



Eliminates management  
of calibration data



## FEATURES AND BENEFITS

### IdentiCal™ Interchangeable Sensor

IdentiCal™ Interchangeable Sensors eliminate the management 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. Perfect for high volume use.

### High Accuracy and Linearity over Wide Temperature Range

The output of the 13203CC sensor is directly proportional to the acceleration input along the measurement axis. The DC-coupled output is fully scaled, referenced, and temperature compensated from -40°C to +85°C. When used in demanding applications, the enhanced signal compensation makes the model 13203CC one of the most accurate accelerometers available.

### Built-In Power Supply Regulation

The accelerometers also include input regulation to allow a range of 8.5 to 36Vdc excitation. Furthermore, reverse power protection is included up to voltages of -80 V constant supply and transients of +80 V for 550msec compatible with MIL-STD-704A.

## 13203CC Analog Accelerometer

### SPECIFICATIONS

- Rugged Uniaxial Accelerometer
- DC Response, Silicon MEMS
- $\pm 6g$  &  $\pm 10g$  Measurement Ranges
- Interchangeable Sensors, Identical Calibrations
- $\pm 1.0\%$  Typical Accuracy from -40°C to +85°C

The TE Connectivity model 13203CC is an interchangeable and rugged uniaxial accelerometer capable of accurately measuring acceleration under demanding environmental conditions. The sensors are fully encapsulated and sealed in a rugged 6061-T6 aluminum housing with electroless nickel finish. The electrical interface is provided by a reliable shielded and jacketed PFA insulated cable with optional connector installation. Its cubical form factor allows mounting with the sensing axis oriented in any direction.

Each accelerometer has been tested over the full operating temperature range from -40°C to +85°C and has a nominal full-scale output swing of  $\pm 2$  Volts. The model 13203CC is available in  $\pm 6g$  and  $\pm 10g$  range and can be ordered with various bandwidth options.

The 13203CC 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

PERFORMANCE SPECIFICATIONS

All values are typical at +24°C and 12Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

Parameters

**DYNAMIC**

	-R006	-R010
Dash Number	-R006	-R010
Range (g)	±6	±10
Sensitivity (mV/g)	333 ±1%	200 ±1%
Frequency Response (Hz)	0-800	0-800
Non-Linearity (%FSO)	±0.10	±0.10
Transverse Sensitivity (%)	<2	<2
Alignment Error (Degrees)	±0.25	±0.25
Shock Limit (g)	±5000	±5000
Resolution B031 filter option (mg)	0.58	0.58
Resolution B094 filter option (mg)	1.02	1.02
Resolution B800 filter option (mg)	2.98	2.98
Spectral Noise (µg/√Hz)	100	100

**Notes**

See Ordering Info  
 IdentiCal, see note 1 below  
 -3dB cutoff per BYYY option  
 FSR  
 <1% typical  
 Deviation from ideal axes  
 0.5msec pulse  
 31Hz -3dB cutoff  
 94Hz -3dB cutoff  
 800Hz -3dB cutoff

**ELECTRICAL**

Zero Acceleration Output (V)	±2.50 ±0.015
Excitation Voltage (Vdc)	8.5 to 36
Excitation Current (mA)	12
Rejection Ratio (dB)	>120
Full Scale Output (single-ended)	0.50 to 4.50Vpk (FSO=2V)
Output Resistance (Ω)	<100
Insulation Resistance (MΩ)	>100
Turn On Time (msec)	<50
Ground Isolation	Isolated from Mounting Surface

Single ended

No load, quiescent  
 DC  
 >10MΩ load

@100Vdc

**ENVIRONMENTAL**

Thermal Zero Shift (%FSO)	±1.0
Thermal Sensitivity Shift (%)	±1.0
Operating Temperature (°C)	-40 to +85
Humidity (Active Element & Electronics)	Hermetically Solder Seal
Humidity (Housing)	Epoxy Sealed, IP65

-40 to +85°C  
 -40 to +85°C

**PHYSICAL**

Case Material	Electroless Nickel Plated 6061-T6 Aluminum
Cable	4x, #22 AWG Conductors, PFA Insulated, Tin Plated Shield, PFA Jacket
Connector	9-pin DB9 Male Connector Installed at End of Cable for Option D
Weight (cable not included)	38 grams
Mounting	2x M3-0.5 Machine Screws
Mounting Torque	5 lbf-in (0.56 N-m)

Note 1 IdentiCal are interchangeable, all units have same range and sensitivity

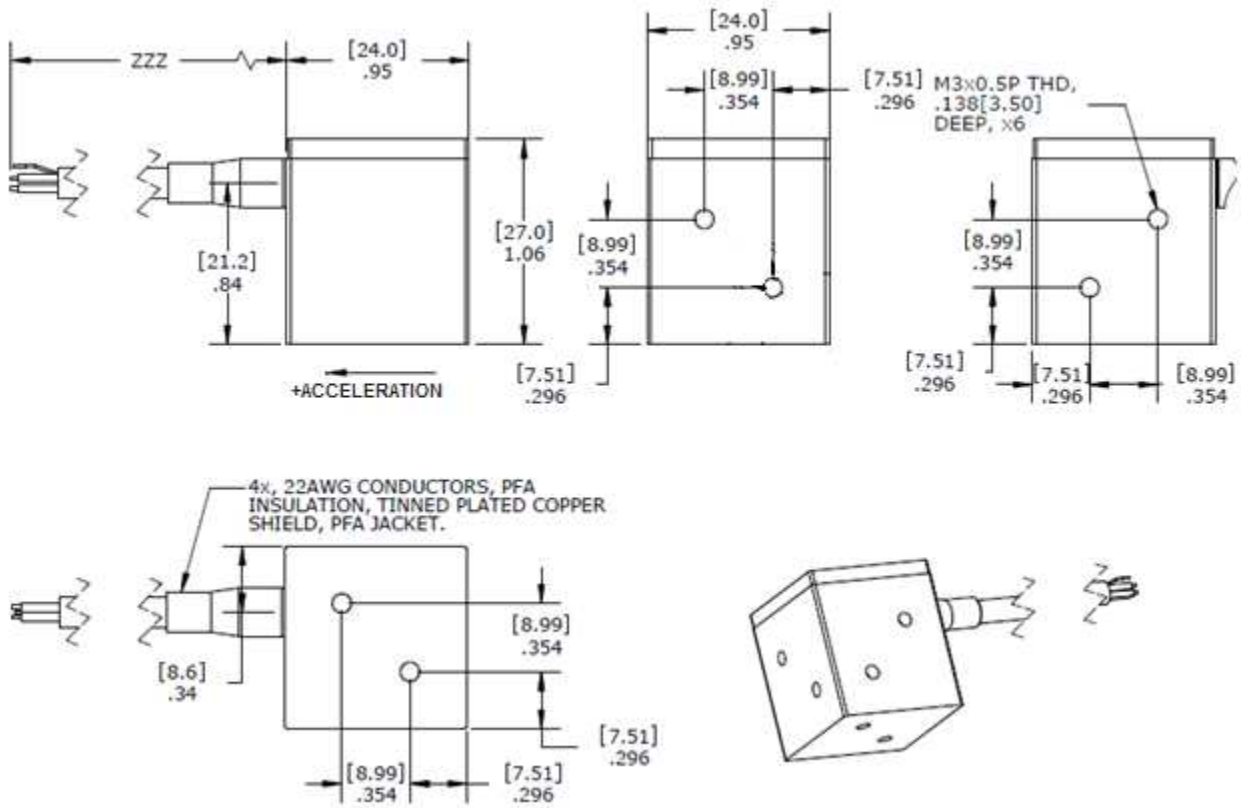


**Calibration supplied:** CS-FREQ-0100 NIST Traceable Calibration with Sensitivity and Offset

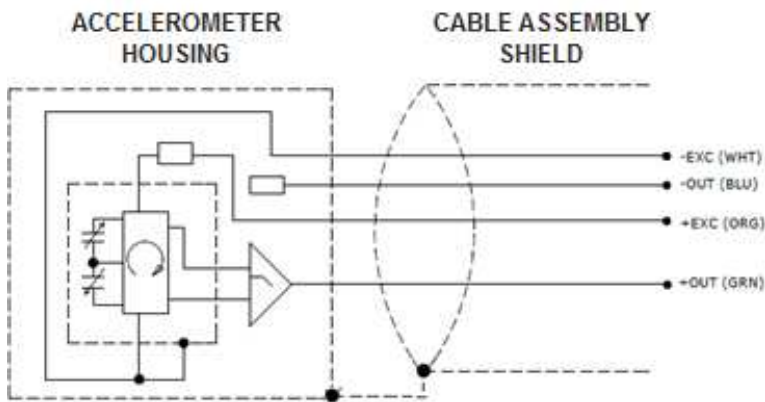
**Optional accessories:** 34170B Adaptor Plate for Flange Mounting

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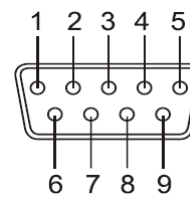
DIMENSIONS



SCHEMATIC



Option D: DB9 Male Connector



- Pin 1: +OUTPUT SIGNAL
- Pin 2: -OUTPUT SIGNAL
- Pin 3: NOT USED
- Pin 4: NOT USED
- Pin 5: NOT USED
- Pin 6: NOT USED
- Pin 7: NOT USED
- Pin 8: +EXCITATION VOLTAGE
- Pin 9: -EXCITATION VOLTAGE (GND)

## ORDERING INFORMATION

13203CC	RXXX	BYYY	TZZZ	A/D
<b>Range</b> R006 = ±6g R010 = ±10g				
<b>Bandwidth</b> B031 = 0 to 31Hz B094 = 0 to 94Hz B800 = 0 to 800Hz				
<b>Cable Length</b> T004 = 4ft cable (standard option) TZZZ = Contact factory for custom length (ZZZ in feet)				
<b>Termination</b> A = Tinned pigtail leads D = 9-pin DB9M connector				

Example; 13203CC-R006-B800-T004A

Model 13203CC, ±6g range, 0-800Hz bandwidth, 4ft cable with pigtail leads

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