

LDT1-028K Piezo Sensor w/ Lead Attachment

Piezoelectric Polymer
Multi-purpose
Vibration Sensing
Impact Sensing
Laminated
Dual Wire Lead Attached



The **LDT1-028K** is a multi-purpose, piezoelectric sensor for detecting physical phenomena such as vibration or impact. The piezo film element is laminate to a sheet of polyester (Mylar), and produces a useable electrical signal output when forces are applied to the sensing area. The dual wire lead attached to the sensor allows a circuit or monitoring device to process the signal.

dimensions

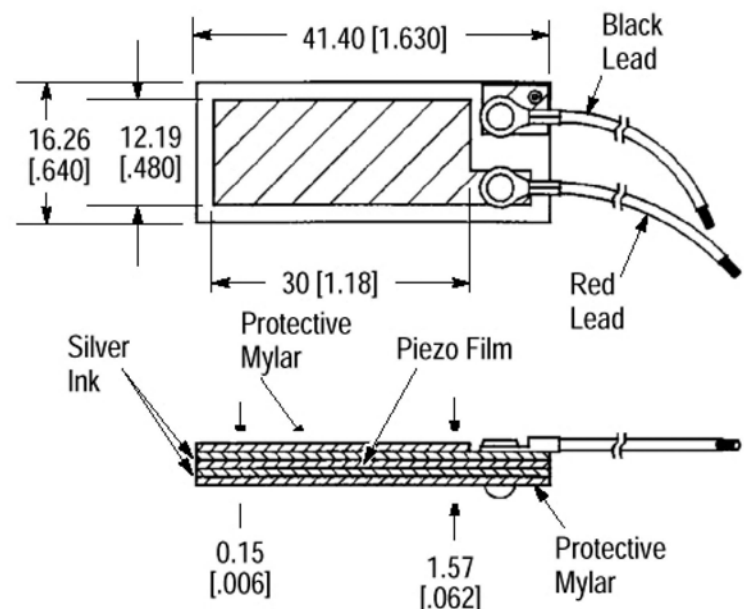
Dimensions in mm [inches]

FEATURES

- Minimum Impedance: 1 M Ω
- Preferred Impedance: 10 M Ω and higher
- Output Voltage: 10 mV-100V depending on Force and Circuit Impedance
- Storage Temperature: -40°C to +70°C [-40°F to 160°F]
- Operating Temperature: 0°C to +70°C[32°F to 160°F]

APPLICATIONS

- Sensing Direct Contact Force
- Recording Time of an Event
- Counting Number of Impact Events
- Measuring Impact Related Events
- Sensing Vibration using Cantilevered Beam
- Wakeup Switch
- Motion Detection



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instructions

Direct Impact Sensing: Using an adhesive (such as double sided tape) adhere the sensor area to a pliable pad to absorb impact with the full length protective laminate on the impact face. Apply the force (such a finger touch or hammer blow) to the sensor area.

Vibration and Motion Sensing: Mount the element in a cantilever arrangement, allowing the sensing are to vibrate up and down. Add a small weight to the end of the sensor if the greater sensitivity is required.

The direct adherence of the LDT1-028K to the vibrating body can detect vibration, but another piezo film sensor configuration (SDT1-028K) is available and designed for this application. The SDT1-028K is a fully shielded form of the LDT1-028K.

Bending: A cantilever arrangement will allow the piezo element to be deflected and this can be used to detect a striking object when the element is flexed. It is essential that the film not be in the neutral axis of the beam. Otherwise signal cancellation can result, minimizing signal.

The LDT1-028K device is unshielded by design. If **shielding** is required, the sensor can be enclosed in a proper environment. Metallized tapes can be used to cover the sensor but these may impede motion and subsequent output. Wire leads can be twisted or covered. Other piezo film devices such as SDT1-028K are available and are shielded.

The LDT1-028K is designed to cover a wide range of sensing applications. Specific sensors requiring wider dynamic range, more or less sensitivity, different area coverage, different shapes, extended life, resistance to sharp objects, and higher temperature range, etc., can be constructed to fit the applications as special orders.

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ordering information

Description	Part Number
LDT1-028K w/leads	1-1002910-0
SDT-028K w/leads	1-1000288-0

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