# Monad Electronics

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**Winner of National Award for year 2009-2010 in R&D**

Monad Electronics is An ISO 9001:2015 certified company, which has been involved for over 20 year in the business of designing, manufacturing and export of Electronic Industrial products, Testing equipments , sensors and related indicating and controlling devices and allied products related to Data logging & Acquisition.

Monad is specialized in providing high end and high accuracy customized Force Transducers, Multi-Axial Force Transducers and Torque Sensors. Monad is an expert in providing import substitutes of high end Load Cells, Safe Load Indicators, etc

We are supplying to leading industries and government institutions and are also exporting our products to USA, Germany, Belgium, Turkey, Australia, U.A.E., Singapore, Spain, Brazil, New Zealand, Philippines, UK, Croatia and to the African countries.

# Charge Amplifier

Monad's Charge Amplifier is a very robust construction and is ideal for use in conditions where the pre amplifier must be sited near to the transducer, in order to avoid noise pick -up in long transducer cables due to electromagnetic noise and tri-boelectric noise.
Power Supply and output signal can be obtained from the 5 pin Connector on the Amplifier.
Both differential (balanced) type and normal, single ended type piezoelectric accelerometers may be used with it. The differential types will be used especially in conditions of severe electromagnetic interference. With differential transducers, where both poles of the piezoelectric element are isolated from the case, and therefore from the machine frame, ground loop interference problems are largely eliminated.
When the Monad`s Amplifier is used with normal, single ended transducers, the micro plug adaptor supplied allows the use of normal, low-noise coaxial cables; this adaptor automatically grounds one of the input poles. The input amplifieris a differential charge amplifier consisting of a dual, low noise FET and two, high-gain IC operational amplifiers
The lower limiting frequency of 1Hz is determined by a filter network around the input amplifier which provides a 40 dB/decade fall-off in response over the decade1Hz to 0.1Hz. This eliminates the influence of low frequency noise on the measured signal, for example due to the pyro-electric effects of some transducers in fluctuating temperature conditions

The output amplifier has a low output impedance which is suitable for driving long cables.
By means of an internal 10 turn potentiometer the gain of the amplifier can be adjusted between 0 and 20 dB
The Power Input and Signal Output of the Amplifier is supplied with a 3.5m long cable fitted with matching connector Wherever possible power should be provided by a dual polarity supply with voltage between -15 and +15 This ensures that the output signal is centred at ground potential with negligible DC offset and that power supply noise and common mode signals are more effectively suppressed When the amplifier is used with normal single ended transducers the micro plug adaptor supplied is employed

With single polarity power supplies the output signal is DC offset to approximately +6V. Voltages of +12V to +28V may be used measuring amplifier or frequency analyser it is convenient to use the +12V power supply provided at the pin pre-amplifier input socket on these instruments. This may be applied to the amplifier using the power and signal cable which is available.

FEATURES

# Small, rugged construction
# Suitable for both differential and single-ended output type transducers
# Sensitivity adjustable from 1 to 10 mV/pC
# Built-in high-pass filter
# Single or dual polarity power supply

USES

# Vibration measurements in industrial environments
# Permanent vibration monitoring on industrial machinery
# Airborne vibration monitoring on aircraft engines
# General vibration measurements with a measuring amplifier