

stack type actuators

series P/S

- stack type actuator hermetic insulated
- applications in aggressive and humid environments (up to IP68)
- integrated mechanical pre-load
- very small and compact design
- motion up to 70 μm
- high stiffness up to 189 N/ μm

applications:

- use under special conditions
- valve technology
- automatisisation



fig.: series P/S

Concept

The piezo actuators of the series P/S based on multilayer stack type actuators without lever transmission. Depending on the type, actuators with a stroke of 18 μm up to 70 μm are available. They have a hermetically sealed housing. The special housing allows for the use in aggressive and humid environments. Due to the hermetic insulation longer life time is achieved.

Specials

The series P/S actuators are pre-loaded by the housing only. These actuators can handle depending on the ceramic size, loads up to 3400N. The construction of the housing tightly encloses the stack, thereby avoiding any mechanical play.

Mounting/Installation

The M3-thread in the bottom plate allows for easy adaptation in existing systems and guarantees an exact positioning. For mounting also the spanner flats on the bottom plate can be used. During installation and use, it is important not to subject the actuator tip to non axial forces.

Please pay attention to our “notes for mounting”, which are available as download on our homepage.

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technical data:

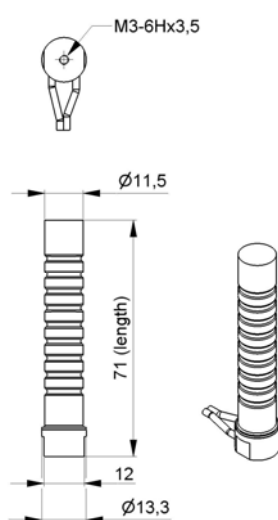
series P/S		unit	P 18/S08	P 50/S08	P 70/S08	P 18/S13	P 50/S13	P 70/S13	P 18/S22	P 50/S22	P 70/S22
part. no.			P-752-30	P-755-30	P-757-30	P-752-00	P-755-00	P-757-00	P-752-50	P-755-50	P-757-50
motion (± 10)%*		μm	18	50	70	18	50	70	18	50	70
capacitance (± 20)%**		μF	0.5	1.5	2	1.5	4.5	6	5.4	16.2	21.6
resolution***		nm	0.03	0.1	0.14	0.03	0.1	0.14	0.03	0.1	0.14
resonant frequency***		kHz	18	6	4	14	10	8	24	9	6
stiffness***		N/ μm	11.1	4.0	2.9	44.4	16	11.4	188.9	68	48.6
blocking force***		N	200	200	200	800	800	800	3400	3400	3400
operating voltage		V	-20...+130								
connector	voltage		stainless steel								
cable length		m	0.8m; without connector; color coded wires								
dimensions	length L	mm	30	70	90	31	71	91	30.5	73.5	90.5
	diameter D	mm	8	8	8	13.3	13.3	13.3	22	22	22
	spanner flats	mm	7	7	7	12	12	12	20	20	20

series P/S according standard IP 68		unit	P 18/S08	P 50/S08	P 70/S08	P 18/S13	P 50/S13	P 70/S13
part no.			P-752-39	P-755-39	P-757-39	P-752-09	P-755-09	P-757-09
motion (± 10)%*		μm	18	50	70	18	50	70
capacitance (± 20)%**		μF	0.5	1.5	2	1.5	4.5	6
resolution***		nm	0.03	0.1	0.14	0.03	0.1	0.14
resonant frequency***		kHz	18	6	4	14	10	8
stiffness***		N/ μm	11.1	4.0	2.9	44.4	16	11.4
blocking force***		N	200	200	200	800	800	800
cable configuration		m	length: 1m with connector LEMO 0S.302					
dimensions	length L	mm	33.5	73.5	93.5	34	74	94
	diameter D	mm	14	14	14	21	21	21
	spanner flats	mm	13	13	13	20	20	20

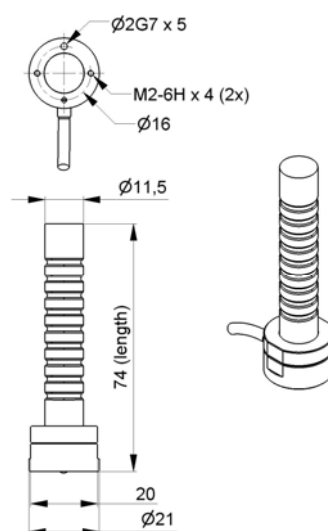
* typical value measured with NV 40/3

** typical value for small electrical field strength

*** please see piezoline

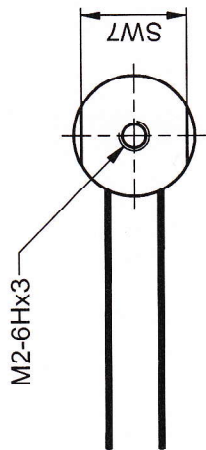


series P/S 13
example: P 50/S13 (P-755-00)

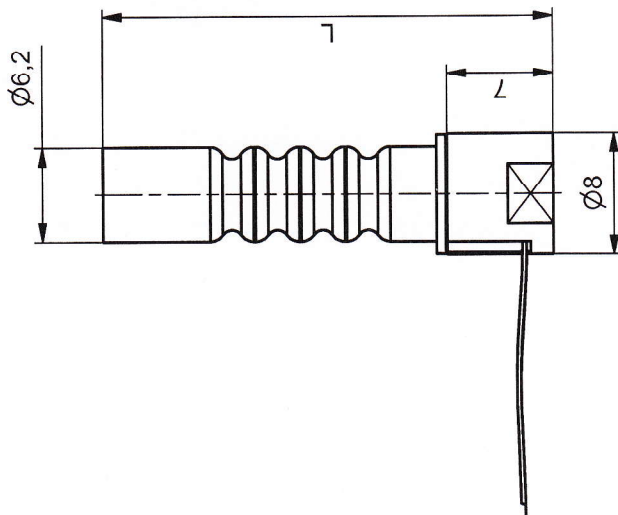
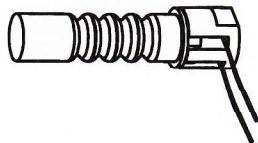


series P/S according standard IP 68
example: P 50/S13 (P-755-09)

All drawings are subject to change without notice. For latest version please check www.piezोजना.com



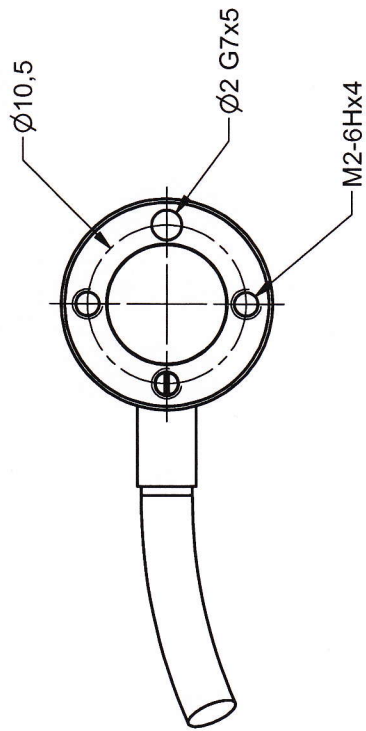
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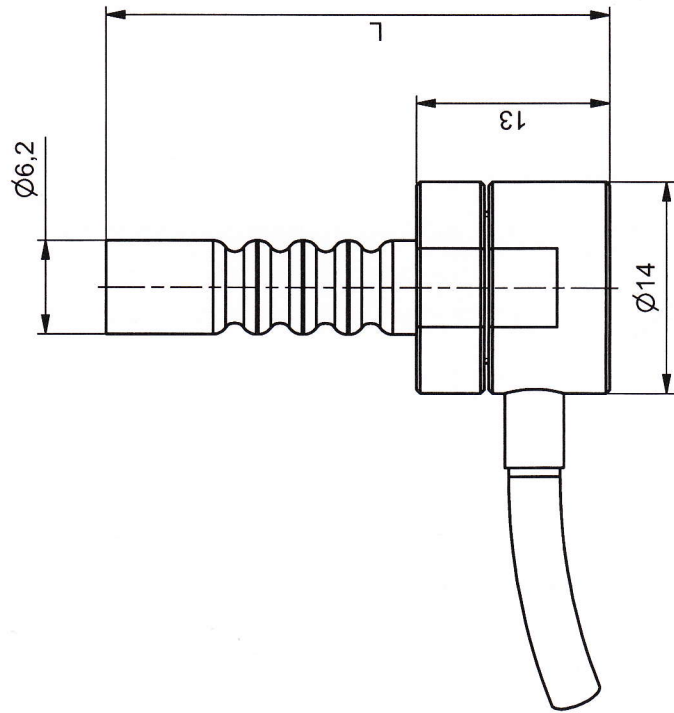
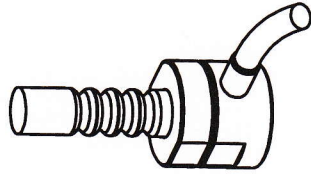
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part no.	P-752-30	P-755-30	P-757-30
L	30	70	90

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		scale	2:1
		customers drawing	piezosystem jena

ORIGINAL



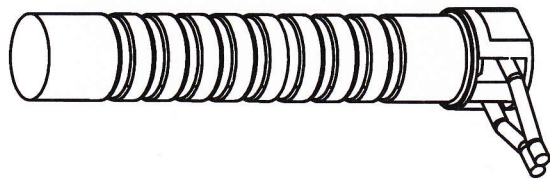
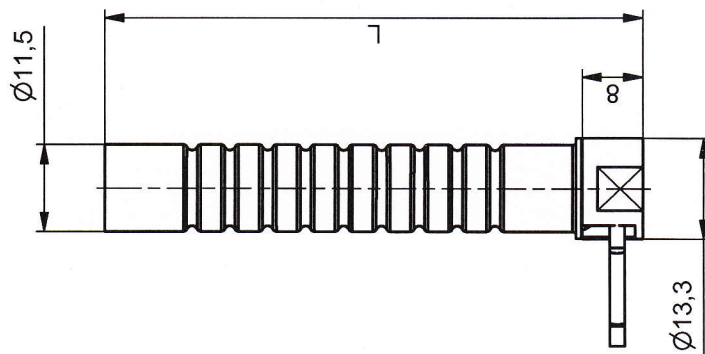
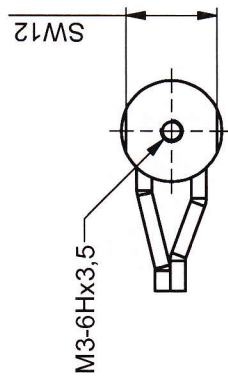
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ORIGINAL

part name	P 18/S 08	P 50/S 08	P 70/S 08
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L	33,5	73,5	93,5

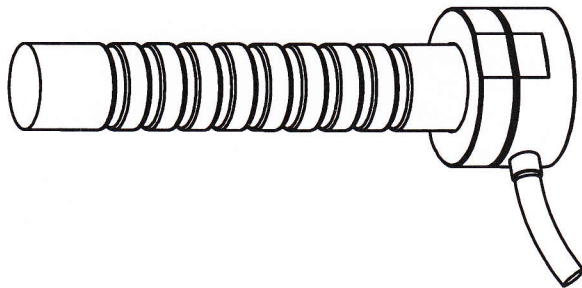
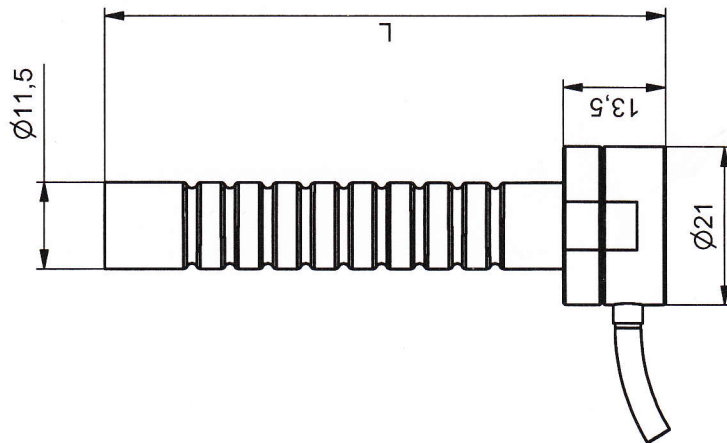
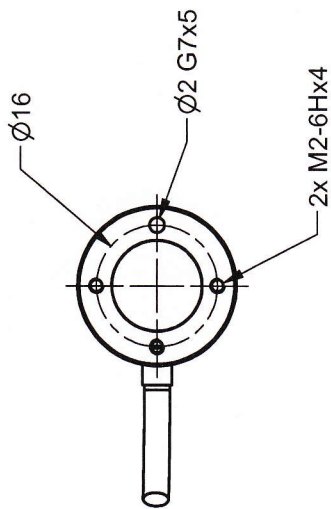
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scale	2:1	customers drawing	piezosystem jena



part name	P 18/S 13	P 50/S 13	P 70/S 13
part no.	P-752-00	P-755-00	P-757-00
L	31	71	91

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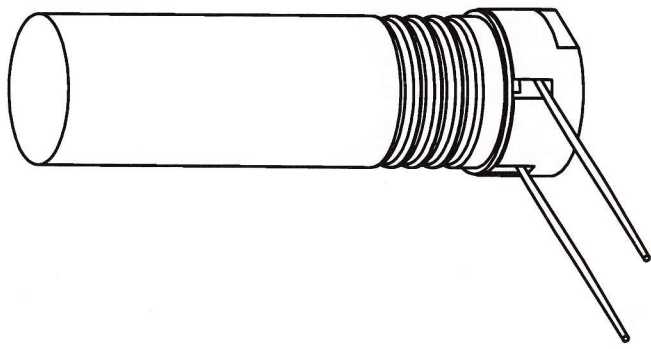
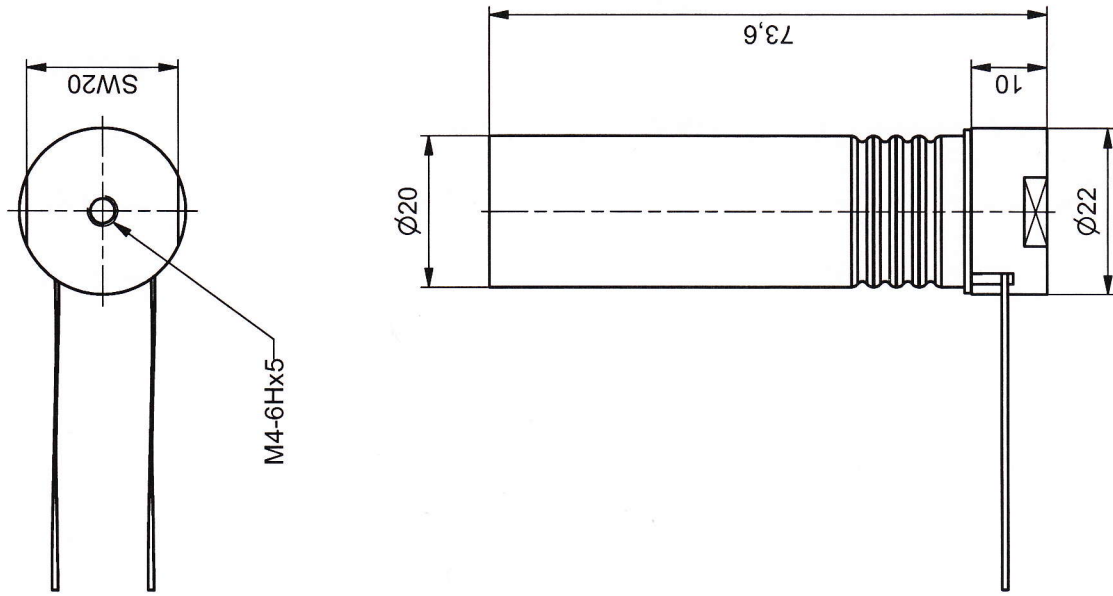
ORIGINAL



part name	P 18/S 13	P 50/S 13	P 70/S 13
part no.	P-752-09	P-755-09	P-757-09
L	34	74	94

part-no.	P 75x 09	part-name	P xx/S 13 (IP 68)
file name	P-75x-09	OK: date/sign.	26.07.2009
scale	1:1	customers drawing	piezosystem jena

ORIGINAL



part name	P 18/S 22	P 50/S 22	P 70/S 22
part no.	P-752-50	P-755-50	P-757-50
L	30,5	73,5	90,5

part-no.	P 75x 50	part-name	P xx/S 22
file name	P-75x-50	OK: date/sign.	26.02.2009
scale	1:1	customers drawing	piezosystem jena

ORIGINAL