

## P/S Series

### Stack type actuators

#### Concept:

The actuators of the P/S series are based on multilayer stack type actuators without lever transmission. Depending on the model, actuators are available with a stroke of 18  $\mu\text{m}$  up to 70  $\mu\text{m}$ . They have a hermetically sealed housing. The special housing allows for the use in aggressive and humid environments. Due to the hermetic insulation, a longer lifetime is achieved.

#### Specials:

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

#### Interfaces:

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



Image: P/S Series

#### Product highlights:

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

#### Applications:

- use under very special conditions
- valve technology
- automatization

## P/S Series

### Technical data:

P/S Series	unit	P18/S08	P50/S08	P70/S08	P18/S13	P50/S13	P70/S13	P18/S22	P50/S22	P7/S22	
<b>part no.</b>	-	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	
<b>motion (<math>\pm 10\%</math>)*</b>	$\mu\text{m}$	18	50	70	18	50	70	18	50	70	
<b>capacitance (<math>\pm 20\%</math>)**</b>	$\mu\text{F}$	0.5	1.5	2	1.5	4.5	6	5.4	16.2	21.6	
<b>resolution***</b>	nm	0.03	0.1	0.14	0.03	0.1	0.14	0.03	0.1	0.14	
<b>resonant frequency***</b>	kHz	18	6	4	14	10	8	24	9	6	
<b>stiffness</b>	N/ $\mu\text{m}$	11.1	4.0	2.9	44.4	16	11.4	188.9	68	48.6	
<b>blocking force***</b>	N	200	200	200	800	800	800	3400	3400	3400	
<b>operating voltage</b>	V	-20...+130									
<b>connector</b>	<b>voltage</b>	-									
		stainless steel									
<b>cable length</b>	m	0.8m; without connector, color coded wires									
<b>dimensions</b>	<b>length</b>	mm	30	70	90	31	71	91	30.5	73.5	90.5
	<b>diameter</b>	mm	8	8	8	13.3	13.3	13.3	22	22	22
	<b>spanner flats</b>	mm	7	7	7	12	12	12	20	20	20

\* typical value measured with NV 40/3 amplifier

\*\* typical value for small electrical field strength

\*\*\* please see "piezoline" on our website

## P/S Series

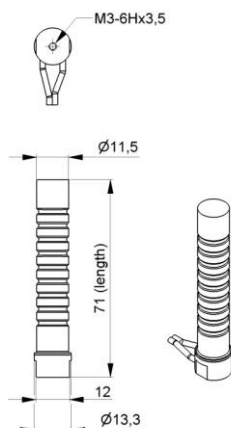
### Technical data:

P/S Series according to standard IP68	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 ( $\pm 10\%$ )*	$\mu\text{m}$	18	50	70	18	50	70	
capacitance ( $\pm 20\%$ )**	$\mu\text{F}$	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/ $\mu\text{m}$	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	mm	33.5	73.5	93.5	34	74	94
	diameter	mm	14	14	14	21	21	21
	spanner flats	mm	13	13	13	20	20	20

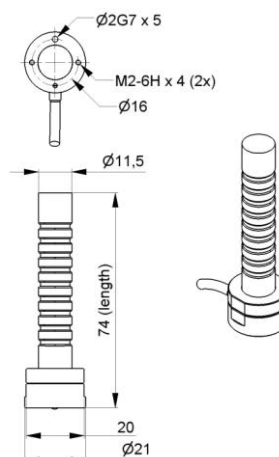
\* typical value measured with NV 40/3 amplifier

\*\* typical value for small electrical field strength

\*\*\* please see "piezoline" on our website



**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)

Rights reserved to change specifications as progress occurs without notice!