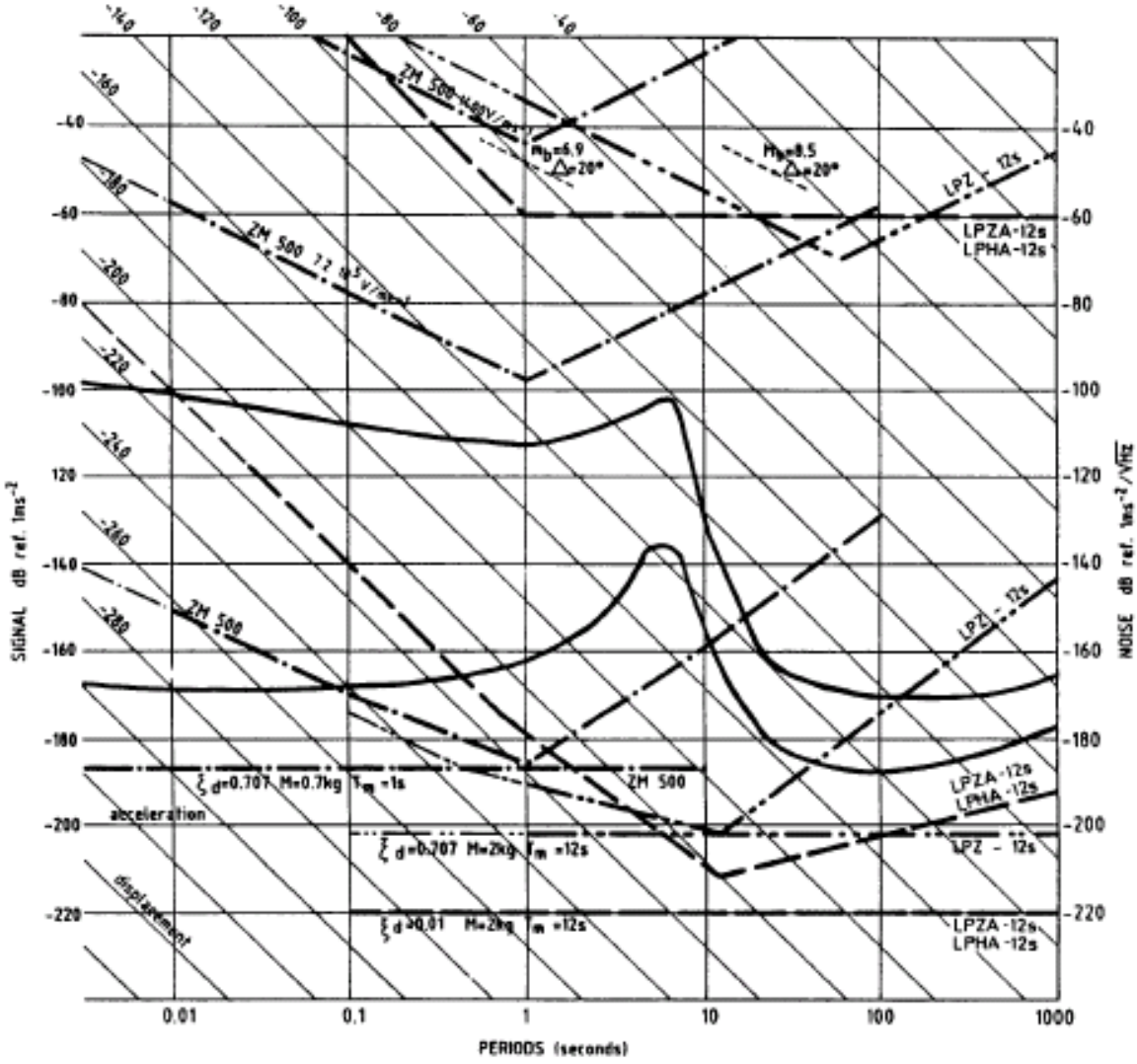
LPZA long period vertical sensor

Operating characteristics (with ESTEREL unit interface)

Mechanical natural period :	T_0 = 12 s
Mechanical damping:	< 0.05
Feed back actuator:	Magnet and coil
Calibration coil:	220 Ω ± 40 Ω
ESTEREL unit Output:	
- type	2 outputs, Single ended
- maximum level	24 Vpp. into 10 KΩ load
- integrated circuit board available	Speed or displacement configuration
Power requirements (with ESTEREL unit):	Nominal ±12 V

Physical characteristics

Basic dimensions :	
- external maximum dimensions	400 mm x 210 mm, height 500 mm
- weight	25 Kg
Field use:	
- moving arm mount operation	On site
- period adjustment by moving foot	
- depressurized case	Vacuum level < 10 mbar (DN10 plug)
Environmental characteristics:	
- in use temperature	-10 to +40 °C
- waterproof case	
- rugged for wet and salt saturated atmosphere (IP68 guaranteed)	



Noise figures and dynamic range for some seismometer

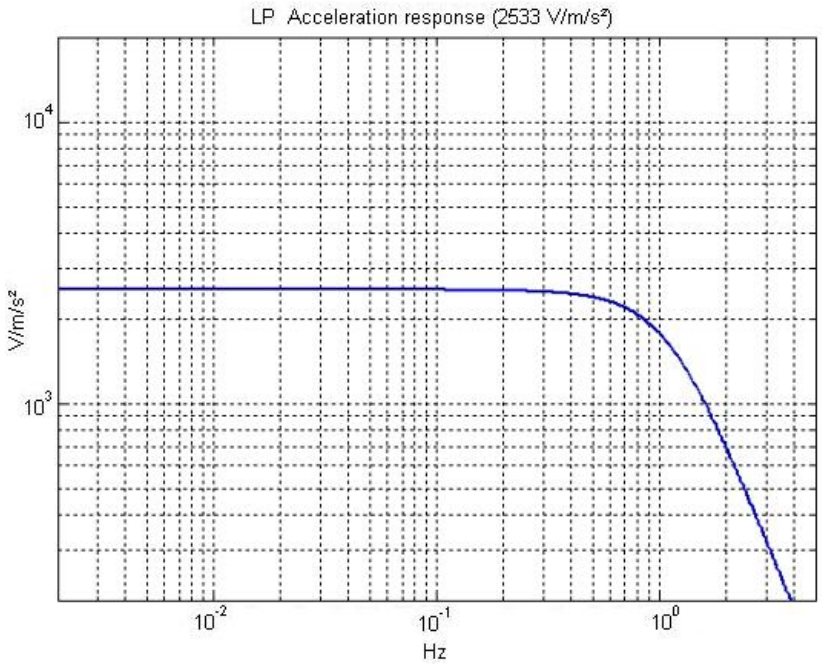
LPZ Poles and zeros

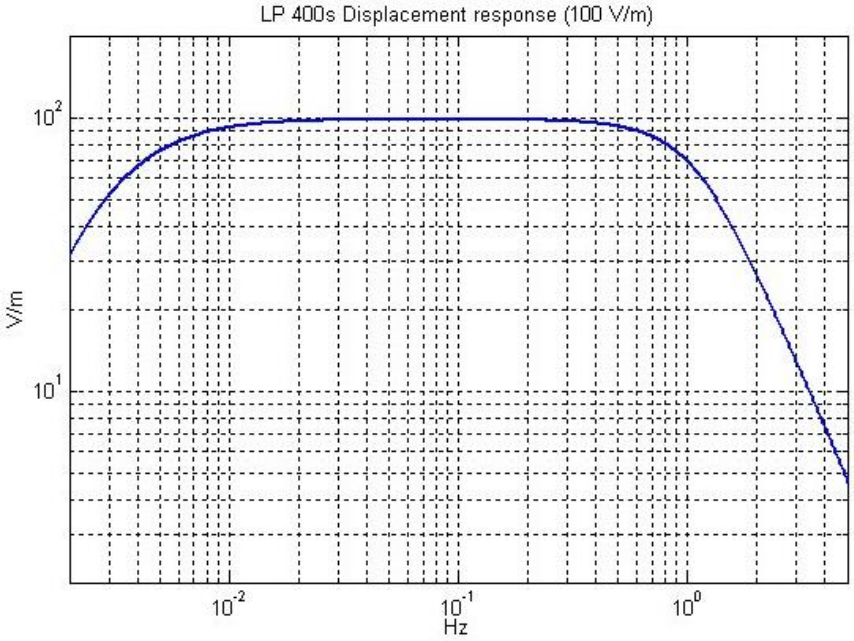
type	Actual	image	Unit
Pole*	-53.8349	52.2152	$V/m.s^{-2}$
Pole*	-53.8349	-52.2152	$V/m.s^{-2}$
Pole*	-5.3651	4.3208	$V/m.s^{-2}$
Pole*	-5.3651	-4.3208	$V/m.s^{-2}$

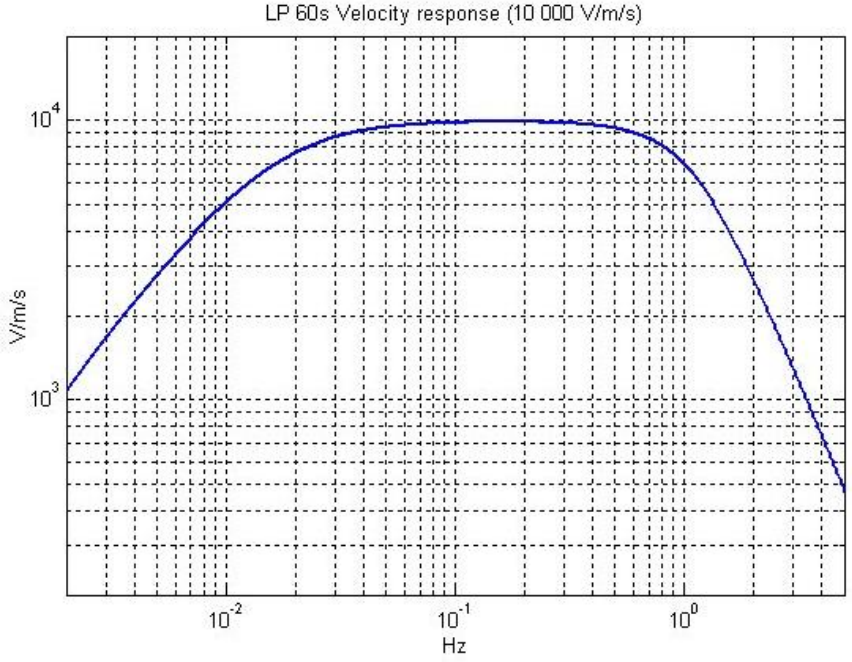
**** normalization frequency = 20 s, normalization factor @ 20 s = 1/0.0031***

ESTEREL Poles and zeros (60 s velocity integrator)

type	Actual	image	Unit
Pole*	-0.1047	0	V/V
Pole*	-0.0063	0	V/V
Zero*	0	0	V/V


LP Acceleration response (2533 V/m/s²)
V/m/s²
10^4
10^3
10^-2
10^-1
10^0
Hz


LP 400s Displacement response (100 V/m)
V/m
10^2
10^1
10^-2
10^-1
10^0
Hz


LP 60s Velocity response (10 000 V/m/s)
V/m/s
10^4
10^3
10^-2
10^-1
10^0
Hz