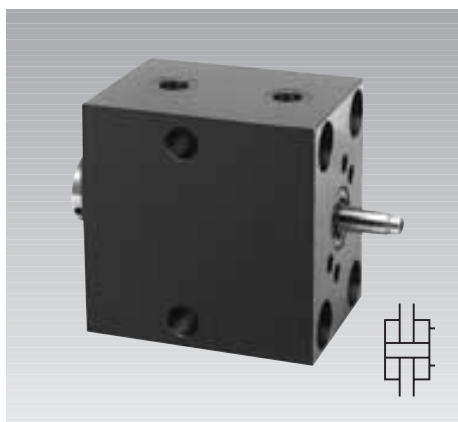




Block Cylinder double acting, with extended piston rod for position monitoring max. operating pressure 500 bar



Description

Double-acting block cylinder with extended piston rod for position monitoring. Tolerances for length and angular dimensions as per DIN 7168-m
Piston material: Casehardening steel, hardened.
Housing: Free cutting steel
VITON® seals for temperatures up to max. 150°C

Important notes

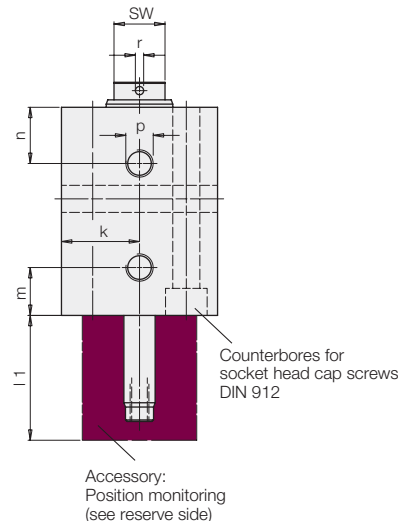
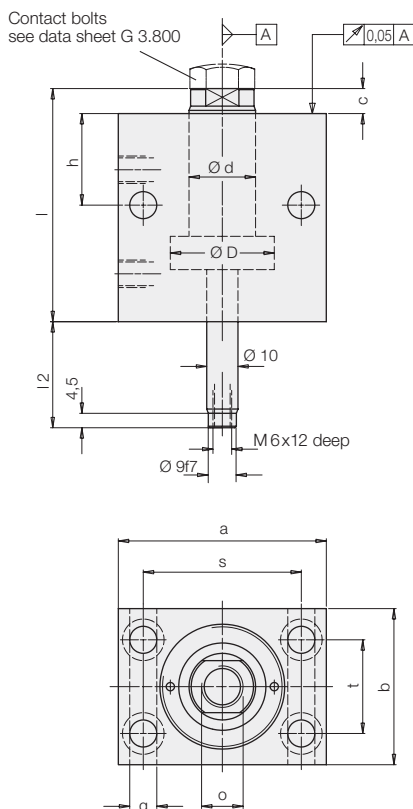
In case of pressures exceeding 160 bar, it is necessary to install an additional support at the back, if the cylinder is fixed by means of two screws through the cross holes (see data sheet B 1.509).

Operating conditions and other data see data sheet A 0.100.

Position monitoring (accessory)
see reverse page



The above figure shows the block cylinder with position monitoring type B (see reverse page) as well as contact bolt with coupling pin (see data sheet G 3.800).



Piston Ø D	[mm]	25	32	40	50	63	80	100	125
Rod Ø d	[mm]	16	20	25	32	40	50	63	80
Stroke ±1	[mm]	20	25	25	25	30	32	40	40
Pressure force at	100 bar [kN]	4.1	7.2	11.8	18.9	30.4	49.5	77.8	122
	500 bar [kN]	20.6	36.2	58.9	94.2	152	247	389	610
Pull force at	100 bar [kN]	2.9	4.9	7.7	11.6	18.6	30.6	47.4	72.4
	500 bar [kN]	14.5	24.5	38.3	58	93	153	237	362
Oil volume at 10 mm stroke									
Adv. flow/return flow	[cm³]	4.1/2.9	7.2/4.9	11.8/7.7	18.9/11.6	30.4/18.6	49.5/30.6	77.8/47.4	122/72.4
a	[mm]	65	75	85	100	125	160	200	230
b	[mm]	45	55	63	75	95	120	150	180
c	[mm]	7	10	10	10	14	14	15	16
g	[mm]	8.5	10.5	10.5	13	17	21	25	32
h	[mm]	33	38	40	44	50	60	64	82
k	[mm]	22.5	27.5	31.5	37.5	47.5	60	75	90
l	[mm]	83	96	100	110	124	134	145	166
l1	[mm]	45	45	45	45	45	65	65	65
l2	[mm]	27	32	32	32	37	47	47	47
m	[mm]	23	22	22	23	25	24	25	31
n	[mm]	18	22	24	27	26	34	35	47
o x depth of thread	[mm]	M10x15	M12x15	M16x25	M20x30	M27x40	M30x40	M42x60	M48x70
p		G 1/4	G 1/4	G 1/4	G 1/4	G 1/2	G 1/2	G 1/2	G 1/2
r	[mm]	-	-	4	4	4	5	6	8
s	[mm]	50	55	63	76	95	120	158	180
t	[mm]	30	35	40	45	65	80	108	130
SW	[mm]	13	17	-	-	-	-	-	-

Part-no. 1543-407 1544-407 1545-407 1546-407 1547-407 1548-407 1549-407 1550-407
without position monitoring
 (accessories see reserve side)





Description

The position monitoring will be screwed on the cylinder bottom and can also be mounted in a position rotated by 180°. Different versions are available according to the application conditions. A control cam is provided at the extended piston rod causing the activation of the proximity switches. The adjustment of the switching position is effected by a displacement of the proximity switches in the lateral groove. The proximity switches are switched on in a stroke range of approx. 6 mm by means of the control cam. The minimum distance to the positions to be monitored depends on the switch type and is indicated in the table.

Function

1. Signal – unclamped position, i.e. piston rod is retracted
2. Signal – clamped position, i.e. piston rod is extended and is in the clamped area

Important notes

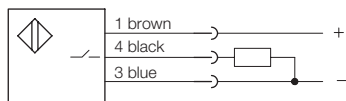
The position monitoring system is not suitable for applications where coolants are used. Additional covers also have to be provided against swarf.

Designing – Application Conditions – Safety Measures

Careful design is required, the corresponding application conditions and safety measures have to be planned and guaranteed.

Please do not hesitate to contact us for further information.

Electric circuit diagram

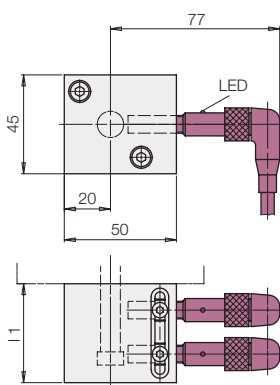


Technical data for inductive proximity switches

Voltage UB	10 ... 30 VDC
Ripple	max. 15%
Switching function	closing
Basic technology	PNP
Material of housing	stainless steel
Code class according to DIN 40050	IP 67

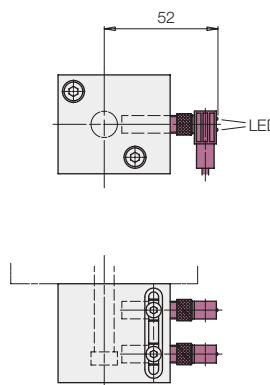
Type A

Standard version



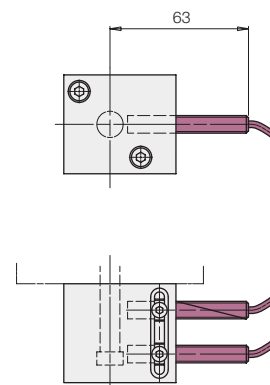
Type B

Compact version



Type C

for high environmental temperature

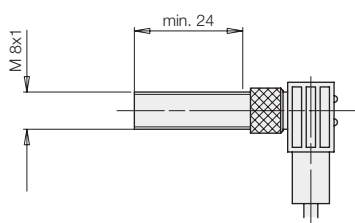


Environmental temperature TA		- 25° ... + 70°C	- 25° ... + 70°C	- 25° ... + 120°C
Min. distance of the switching positions [mm]		13	8	8
Connection type		Plug	Plug	Teflon cable 3 x 0.14 mm ²
LED function display		Yes	At plug	No
Max. constant current [mA]		200	200	200 – off 70°:100
Nominal switch distance [mm]		1.5	1.5	2
Short circuit proof		Yes	Yes	No
Connection cable [m]		5	5	3
Proximity switch	Part-no.	3829-077	3829-098	3829-087
Plug with cable	Part-no.	3829-088	3829-099	-
L1 complete [mm]		45	45	45
Position monitoring up to 30 mm total stroke	Part-no.	0382-300	0382-301	0382-302
L1 complete [mm]		65	65	65
Position monitoring up to 50 mm total stroke	Part-no.	0382-310	0382-311	0382-312

Position monitoring without proximity switches

In case of use of own inductive proximity switches the switching unit M 8x1 is also available without proximity switches.

Required dimensions



			Part-no.
Total stroke [mm]	up to 30		0382-303
Total stroke [mm]	up to 50		0382-313