



**UNHOLTZ-  
DICKIE  
CORP.**

Vibration Test Equipment

Piezoelectric Accelerometer

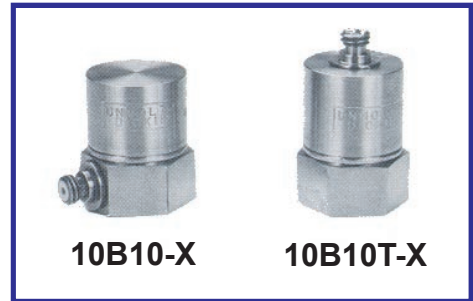
**Model 10B10-X**

**Model 10B10T-X**

The **10B10-X** and **10B10T-X** Accelerometers are general purpose piezoelectric vibration transducers designed with wide operating temperature range for use in the charge mode. The nominal sensitivity at 160 Hz is within the range of 9.0 to 10.8 pC/g. The sensitivity is extremely stable over a wide frequency range with a maximum 2% deviation from 10 to 2,000 Hz. (see typical curve below)

**KEY FEATURES**

- Normalized charge sensitivity (typ 10.2 pC/g)
- Temp range -300°F to +500°F (-184°C to +260°C)
- Low base and case strain sensitivity
- Flat charge sensitivity vs frequency
- Flat charge sensitivity vs temperature
- Mounted resonant frequency 30 kHz



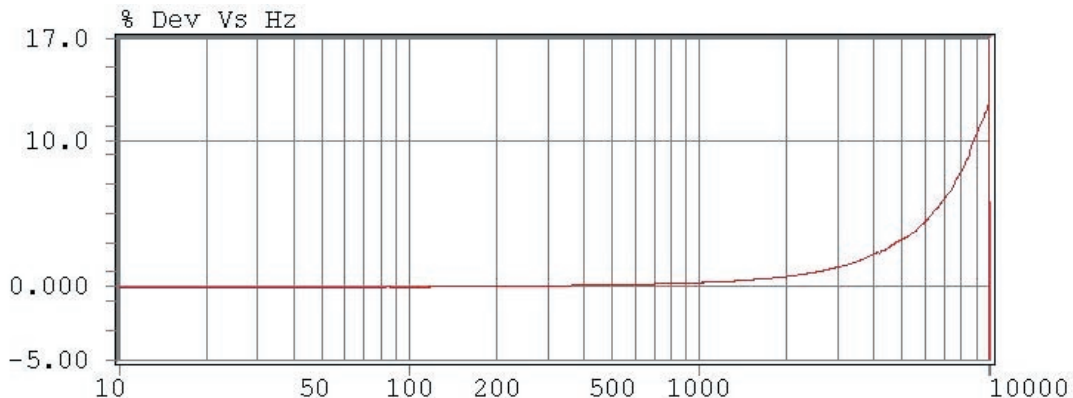
**10B10-X**

**10B10T-X**

**DYNAMIC PERFORMANCE**

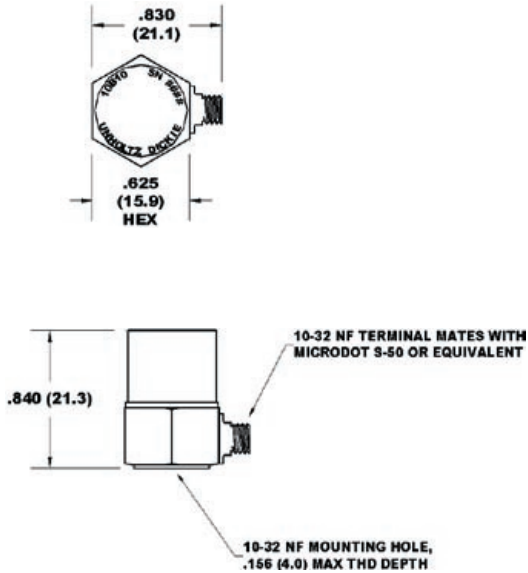
Nominal Charge Sensitivity:	10.2 pC/g typ at 160 Hz.
Open Circuit Voltage Sensitivity:	5.2 mV/g typical
Accelerometer Capacitance:	1600 pF typical at 160 Hz
Mounted Resonant Frequency:	30,000 Hz typical
Transverse Sensitivity:	3% max at 160 Hz 1% typical
Accelerometer Resistance:	20,000 megohms min at 75°F 500 megohms min at 500°F
Frequency Response:	See curve below, (reference to 160 Hz.)
Flatness:	± 2%, 10-2,000 Hz
Amplitude Linearity:	Within 2% of best line (2000 g range)

**SENSITIVITY DEVIATION  
FREQUENCY RESPONSE (typ.)  
(REFERENCED TO 160 Hz)**

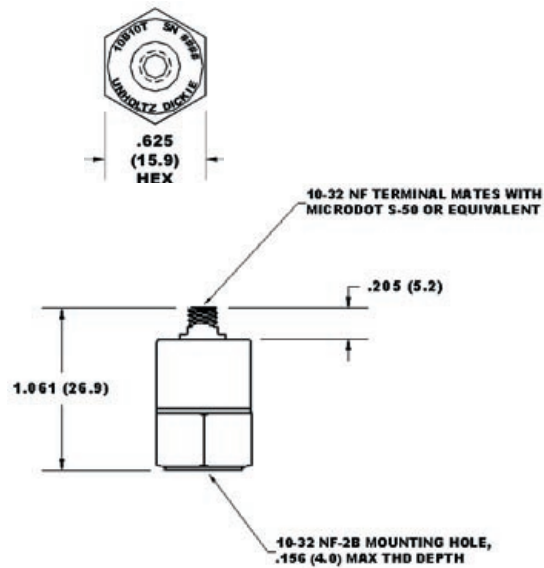


# UNHOLTZ-DICKIE CORPORATION

## 10B10-X



## 10B10T-X



## SPECIFICATIONS

### MECHANICAL

Design Type:	Compression mode, grounded case, strain isolating double base
Connector:	10B10-X Side connector 10B10T-X Top connector
Piezoelectric Material:	Bismuth Titanate (high temp)
Dimensions:	(See dim. dwg. above)
Weight:	1 oz (27 gm) nominal
Mounting:	10-32 internal thread, .145 inch deep
Case:	Type 303 stainless steel
Accessories Available:	Microdot low noise cable (10, 25, 35 ft) plus 10-32 x 3/8 inch isolating stud

### ENVIRONMENTAL

Dynamic Range:	1000 g sinusoidal, 2000 g shock
Temperature Range:	-300°F to +500°F for ±5% charge sensitivity variation -300°F to +350°F for +0%, -5% voltage sensitivity variation with typical capacitive load
Base Strain Sensitivity:	10B10-X: Equivalent .005g/microinch/inch strain, typical 10B10T-X: Equivalent .002g/microinch/inch strain, typical
Seal:	True hermetic seal, grade A, with welded and glass-to-metal bonds

Calibration of each accelerometer is accomplished by comparison to an NIST traceable reference. Using a UD Calibration System, a continuous calibration curve is plotted from 10 to 10,000 Hz, showing percent deviation of charge sensitivity compared to the sensitivity measured at 160 Hz.

10B10-XR12