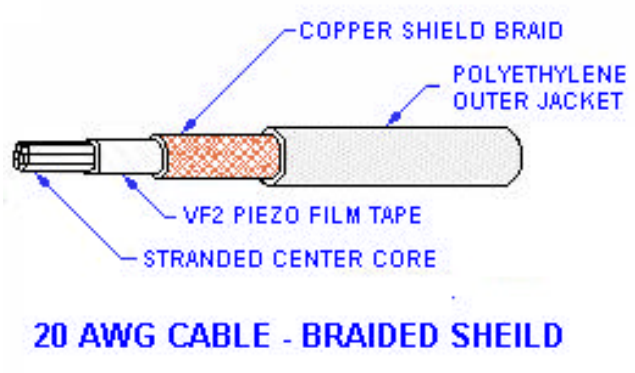
DESCRIPTION

Measurement Specialties, Inc. Piezo Cable utilizes a piezoelectric polymer sensor construction. The Piezo Cable has the appearance of standard coaxial cable, but is constructed with a piezoelectric polymer (PVDF) insulation layer between the copper braided inner conductor and the outer shield. Protected by a rugged polyethylene jacket, the cable has provided excellent service in buried and fence-mounted sensors for airports and other installation perimeter security applications.



P/N: 1005801-1

APPLICATIONS

- Perimeter Intrusion Detection
- Safety and Security Fencing
- Door Edge/Vehicle Bumper Switch
- Cable Tampering Detector
- Remote Impact/Detonation Vibration Sensing
- Large Area Switch Mats
- Patient Mattress Monitor
- Sports Scoring
- Weather Sensing/Rain/Hail
- Geophones

FEATURES

- Passive, Long Length Sensor
- Very Tough, Water Resistant and Flexible
- Temperature Stability to 85EC
- Self-Shielded Coaxial Construction
- High Voltage Response
- Low Impedance Per Unit Length
- Simplified Interconnections
- Field Repairable

Typical Properties	Units	Value
Outside Diameter	mm	2.69
Capacitance @ 1 kHz	pF/m	950
Weight	kg/km	14.5
Relative Permittivity	@ 1 kHz	9
Tangent Delta	@ 1 kHz	.016
Hydrostatic Piezo Coefficient	pC/N	20
Resistance (Center)	DCR/km	31
Resistance (Shield)	DCR/km	47

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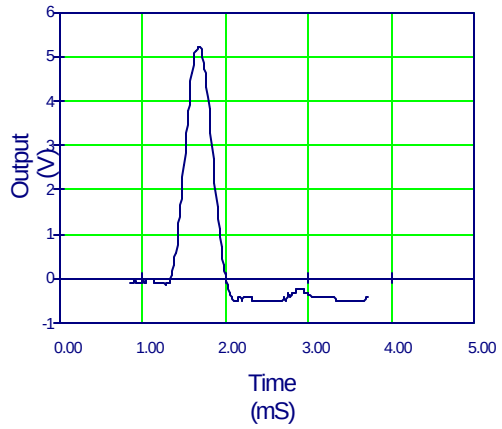
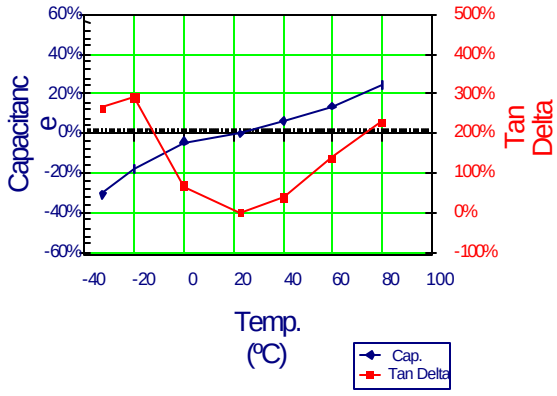
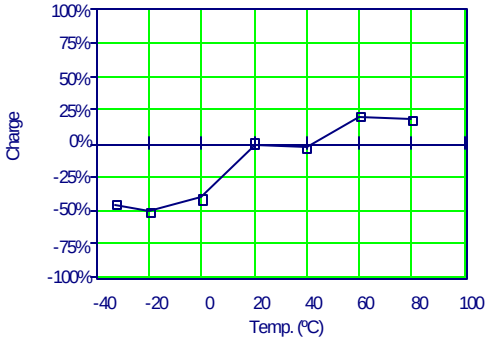


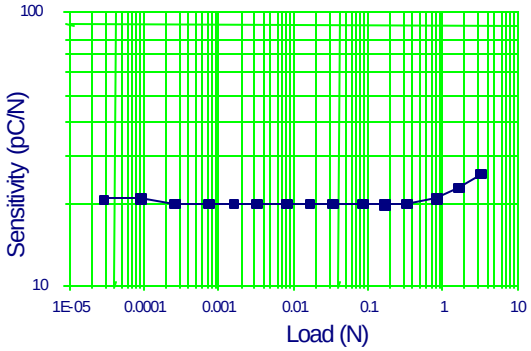
Typical Analog Output from an Impact



Typical Charge Response vs. Temperature

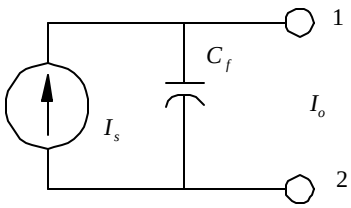


% Change in Charge Output vs. Temperature

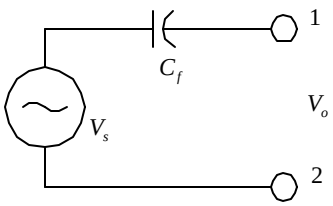


Typical Sensitivity vs. Load

Equivalent Circuit



Current Source

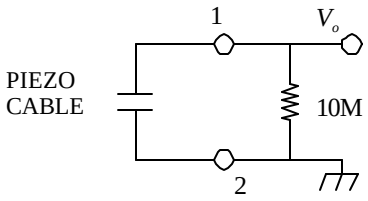


Voltage Source

TYPICAL INTERFACE CIRCUITS:

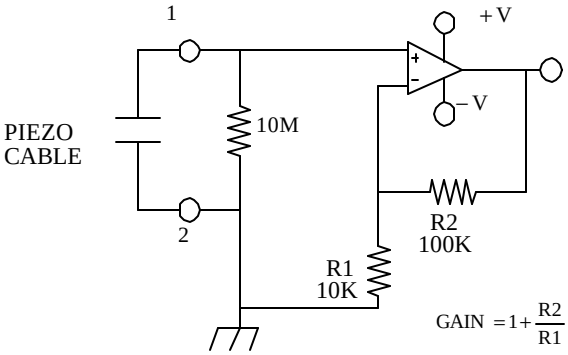
Example 1:

- Taxiway Sensor (100 m cable)
- Large Impact Force (Aircraft or Truck)
- Low Frequency Event (0.1 Hz...10 Hz)



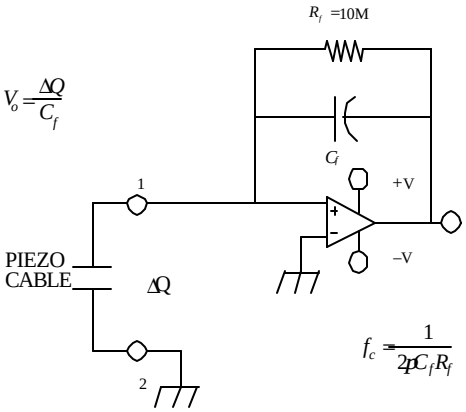
Example 2:

- Fence Sensor (1 km cable)
- Small Vibration Signals (intruder)
- Higher Frequency (10 Hz...10 kHz)



Example 3:

- Step Switch Mat (1 m cable)
- Foot Pressure
- Low Frequency (0.1 Hz...100 Hz)



ADDITIONAL INFORMATION

For additional information or assistance, please contact:

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