VP1000 Voltage preamplifier

The VP1000 is a 1 MHz bandwidth single ended voltage preamplifier, designed for use with piezoelectric hydrophone and a variety of transducers. VP1000 offers excellent low-noise performance, gain selection in 6 levels and options of 12 Hi-Pass filters. The high input impedance of 100MΩ allow for low frequency measurements with even very small sensor element capacities. The VP1000 is encapsulated in a water splash proof proof aluminum box.

**FEATURES**

- 1 Hz to 1 MHz bandwidth
- Hi-pass filter options
- 6 level gain selection
- 100 M Ohm input impedance
- Excellent low-noise characteristic

**TECHNICAL SPECIFICATIONS**

**Input:**
- Impedance: 100 MΩ/2.5 pF
- Max. level: 2.8 Vrms at 12 V supply

**Output:**
- Impedance: 10 Ohm/100μF
- Max. level: 2.8 Vrms at 0 dB gain
- Max. load: 10 nF = 100 m cable
- DC offset Phase: -180°

**Gain:**
- Gain settings: 0, 6, 12, 20, 26, 32 dB
- Tolerance: ± 0.5 dB

**Bandwidth:**
- Operating frequency range: 0.5 Hz to 1 MHz
- -3 dB at 20 dB gain: 0.5 Hz to 1 MHz

**Noise:**
- Power spectrum density noise at 1kHz: 20 nV/√Hz

**Hi-Pass Filters:**
- -3 dB @ Hz: 1, 5, 10, 20, 100, 1k, 2k, 5k, 10k, 20k, 50k
- -12 dB @ Hz: 0.1

**Power supply:**
- Voltage nominal: 12 Vdc
- Current quiescent: (min 9Vdc, max 18Vdc) 12 mA @ 12 Vdc

**Weight:**
- With supply cable and LEMO adaptor: 305 g.

**Accessories included:**
- Supply cable TL 8088
**VP1000 outline dimensions and layout**

![VP1000 outline dimensions and layout diagram]

**Noise power density spectrum re input**

Input load 1nF, gain 20dB, 0.1Hz filter

![Noise power density spectrum re input graph]

**Voltage preamplifier VP1000**

Phase shift with 0.1 Hz filter at 0dB and 20dB gain

![Voltage preamplifier VP1000 graph]
VP1000 filter characteristics

VP1000 Frequency roll-off versus gain

TL 8088 Supply cable

Pin Nr. / wire colour:
Pin1 = +VDC = Brown
Pin2 = 0VDC = Black
Pin3 not used = Blue

1.0 meter

Universal Plugs

Red = + DC

Black = 0 Volt

3 pole Female