



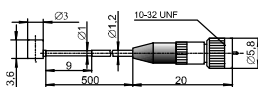
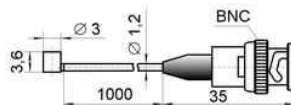
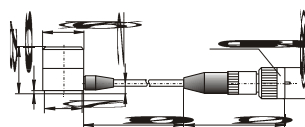


The AP Tech range of miniature accelerometers is designed to offer good stability, large dynamic range and very small dimensions. In all situations where mass-loading of the test-object has to be considered, Type AP19 or AP33 is the best choice. AP31 and AP2031 have an integral M5 mounting-stud, all other miniature versions are designed for glue- or wax-mounting.

<i>High frequency / miniature- accelerometers</i>		AP19	AP2019	AP30	AP2030
					
Parameter	Unit				
Charge sensitivity (+/- 10%)	pC/g	0.25*	-	1.1	-
	pC/ms ²	0.03	-	0.1	-
Voltage sensitivity (+/- 10%)	mV/g	-	0.5	-	3
	mV/ms ²	-	0.05	-	0.3
Amplitude range	g rms	20,000	7,000	10,000	1,500
Resolution (1 Hz to 10 kHz)	g rms	-	0.005	-	0.002
Mechanical shock limit	g peak	40,000	40,000*	20,000	3,000
Frequency range (+/- 1 dB)	Hz	0.5 to 30,000	5 to 22,000	0.5 to 20,000	0.5 to 20,000
Resonant frequency	kHz	>100	>100	>60	>60
Transverse sensitivity	%	<5	<5	<3	<3
Base strain sensitivity	g/μm	<0.005	<0.005	<0.005	<0.005
Temperature range	°C	-60 to +150	-40 to +125	-60 to +150	-40 to +125
Insulation resistance	MΩ	>10,000	-	>10,000	-
Capacitance	pF	500 to 700	-	500 to 700	-
Isolated base		No	No	Yes	Yes
Excitation voltage	Volt DC	-	+15 to +30	-	+15 to +30
Constant current	mA	-	2 to 20	-	2 to 20
Output impedance	Ω	-	<500	-	<500
Output bias voltage	Volt DC	-	+8 to +11	-	+8 to +11
Settling time	second	-	4	-	4
Construction		Shear	Shear	Shear	Shear
Piezo material		ZTP19	ZTP19	ZTP19	ZTP19
Sensor connector		-	-	-	-
Integral cable length	meter	1	1	2	2
Connecting cable		-	-	-	-
Cable connector		10-32 UNF	BNC	10-32 UNF	BNC
Side/Top connection		Side	Side	Side	Side
Mounting method		Adhesive	Adhesive	Adhesive	Adhesive
Housing material		Titanium	Titanium	Titanium	Titanium
Weight without cable	gram	0.14	0.18	1.3	1.6
Notes		* Charge sensitivity +/- 20%	* max shock for connector 10,000 g		


AP19

AP2019

AP30

AP2030

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High frequency / miniature- accelerometers

AP19



AP30



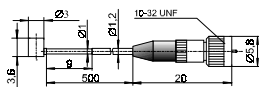
AP2030



AP31



Parameter	Unit	AP19	AP30	AP2030	AP31
Charge sensitivity (+/- 10%)	pC/g	0.25	1.1	-	1
	pC/ms ²	0.03	0.1	-	0.1
Voltage sensitivity (+/- 10%)	mV/g	-	-	1	-
	mV/ms ²	-	-	0.1	-
Amplitude range	g rms	20,000	10,000	5000	20,000
Resolution	g rms	-	-	0.003	-
Mechanical shock limit	g peak	40,000	20,000	10,000	40,000
Frequency range (+/- 1 dB)	Hz	0.5 to 30,000	0.5 to 20,000	0.5 to 20,000	0.5 to 20,000
Resonant frequency	kHz	>100	>60	>60	>60
Transverse sensitivity	%	<5	<3	<3	<3
Base strain sensitivity	g/μm	<0.005	<0.00005	<0.00005	<0.0001
Temperature range	°C	-60 to +150	-60 to +150	-60 to +125	-60 to +150
Insulation resistance	MΩ	>10,000	>10,000	-	>10,000
Capacitance	pF	500 to 700	500 to 700	-	600 to 900
Isolated base		No	Yes	Yes	No
Excitation voltage	Volt DC	-	-	+15 to +30	-
Constant current	mA	-	-	2 to 20	-
Output impedance	Ω	-	-	<500	-
Output bias voltage	Volt DC	-	-	+8 to +10	-
Settling time	second	-	-	2	-
Construction		Shear	Shear	Shear	Shear
Piezo material		ZTP19	ZTP19	ZTP19	ZTP19
Sensor connector		-	-	-	-
Integral cable length	meter	0.5	2	2	2
Connecting cable		-	-	-	-
Cable connector		10-32 UNF	10-32 UNF	BNC	10-32 UNF
Side/Top connection		Side	Side	Side	Side
Mounting method		Adhesive	Adhesive	Adhesive	M5 stud
Housing material		Titanium	Titanium	Titanium	Titanium
Weight without cable	gram	0.14	1.3	1.6	1.5
Notes					

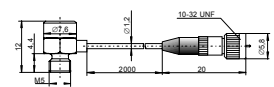


AP19

AP30

AP2030

AP31



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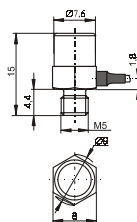
High frequency / miniature- accelerometers

AP2031

AP33



Parameter	Unit	AP2031	AP33
Charge sensitivity (+/- 10%)	pC/g	-	0.2
	pC/ms ²	-	0.03
Voltage sensitivity (+/- 10%)	mV/g	1	-
	mV/ms ²	0.1	-
Amplitude range	g rms	5000	20,000
Resolution	g rms	0.003	-
Mechanical shock limit	g peak	10,000	40,000
Frequency range (+/- 1 dB)	Hz	0.5 to 20,000	0.5 to 30,000
Resonant frequency	kHz	>60	>90
Transverse sensitivity	%	<3	<3
Base strain sensitivity	g/μm	<0.00005	<0.0001
Temperature range	°C	-60 to +125	-60 to +150
Insulation resistance	MΩ	-	>10,000
Capacitance	pF	-	500 to 700
Isolated base		No	No
Excitation voltage	Volt DC	+15 to +30	-
Constant current	mA	2 to 20	-
Output impedance	Ω	<500	-
Output bias voltage	Volt DC	+8 to +10	-
Settling time	second	2	-
Construction		Shear	Shear
Piezo material		ZTP19	ZTP19
Sensor connector		-	-
Integral cable length	meter	2	2
Connecting cable		-	-
Cable connector		BNC	10-32 UNF
Side/Top connection		Side	Side
Mounting method		M5 stud	Adhesive
Housing material		Titanium	Titanium
Weight without cable	gram	1.6	0.7
Notes			



AP2031

AP33