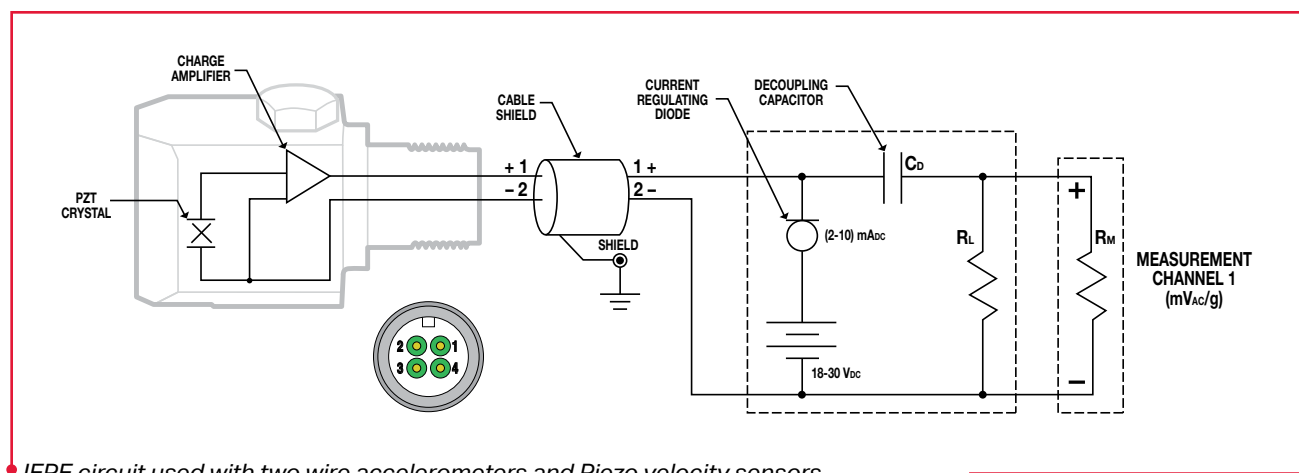


IEPE Power

Integrated Electronic Piezo Electric (IEPE) power supplies are an integral part of today's modern data collectors, dynamic signal analyzers, and on-line condition monitoring systems used for vibration analysis. **The IEPE platform is a two-wire technology where Pin 1 is positive, and Pin 2 is negative.** The power and signal for the accelerometer or Piezo velocity sensor is found on the positive wire (Pin 1), and the circuit common is located on the negative wire (Pin 2).

The IEPE Power supply provides a constant current source of 2 to 10 mA with a supply voltage of 18 to 30 volts. Internally, the accelerometer or Piezo velocity sensor uses the supply current and voltage to power the integrated circuit that converts the change output of the PZT ceramic element to a voltage and amplifies the output of the accelerometer or integrates and amplifies the output of the Piezo velocity sensor.

Located inside the data collector, dynamic signal analyzer, and on-line condition monitoring systems, the IEPE power supply also plays an essential role in separating the AC vibration signal from the DC operating (bias) voltage. By using a decoupling capacitor, the IEPE circuit can provide the AC vibration signal for processing by the data collector, dynamic signal analyzer, or on-line condition monitoring system without the large DC voltage component. This provides a very clean vibration signal for analysis in the time waveform and FFT.



• IEPE circuit used with two wire accelerometers and Piezo velocity sensors

IEPE SENSOR WIRING

Relative to the figure above, for a two-wire accelerometer or Piezo velocity sensor, the positive wire would be connected to Pin 1, and the negative wire would be connected to Pin 2. Pins 3 and 4 are not used.

[Click here](#) to download our entire guide to wiring CTC accelerometers.

