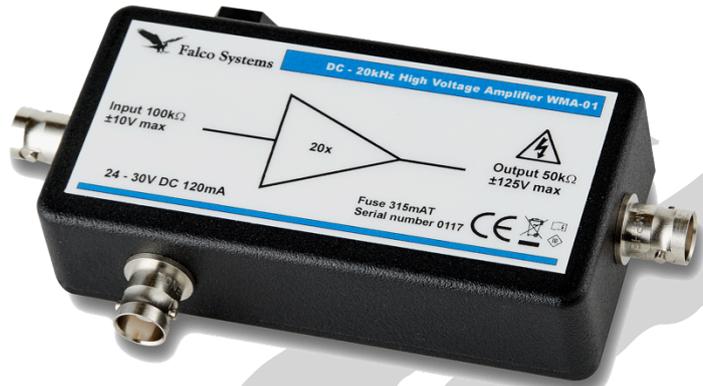




24V DC powered high voltage amplifier

- -125V to +125V Output voltage
- DC to 20kHz @ -3dB large signal bandwidth
- Single power supply 24V DC, battery powered operation possible
- 50kΩ output impedance
- Stable with all capacitive loads, generates no overshoot
- Short-circuit protected output

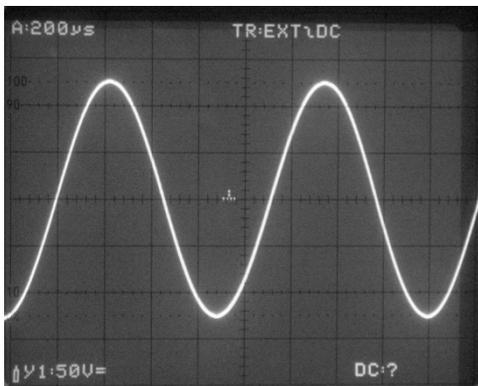


The Falco Systems WMA-01 is a high voltage amplifier that runs from a 24V DC power supply and can be battery powered if required, e.g. for use in a Faraday cage. Its internal high voltage generator is inductor-free and hence does not spread magnetic interference in sensitive experimental setups. Its large voltage range makes it an excellent choice for use with MEMS devices, EO-modulators, piezo positioning systems, beam steering components, and many more.

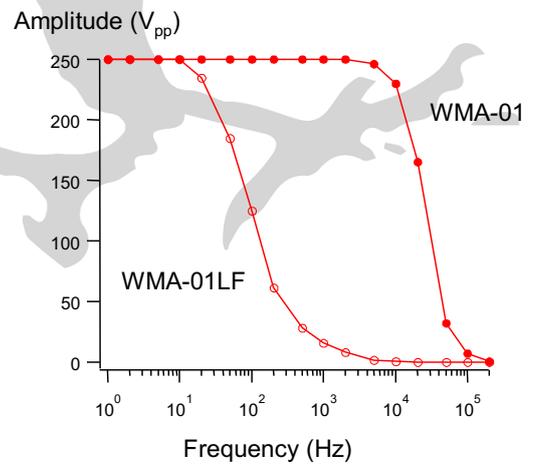
The amplifiers' full-power frequency response has a -3dB corner frequency at 20kHz. The input impedance is 100kΩ and the output 50kΩ.

The output noise of the WMA-01 is impressively low, at only 3mV_{rms} in the DC - 20kHz full power bandwidth. For even lower noise applications where bandwidth is not an issue, the WMA-01LF amplifier contains an output low pass filter capacitor. This reduces the bandwidth to 50Hz, but makes the noise drop below 0.1mV_{rms}. The bandwidth-limited WMA-01LF is ideal for MEMS or piezo positioning with manual voltage adjustment requiring ultra-low noise.

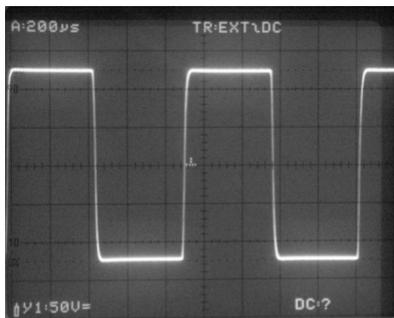
The WMA-01 is long-term short-circuit proof. The input, output and DC power supply connections are all standard BNC.



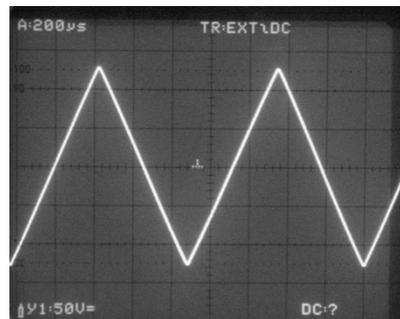
Sine wave output signal 1kHz 250V_{pp}



Bandwidth of the WMA-01 and the WMA-01LF



Full-power 1kHz square wave

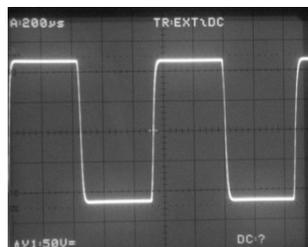


Full-power 1kHz triangle wave

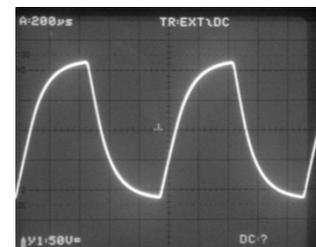
Technical specifications

Amplification: 20x, fixed
Output: -125V to +125V
Power supply: single 24V DC, 180mA, can be battery powered
Bandwidth WMA-01: DC - 20kHz
Bandwidth WMA-01LF: DC - 50Hz
Noise WMA-01: 3mV _{rms} , WMA-01LF: <0.1mV _{rms}
Stability: stable with all capacitive and resistive loads, no overshoot > 5%
Output impedance: 50kΩ
Dimensions: 50 x 100 x 26 mm excl. BNC's
Weight: 300g
Country of origin: The Netherlands

Specifications may be subject to change

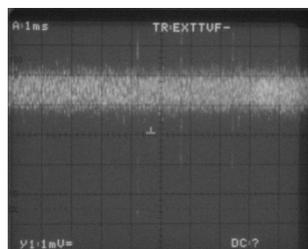


100pF

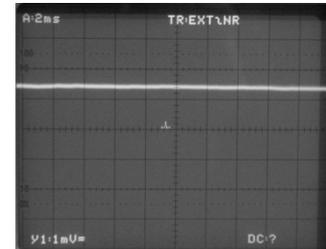


2.2nF

Effect of capacitive loading at 1kHz, 250Vpp



WMA-01 noise



WMA-01LF noise



Falco Systems (established in 2006) is an innovative company that designs and manufactures technology leading high voltage amplifiers for company R&D departments, research institutes and universities worldwide. These amplifiers are used in e.g. precision engineering, electronics, physics, optics, chemistry, (aero-)space engineering and metrology and control.

