



Description and Features

The voltage signal output by acoustic emission sensors can sometimes be as low as a few microvolts. Such weak signals, if transmitted over long distances, will inevitably decrease in strength. The original sensor signal needs to be amplified several times before transmission, and then transmitted to the signal acquisition unit through a high-frequency coaxial cable. The preamplifier is an analog circuit, with the input being the voltage signal output from the acoustic emission sensor, and the output being the amplified analog signal.

Technical Specs

Gain	20/40/60dB
Attenuation	0/-6dB
Response frequency	5KHz~1200KHz
Equivalent noise	<7uV (60dB gain RMS value)
Filter	5KHz~50KHz 5KHz~160KHz 80KHz~480KHz 5KHz~1200KHz
Maximum transient output	20V (Vpp)
Maximum steady-state output	13.6V (Vpp)
Board power supply	7.5V-32V
DC power supply	18-32V
Rated load	50 Ω
Working temperature	-20 °C ~ +60 °C
Dimensions (LxWxH)	10.5cm x 5.5cm x 7cm
Weight	483.7g
Housing material	Cast aluminum
Protection level	IP65



Certification



Functional Description

- **Input Switch:** choose between "Single" input (left) or "Differential" input (right) as the input signal.
- **Differential Input:** connect it when a differential sensor is used. BNC
- **Gain Switch:** choose one of the gains. There are three options, from left to right, 40dB | 20dB | 60dB respectively.
- **Filter Knob:** rotate the knob to choose one of the analog filter range. There are four options, from left to right, 5k-1200kHz | 80k-480kHz | 5k-160kHz | 5k-50kHz.
- **Attenuation Switch:** choose between the two attenuation values, 0dB (left) or -6dB (right).
- **Single Input:** connect the port when the sensor is single core (most sensors are).
- **Power Port:** the power port need to be connected to the external power adaptor when this preamp output is not connecting to the AE data acquisition system. The power input voltage should be 18V to 32V DC.
- **Power Indicator:** when there is power input (no matter it's the phantom power from AE data acquisition system or the DC power from the external power adaptor), the power indicator is turned on. DC port.
- **Signal Output:** output amplified and filtered electrical acoustic emission signals. It also supports the phantom power input from the AE data acquisition system to power the preamp. BNC connector
- **Magnetic Base:** it can have magnets installed at the bottom or not for easier installations. Choose when ordering.

