

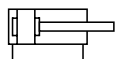
Technical details

Operating pressure	1 ... 10 bar
Temperature range	-20°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Additionally the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Cylinder tube: Al (anodized) End caps: Al (anodized) Piston rod: steel hard chrome plated Seals: PU, NBR

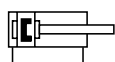


Double acting pneumatic cylinder with magnetic piston for proximity sensors and built-in cushioning rings.

Versions



350, 360
double acting, built-in cushioning rings,



250, 260
double acting, built-in cushioning rings,
with magnetic piston

Order code

88CQ*2-***-***-***-*		
Series	←	Options (mounting holes)
- double acting		- through hole
M with magnetic piston		A* female thread on both sides
Piston Ø	←	Versions
012 12 mm		350 standard version, male thread
016 16 mm		360 standard version, female thread
020 20 mm		250 with magnetic piston, male thread
025 25 mm		260 with magnetic piston, female thread
032 32 mm		
040 40 mm		stroke (mm)
050 50 mm		XXX max. stroke see technical data
063 63 mm		
080 80 mm		
100 100 mm		

* only on request

Not all combinations are possible and available.

Series 88CQ2

double acting

Technical data

Model-no.:	88CQ2-012-...	88CQ2-016-...	88CQ2-020-...	88CQ2-025-...	88CQ2-032-...
Piston Ø (mm)	12	16	20	25	32
Force at 6 bar (N)	Extension	81	81	170	265
	Retraction	109	109	127	223
Connection	M5	M5	M5	M5	G1/8
Speed	30 - 500 mm/s	30 - 500 mm/s	30 - 500 mm/s	30 - 500 mm/s	30 - 500 mm/s
Stroke (mm)	5 - 30	5 - 30	5 - 50	5 - 50	5 - 100
Piston rod thread	male	M5	M6	M8	M10 x 1.25
	female	M3	M4	M5	M6

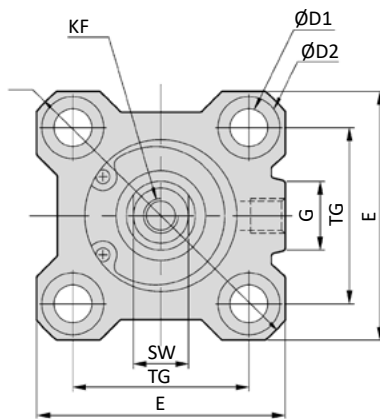
Model-no.:	88CQ2-040-...	88CQ2-050-...	88CQ2-063-...	88CQ2-080-...	88CQ2-100-...
Piston Ø (mm)	40	50	63	80	100
Force at 6 bar (N)	Extension	678	1060	1682	2713
	Retraction	617	951	1574	2543
Connection	G1/8	G1/4	G1/4	G3/8	G3/8
Speed	30 - 350 mm/s	30 - 350 mm/s	30 - 250 mm/s	30 - 250 mm/s	30 - 250 mm/s
Stroke (mm)	5 - 100	5 - 100	5 - 100	5 - 100	5 - 100
Piston rod thread	male	M14 x 1.5	M18 x 1.5	M18 x 1.5	M22 x 1.5
	female	M8	M10	M10	M16

Proximity sensors

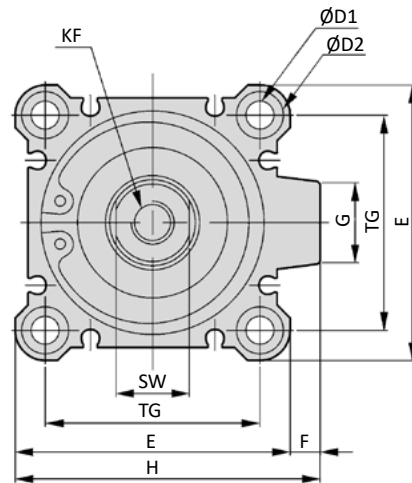


Dimensions series 88CQ2

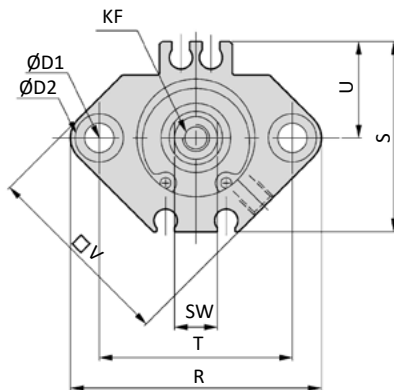
88CQ2, Ø 12 - 25



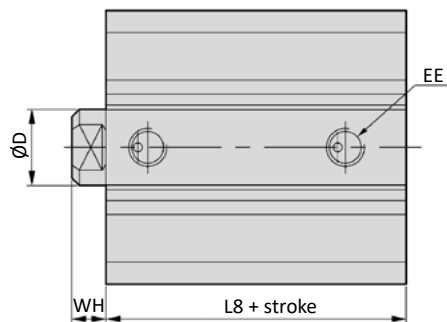
88CQ2, 88CQM2, Ø 32 - 100



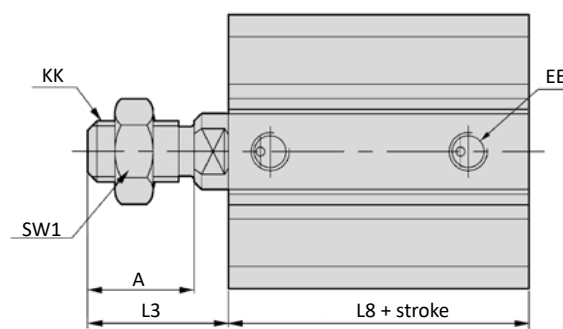
88CQM2, Ø 12 - 25



Versions 260, 360



Versions 250, 350



Series 88CQ2

double acting



Dimensions series 88CQ2

Piston Ø	A	Ø D	Ø D1	Ø D2	Ø D2 (Version A)	E	EE	F	G
12	10.5	6	3.5	6.5 x 3	M4 x 7	25	M5	-	-
16	12	8	3.5	6.5 x 3	M4 x 7	29	M5	-	10
20	14	10	5.5	9 x 7	M6 x 10	36	M5	-	10
25	17.5	12	5.5	9 x 7	M6 x 10	40	M5	-	10
32	23.5	16	5.5	9 x 7	M6 x 10	45	G1/8	4.5	14
40	23.5	16	5.5	9 x 7	M6 x 10	52	G1/8	5	15
50	28.5	20	6.6	11 x 8	M8 x 14	64	G1/4	7	19
63	28.5	20	9	14 x 10.5	M10 x 18	77	G1/4	7	19
80	35.5	25	11	17.5 x 13.5	M12 x 22	98	G3/8	6	25
100	35.5	32	11	17.5 x 13.5	M12 x 22	117	G3/8	6.5	25

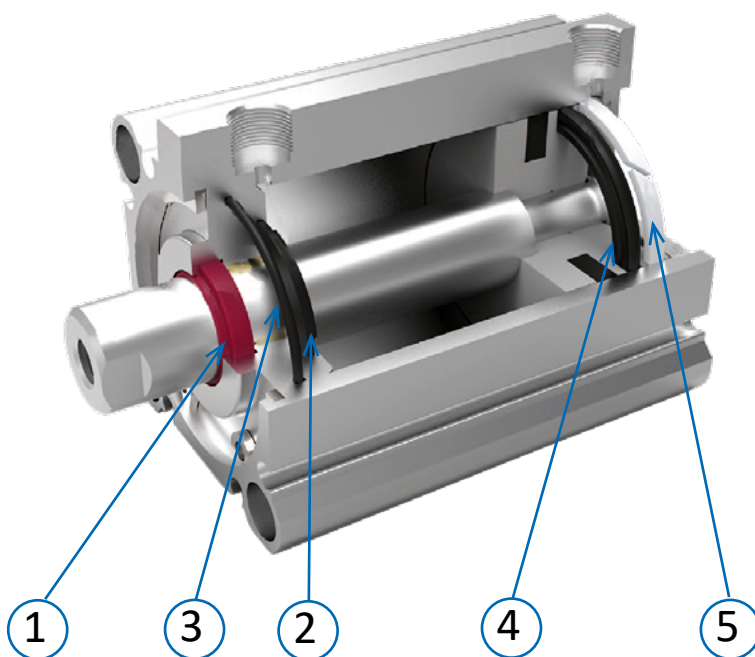
Piston Ø	H	KF	KK	L3	SW	SW1	TG	WH
12	-	M3	M5	14	5	8	15.5	3.5
16	-	M4	M6	15.5	6	10	20	3.5
20	-	M5	M8	18.5	8	13	25.5	4.5
25	-	M6	M10x1.25	22.5	10	17	28	5
32	49.5	M8	M14x1.5	28.5	14	22	34	7
40	57	M8	M14x1.5	28.5	14	22	40	7
50	71	M10	M18x1.5	33.5	17	27	50	8
63	84	M10	M18x1.5	33.5	17	27	60	8
80	104	M16	M22x1.5	43.5	22	32	77	10
100	123.5	M20	M26x1.5	43.5	27	41	94	12

Piston Ø	Stroke (mm)	88CQ2	88CQM2					
		L8	L8	R	S	T	U	V
12	5 - 30	17	28	33	27.5	22	14	25
16	5 - 30	18.5	30.5	37	29.5	28	15	29
20	5 - 50	19.5	31.5	47	35.5	36	18	36
25	5 - 50	22.5	32.5	52	40.5	40	21	40
32	5 - 49	23	33	-	-	-	-	-
	50 - 100	33	33	-	-	-	-	-
40	5 - 49	29.5	39.5	-	-	-	-	-
	50 - 100	39.5	39.5	-	-	-	-	-
50	5 - 49	30.5	40.5	-	-	-	-	-
	50 - 100	40.5	40.5	-	-	-	-	-
63	5 - 49	36	46	-	-	-	-	-
	50 - 100	46	46	-	-	-	-	-
80	5 - 49	43.5	53.5	-	-	-	-	-
	50 - 100	53.5	53.5	-	-	-	-	-
100	5 - 49	53	63	-	-	-	-	-
	50 - 100	63	63	-	-	-	-	-

Order code

Series		88-VS-CQ2-***-**-**		Versions	
88-VS-CQ2		repair kit for series 88CQ2		01	standard version
Piston Ø					
012	12 mm				
016	16 mm				
020	20 mm				
025	25 mm				
032	32 mm				
040	40 mm				
050	50 mm				
063	63 mm				
080	80 mm				
100	100 mm				

Content



Standard version

Position	Product description	Quantity
1	piston rod seal (PUR)	1
2	damping seal (NBR)	1
3	O ring (NBR)	1
4	piston seal (NBR)	1
5	guide ring (PTFE)	1



Please grease the running surfaces after fitting the seals.
We recommend our assembly grease 21-MP-01-00030-50.



Series 88-ZS-C

Proximity sensors

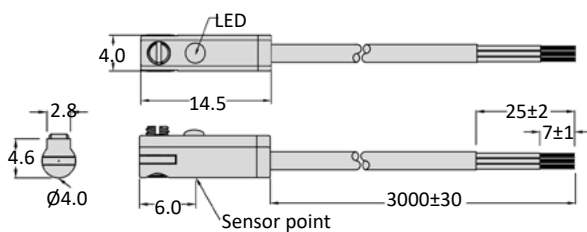


Technical data

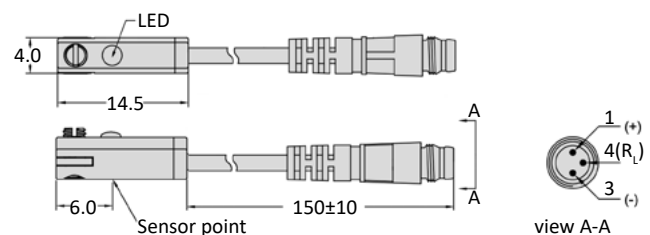
Model-no.:	88-ZS-C-6700-03	88-ZS-C-6701
Design	C-Nut	C-Nut
Contact function	3-pole inductive	3-pole inductive
Output	NO	NO
Rated operational voltage	PNP	PNP
Rated operational current I_E	5 ... 30 V DC	5 ... 30 V DC
Max. voltage drop at I_E	≤ 200 mA	≤ 200 mA
Breaking capacity	$\leq 0,5$	$\leq 0,5$
Cable length	6 W	6 W
Temperature range	3 m	0,15 m with M8 connection
Protection	-10 ... +70°C	-10 ... +70°C
Switching status indication	IP 67	IP 67
Statusanzeige	LED red	LED red

Dimensions

88-ZS-C-6700-03



88-ZS-C-6701



Mounting

The sensors are mounted at the groove of the cylinder profile. It is fixed by turning the fixing screw at the sensor clockwise.

Connection cable M8

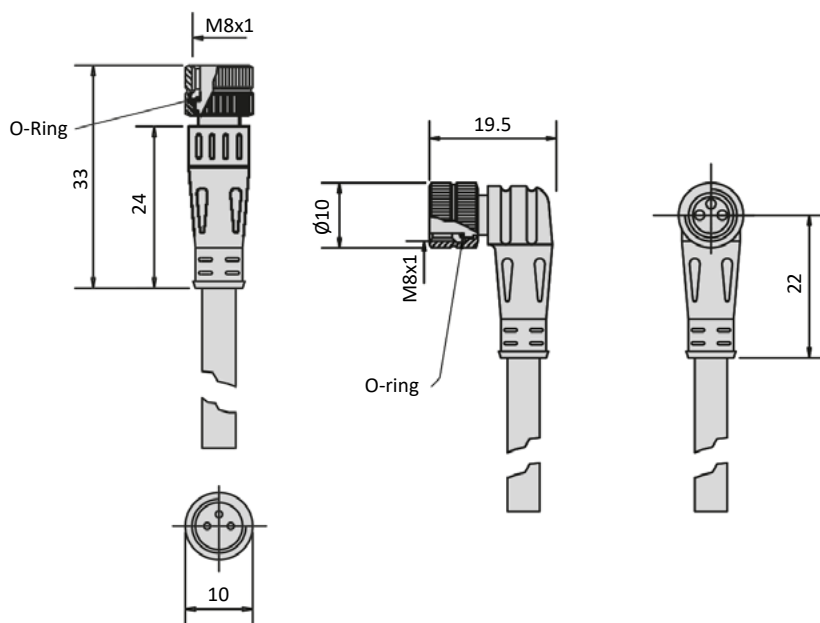
Contacts	M8 Plug socket
Protection	IP 67 according to EN 60529 in conjunction with suitable connection plug
Duty cycle	100 %
Temperature range*	-25°C...+90°C
max. voltage	60 V AC / DC
Use for	Solenoids with M8 plug, cylinder switch with M8 plug



Model-no.:	KA-10-01	KA-30-01	KA-50-01	KA-100-01
Contacts	M8 Socket, straight	M8 Socket, straight	M8 Socket, straight	M8 Socket, straight
Mounting	Coupling nut	Coupling nut	Coupling nut	Coupling nut
Cable	3-pin	3-pin	3-pin	3-pin
Length (L)	1 m	3 m	5 m	10 m

Model-no.:	KA-11-01	KA-31-01	KA-51-01	KA-101-01
Contacts	M8 Socket, elbow 90°	M8 Socket, elbow 90°	M8 Socket, elbow 90°	M8 Socket, elbow 90°
Mounting	Coupling nut	Coupling nut	Coupling nut	Coupling nut
Cable	3-pin	3-pin	3-pin	3-pin
Length (L)	1 m	3 m	5 m	10 m

Dimensions



Pin assignment



1 = brown
3 = blue
4 = black

Version code

Cylinder - * * * - xxxx		
Cylinder double acting	Piston rod versions	Seals, Air connection
0 piston rod on one side with magnetic piston adjustable cushioning	0 piston rod stainless steel male thread	0 standard seals (PUR, NBR) air connection G thread
1 piston rod on one side adjustable cushioning	1 piston rod stainless steel female thread	1 standard seals (PUR, NBR) air connection NPT thread
2 piston rod on one side with magnetic piston	2 piston rod stainless steel female thread with guide and non rotating	2 high temperature version (FKM) air connection G thread
3 piston rod on one side	3 piston rod stainless steel male thread non rotating	3 high temperature version (FKM) air connection NPT thread
4 double end piston rod with magnetic piston adjustable cushioning	4 piston rod stainless steel female thread non rotating	4 standard seals (NBR) piston rod seal FKM air connection G thread
5 double end piston rod adjustable cushioning	5 piston rod steel hard chrome plated male thread	5 standard seals (NBR) piston rod seal FKM air connection NPT thread
6 double end piston rod with magnetic piston	6 piston rod steel hard chrome plated female thread	
7 double end piston rod	7 Doppelkolbenstange	
8 double end piston rod through hollow with magnetic piston	8 piston rod stainless steel without thread	
	9 piston rod steel hard chrome plated female thread with guide and non rotating	
	Axxx piston rod stainless steel male thread lengthened by xxx mm [#]	
	Bxxx piston rod stainless steel female thread lengthened by xxx mm	
	Cxxx piston rod steel hard chrome plated male thread lengthened by xxx mm [#]	
	Dxxx piston rod steel hard chrome plated female thread lengthened by xxx mm [#]	
	Exxx piston rod stainless steel without thread lengthened by xxx mm [#]	
	Fxxx piston rod steel hard chrome plated without thread lengthened by xxx mm [#]	
	V piston rod stainless steel AISI 316 (1.4401) male thread	
	xxxx - Additions* ATEX EX X cylinders in accordance with 2014/34/EU (ATEX) E8 piston rod seal E8, two-part, with plastic scraper	
	* Use taking into account the maximum length of 20 characters for an article number	

Cylinder single acting

0	piston rod on one side with magnetic piston normally retracted
1	piston rod on one side normally retracted
2	piston rod on one side with magnetic piston normally extended
3	piston rod on one side normally extended
4	double end piston rod with magnetic piston
5	double end piston rod

[#] with a double end piston rod, only one side is extended

Exceptions

Round cylinders are described by the designation of the series.
A design code is only used if there are deviations from the standard described.

If it is not possible to describe the version of the cylinder using the version code, a project number in the form Pxxxx should be used.

Not all options are suitable for all cylinder series