mm	50 mm	63 mm	80 mm	100 mm
Retracting piston force	238 N	435 N	600 N	1077 N	1724 N	2927 N	4503 N
Extracting piston force	309 N	507 N	792 N	1237 N	1964 N	3167 N	4948 N
Weight 0 mm stroke	0.33 kg	0.38 kg	0.75 kg	1.1 kg	1.93 kg	2.03 kg	4.2 kg
Weight +10 mm stroke	0.028 kg	0.035 kg	0.055 kg	0.068 kg	0.086 kg	0.137 kg	0.183 kg
Stroke max.	1600 mm	1600 mm	1900 mm	2100 mm	2500 mm	2600 mm	2600 mm

Piston Ø	125 mm	160 mm	200 mm
Retracting piston force	7286 N	11875 N	19000 N
Extracting piston force	7731 N	12667 N	19792 N
Weight 0 mm stroke	5.06 kg	11.6 kg	14.5 kg
Weight +10 mm stroke	0.202 kg	0.352 kg	0.54 kg
Stroke max.	2600 mm	2600 mm	2600 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).

Optional heat-resistant variants are suitable for applications at temperatures up to 120 °C and do not have a magnetic piston.

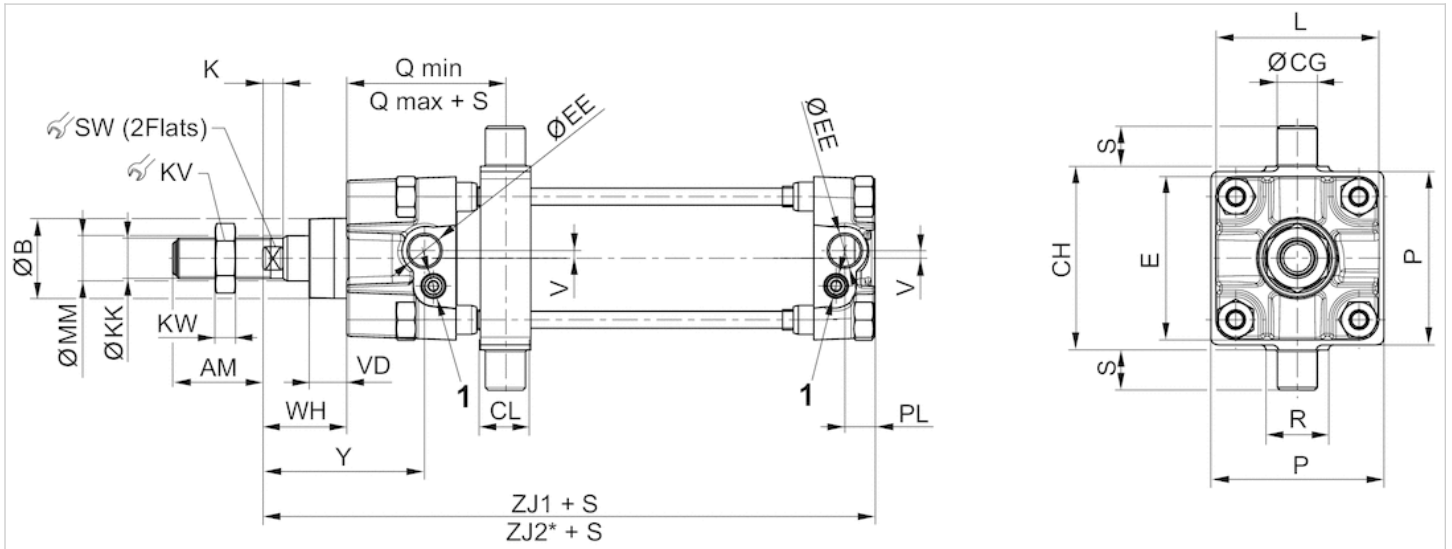
You will find the order key and all valid configurations (customer information) in the Media Centre.

## Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Tie-rods	Stainless steel

## Dimensions

### Dimensions



1) Flow control screw  
S=stroke

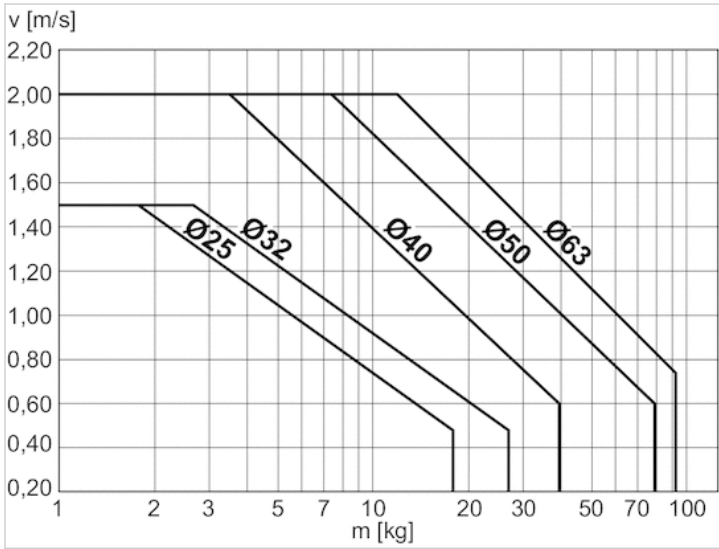
## Dimensions

Piston Ø	AM	Ø B e9	Ø CG	CH	CL	E	Ø EE	K	Ø KK	KV	KW	Ø MM	P	PL	Q min.
25 mm	20	25	12	42	22	40	G1/8	6	M10x1,5	17	5	12	38	9	40
32 mm	20	25	12	50	15	45	G1/8	6	M10x1,5	17	5	12	46	9	43
40 mm	36	32	16	63	20	52	G1/4	8	M16x1,5	24	8	18	59	12	54
50 mm	36	32	16	73	20	65	G1/4	8	M16x1,5	24	8	18	69	12	62
63 mm	46	45	20	90	25	75	G3/8	10	M20x1,5	30	10	22	84	14	64
80 mm	46	45	20	108	25	95	G3/8	10	M20x1,5	30	10	22	102	14	67
100 mm	63	55	25	131	30	115	G1/2	16	M27x2	41	13.5	30	125	18	73
125 mm	63	55	25	160	32	140	G1/2	16	M27x2	41	13.5	30	155	18	75
160 mm	85	65	32	200	50	180	G3/4	16	M36x2	55	18	40	-	25	81
200 mm	85	65	32	250	50	220	G3/4	16	M36x2	55	18	40	-	25	79

Piston Ø	Q max. + S	R	S	SW	TG	V	VD	WH	Y	ZJ1	ZJ2
25 mm	50	20	12	8	28	-	15	25	44	105	-
32 mm	48	20	12	8	33	-	15	25	44	105	128
40 mm	75	25	16	13	40	3	15	34	65	144	165
50 mm	67	25	16	13	49	3	15	34	65	144	167
63 mm	79	30	20	17	59	5	20	39	71	164	189
80 mm	77	30	20	17	75	9	20	39	71	164	188
100 mm	91	36	25	22	90	-	20	47	84	192	221
125 mm	89	36	25	22	110	-	20	47	84	192	237
160 mm	100	45	32	32	140	-	25	50	95	230	272
200 mm	101	45	32	32	175	-	25	50	95	230	277

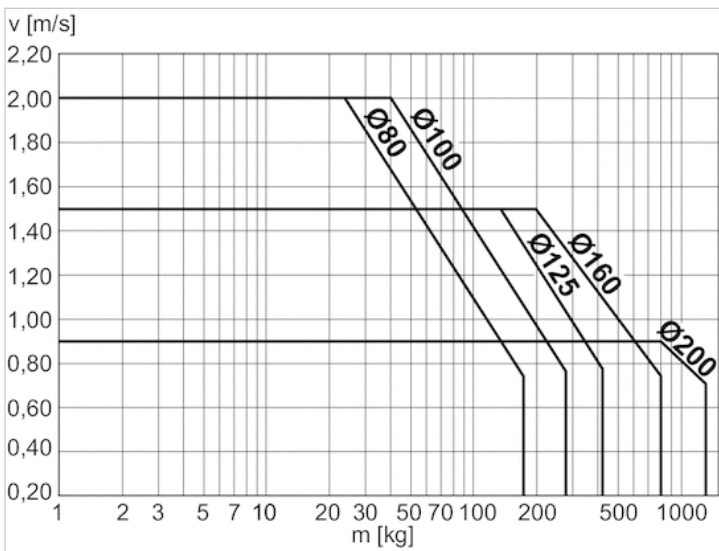
## Diagrams

### Cushioning diagram



v = Piston velocity [m/s]  
 m = Cushionable mass [kg]

### Cushioning diagram



v = Piston velocity [m/s]  
 m = Cushionable mass [kg]

# Bearing block, Series AB7

- Cylinder mounting in accordance with CNOMO / NFE 49-001

- Suitable piston Ø 25, 32 40, 50 63, 80 100, 125 160, 200 mm



Standards

CNOMO / NFE 49-001

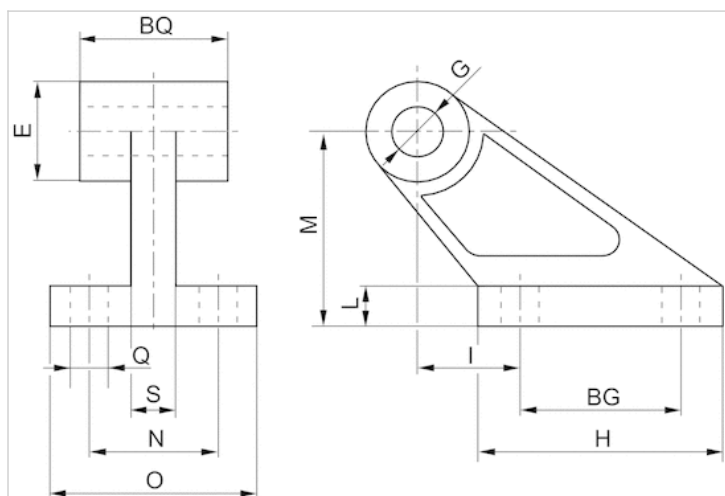
## Technical data

Part No.	Piston Ø	Swivel bearing Ø
R422003602	25, 32 mm	10 mm
R422003603	40, 50 mm	10 mm
R422003604	63, 80 mm	10 mm
R422003605	100, 125 mm	10 mm
R422003606	160, 200 mm	10 mm

## Technical information

Material	
Material	Aluminum
	Cathodic dip-painted

## Dimensions



## Dimensions

Part No.	Piston Ø	BG	BQ	G H9	H	I	L	M	N	O	Q H13	R max.	S
R422003602	25, 32 mm	20	20	8	37	18	8	32	25	41	7	19.5	9
R422003603	40, 50 mm	32	32	12	54	25	10	45	32	52	9	26	14
R422003604	63, 80 mm	50	50	16	75	32	13	63	40	63	11	32	14
R422003605	100, 125 mm	70	70	20	103	40	17	90	50	80	14	42	22
R422003606	160, 200 mm	110	110	25	154	50	20	140	63	111	18	54	26

# Detachable Clevis (MP2 mount)

- Cylinder mounting in accordance with CNOMO / NFE 49-001

- Suitable piston Ø 25 32 40 50 63 80 100 125 160 200 mm



Standards

CNOMO / NFE 49-001

## Technical data

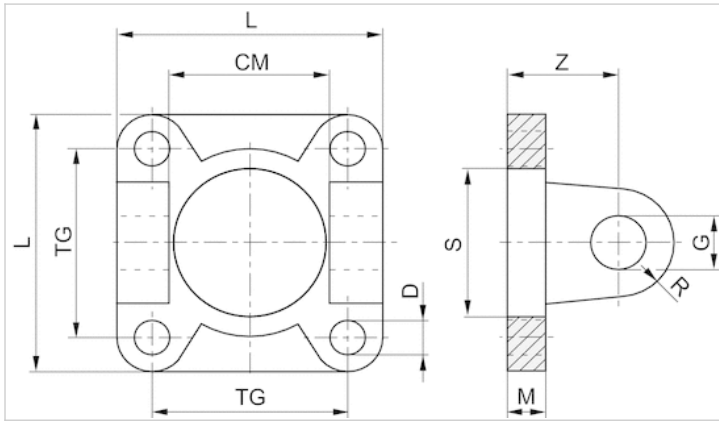
Part No.	Piston Ø	Swivel bearing Ø
1827005910	25 mm	10 mm
1827005911	32 mm	10 mm
1827005912	40 mm	10 mm
1827005913	50 mm	10 mm
1827005914	63 mm	10 mm
1827005915	80 mm	10 mm
1827005916	100 mm	10 mm
1827005917	125 mm	10 mm
7472ZZ1428	160 mm	10 mm
7472ZZ1429	200 mm	10 mm

Scope of delivery incl. lock nut

## Technical information

Material	
Material	Aluminum
	Cathodic dip-painted

## Dimensions



## Dimensions

Part No.	Piston Ø	CM H14	D H13	G H9	M	L	R	S	TG	Z
1827005910	25 mm	26	7	8	8	40	8	25	28	18
1827005911	32 mm	26	7	8	8	45	8	25	33	18
1827005912	40 mm	33	7	12	8	52	12	32	40	24
1827005913	50 mm	33	9	12	10	65	12	32	49	26
1827005914	63 mm	47	9	16	10	75	16	45	59	30
1827005915	80 mm	47	11	16	12	95	16	45	75	32
1827005916	100 mm	57	11	20	12	115	20	55	90	37
1827005917	125 mm	57	14	20	16	140	21	55	110	41
7472ZZ1428	160 mm	72	18	25	20	180	25	65	140	55
7472ZZ1429	200 mm	72	18	25	20	220	25	65	175	55

# Rear eye

- for clevis mounting MP2 and AB3
- Cylinder mounting in accordance with CNOMO / NFE 49-001
- Suitable piston  $\varnothing$  25, 32 40, 50 63, 80 100, 125 160, 200 mm



Standards

CNOMO / NFE 49-001

## Technical data

Part No.	Piston $\varnothing$	Swivel bearing $\varnothing$
R422003607	25, 32 mm	8 mm
R422003608	40, 50 mm	12 mm
R422003609	63, 80 mm	16 mm
R422003610	100, 125 mm	20 mm
R422003611	160, 200 mm	25 mm

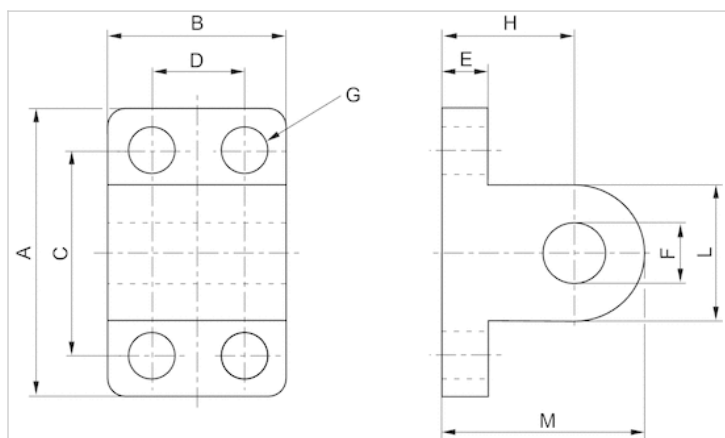
ISO 15552

## Technical information

Material	
Material	Aluminum
	Cathodic dip-painted



## Dimensions



## Dimensions

Part No.	Piston Ø	A	B	C	D	E	F H9	G	H	L 1)	M 1)
R422003607	25, 32 mm	40	25	28	-	8	8	7	18	16	26
R422003608	40, 50 mm	52	32	38	16	10	12	9	26	24	38
R422003609	63, 80 mm	75	46	54	25	12	16	11	34	36	52
R422003610	100, 125 mm	115	56	90	32	16	20	14	41	40	61
R422003611	160, 200 mm	180	71	150	43	20	25	18	55	50	80

1) Max.

# Rear eye with bolt

- for clevis mounting MP2 and AB3
- Cylinder mounting in accordance with CNOMO / NFE 49-001
- Suitable piston Ø 32 40 50 63 80 100 125 mm



Standards

CNOMO / NFE 49-001

## Technical data

Part No.	Piston Ø
5210163472	32 mm
5210263472	40 mm
5210363472	50 mm
5210463472	63 mm
5210563472	80 mm
5210663472	100 mm
5210763472	125 mm

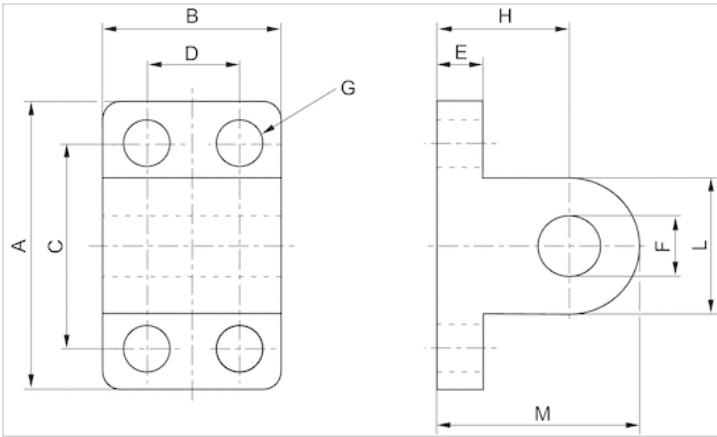
Scope of delivery: galvanized steel bolts incl. circlips

## Technical information

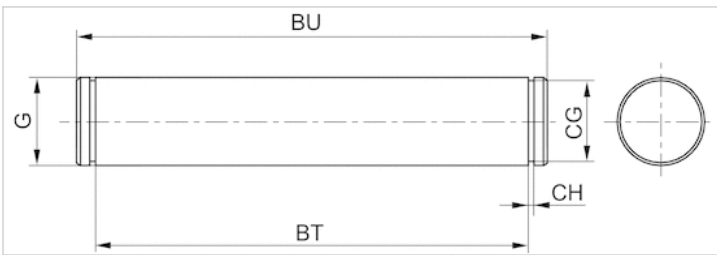
Material	
Material	Aluminum
	Cathodic dip-painted

## Dimensions

### Rear eye dimensions



### Bolt dimensions



## Dimensions

Part No.	Piston Ø	A	B	C	D	E	F H9	G	H	L 1)	M 1)	BT	BU	CG	CH	G f7
5210163472	32 mm	40	25	28	-	8	8	7	18	16	26	46	53	7.6	1.1	8
5210263472	40 mm	52	32	38	16	10	12	9	26	24	38	53	60	11.5	1.1	12
5210363472	50 mm	52	32	38	16	10	12	9	26	24	38	66	73	11.5	1.1	12
5210463472	63 mm	75	46	54	25	12	16	11	34	36	52	76	83	15.2	1.1	16
5210563472	80 mm	75	46	54	25	12	16	11	34	36	52	96	103	15.2	1.1	16
5210663472	100 mm	115	56	90	32	16	20	14	41	40	61	117	124	19	1.3	20
5210763472	125 mm	115	56	90	32	16	20	14	41	40	61	142	149	19	1.3	20

1) max.

# Bearing, Series CM1

- for trunnion mounting

- Suitable piston Ø 25 32 40, 50 63, 80 100, 125 160, 200 mm



## Technical data

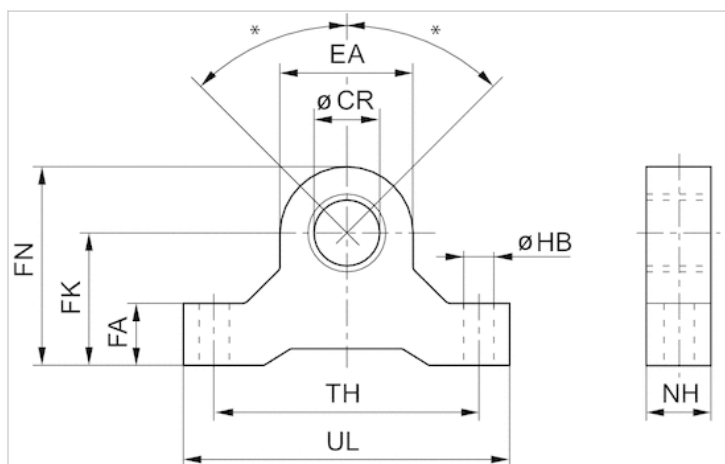
Part No.	Piston Ø	Swivel bearing Ø	Scope of delivery
3671202000	25 mm	10 mm	2 piece
3671203000	32 mm	12 mm	2 piece
3671204000	40, 50 mm	16 mm	2 piece
3671206000	63, 80 mm	20 mm	2 piece
3671210000	100, 125 mm	25 mm	2 piece
3671216000	160, 200 mm	32 mm	2 piece

## Technical information

### Material

Material	Aluminum
----------	----------

## Dimensions



\* Max. pendulum movement for cylinders with rear eye MP6 with ball joint:  $\pm 45^\circ$

## Dimensions

Part No.	$\varnothing$ CR H8	EA	FA	FK $\pm 0,1$	FN	HB	NH	TH	UL
3671202000	10	16	10	21	29	5.5	10	27	37
3671203000	12	19	11	22	32	6.6	11	44	55
3671204000	16	28	16	35	49	9	16	65	82
3671206000	20	38	19	40	59	9	19	80	99
3671210000	25	46	22	48	71	11	22	96	118
3671216000	32	66	32	70	103	17	32	140	172

# Bearing AT4, Series CM1

- for trunnion mounting MT4, MT5, MT6
- Cylinder mounting in accordance with ISO 15552
- Suitable piston Ø 20, 25, 32 40, 50 63, 80 100, 125 160, 200 mm
- for series CCI, CCL-IC, ICL, KPZ, PRA/TRB CCI, CCL-IC, KPZ, PRA/TRB ITS



Standards

ISO 15552

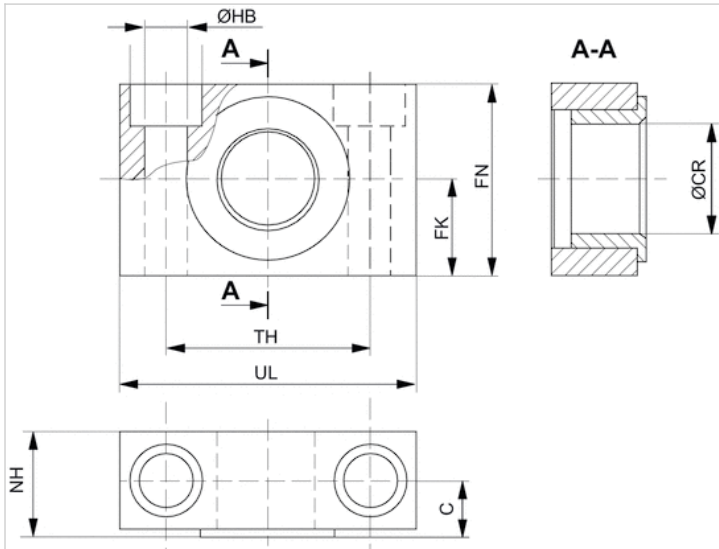
## Technical data

Part No.	Piston Ø	Swivel bearing Ø	Scope of delivery
1827001603	20, 25, 32 mm	12 mm	2 piece
1827001604	40, 50 mm	16 mm	2 piece
1827001605	63, 80 mm	20 mm	2 piece
1827001606	100, 125 mm	25 mm	2 piece
1827001607	160, 200 mm	32 mm	2 piece

## Technical information

Material	
Material	Steel
	galvanized
Guide bushing	Sintered bronze

## Dimensions



## Dimensions

Part No.	Piston Ø	UL	NH	TH	C	CR H9	HB H13	FN	FK	Plain bearing
1827001603	20, 25, 32 mm	46	18	32 ±0,2	10.5	12	6.6	30	15 ±0,1	Sintered bronze
1827001604	40, 50 mm	55	21	36 ±0,2	12	16	9	36	18 ±0,1	Sintered bronze
1827001605	63, 80 mm	65	23	42 ±0,2	13	20	11	40	20 ±0,1	Sintered bronze
1827001606	100, 125 mm	75	28.5	50 ±0,2	16	25	14	50	25 ±0,1	Sintered bronze
1827001607	160, 200 mm	92	40	60 ±0,3	22.5	32	18	60	30 ±0,2	Sintered bronze

# Flange mounting, Series MF1, MF2

- Suitable piston Ø 25 32 40 50 63 80 100 125 160 200 mm



## Technical data

Part No.	Piston Ø	Swivel bearing Ø
1827005926	25 mm	-
1827005927	32 mm	30 mm
1827005928	40 mm	30 mm
1827005929	50 mm	30 mm
1827005930	63 mm	30 mm
1827005931	80 mm	30 mm
1827005932	100 mm	30 mm
1827005933	125 mm	30 mm
7472ZZ1408	160 mm	30 mm
7472ZZ1409	200 mm	30 mm

Scope of delivery incl. lock nut

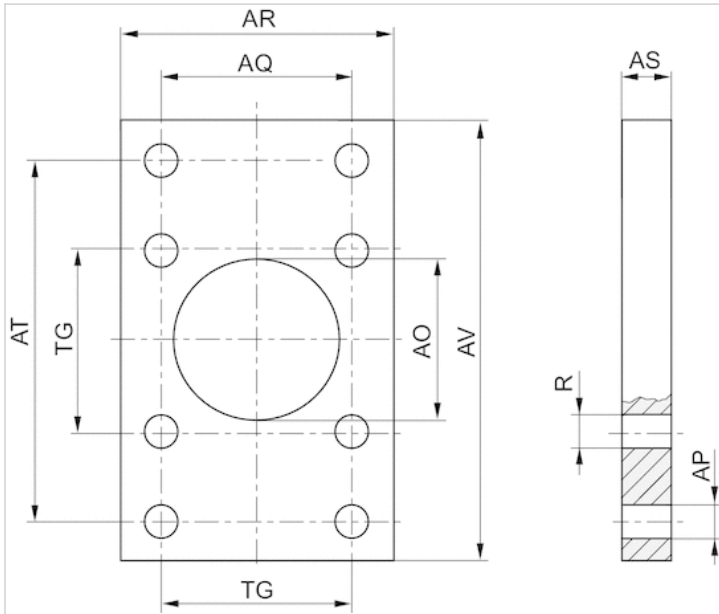
## Technical information

Material	
Material	Steel
	galvanized



## Dimensions

### Dimensions



## Dimensions

Part No.	Piston Ø	AO H11	AP H13	AQ JS14	AR	AS	AT JS14	AV	R	TG
1827005926	25 mm	25	9	28	40	8	68	80	7	28
1827005927	32 mm	25	9	33	45	8	68	80	7	33
1827005928	40 mm	32	9	40	52	8	78	90	7	40
1827005929	50 mm	32	11	49	65	10	94	110	9	49
1827005930	63 mm	45	11	59	75	10	104	120	9	59
1827005931	80 mm	45	14	75	95	12	130	150	11	75
1827005932	100 mm	55	14	90	115	12	150	170	11	90
1827005933	125 mm	55	18	110	140	16	180	205	14	110
7472ZZ1408	160 mm	65	22	140	180	20	228	260	18	140
7472ZZ1409	200 mm	65	22	175	220	20	268	300	18	175

# Foot mounting, Series MS1

- wide version
- Cylinder mounting in accordance with CNOMO / NFE 49-001
- Suitable piston Ø 25 32 40 50 63 80 100 125 160 200 mm



Standards

CNOMO / NFE 49-001

## Technical data

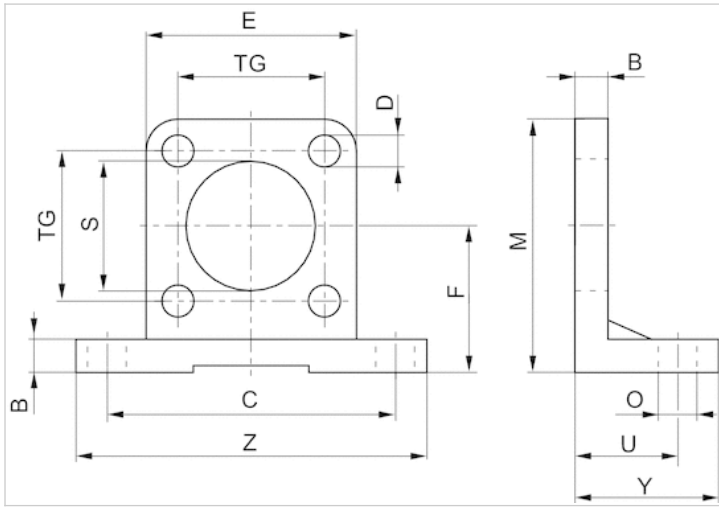
Part No.	Piston Ø
1827005870	25 mm
1827005871	32 mm
1827005872	40 mm
1827005873	50 mm
1827005874	63 mm
1827005875	80 mm
1827005876	100 mm
1827005877	125 mm
7472ZZ1483	160 mm
7472ZZ1484	200 mm

Scope of delivery: 2 foot mountings incl. mounting nuts

## Technical information

Material	
Material	Aluminum
	Cathodic dip-painted

## Dimensions



## Dimensions

Part No.	Piston Ø	B	C	D	E	F	M	O	S	TG	U	Y	Z
1827005870	25 mm	8	58	7	40	30	50	9	25	28	18	35	75
1827005871	32 mm	8	65	7	45	32	54	9	25	33	18	35	82
1827005872	40 mm	8	72	7	52	36	62	9	32	40	18	35	90
1827005873	50 mm	10	90	9	65	45	77	11	32	49	22	45	110
1827005874	63 mm	10	100	9	75	50	87	11	45	59	22	45	120
1827005875	80 mm	12	126	11	95	63	110	14	45	75	28	55	154
1827005876	100 mm	12	148	11	115	73	130	14	55	90	28	55	180
1827005877	125 mm	16	180	14	140	91	161	18	55	110	32	67.5	215
7472ZZ1483	160 mm	20	230	18	180	115	205	22	65	140	40	80	275
7472ZZ1484	200 mm	20	270	18	220	135	245	22	65	175	40	80	318

# Foot mounting, Series MS1

- narrow version
- Cylinder mounting in accordance with CNOMO / NFE 49-001
- Suitable piston Ø 25 32 40 50 63 80 100 125 160 200 mm



Standards

CNOMO / NFE 49-001

## Technical data

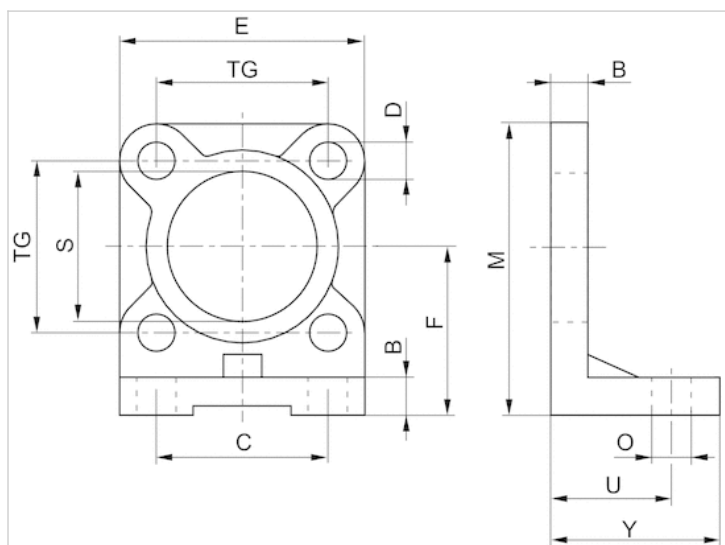
Part No.	Piston Ø
1827005878	25 mm
1827005879	32 mm
1827005880	40 mm
1827005881	50 mm
1827005882	63 mm
1827005883	80 mm
1827005884	100 mm
1827005885	125 mm
7472ZZ1418	160 mm
7472ZZ1419	200 mm

Scope of delivery: 2 foot mountings incl. mounting nuts

## Technical information

Material	
Material	Aluminum
	Cathodic dip-painted

## Dimensions



## Dimensions

Part No.	Piston Ø	B	C	D	E	F	M	O	S	TG	U	Y
1827005878	25 mm	8	24	7	40	30	50	9	25	28	27	35
1827005879	32 mm	8	28	7	45	32	54	9	25	33	27	35
1827005880	40 mm	8	36	7	52	36	62	9	32	40	27	35
1827005881	50 mm	10	45	9	65	45	77	11	32	49	35	45
1827005882	63 mm	10	55	9	75	50	87	11	45	59	35	45
1827005883	80 mm	12	70	11	95	63	110	14	45	75	43	55
1827005884	100 mm	12	90	11	115	73	130	14	55	90	43	55
1827005885	125 mm	16	110	14	140	91	161	18	55	110	52	68
7472ZZ1418	160 mm	20	130	18	180	115	205	22	65	140	62	82
7472ZZ1419	200 mm	20	170	18	220	135	245	22	65	175	62	92

# Bolts, AA4

- Cylinder mounting in accordance with CNOMO / NFE 49-001

- Suitable piston Ø 25 32 40 50 63 80 100 125 160 200 mm



Standards

CNOMO / NFE 49-001

## Technical data

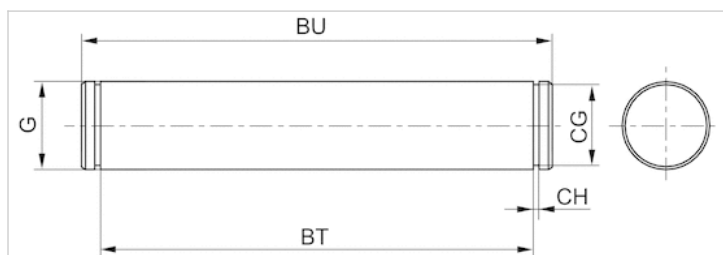
Part No.	Piston Ø
R422003612	25 mm
R422003613	32 mm
R422003614	40 mm
R422003615	50 mm
R422003616	63 mm
R422003617	80 mm
R422003618	100 mm
R422003619	125 mm
R422003620	160 mm
R422003621	200 mm

Scope of delivery: pivot pins incl. circlips

## Technical information

Material	
Material	Steel
	galvanized

## Dimensions



## Dimensions

Part No.	Piston Ø	BT	BU	CG	CH	G f7
R422003612	25 mm	41	47	7.6	1.1	8
R422003613	32 mm	46	53	7.6	1.1	8
R422003614	40 mm	53	60	11.5	1.1	12
R422003615	50 mm	66	73	11.5	1.1	12
R422003616	63 mm	76	83	15.2	1.1	16
R422003617	80 mm	96	103	15.2	1.1	16
R422003618	100 mm	117	124	19	1.3	20
R422003619	125 mm	142	149	19	1.3	20
R422003620	160 mm	182	189	23.9	1.3	25
R422003621	200 mm	222	229	23.9	1.3	25

# Piston rod nut MR9



Weight

See table below

## Technical data

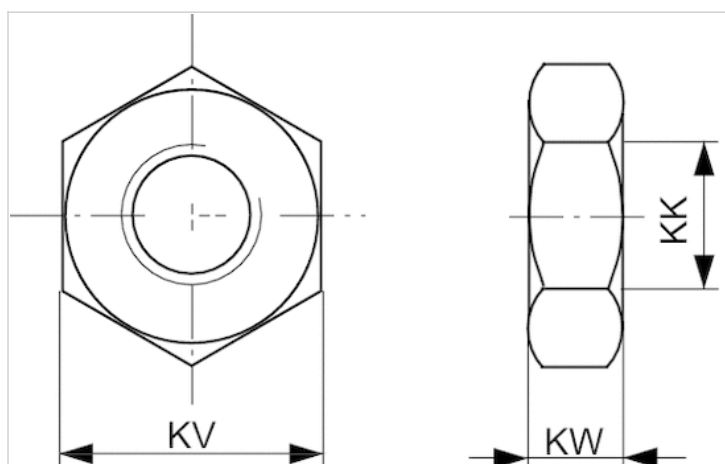
Part No.	Suitable piston rod thread	Weight
1823300030	M16x1,5	0.017 kg
8103040344	M20x1,5	0.06 kg
1823A00029	M27x2	0.108 kg
8103190414	M36x2	0.175 kg

## Technical information

### Material

	Steel
	galvanized

## Dimensions





## Dimensions

Part No.	KK	KV	KW
1823300030	M16x1,5	24	8
8103040344	M20x1,5	30	10
1823A00029	M27x2	41	13.5
8103190414	M36x2	50	16

## Rod clevis, Series AP2



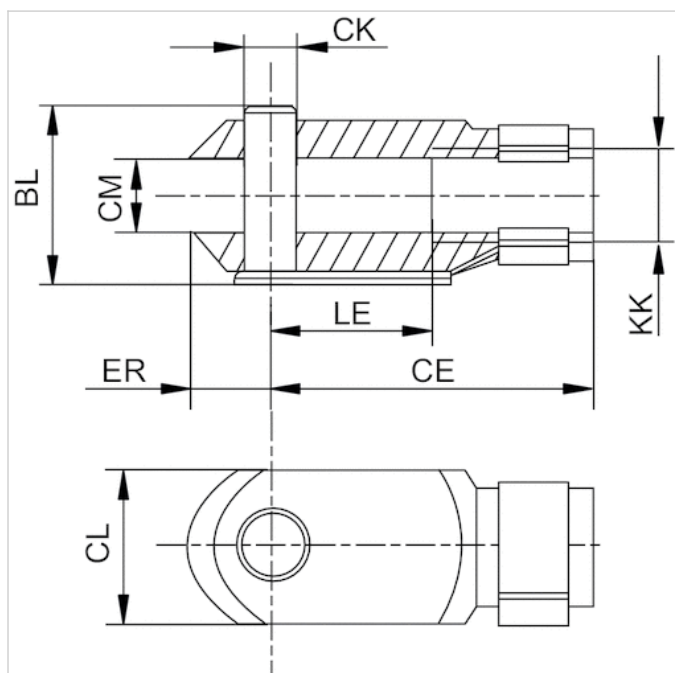
### Technical data

Part No.	Suitable piston rod thread
1827009940	M10x1,5
1827009941	M16x1,5
1827009942	M20x1,5
1827009943	M27x2
7472ZZ1444	M36x2

### Technical information

Material	
	Steel
	galvanized

## Dimensions



## Dimensions

Part No.	CK	BL	CE	$\varnothing$ CK e11	CL	CM	ER	LE
1827009940	M10x1,5	22	36	8	22	11	9	16
1827009941	M16x1,5	26	51	12	26	18	13	25
1827009942	M20x1,5	34	63	16	34	22	17	33
1827009943	M27x2	44	85	20	44	30	20	30
7472ZZ1444	M36x2	56	115	25	56	40	25	40

# Ball eye rod end AP6, series CM2

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



Weight

See table below

## Technical data

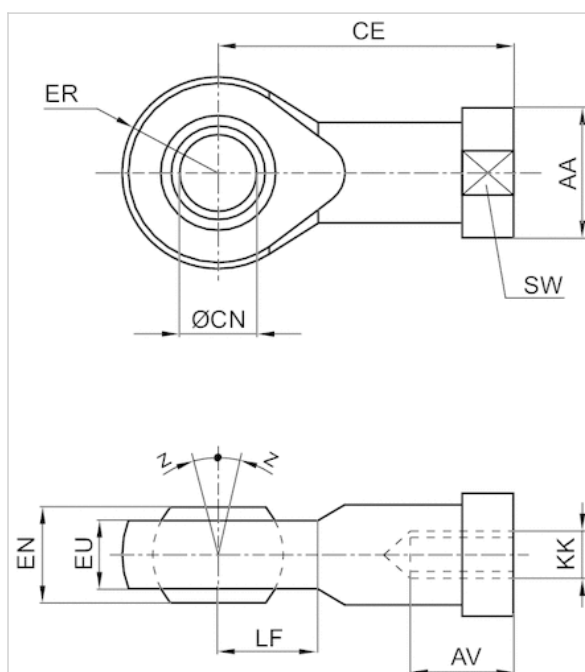
Part No.	Suitable piston rod thread	for	Swivel bearing Ø
1822124005	M16x1,5	PRA TRB CCI SSI RPC KPZ 167 CVI RDC 102	406.4 mm
1822124006	M20x1,5	PRA TRB KPZ 167 CVI 102	508 mm
1822124013	M27x2	PRA TRB 167 CVI	762 mm
1822124008	M36x2	ITS	889 mm

Part No.	Weight
1822124005	0.21 kg
1822124006	0.38 kg
1822124013	1.17 kg
1822124008	2 kg

## Technical information

Material	
	Steel
	galvanized

## Dimensions



## Dimensions

Part No.	KK	AA	AV min.	CE	Ø CN H7	EN -0,1	ER	EU max.	LF	SW	Z [°] max.
1822124005	M16x1,5	27	24	64	16	21	21	15.5	21	22	4
1822124006	M20x1,5	34	30	77	20	25	25	18.5	25	30	4
1822124013	M27x2	50	45	110	30	37	35	27	35	41	4
1822124008	M36x2	60	56	125	35	43	40	32	40	50	4

# Piston rod end plate



Weight

See table below

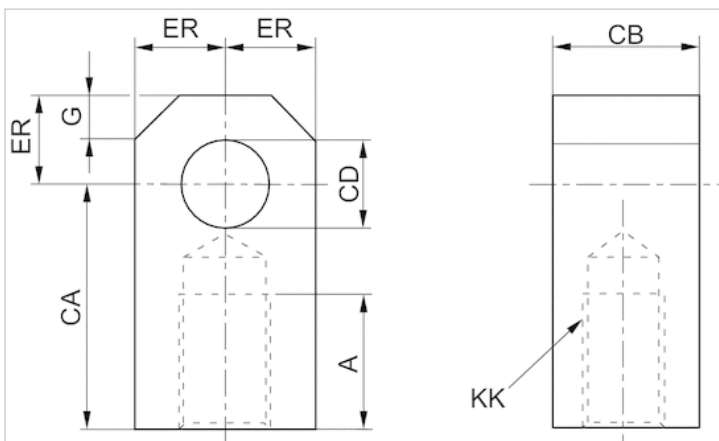
## Technical data

Part No.	Suitable piston rod thread	Weight
7472ZZ5700	M10x1,5	0.07 kg
7472ZZ1445	M10x1,5	-
7472ZZ1446	M16x1,5	-
7472ZZ1447	M20x1,5	-
7472ZZ1448	M27x2	-
7472ZZ1449	M36x2	-

## Technical information

Material	
	Steel
	galvanized

## Dimensions



## Dimensions

Part No.		Ø	A	CA	CB	CD	ER	G
-	M10x1,5	-	-	-	-	-	-	-
7472ZZ1445	M10x1,5	25 32	20	36	18	8	9	6
7472ZZ1446	M16x1,5	40 50	30	51	28	12	13	10
7472ZZ1447	M20x1,5	63 80	36	63	36	16	17	12
7472ZZ1448	M27x2	100 125	50	85	45	20	20	17.5
7472ZZ1449	M36x2	160 200	70	115	56	25	25	20

# Sensor mounting, Series CB1

- for series ST6, SN2, SN6, SN1, SM6, SM6-AL

- to mount on cylinder C12P, ITS



Weight

0.058 kg

## Technical data

Part No.	Cylinders Ø		for series
	min.	max.	
R412017979	160 mm	200 mm	ST6, SN2, SN6, SN1, SM6, SM6-AL

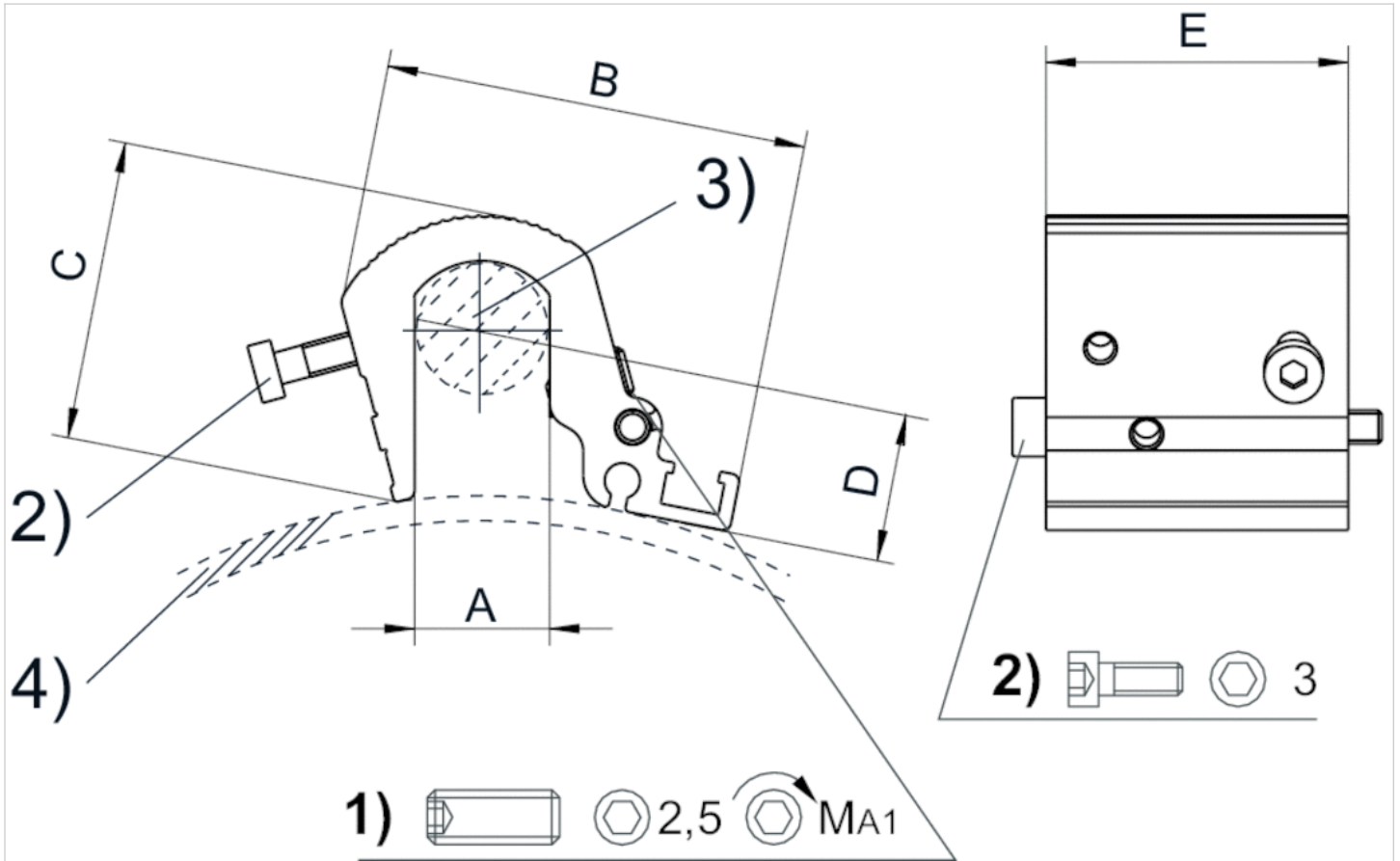
Scope of delivery: Incl. mounting screws

## Technical information

Material	
	Aluminum



## Dimensions



1) Clamping threaded pin 2) Mounting screws for sensor 3) Tie rod 4) Cylinder profile

## Dimensions

Part No.	Cylinders Ø	A	B	C	D	E	MA1 [Nm]
R412017979	200 mm	16	51	36	6.8	36	2

Scope of delivery: Incl. mounting screws

# Sensor mounting, Series CB1

- for series ST6, SM6, SN1, SN2

- to mount on cylinder TRB, C12P, CVI, 523



Weight

0.031 kg

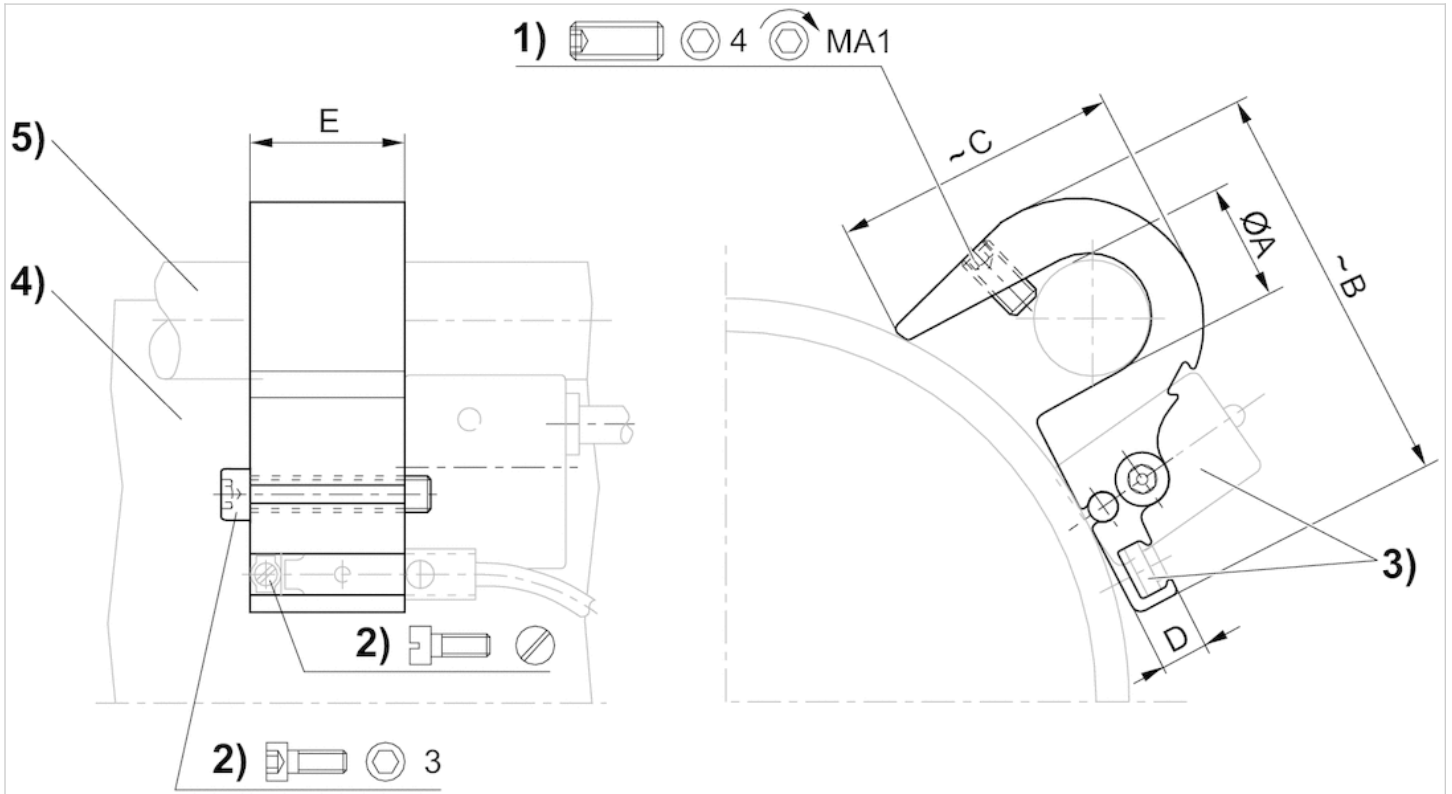
## Technical data

Part No.	Cylinders Ø		for series
	min.	max.	
1827020292	125 mm	125 mm	ST6, SM6, SN1, SN2

## Technical information

Material	
	Aluminum

## Dimensions



1) Clamping threaded pin 2) Mounting screw for sensor 3) Sensor 4) Cylinder profile 5) Tie rod

## Dimensions

Part No.	Ø A	B	C	D	E	1)	MA1 [Nm]
1827020292	12	45	29	6.5	21	M5x10	2

# Sensor mounting, Series CB1

- for series ST6, SM6

- to mount on cylinder TRB, C12P, 167, CVI, TRR, 523



Weight

See table below

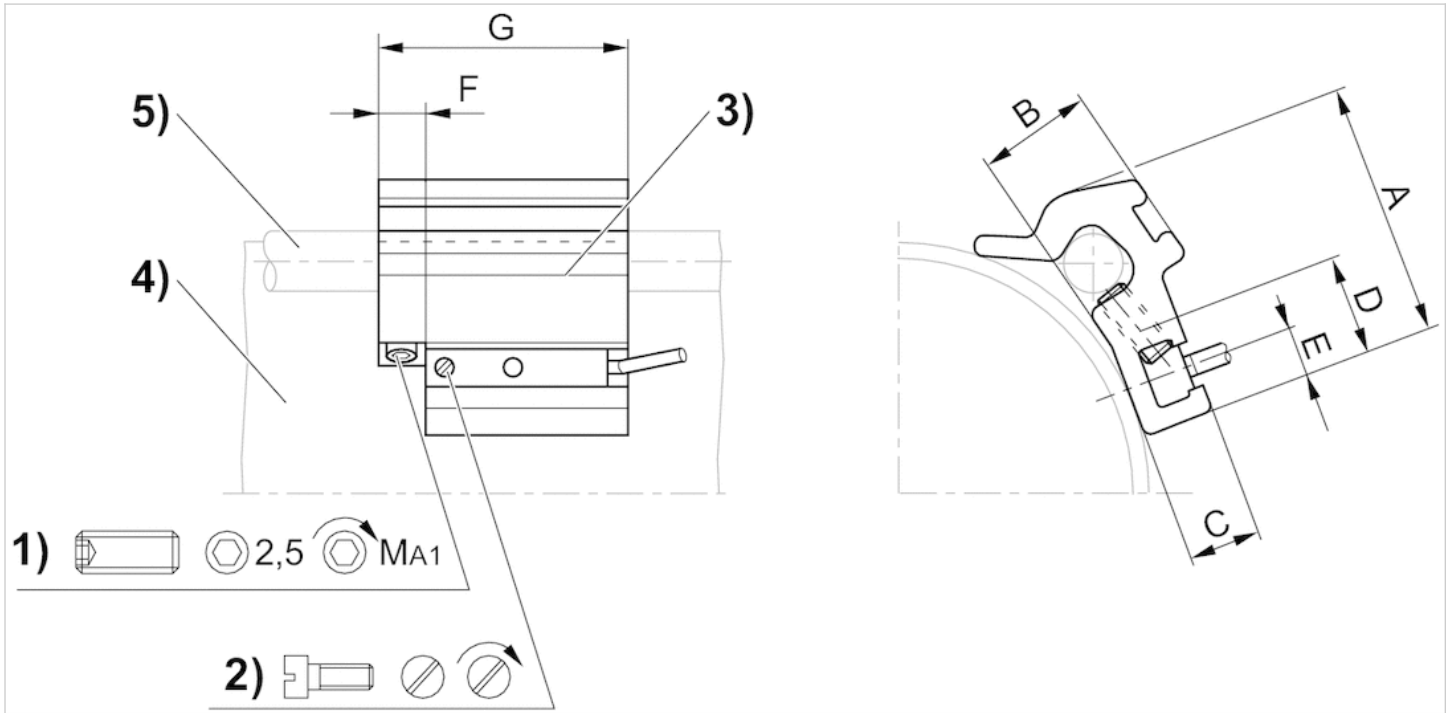
## Technical data

Part No.	Cylinders Ø	Cylinders Ø	for series	Weight
	min.	max.		
1827020282	32 mm	40 mm	ST6, SM6	0.016 kg
1827020283	50 mm	63 mm	ST6, SM6	0.029 kg
1827020284	80 mm	100 mm	ST6, SM6	0.042 kg

## Technical information

Material	
	Aluminum

## Dimensions



1) Clamping threaded pin 2) Mounting screw for sensor 3) Sensor 4) Cylinder profile 5) Tie rod

## Dimensions

Part No.	A	B	C	D	E	F	G	1)	MA1 [Nm]
1827020282	26	10	7	14	5	8	40	M5x8	2 ±0,2
1827020283	32.5	15.5	7	14	5	8	40	M5x10	2 ±0,2
1827020284	43	17	6.9	14	5	8	40	M5x16	2 ±0,2

# Sensor mounting, Series CB1

- for series SN6

- to mount on cylinder TRB, C12P, CVI, 523



Weight

0.034 kg

## Technical data

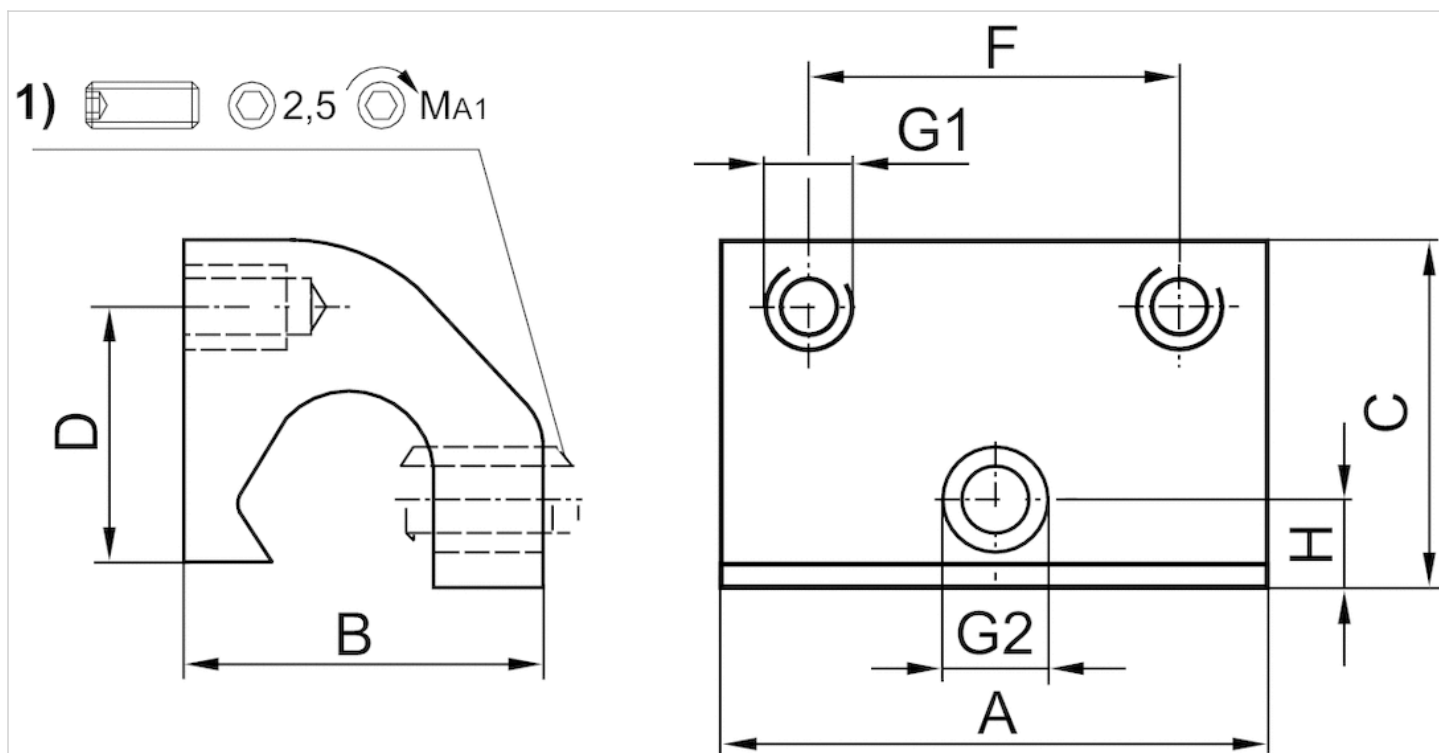
Part No.	Cylinders Ø		for series
	min.	max.	
3220613562	32 mm	63 mm	SN6
3220643562	80 mm	125 mm	SN6

## Technical information

Material

Aluminum

## Dimensions



1) Clamping threaded pin

## Dimensions

Part No.	Cylinders Ø	A	B	C	D	F	G1	G2	H	MA1 [Nm]
3220613562	63 mm	35	22	21	16	23	M4	M6	5	1,8 +0,4
3220643562	125 mm	35	22	21	12	23	M4	M5	5	1,8 +0,4

## Sensor, Series ST6











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



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



## Technical data

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

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

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

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

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

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

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

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

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

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

3) open cable ends, 3-pin

## Technical information

No cULus certification for 230 V variant.

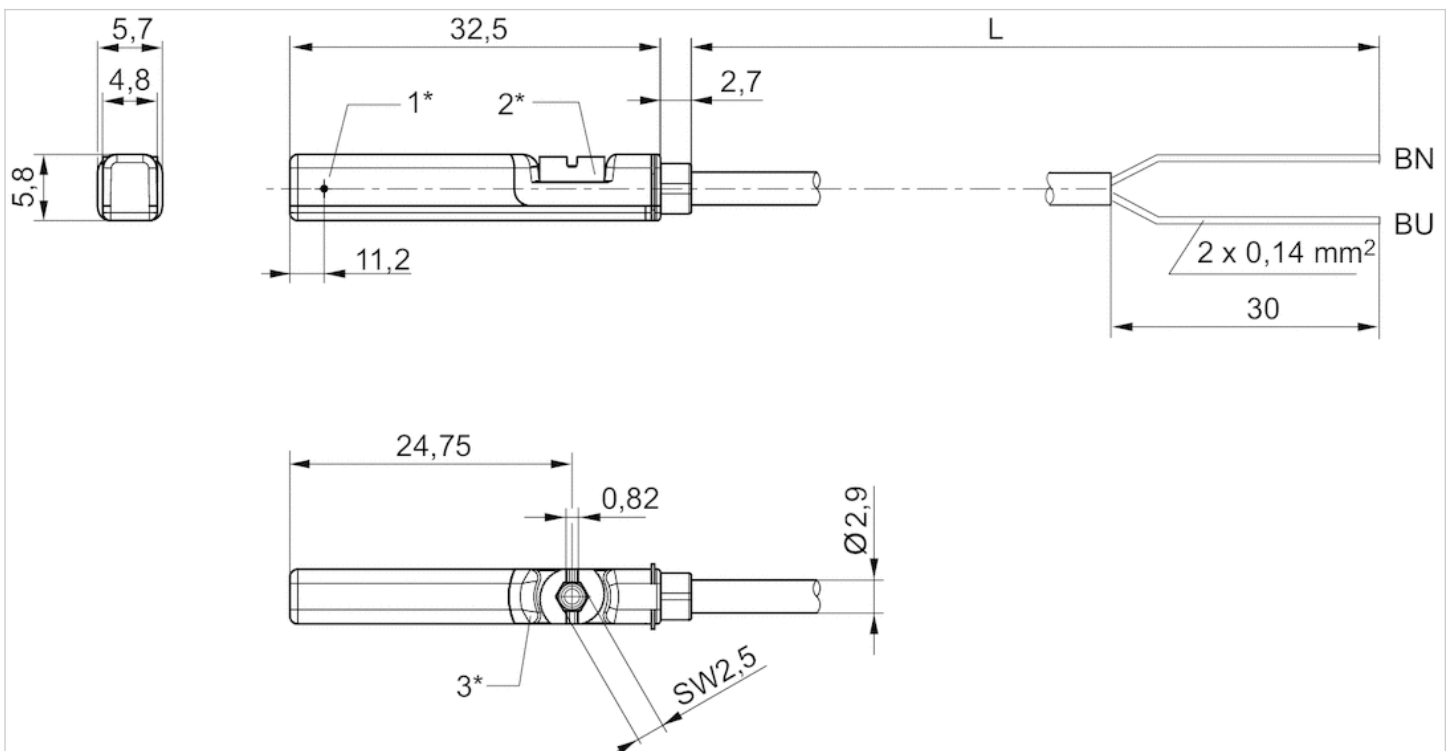
## Technical information

### Material

Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

## Dimensions

Fig. 1

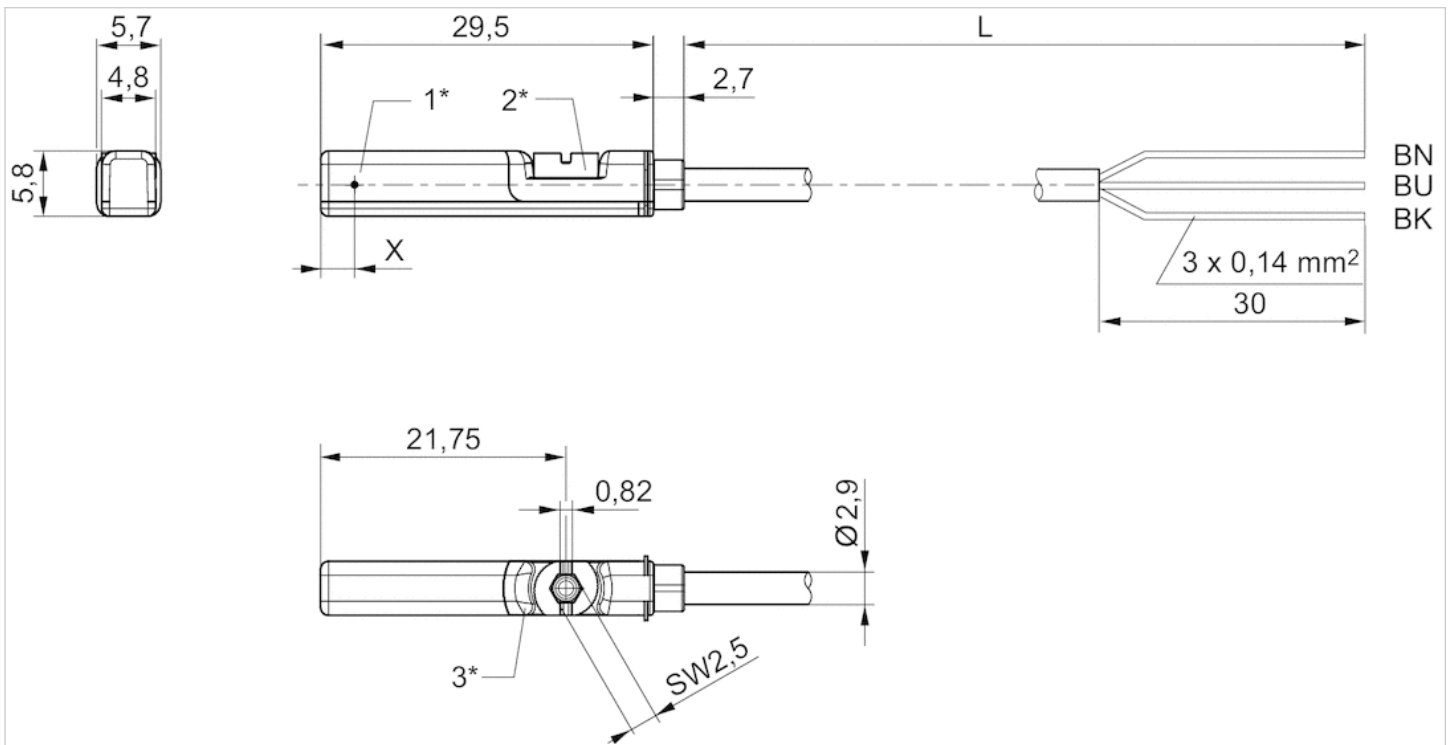


1\* = switching point 2\* = locking screw 3\* = LED window, transparent

L = cable length

BN=brown, BU=blue

Fig. 2



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








# Sensor, Series ST6

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



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

## Technical data

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

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

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

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

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

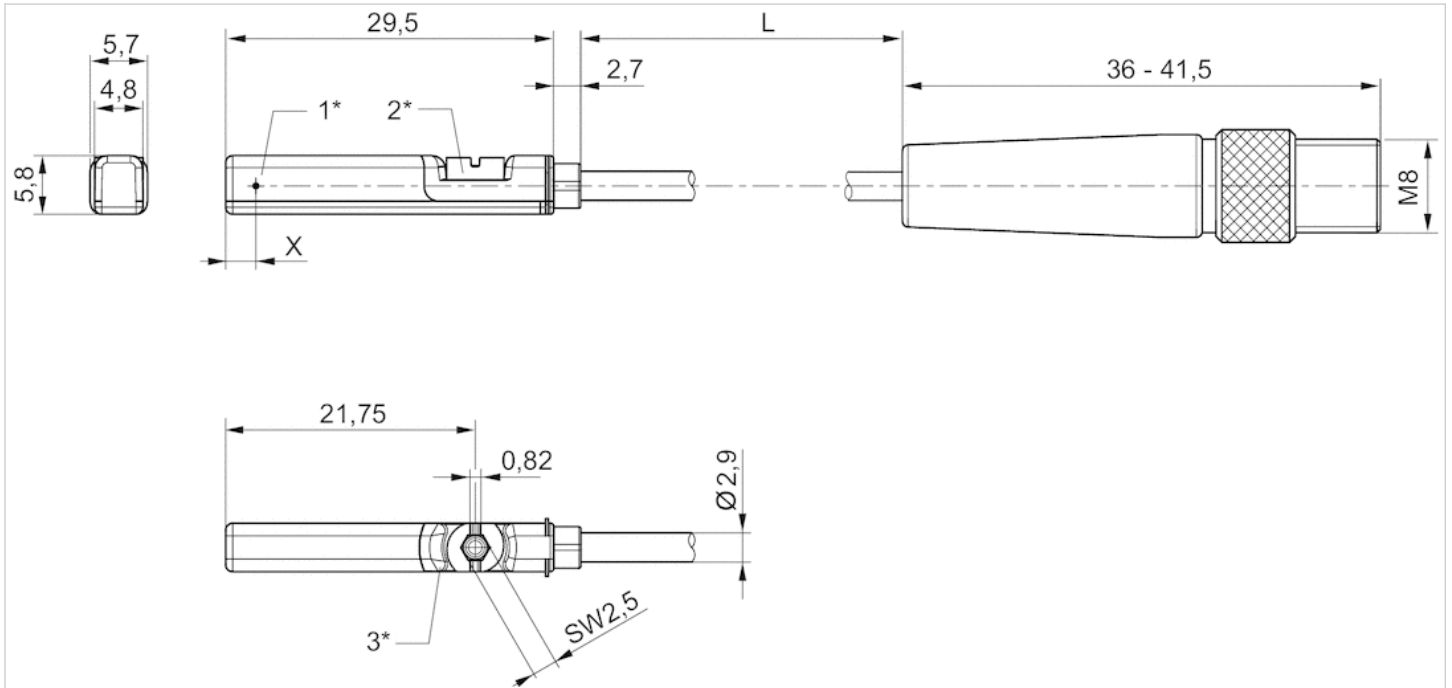
Part No.	Version
R412022873	Protected against polarity reversal
R412022875	Protected against polarity reversal
R412022874	Protected against polarity reversal
R412022859	short circuit resistant Protected against polarity reversal
R412022862	short circuit resistant Protected against polarity reversal
R412022861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

## Technical information

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

## Dimensions

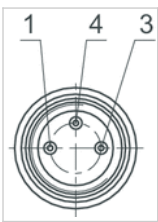
### Dimensions



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

## Pin assignments

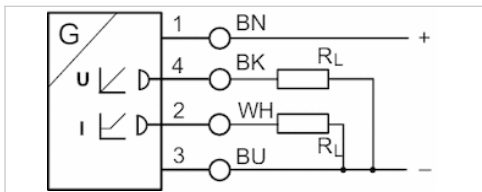
### Pin assignments



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

# Sensors, Series SM6

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



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

## Technical data

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

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



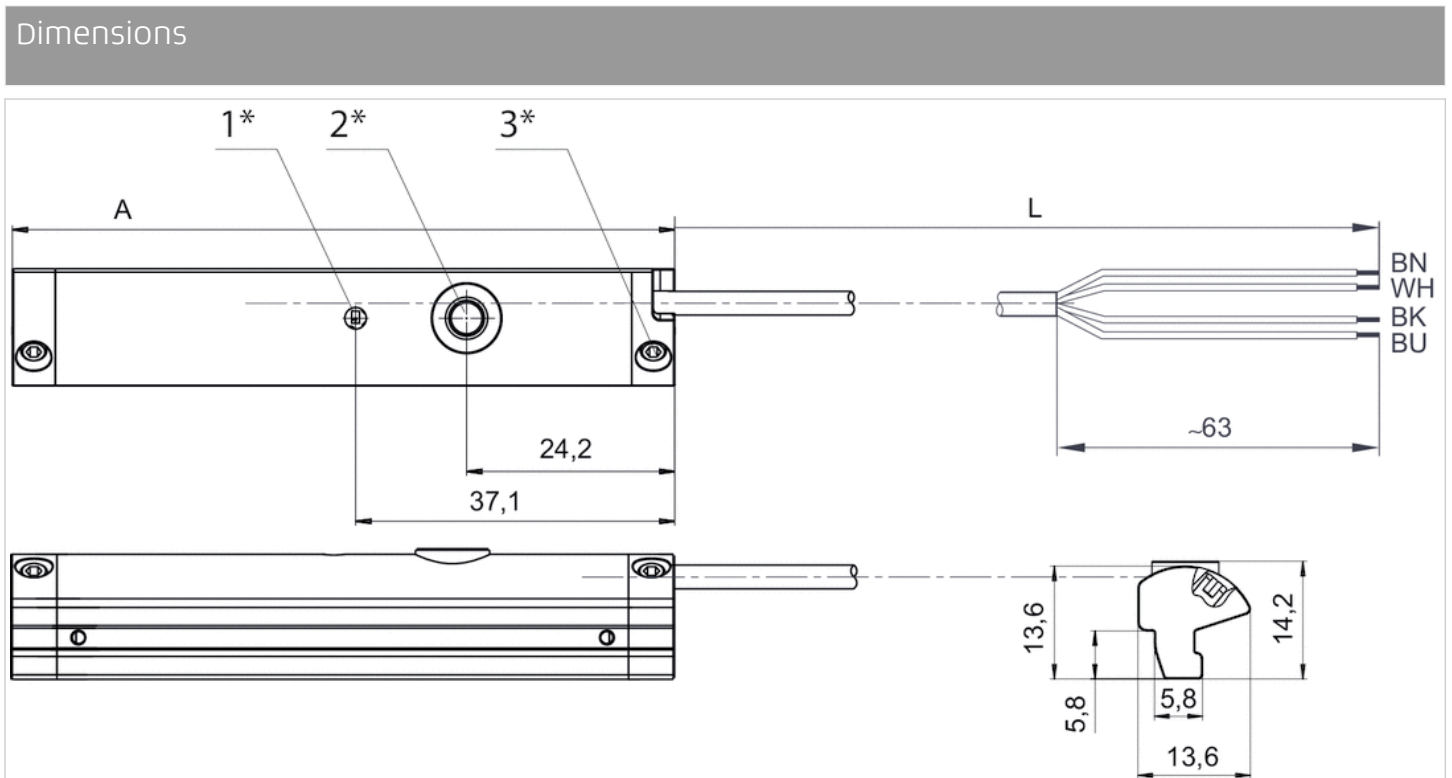
Part No.	max. measuring range	Overall length Sensor A
R412010415	224 mm	237 mm
R412010417	256 mm	269 mm

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

## Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

## Dimensions

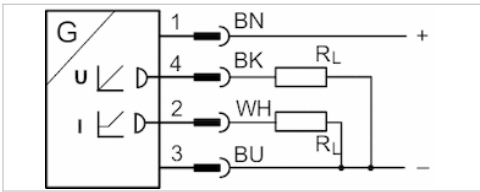


- 1\* = LED 2\* = teach button 3\* = threaded pin M3x11
- L = cable length
- (1) BN=brown
- (2) WH=white
- (3) BU=blue

(4) BK=black  
A = sensor length

# Sensors, Series SM6

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



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

## Technical data

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

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

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

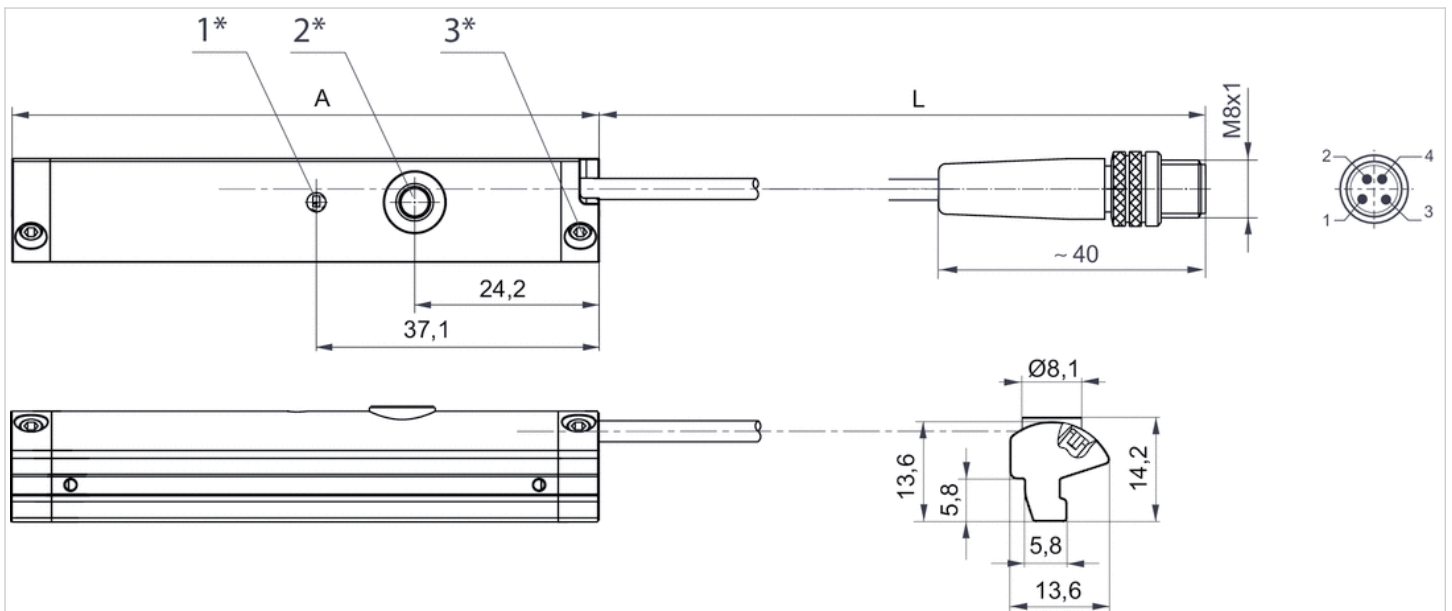
Part No.	Version
R412010142	short circuit resistant Protected against polarity reversal Overload protection
R412010144	short circuit resistant Protected against polarity reversal Overload protection
R412010263	short circuit resistant Protected against polarity reversal Overload protection
R412010265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

## Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

## Dimensions

### Dimensions



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

# Sensor, Series SN6

- Plug, Form B, industry, 2-pin
- Reed
- Indirect mounting for series TRB, ITS, 523



Ambient temperature min./max.	-25 ... 75 °C
Protection class	IP65
Switching point precision	±0,1 mT
Min./max. DC operating voltage	10 ... 48 V DC
Min./max. AC operating voltage	10 ... 48 V AC
LED status display	See table below
Vibration resistance	35 g (50 - 2000 Hz)
Shock resistance	50 g / 11 ms

## Technical data

Part No.		Type of contact	DC switching current, max.
8940410602		Reed	3 A
8940410612		Reed	0.5 A

Part No.	AC switching current, max.	Switching capacity	LED status display
8940410602	3 A	60 W / 60 VA	-
8940410612	0.5 A	50 W / 50 VA	Yellow

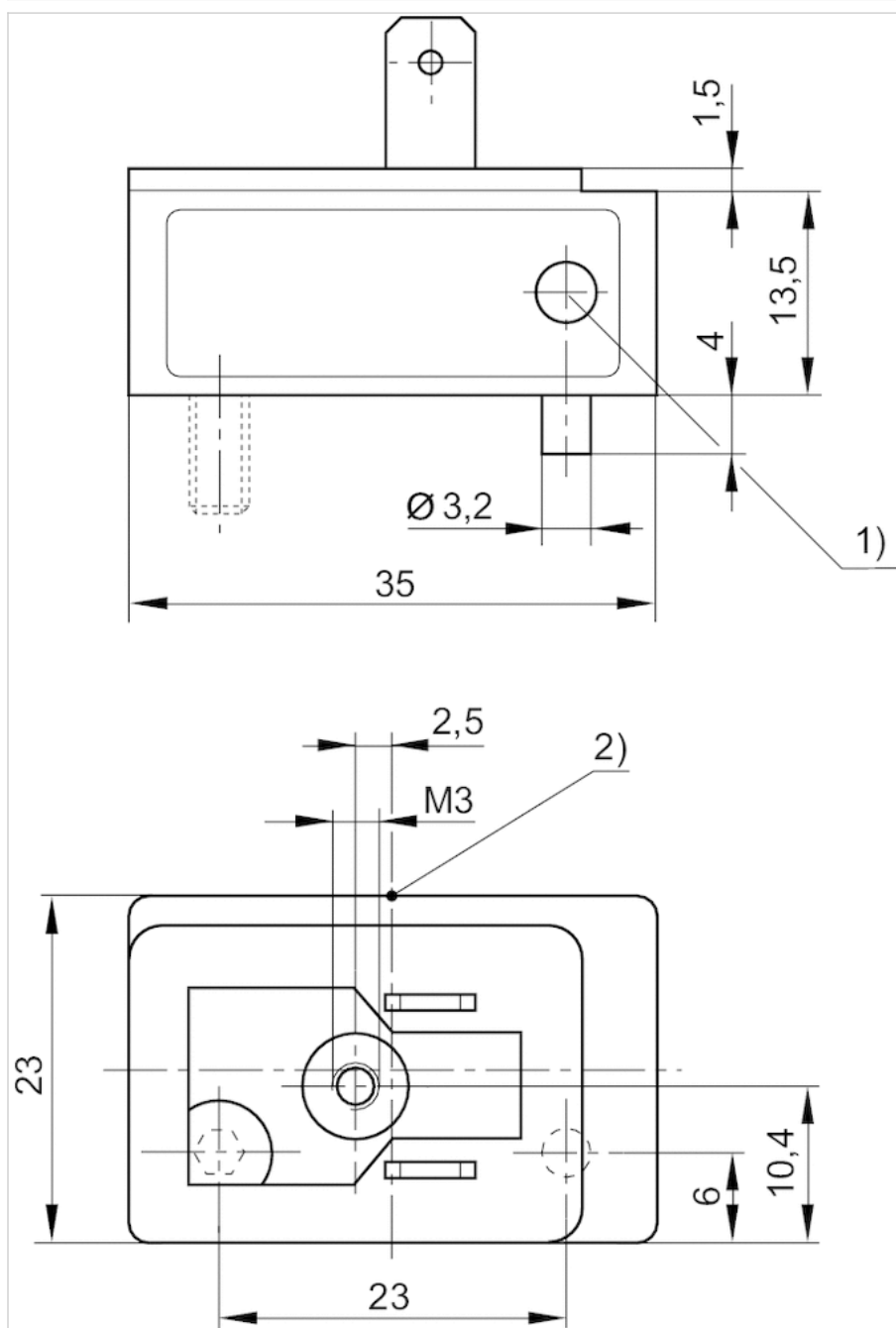
Part No.	Version
8940410602	-
8940410612	Protected against polarity reversal

## Technical information

Material	
Housing	Polyester amide

## Dimensions

## Dimensions



1) LED

2) Switching point





# Sensor, Series SN6

- with cable
- without wire end ferrule, tin-plated, 2-pin
- Heat resistant
- Reed
- Indirect mounting for series TRB, ITS



Ambient temperature min./max.	See table below
Protection class	IP67, IP65
Switching point precision	±0,1 mT
Min./max. DC operating voltage	10 ... 48 V DC
Min./max. AC operating voltage	10 ... 48 V AC
LED status display	Yellow
Vibration resistance	35 g (50 - 2000 Hz)
Shock resistance	50 g / 11 ms
Cable length L	2.5 6 10 m

## Technical data

Part No.		Type of contact	Cable length L	DC switching current, max.
8940412022		Reed	2.5 m	0.5 A
8940412032		Reed	6 m	0.5 A
8940411902		Reed	2.5 m	3 A
8940411922		Reed	10 m	3 A

Part No.	AC switching current, max.	Ambient temperature min./max.	Switching capacity
8940412022	0.5 A	-25 ... 75 °C	50 W / 50 VA
8940412032	0.5 A	-25 ... 75 °C	50 W / 50 VA
8940411902	3 A	-20 ... 105 °C	60 W / 60 VA
8940411922	3 A	-20 ... 105 °C	60 W / 60 VA

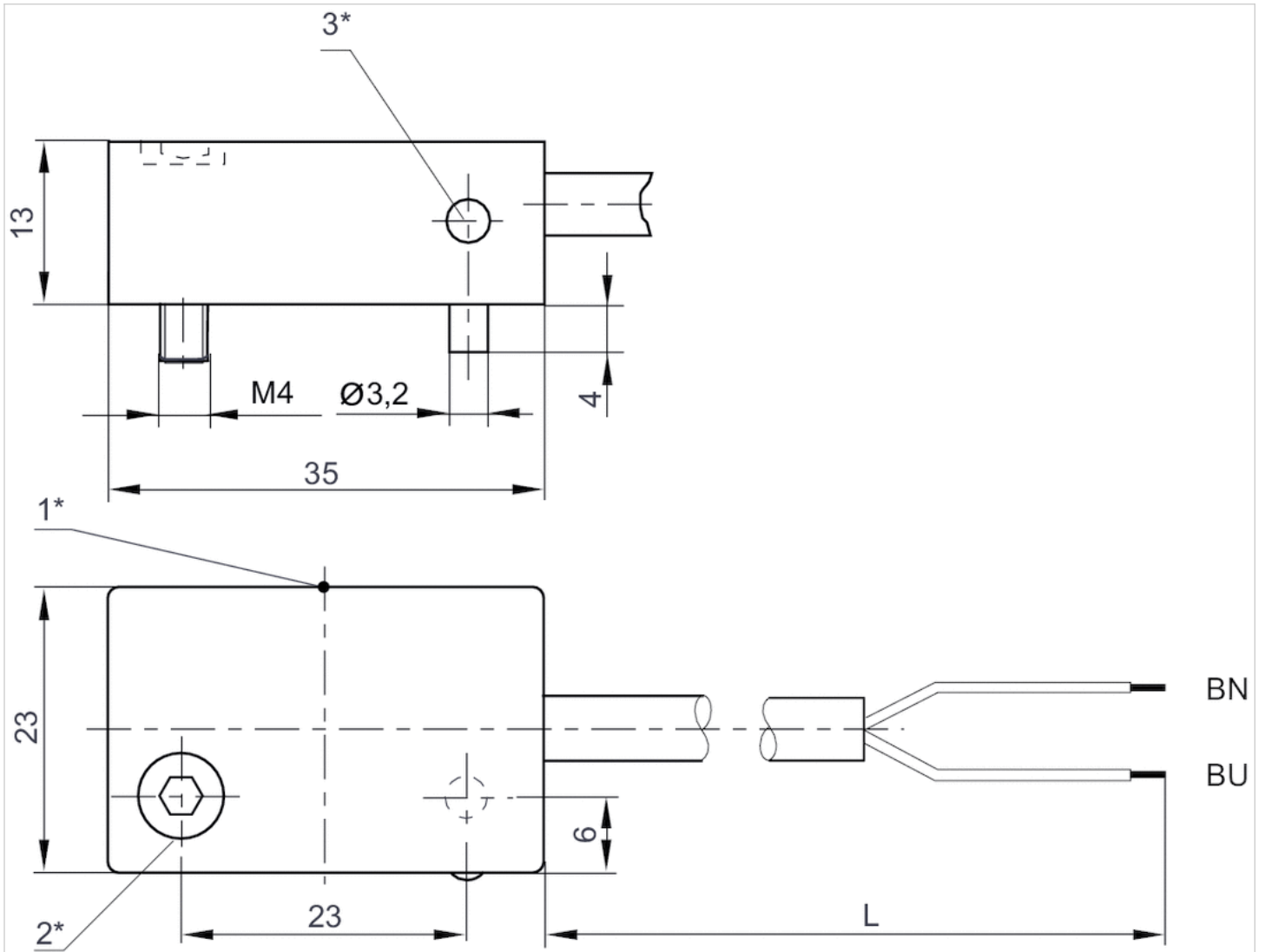
Part No.	Version
8940412022	Protected against polarity reversal
8940412032	Protected against polarity reversal
8940411902	Protected against polarity reversal
8940411922	Protected against polarity reversal

## Technical information

Material	
Housing	Polyester amide
Cable sheath	Polyvinyl chloride

# Dimensions

## Dimensions



1\* = switching point 2\* = clamping screw 3\* = LED  
L = cable length  
BN=brown, BU=blue

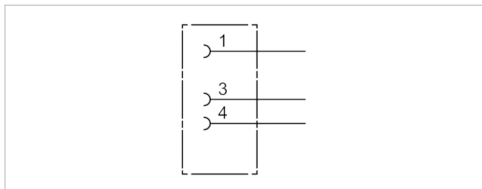


# Round plug connector, Series CON-RD

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



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



## Technical data

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

## Technical information

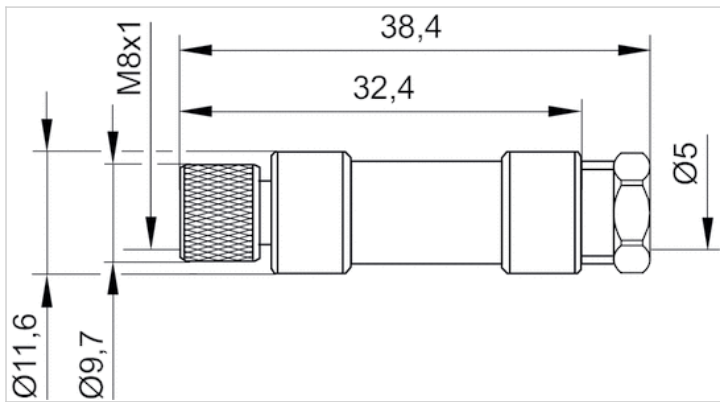
The specified protection class is only valid in assembled and tested state.

## Technical information

Material	
Housing	Polyamide

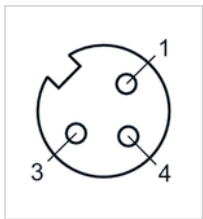
## Dimensions

### Dimensions



## Pin assignments

### Pin assignment, socket

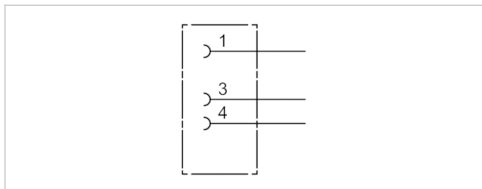


# Round plug connector, Series CON-RD

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



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



## Technical data

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

## Technical information

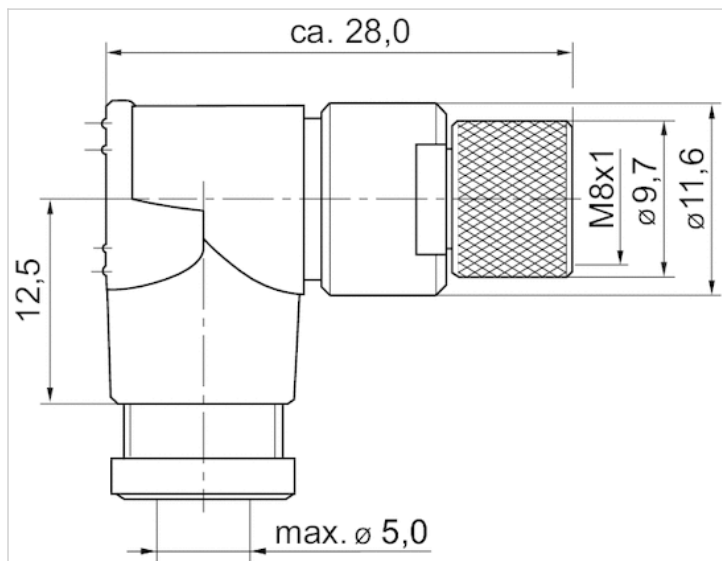
The specified protection class is only valid in assembled and tested state.

## Technical information

Material	
Housing	Polyamide

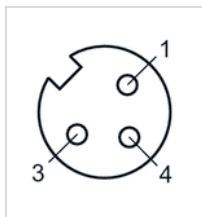
## Dimensions

### Dimensions



## Pin assignments

### Pin assignment, socket

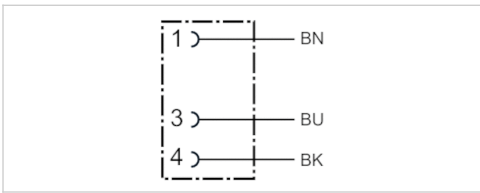


# Round plug connector, Series CON-RD

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



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



## Technical data

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

## Technical information

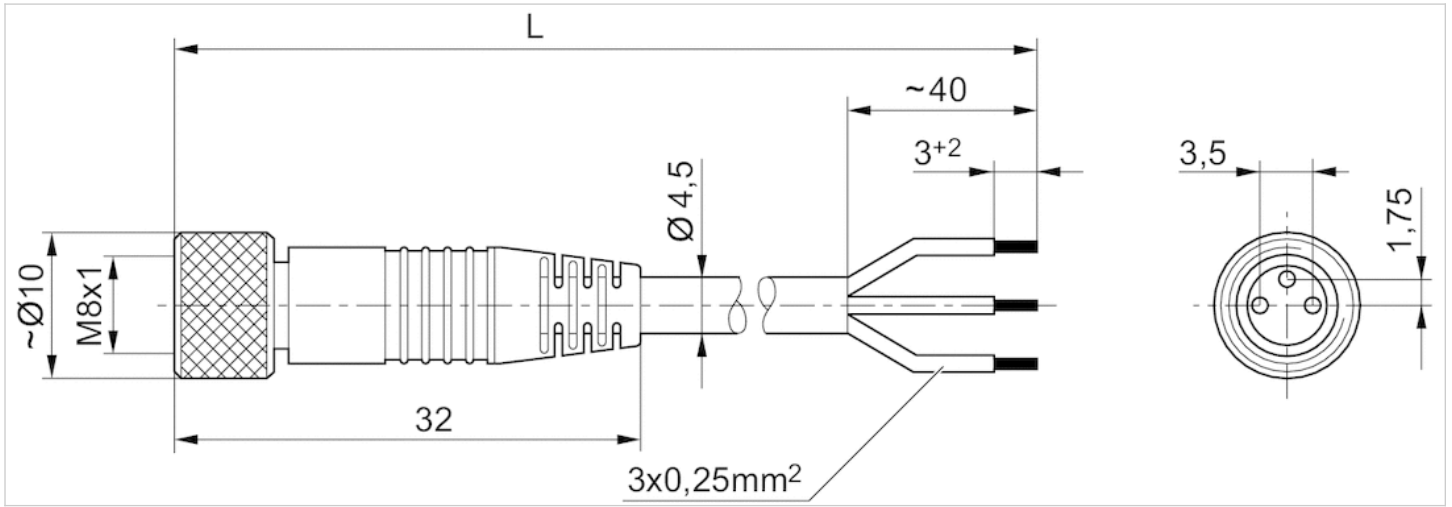
The specified protection class is only valid in assembled and tested state.

## Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

## Dimensions

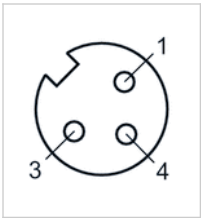
### Dimensions



L = length

## Pin assignments

### Pin assignment, socket



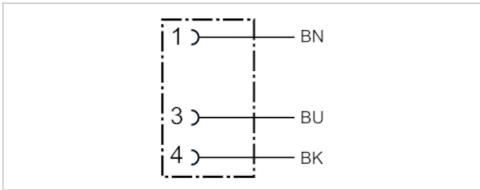
- (1) BN=brown
- (3) BU=blue
- (4) BK=black

# Round plug connector, Series CON-RD

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



Ambient temperature min./max.	-40 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Wire cross-section	0.24 mm <sup>2</sup>
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

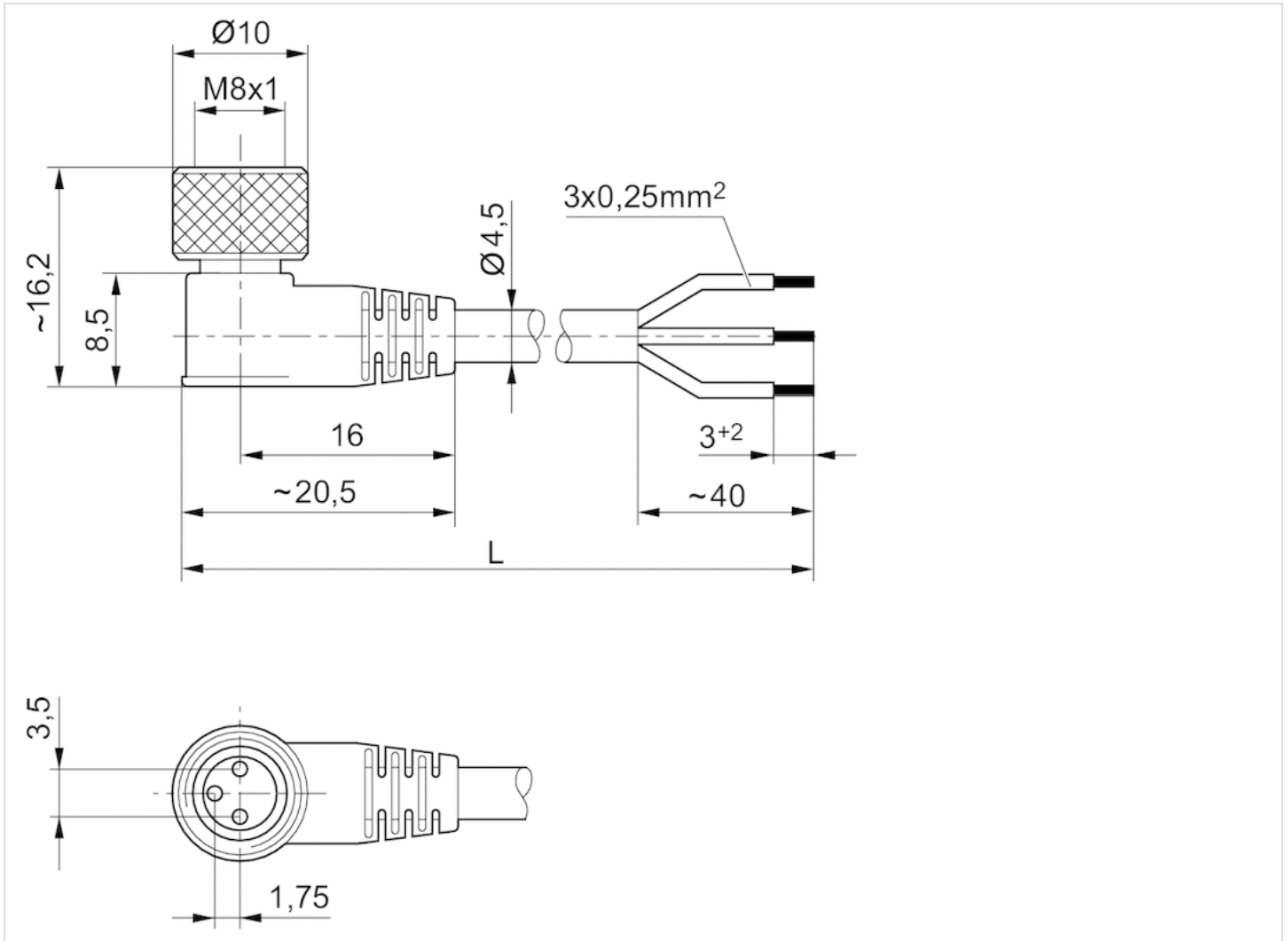
The specified protection class is only valid in assembled and tested state.

## Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

## Dimensions

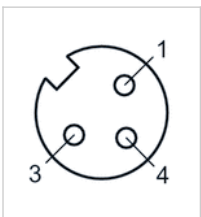
### Dimensions



L = length

## Pin assignments

### Pin assignment, socket



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



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