

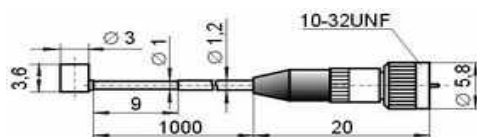


Miniature Vibration Transducers
 NTIP19, NTIP30, NTIP31, NTIP32, NTIP33

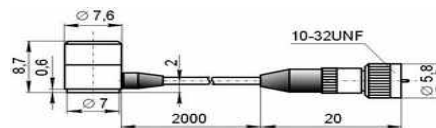


Parameter	Unit	NTIP19	NTIP30	NTIP31	NTIP32	NTIP33
Axial sensitivity (± 20 %)	pC/g ^{*1}	0.25	1.1	1.1	2	0.2
Relative transverse sensitivity	%	< 5	< 3	< 3	< 3	< 3
Amplitude range	g ^{*1}	±20000	±10000	±20000	±10000	±20000
Max. shock limit (peak value)	g ^{*1}	±40000	±20000	±40000	±20000	±40000
Operating temperature range	° C			-60...+150		
Frequency range (ripple ± 1dB)	Hz	0.5...	0.5...	0.5...	0.5...	0.5...
Self-resonant frequency in attached condition	kHz	> 100	> 60	> 60	> 50	> 90
Strain sensitivity	g · m/μm	< 0.005	< 0.005	< 0.0001	< 0.005	< 0.0001
Capacitance	pF	500...700	500...700	600...900	600...900	500...700
Insulation resistance in normal conditions	MOhm	> 10000	> 10000	> 10000	> 10000	> 10000
Design	-	Shear	Shear	Shear	Shear	Shear
Bottom insulation	-	no	yes	no	yes	no
Built-in cable length	m	1 ^{*2}	2 ^{*2}	2 ^{*2}	2 ^{*2}	2 ^{*2}
Housing material	-		titanium alloy (st. steel) ^{*2}			
Weight (without connector and cable)	gram	0.14(0.18)	1.3(1.7)	1.3(1.7)	2(2.6)	0.7(0.9)

General view of NTIP19

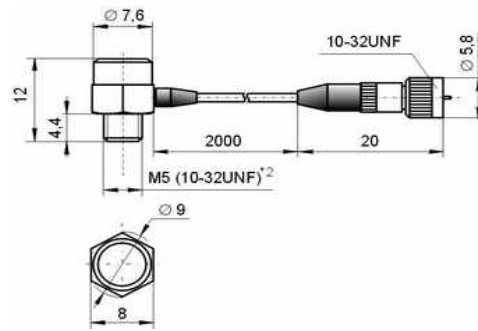


General view of NTIP30

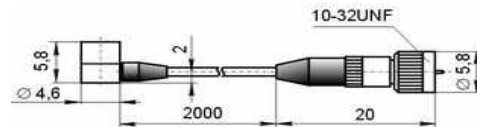
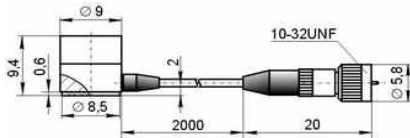




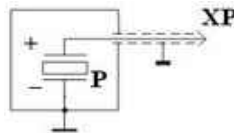
General view of NTIP31



General view of NTIP32 General view of NTIP33



Electrical circuit of NTIP19,NTIP31,NTIP33



Electrical circuit of NTIP30,NTIP32

