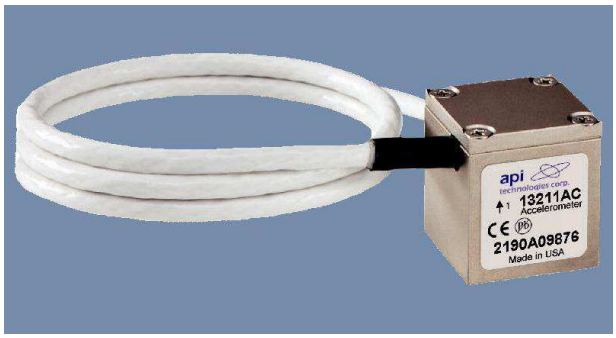
Preliminary

Eliminates management of calibration data



13211AC

Low g Uniaxial Accelerometer

FEATURES

- **IdentiCal™ Interchangeable Sensors** eliminate the manage-ment of calibration data and allow convenient interchangeability of individual sensors. With standardized sensitivity and offset, there is no need to enter new parameters for each unit. 13211AC is perfect for high volume use**.**
- **Rugged for Harsh Environments** The 13211AC is robust to perform well in harsh environments. The 6061-T6 case with elec-troless nickel finish plus a Teflon cable with a shield bonded to the case provide improved resistance to EMI, lightning, or other disturbances. The enclosure is rated IP65. The unit has resilient power and will survive 3500 g powered and unpowered.
- **High Accuracy and Linearity over Wide Temperature Range**
  The output of the 13211AC is directly proportional to the ac-celeration of its axis. The DC-coupled output is fully scaled, ref-erenced, and temperature compensated. When used in demand-ing temperature environments, the 13211AC is one of the most accurate accelerometers available.

SPECIFICATIONS

- **±0.5 g to ±2 g**

The 13211AC is an interchangeable and rugged uniaxial accelerometer capable of accurately measuring acceleration under demanding environmental conditions. A tough, compact housing holds potted electronics and a shielded heavyweight cable.

The 13211AC provides enhanced accuracy and durability features to meet the challenges of your application. In addition to its robust construction, increased precision is achieved through improved offset and gain compensation.

Each axial sensor has been tested over the -40 to +85 °C temperature range and has a nominal full scale output swing of ±2 Volts. Sensors are available in various fixed sensitivities, each with a 2.500 V offset. The 13211AC can also be ordered with different bandwidths and wiring configurations.

- **Small Size** Complete conditioned accelerometer package in less than one cubic inch; it may be easily mounted for any axis orientation
- **Built-in Power Supply Regulation** Unregulated DC power from +8.5 to +36 Volts is all that is required to measure accel-eration.
- **Self-Test on Digital Command** A TTL-compatible self-test input causes a simulated acceleration to be injected into all axes to verify channel integrity and wiring connections.
- **Earth Friendly Design** Lead-free design makes the 13211AC environmentally safe while Measurement Specialties' assembly process ensures reliable functionality. Fully-potted electronics eliminates the possibility of tin whiskers-related failures.
- **Three-Year Warranty -** Measurement Specialties acceler-ometers are covered by a three-year return to factory warranty. Extended warranties are available.

*Technical Data subject to change without notice

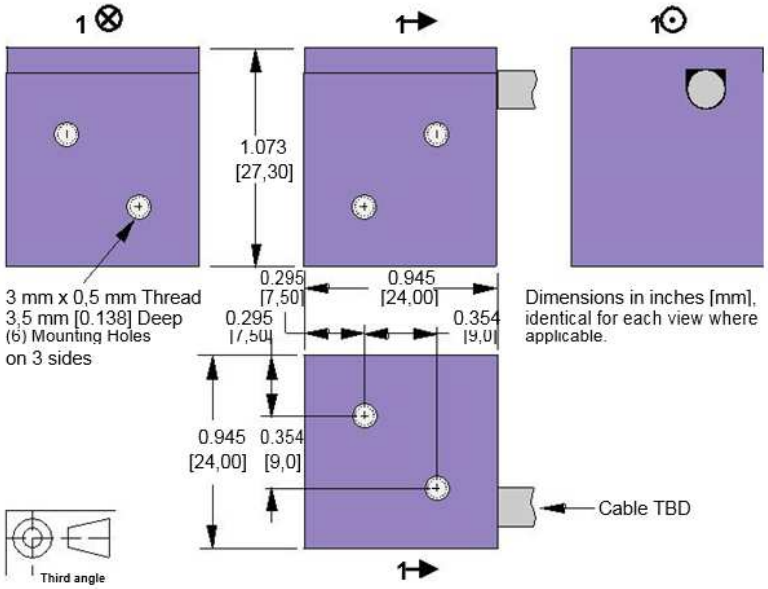
SPECIFICATIONS FOR 13211AC - improved specifications available upon request

TA = TMIN to TMAX; 8.5 ≤ VS ≤ 36 V; Acceleration = 0 g, unless otherwise noted; within one year of calibration.

Parameter	Min	Typi-cal	Max	Units	Conditions/Notes
Range & Sensitivity* at 25 °C Option R001 Option R0.5		 2.000 4.000		 V/g V/g	Must specifiy via Option Rnnn, see Ordering Info *Maximum error ±0.75%* *of nominal at 25 °C*
Sensitivity Drift 25°C to T_{MIN} or T_{MAX}		0.1		% FSR	
Offset at 25 °C, Zero g Bias Level		2.500		V	Max error ±50 mg of nominal at 25 °C
Offset Drift 25 °C to T_{MIN} or T_{MAX}		0.5		% FSR	
Alignment, Deviation from Ideal Axes		±1.5		degrees	
Transverse Sensitivity		±1.5		%	Inherent sensor error, excluding misalignment
Nonlinearity		0.2		% FSR	Best fit straight line
Frequency Response	0		2500	Hz	Upper cutoff per Option Bnnn, -3 dB pt ±10%
Noise Density		110		µg/√Hz	T_A = 25 °C
Self Test Pull-up Resistor	5			kΩ	Logic "1" ≥ 3.5 V, Logic "0" ≤ 1.5 V, "0" causes self test
Outputs Output Voltage Swing	 0.50		 4.50	 V	Measuring equipment >10 MΩ recommended I_{OUT} = 1 mA, Capacitive load <1000 pF
Power Supply (V_S) Input Voltage Limits Input Voltage - Operating Input Current Rejection Ratio	 -80 +8.5	 12 >120	 +80 +36	 V V mA dB	 -80 V continuous, >38 V if ≤550 ms, duty <1% No load, quiescent DC
Temperature Range (T_A)	-40		+85	°C	
Mass		38		grams	
Shock Survival	-3500		+3500	g	Any axis for 0.5 ms, powered or unpowered

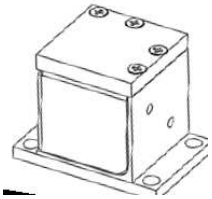
**IdentiCal sensors are interchangeable, any with same range have same value*

MECHANICAL

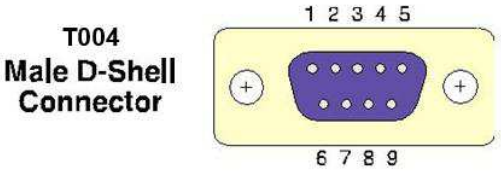


6061-T6 aluminum case with electroless nickel finish plus integrated cable with shield bonded at the case

Shown with
34170B
Mounting
Adapter
(Sold separately)

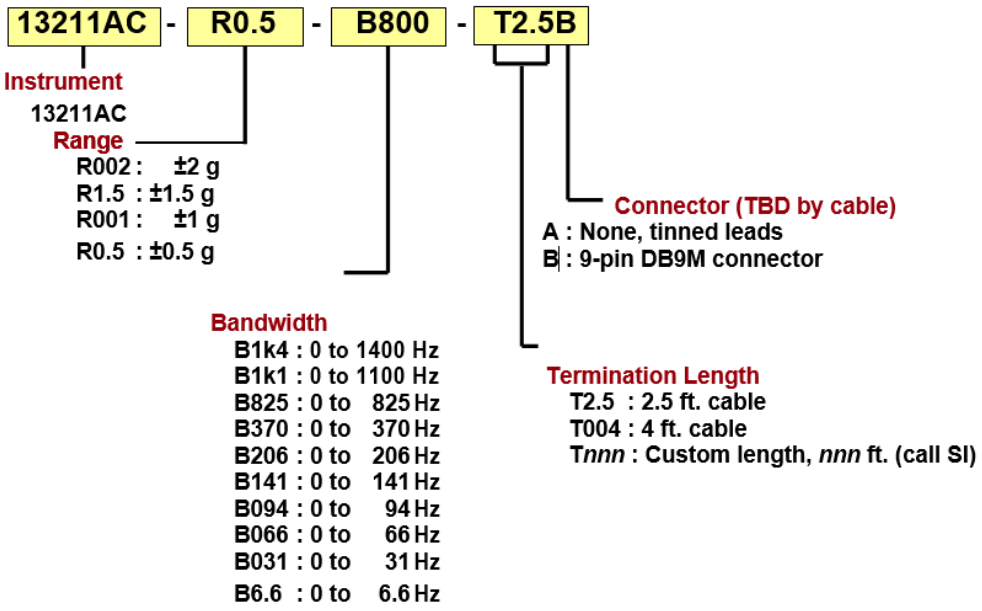


CONNECTIONS



Pin	1	2	3	4	5	6	7	8	9
Signal	A1+	Signal -	Not	Not	Not	Not	SelfTest	+Vs	Gnd
Wire	Green	Blue	Used	Used	Used	Used	Violet	Orange	White

ORDERING INFORMATION



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