



VP2000 Voltage preamplifier



The VP2000 is a 1 MHz bandwidth voltage preamplifier designed for use in conjunction with piezoelectric hydrophones.

VP2000 offers excellent low-noise performance over the entire frequency range; - gain selections in 6 levels from 0 to 50 dB.

A range of 12 high-pass and 12 low-pass filters are available, - these allow ideal band pass filter settings.

The VP2000 has a high input impedance which allows the measurements at frequencies below 1 Hz with even very small hydrophones sensor capacities.

FEATURES

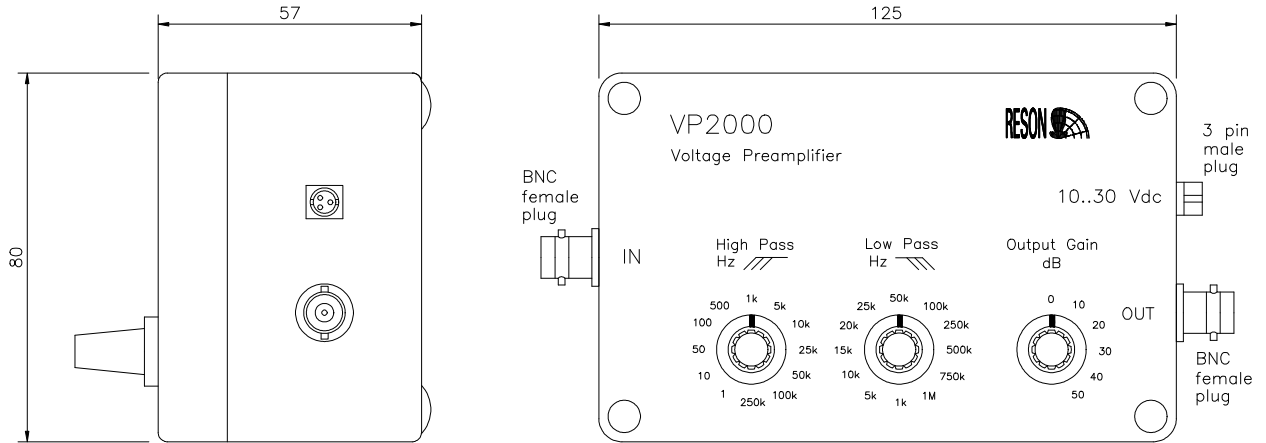
- ◆ 1 Hz to 1 MHz bandwidth
- ◆ Gain selection From 0 to 50 dB
- ◆ Options of 12 high-pass filters and 12 low-pass filters
- ◆ Excellent low-noise characteristic

TECHNICAL SPECIFICATIONS

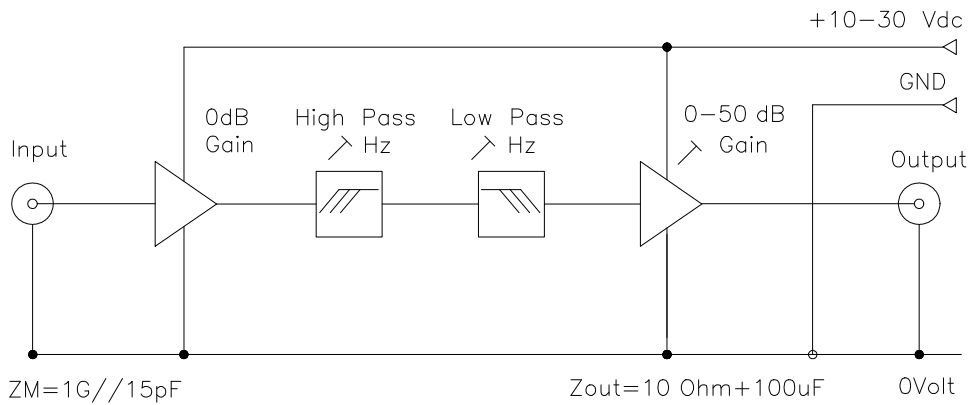
<p>Input: Impedance: >100 M-Ohm's Max. input level: 1 Vrms at 12 V supply</p> <p>Output: Impedance: 10 Ohm//100µF Max. level: 3 Vrms at 24 V supply Max. load: 10 nF (100 m cable)</p> <p>Gain: Gain settings, 6 steps dB:: 0-10-20-30-40-50</p> <p>Bandwidth Frequency range with 20 dB gain: -3 dB 0.5 Hz to 0.5 MHz -6 dB 1 MHz)</p> <p>Noise: Power spectrum density noise at 1kHz: 20 nV/√Hz</p>	<p>Hi-Pass Filters: -3 dB @ Hz: 1-10-50-100-500-1k-5k (6 dB/oct) 10k-25k-50k-100k-250k</p> <p>Lo-Pass Filters: -3 dB @ Hz: 1k-5k-10k-20k-25k-50k (6 dB/oct) 100k-250-500k-750-1M</p> <p>Power supply: Voltage nominal: 12 Vdc (min 10Vdc, max 30Vdc) Current quiescent: 15mA @ 12 Vdc 20mA @ 24 Vdc</p> <p>Enclosure case: Dimensions: Splash proof aluminum box. L: 125 mm, W:80 mm, H: 60 mm.</p> <p>Accessory included: Supply cable TL8088 for Laboratory. DC Supply.</p> <p>Accessory available: See page 5</p>
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VP2000 outline dimensions and layout



Functional Block Diagram



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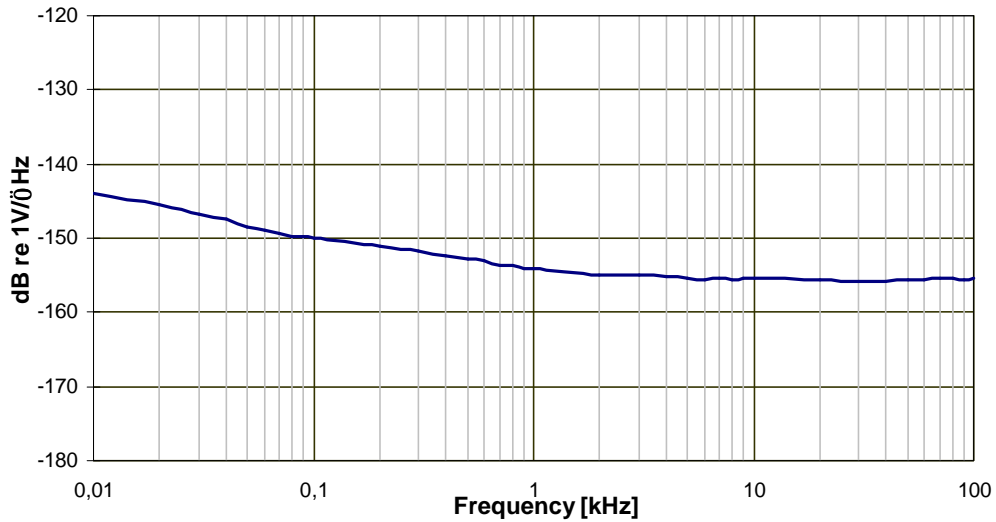
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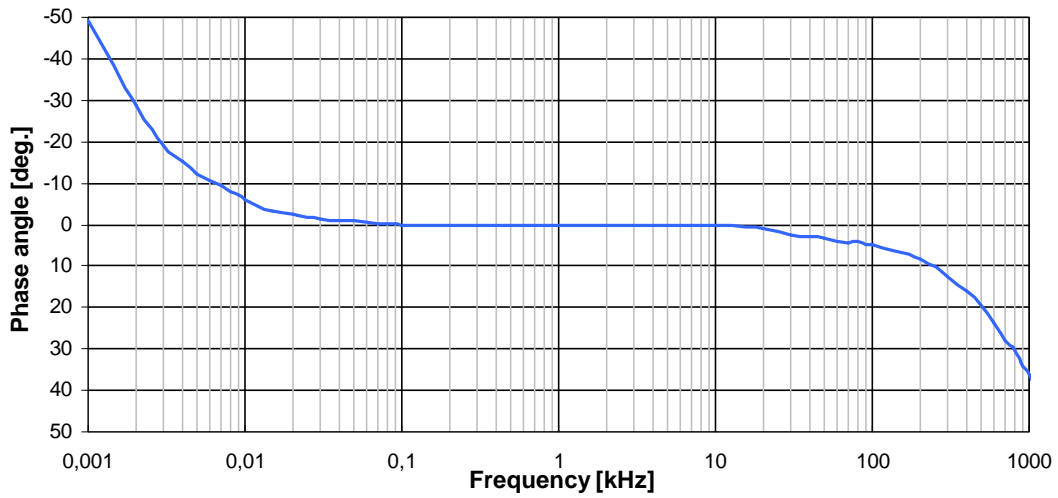
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Noise power density spectrum re input
Input load 1nF, gain 0dB, 1Hz filter



Phase shift
With 1 Hz filter at 0dB and 0dB gain



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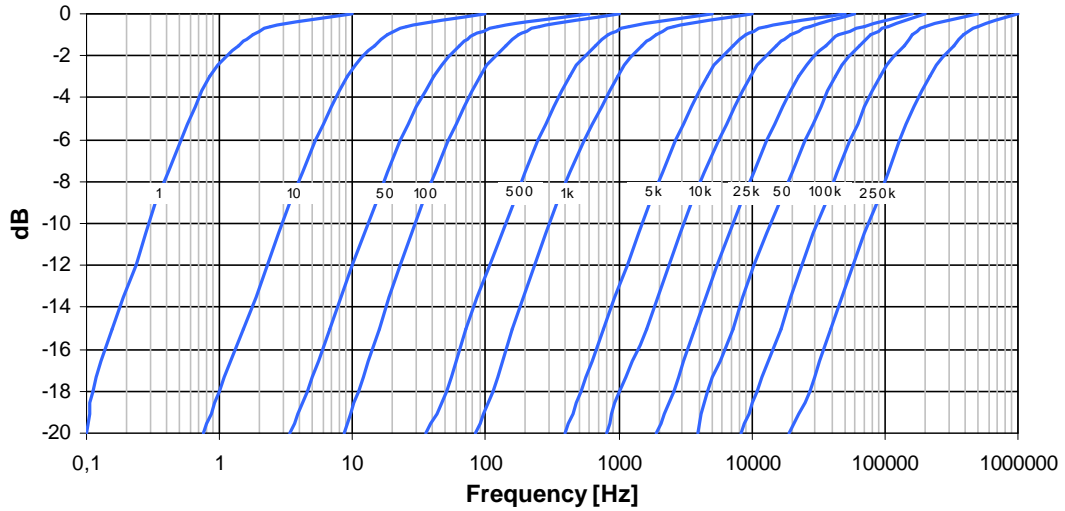
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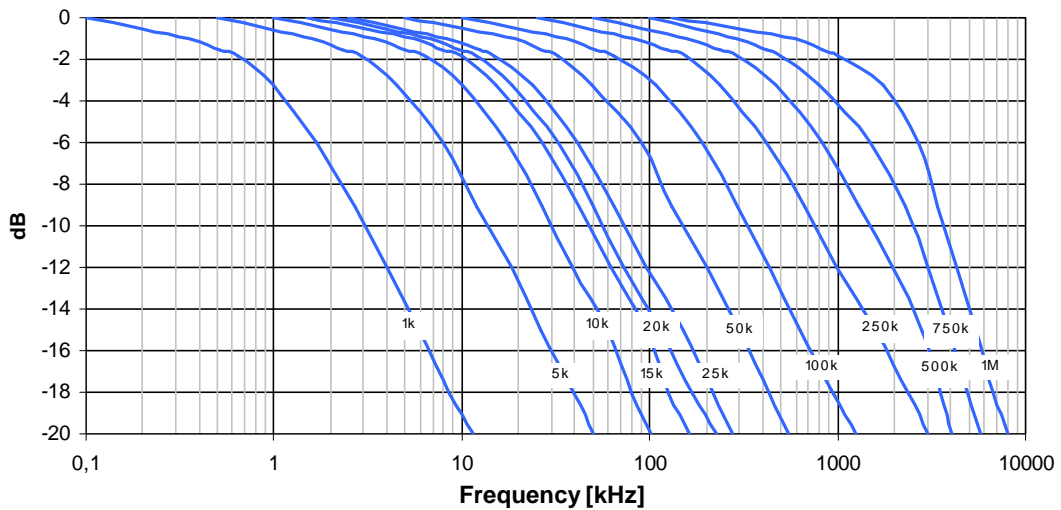
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High Pass filter characteristics



Low Pass filter characteristics



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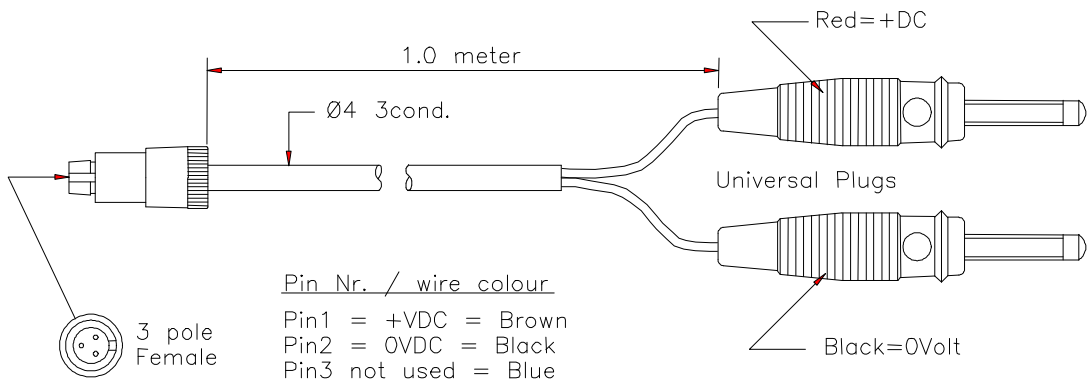
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TL 8088 Supply cable



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