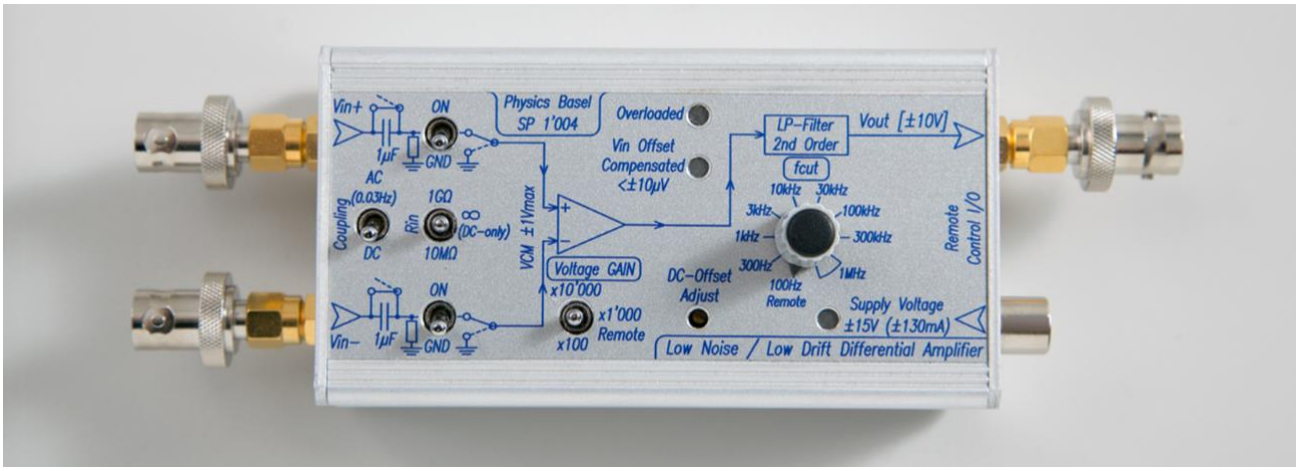
Basel Precision Instruments



Low-Noise Low-Drift Differential Amplifier

low-noise, true differential, feedback stabilized

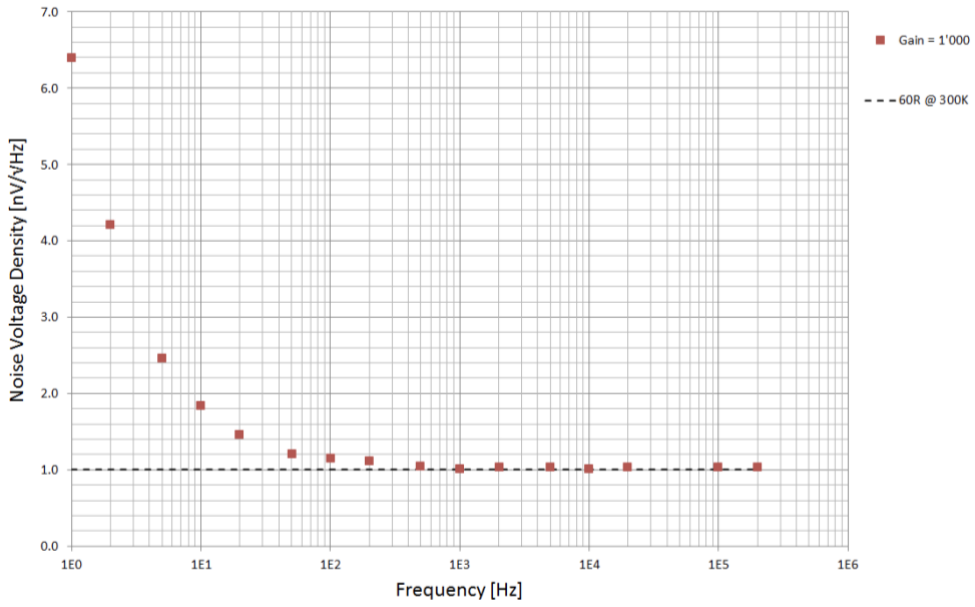
Model	**SP1004**
Input Voltage	stable, low drift and low noise input voltage offset compensated
	noise: 6.5 nV/√Hz @ 1 Hz 1.8 nV/√Hz @ 10 Hz 1.0 nV/√Hz @ f > 1 kHz
	feedback stabilized drift ≤ 0.3 µV/K @25°C
Input Current	stable and low input current noise
	noise: 6 fA/√Hz @10 Hz & ∞ input resistor 12 fA/√Hz @1 kHz & ∞ input resistor
Gain	three decades 10^2 to 10^4 - remote controllable
Filtering	integrated low-pass filter 100 Hz to 1 MHz - remote controllable
Bandwidth	1 MHz maximum
Input Coupling	DC or AC (0.03 Hz)
Input Resistor	selectable: 10 MΩ, 10 GΩ or ∞ (DC only)
Common-Mode	±1 V input common-mode voltage range high common-mode rejection ratio: > 100 dB @100 Hz
Dimensions	small size, low weight, mountable directly on breakout box 122 x 55 x 35 mm, 290 gr

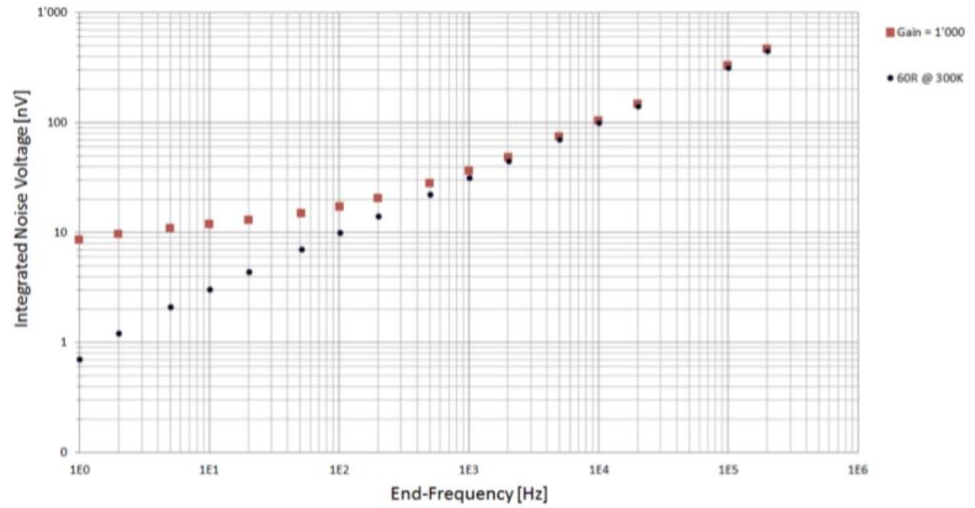
Table shows typical specs; for details, please contact info@baspi.ch

Applications

- Sensitive voltage measurements at cryogenic temperatures
- Low-drift DC differential voltage measurements
- Precise DC and AC current measurements by using a shunt-resistor
- General purpose DC and AC low-noise laboratory preamplifier

Measured Input Voltage Noise Density and Integrated Voltage Noise





Input Current Noise

Selected Input Resistance (Ω)	Current Noise (fA/√Hz) @ 10 Hz / 30°C	Current Noise (fA/√Hz) @ 1 kHz / 30°C	Theoretical Limit (fA/√Hz) @ 30°C
∞ (DC only)	6	12	3.1
1 G	8	14	5.1
10 M	43	48	41.1