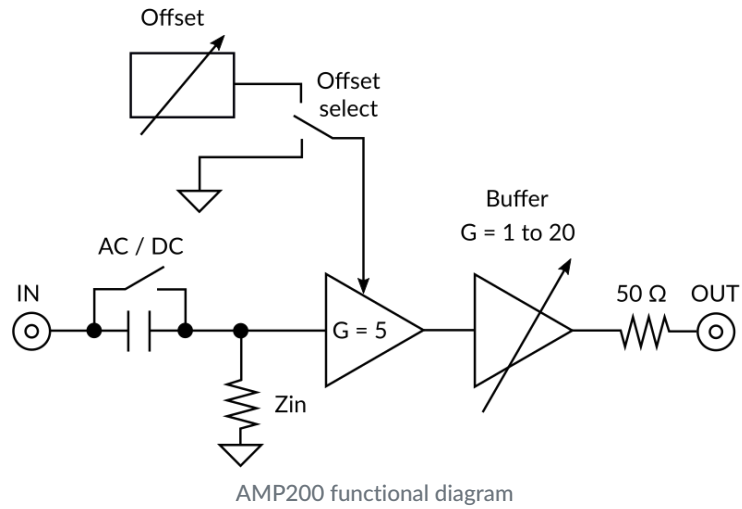


Koheron AMP200 is a low-noise (down to 2.4 nV/ $\sqrt{\text{Hz}}$), wide-bandwidth (up to 13 MHz) voltage preamplifier. Thanks to the high-impedance input (10 k Ω or 1 M Ω) many sensors can be directly interfaced to the amplifier. The input can be either AC or DC coupled and the input offset voltage is adjustable over a ± 100 mV range. A strong adjustable-gain output buffer is capable of driving up to ± 2.2 V across a 50 Ω load.

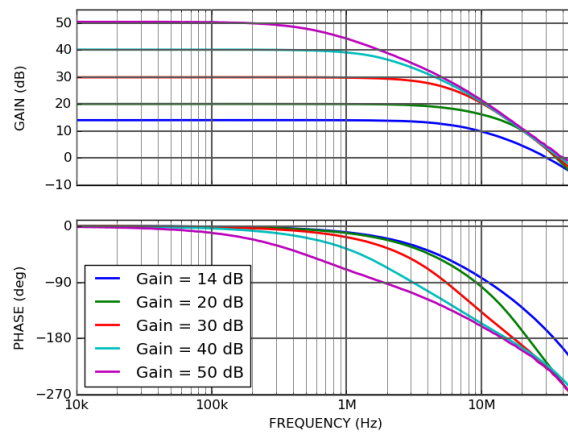
Specifications

	AMP200-1M	AMP200-10k
Gain, Bandwidth		
Gain range	5 to 100	5 to 100
3 dB bandwidth gain = 10	8 MHz	13 MHz
Input		
Input impedance	1 M Ω	10 k Ω
Front-end amplifier	Junction-gate field-effect transistor	Bipolar junction transistor
Input-referred voltage noise 10 kHz, 50 Ω input	4.7 nV/ $\sqrt{\text{Hz}}$	2.4 nV/ $\sqrt{\text{Hz}}$
Input offset adjustment range	± 100 mV	± 100 mV
Coupling	AC or DC	AC or DC
AC cutoff frequency at 3 dB	1.59 Hz	0.72 Hz
Input voltage range	-1.7 V to 1.7 V	-1.7 V to 1.7 V
Output		
Output impedance	50 Ω	50 Ω
Slew rate high impedance	60 V/ μs	60 V/ μs
Slew rate 50 Ω	10 V/ μs	10 V/ μs
Output voltage range high impedance	-8.5 V to 8.5 V	-8.5 V to 8.5 V
Output voltage range 50 Ω	-2.2 V to 2.2 V	-2.2 V to 2.2 V
Power supply		
Positive supply voltage	12 V	12 V
Negative supply voltage	-12 V	-12 V
Supply current per rail	100 mA	100 mA
Quiescent current per rail	22 mA	22 mA
Other		
Outside dimensions	66 mm x 50 mm x 13 mm	66 mm x 50 mm x 13 mm
Weight	20 g	20 g
Operating temperature	-20 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$	-20 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$

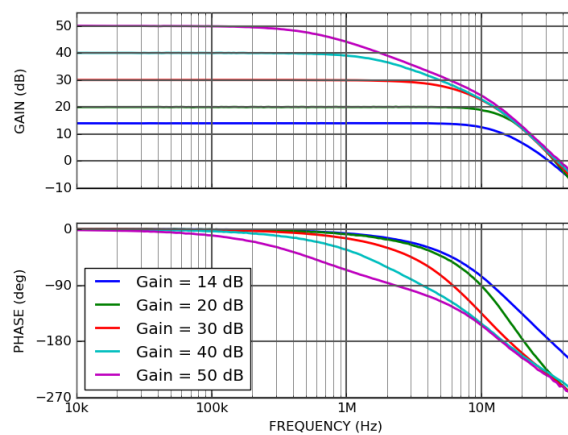
Functional diagram



Frequency response



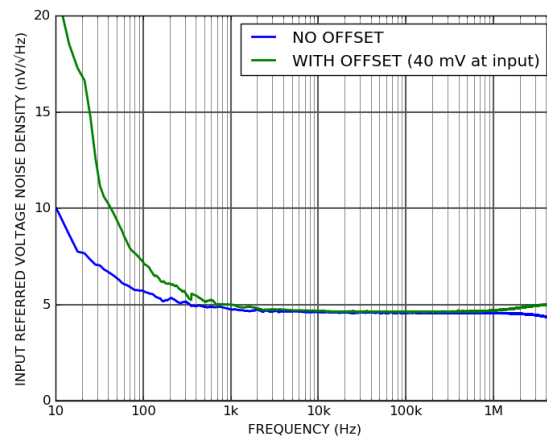
AMP200-1M (1 M Ω) frequency response



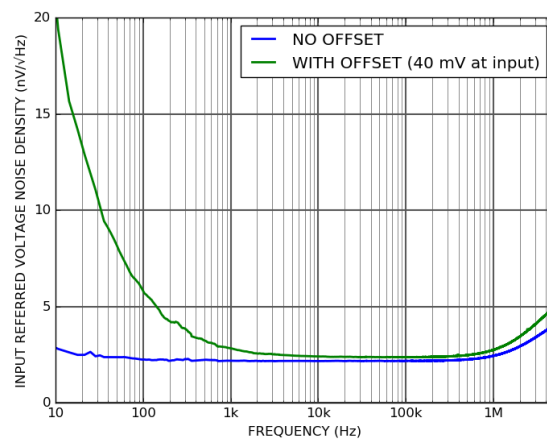
AMP200-10k (10 k Ω) frequency response

Input referred voltage noise

Input-referred voltage noise measured for a gain of 25 with DC-coupled 50 Ω terminated input.



AMP200-1M (1 M Ω) input referred voltage noise



AMP200-10k (10 k Ω) input referred voltage noise

Ordering codes

PRODUCT NUMBER	ATTRIBUTE
AMP200-1M	Input impedance 1 MOhm
AMP200-10k	Input impedance 10 kOhm