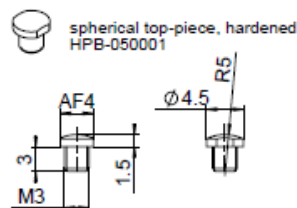
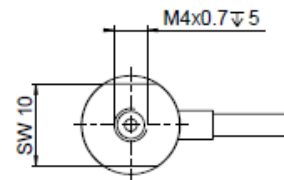
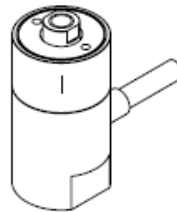


## Product-Specification

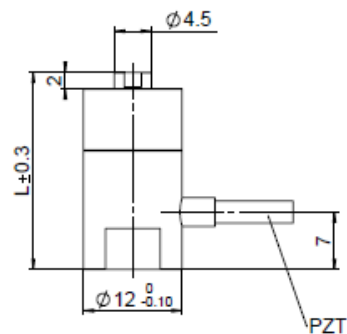
Product	HPO-a5 Piezo Stacks							
Product-Number	HPO-a50015	HPO-a50030	HPO-a50050	HPO-a50100	HPO-a50150	Unit	Tolerance	
Expansion (0..150 V)	15	30	45	90	135	µm	±10%	
Expansion (-45..180 V)	23	47	72	143	216	µm	±10%	
Resolution, open loop	0.1	0.2	0.3	0.5	1	nm	RMS	
Resolution, closed loop	0.2	0.3	0.5	1	1.5	nm	RMS	
Push/Pull	1400/100					N	max.	
Stiffness	70	37	25	12	9	N/µm	±10%	
Torque, head-piece to body	0.4					Nm	max.	
Resonance, unloaded	20	16	12	9	6	kHz	±10%	
el. Capacitance @ 1V RMS, 1 kHz	1.1	2.2	3.3	6.6	9.9	µF	±10%	
Overall Length, L	24	34	44	74	104	mm	±0.3	
Mass w/o Wires	15	20	25	40	55	g	± 10%	
Material, Encapsulation, Endpieces	stainless steel							
Operating-Temperature	-40..+80						°C	
Connection Wire, 1.5 m, w/o Socket	a=P, e.g. HPO-P50015							
Connection Wire, 1.5 m, w/ Lemosa	a=L, e.g. HPO-L50015							

### Options:

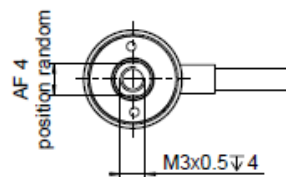
- Versions with position-sensors
- Versions with 60 V max. voltage
- Spherical End-Pieces
- Suitable Electrical Drivers, e.g. EBO-050100



spherical top-piece, hardened  
HPB-050001



Product	Stroke µm	Length L [mm]
HPO-a50015	15	24
HPO-a50030	30	34
HPO-a50050	45	44
HPO-a50100	90	74



a: L = LEMO connector FFA.0S.302.CLAxxx; P = Pigtail

Standard cable length: 1.5m