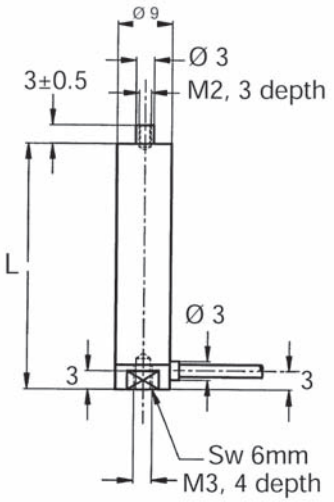
A. Stack type piezo actuators

Low voltage actuators with preloaded casings VS

PSt 150/4 /... VS9

General data: see brochure: “Piezomechanics: An Introduction”

Prestress force = max. tensile force = approx. 40 N
Max. load force: 300 N
Max. force generation: 300 N
Open loop sensitivity at 1 mV noise for actuator PSt 150/4/7 VS9: approx. 0.05 Nanometer

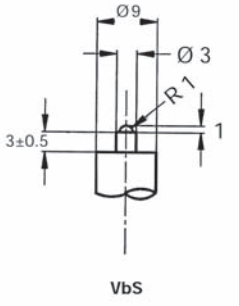


Type	max. stroke µm	length mm	el. capacitance nF	stiffness N/µm	resonance frequency kHz
PSt 150/4/7 VS9	13/9	19	170	25	40
PSt 150/4/20 VS9	27/20	28	340	12	30
PSt 150/4/40 VS9	55/40	46	700	6	20
PSt 150/4/60 VS9	80/60	64	1000	4	12

Standard configuration:
Tapped hole in moving end
Electrical connection: 1 m coaxial cable RG 178 with BNC connector

Options:
Coaxial cable RG 178 with LEMOSA connectors 00250 or 0S250
Moving end with spherical end piece **VbS**
UHV compatibility

Accessories see section C

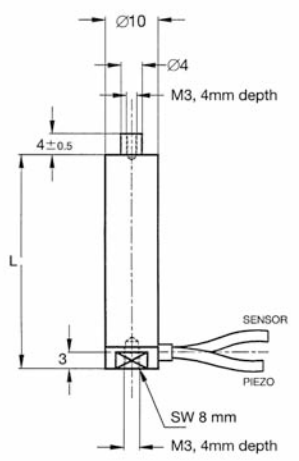


Stroke A/B A: for –30 V thru +150 V
B: for 0 V thru +150 V
Max. force generation: for –30 V thru +150 V

PSt 150/5/… VS10

General data: see brochure: “Piezomechanics: An Introduction”

Prestress force = max. tensile force = approx. 150 N
Max. load force: 800 N
Max force generation: 800 N
Open loop sensitivity at 1 mV noise for actuator PSt 150/5/7 VS10: 0.05 Nanometer



Type	max. stroke µm	length mm	el. capacitance nF	stiffness N/µm	resonance frequency kHz
PSt 150/5/7 VS10	13/9	19	350	50	40
PSt 150/5/20 VS10	27/20	28	800	25	30
PSt 150/5/40 VS10	55/40	46	1600	12	20
PSt 150/5/60 VS10	80/60	64	2400	8	15
PSt 150/5/80 VS10	105/80	82	3200	6	12
PSt 150/5/100 VS10	130/100	100	4000	5	10

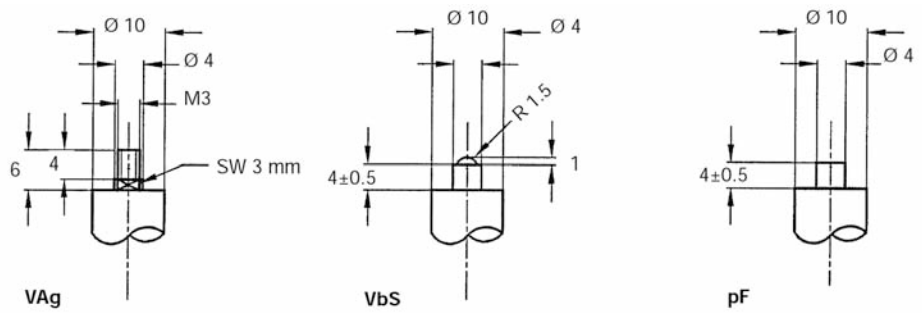
Standard configuration:

Tapped hole in moving end
Electrical connection: 1 m coaxial cable RG 178 with BNC connector

Options:
Coaxial cable RG 178 with LEMOSA connectors 00250 or 0S250

Moving end with spherical end piece **Vbs**
Moving end with threaded pin **VAg**
Moving end plane **pF**
Thermostable modification
Low temperature modification
UHV compatibility
Position detection

Accessories see section C



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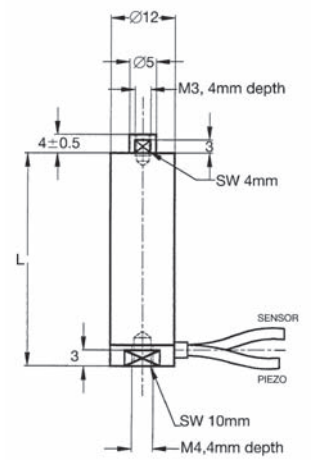
PSt 150/7/… VS12

General data: see brochure: “Piezomechanics: An Introduction”

Prestress force = max. tensile force = 300 N
Max. load force: 1800 N
Max. force generation: 1800 N
Open loop sensitivity at 1 mV noise for actuator PSt 150/7/7: 0.05 Nanometer



Type	max. stroke µm	length mm	el. capacitance µF	stiffness N/µm	resonance frequency kHz
PSt 150/7/7 VS12	13/9	19	0.7	120	40
PSt 150/7/20 VS12	27/20	28	1.8	60	30
PSt 150/7/40 VS12	55/40	46	3.6	25	20
PSt 150/7/60 VS12	80/60	64	5.4	15	15
PSt 150/7/80 VS12	105/80	82	7.2	12	12
PSt 150/7/100 VS12	130/100	100	9	10	10
PSt 150/7/120 VS12	160/120	118	11	8	8
PSt 150/7/140 VS12	190/140	136	13	7	6
PSt 150/7/160 VS12	210/160	154	15	6	5

Standard configuration:

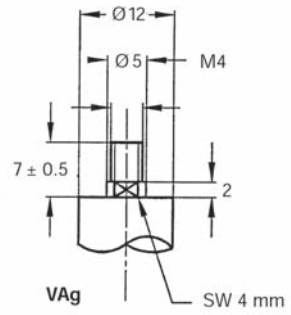
Tapped hole in moving end
Electrical connection: 1 m coaxial cable RG 178 with BNC connector

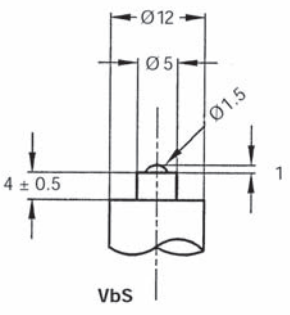
Options:

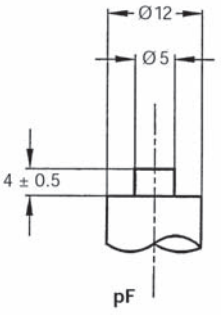
Coaxial cable RG178 with LEMOSA connectors 00250 or 0S250

Moving end with spherical end piece **VbS**
Moving end with threaded pin **VAg**
Moving end plane **pF**
Thermostable modification
Low temperature modification
UHV compatibility
Position detection

Accessories see section C



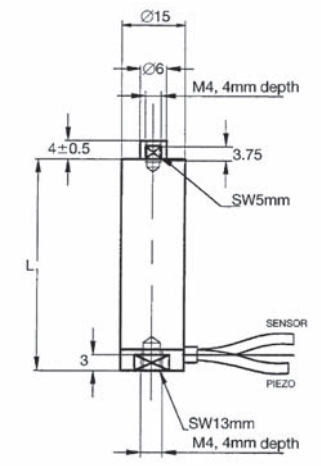




PSt 150/10/… VS15

General data: see brochure: “Piezomechanics: An Introduction”

Prestress force = max. tensile force = approx. 400 N
Max. load force: 4000 N
Max. force generation: 3500 N
Open loop sensitivity at 1 mV noise for actuator PSt 150/10/7 VS15: 0.05 Nanometer



Type	max. stroke µm	length mm	el. capacitance µF	stiffness N/µm	resonance frequency kHz
PSt 150/10/20 VS15	27/20	28	3.6	120	30
PSt 150/10/40 VS15	55/40	46	7.2	60	20
PSt 150/10/60 VS15	80/60	64	11	35	14
PSt 150/10/80 VS15	105/80	82	14	25	12
PSt 150/10/100 VS15	130/100	100	18	20	10
PSt 150/10/120 VS15	160/120	118	21	15	8
PSt 150/10/140 VS15	190/140	136	25	14	7
PSt 150/10/160 VS15	210/160	154	28	13	6
PSt 150/10/180 VS15	240/180	172	33	11	5
PSt 150/10/200 VS15	270/200	190	37	10	4

Standard configuration:

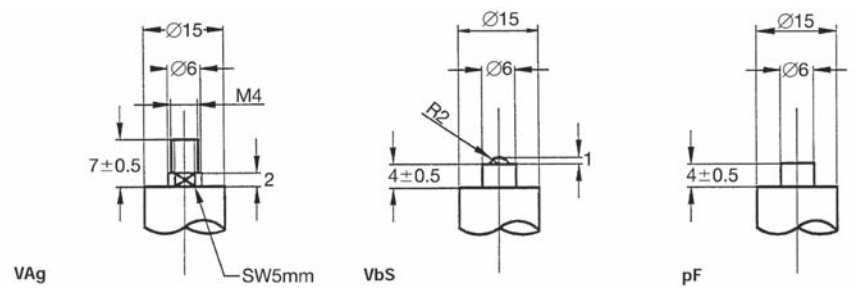
Tapped hole in moving end
Electrical connection: 1 m coaxial cable RG 178 with BNC connector

Options:

Coaxial cable RG 178 with LEMOSA connectors 00250 or 0S250

Moving end with spherical end piece **Vbs**
Moving end with threaded pin **VAg**
Moving end plane **pF**
Thermostable modification
Low temperature modification
UHV compatibility
Position detection

Accessories see section C



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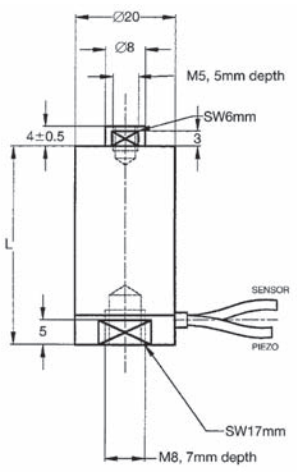
PSt 150/14/… VS20

General data: see brochure: “Piezomechanics: An Introduction”

Prestress force = max. tensile force = approx. 1000 N
Max. load force: 7000 N
Max. force generation: 7000 N
Open loop sensitivity at 1 mV noise for actuator PSt 150/14/20: approx. 0.1 Nanometer



Type	max. stroke µm	length mm	el. capacitance µF	stiffness N/µm	resonance frequency kHz
PSt 150/14/20 VS20	27/20	35	7	250	30
PSt 150/14/40 VS20	55/40	53	14	120	20
PSt 150/14/60 VS20	80/60	71	22	70	14
PSt 150/14/80 VS20	105/80	89	30	50	12
PSt 150/14/100 VS20	130/100	107	39	40	10
PSt 150/14/120 VS20	160/120	125	47	35	8
PSt 150/14/140 VS20	190/140	143	55	30	7
PSt 150/14/160 VS20	210/160	161	63	25	6
PSt 150/14/180 VS20	240/180	179	71	22	5
PSt 150/14/200 VS20	270/200	197	80	20	4

Standard configuration:

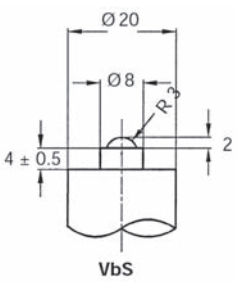
Tapped hole in moving end
1 m coaxial cable RG 178 with BNC connector

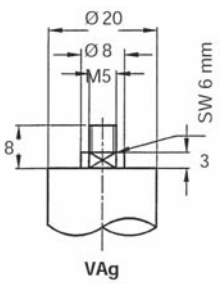
Options:

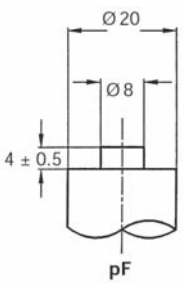
Coaxial cable RG178 with LEMOSA connectors 00250 or 0S250
Coaxial cable RG 316 for power applications

Moving end with spherical end piece **Vbs**
Moving end with threaded pin **VAg**
Moving end plane **pF**
Thermostable modification
Low temperature modification
UHV compatibility
Position detection

Accessories see section C



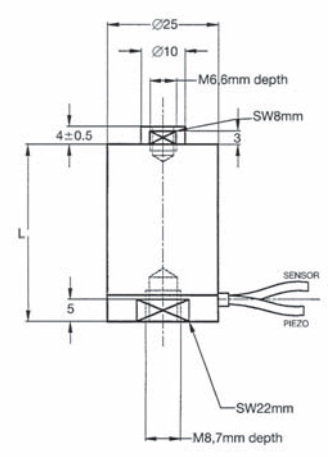




PSt 150/20/… VS25

General data: see brochure: “Piezomechanics: An Introduction”

Prestress force = max. tensile force = approx. 1500 N
Max. load force: 14000 N
Max. force generation: 11000 N
Open loop sensitivity at 1 mV noise for actuator PSt 150/20/20 VS25: approx. 0.1 Nanometer (see 2.8.)



Type	max. stroke µm	length mm	el. capacitance µF	stiffness N/µm	resonance frequency kHz
PSt 150/20/18 VS25	25/18	37	11	500	28
PSt 150/20/36 VS25	50/36	57	22	250	18
PSt 150/20/54 VS25	75/54	77	33	160	13
PSt 150/20/72 VS25	95/72	97	44	100	11
PSt 150/20/90 VS25	120/90	117	55	80	9
PSt 150/20/110 VS25	150/110	137	66	65	7
PSt 150/20/130 VS25	175/130	157	77	55	6
PSt 150/20/150 VS25	200/150	177	88	50	5
PSt 150/20/170 VS25	230/170	197	100	45	4
PSt 150/20/190 VS25	250/190	217	110	40	3

Standard configuration:

Tapped hole in moving end
Electrical connection: 1 m coaxial cable RG 178 with BNC connector

Options:

Coaxial cable RG178 with LEMOSA connectors 00250 or 0S250
Coaxial cable RG 316 for power applications
Modified end pieces on request

Stroke A/B A: for –30 V thru +150 V
B: for 0 V thru +150 V
Max. force generation: for –30 V thru +150 V

Thermostable modification
Low temperature modification
UHV compatibility
Position detection
Accessories see section C