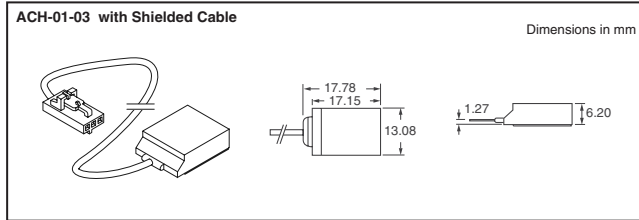


## ACH-01 Accelerometers

The ACH-01 Accelerometer is a robust, general purpose, linear single axis accelerometer featuring buffered electronic output.

### Specifications:

- Sensitivity: 10mV/g • Lower Frequency Limit (-3dB): 2Hz • Upper Frequency Limit (+3dB): 20kHz
- Dynamic Range: ±150g • Linearity: 0.1% • Resonant Frequency: 35kHz • Operating Temperature: -40°C ~ 85°C • Maximum Shock Level: 1000g

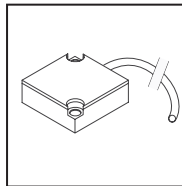


Description	Digi-Key Part No.	Price Each	1	10	100	Measurement Part No.
ACH-01-03 Sensor Accelerometer with 40" Single Coax Cable and Female Connector	MSP1001-ND	24.38	19.50	13.65		1-1001220-0
ACH-01-04 Sensor Accelerometer with Wires	MSP1002-ND	24.38	19.50	13.65		1-1001497-0

## Model 4000 Accelerometers



The Model 4000 is an economical signal conditioned accelerometer with integral temperature compensation. The accelerometer incorporates a 2nd generation piezoresistive MEMS sensor providing outstanding performance. It is packaged in a lightweight thermoplastic housing ideal for transportation and instrumentation testing. The signal conditioned output incorporates a 2.5V reference that offers the user a differential or single-ended output.



"G" Range	Digi-Key Part No.	Price Each	Measurement Part No.
10	223-1079-ND	276.38	4000-010-060

## Amplifier Box

For use with ACH-01-03 and ACH-01-04

- Characteristics: • Gain: 10X • Power Supply: 9V Battery • Supply Current: 4.0mA • Input Interface: FET for ACH-01 • Output Impedance: 100Ω • Output Connector: BNC

Description	Digi-Key Part No.	Price Each	1	10	100	Measurement Part No.
IB-ACH-01 — Amplifier Box	MSP1003-ND	92.50	77.50	67.50		0-1003058-0

## Pressure Sensors



The SCP1000 performs almost complete data processing on-chip. The communication between the SCP1000 and its host micro-controller (μC) is based on a serial interface, an interrupt line and specialized pins used to trigger special functions. Two different serial interfaces are available: SPI and TWI (TWI is very similar to I<sup>2</sup>C bus). The appropriate communication interface is pre-programmed in the factory.

The SCP1000 pressure demonstrator is designed to give a quick access and understanding on the performance and capabilities of the SCP1000 pressure component. The demo kit supports SCP1000-D01 and SCP1000-D11 sensors.

**SCP1000 Demo Kit Includes:** SCP1000-D01 sensor soldered on chip carrier PCB, USB interface card inside the demo box, USB cable, CD-ROM with documentation, drivers and GUI software running on PC

Description	Supply Voltage	Average Supply Current (μA)	Measuring Range (kPa)	Temperature Range	Package	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel		VTI Part No.
							1	10	25		Qty.	Pricing	
Absolute Pressure Sensor	2.4 ~ 3.3V	25	30 ~ 120	-20°C ~ 70°C	SPI Interface	551-1046-1-ND	20.30	18.89	17.47	551-1046-2-ND	500	6091.00	SCP1000-D01
Absolute Pressure Sensor	2.4 ~ 3.3V	25	30 ~ 120	-20°C ~ 70°C	I <sup>2</sup> C Interface	551-1043-1-ND	20.30	18.89	17.47	551-1043-2-ND	500	6091.00	SCP1000-D11
SCP1000-D01 on PCB	2.4 ~ 3.3V	25	30 ~ 120	-20°C ~ 70°C	SPI Interface	551-1042-ND†	47.40	46.56	45.71	—	—	—	SCP1000 PCB1
SCP1000-D11 on PCB	2.4 ~ 3.3V	25	30 ~ 120	-20°C ~ 70°C	I <sup>2</sup> C Interface	551-1044-ND†	47.40	46.56	45.71	—	—	—	SCP1000 PCB3
Sealing Gasket for SCP1000 Series Sensors						551-1049-ND	.40	.23	.19	—	—	—	SCP1000 GA1K
Demo Kit for SCP1000						551-1045-ND	337.50	—	—	—	—	—	SCP1000 Demo

† Bulk

## LDT Vibration Sensors



Typically, a 0.005" (125μm) polyester layer is laminated to a 28μm piezo film element. When used in a "bending" mode, laminated film elements develop much higher voltage output when flexed than non-laminated elements. The piezo film is off the neutral axis in the laminate, and is strained more when flexed.

### LDT0-028K High Sensitivity

### LDTM

### MiniSense

Description	Cap (nF)	Digi-Key Part No.	Price Each	1	10	100	Measurement Part No.
LDT0-028K, with Solder Tabs	.500	MSP1006-ND	1.20	.90	.50		1002794-0
LDTM-028K, with Mass and Solder Tabs	.420	MSP1007-ND	2.00	1.50	.83		0-1005447-1
MiniSense 100 (Horizontal)	—	MSP6914-ND	3.00	2.25	1.25		1005939-1
MiniSense 100 (Vertical)	—	MSP6915-ND	3.00	2.25	1.25		1005940-1

## Basic Design Kit

This kit demonstrates the use of MSI piezo film sensors as microphones, speakers, switches and acoustic pickups. All components and film samples in the kit can be used for experimentation.

- Kit Includes: • Seven sensor elements • One piezo cable • One PCB for ACH-04-08 • Application/instruction specifications • Technical manual

Description	Digi-Key Part No.	Price Each	Measurement Part No.
Basic Design Kit	MSP1010-ND	113.75	0-1004308-0

N

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## Accelerometers and Inclinometers

VTI Technologies is a forerunner in motion and pressure sensors and the world's leading designer and producer of acceleration sensors. VTI develops and produces silicon based capacitive sensors with unique 3D-MEMS (MicroElectroMechanical System) technology, with application areas in acceleration, inclination, shock, vibration and pressure measurement. **SCA3000 Demo Kit Includes:** Two inclinometers; SCA3000 sensor soldered on chip carrier PWB; USB interface card; USB cable and GUI software running on PC and powered from USB port. SCA3000 Demo runs on Windows XP and 2000 and requires USB connection for data transfer.

Dimensions in mm

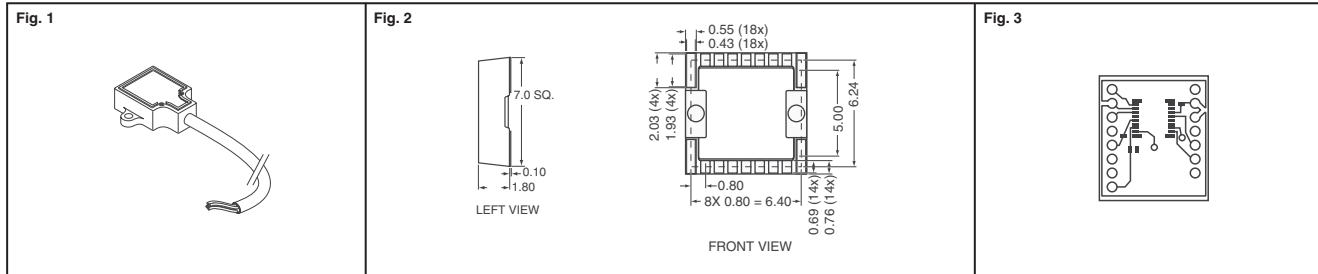


Fig.	Description	Supply Voltage (V)	Current Consumption	Measuring Range	Sensitivity	Frequency Response (Hz)	Temperature Range (°C)	Package	Digi-Key Part No.	Price Each			Tape and Reel†		VTI Part No.	
										1	10	25	Qty.	Pricing		
<b>Inclinometers — RoHS Compliant</b>																
—	Single Output, 1g	4.75 - 5.25	2.5mA	±90°	2V/g	8 - 28	-55 - 125	8-DIL SMD	551-1005-1-ND	50.76	48.23	45.82	100	3942.00	SCA61T-FA1H1G	
	Single Output, 0.5g	4.75 - 5.25	2.5mA	±30°	4V/g	8 - 28	-55 - 125	8-DIL SMD	551-1004-1-ND	50.76	48.23	45.82	100	3942.00	SCA61T-FAHH1G	
	Dual Output, 0.5g	4.75 - 5.25	4mA	±30°	4V/g	8 - 28	-55 - 125	12-DIL SMD	551-1002-1-ND	65.88	62.59	59.46	100	5184.00	SCA100T-D01	
	Dual Output, 1g	4.75 - 5.25	4mA	±90°	2V/g	8 - 28	-55 - 125	12-DIL SMD	551-1003-1-ND	65.88	62.59	59.46	100	5184.00	SCA100T-D02	
	Single Output, 0.26g	4.75 - 5.25	4mA	±15°	16V/g	8 - 28	-55 - 125	12-DIL SMD	551-1000-1-ND	65.88	62.59	59.46	100	5184.00	SCA103T-D04	
	Single Output, 0.5g	4.75 - 5.25	4mA	±30°	8V/g	8 - 28	-55 - 125	12-DIL SMD	551-1001-1-ND	65.88	62.59	59.46	100	5184.00	SCA103T-D05	
<b>Accelerometers — RoHS Compliant</b>																
—	Dual Output	4.75 - 5.25	5mA	±1.7g	1.2V/g	50±30	-55 - 125	12-DIL SMD	551-1007-1-ND	47.52	45.15	42.89	100	3564.00	SCA1000-D01	
	Dual Output	4.75 - 5.25	5mA	±1.7g	1.2V/g	50±30	-55 - 125	12-DIL SMD	551-1008-1-ND	57.24	54.38	51.66	100	4428.00	SCA1020-D02	
	Dual Output	4.75 - 5.25	4.5mA	±4g	.55V/g	115±55	-55 - 125	12-DIL SMD	551-1025-1-ND	76.95	73.11	69.45	100	6561.00	SCA1000-N1000070	
	Single Output	4.75 - 5.25	2mA	±0.5g	4V/g	18±10	-55 - 125	8-DIL SMD	551-1009-1-ND	45.36	43.10	40.94	600	14904.00	SCA610-CAHH1G	
	Single Output	4.75 - 5.25	2mA	±1g	2V/g	18±10	-55 - 125	8-DIL SMD	551-1010-1-ND	45.36	43.10	40.94	600	14904.00	SCA610-CA1H1G	
	Single Output	4.75 - 5.25	2mA	±1.5g	1.33V/g	400±150	-55 - 125	8-DIL SMD	551-1026-1-ND	37.80	34.02	32.33	—	—	SCA610-C13H1A	
	Single Output	4.75 - 5.25	2mA	±1g	2V/g	50±30	-55 - 125	8-DIL SMD	551-1027-1-ND	37.80	34.02	32.33	—	—	SCA610-C21H1A	
	Single Output	4.75 - 5.25	2mA	±1.5g	1.333V/g	50±30	-55 - 125	8-DIL SMD	551-1011-1-ND	37.80	34.02	32.32	600	11664.00	SCA610-C23H1A	
	Single Output	4.75 - 5.25	2mA	±3g	.75V/g	115±55	-55 - 125	8-DIL SMD	551-1028-1-ND	37.80	34.02	32.33	—	—	SCA610-CC5H1A	
	Single Output	4.75 - 5.25	2mA	±1.7g	1.2V/g	50±30	-55 - 125	8-DIL SMD	551-1012-1-ND	37.80	34.02	32.32	100	2700.00	SCA610-C28H1A	
	Single Output	4.75 - 5.25	2mA	±1.7g	1.2V/g	50±30	-55 - 125	8-DIL SMD	551-1013-1-ND	43.20	41.04	38.99	600	14580.00	SCA620-CF8H1A	
	<b>Stand Alone Inclinometers and Accelerometers</b>															
	1	Dual Axis	7 - 35	5mA	±90°	2V/g, 70mV/°≥4V/g	18	-40 - 85	Module	551-1017-ND◆	132.30	108.00	91.80	—	—	SCA121T-D03
		Dual Axis	4.75 - 5.25	5mA	±90°	2V/g, 70mV/°≥4V/g	18	-40 - 85	Module	551-1029-ND◆	139.05	113.40	95.85	—	—	SCA121T-D05
Dual Axis		7 - 35	5mA	±30°	2V/g, 70mV/°≥4V/g	18	-40 - 85	Module	551-1018-ND	132.30	108.00	91.80	—	—	SCA121T-D07	
Dual Axis		7 - 35	20mA	±30°	0.035°/LSB	10 - 28	—	Module	551-1015-ND	216.00	183.60	162.01	—	—	SCA125T-D08-A	
2	Triple Axis Digital	2.35 - 3.6	480µA	±2g	1333/g	45	-40 - 85	SPI Interface	551-1033-1-ND◆	27.00	25.11	23.22	1,000	16200.00	SCA3000-D01	
	Triple Axis Digital	2.35 - 3.6	650µA	±2g	1333/g	45	-40 - 85	I <sup>2</sup> C Interface	551-1035-1-ND◆	27.00	25.11	23.22	1,000	16200.00	SCA3000-D02	
	Triple Axis Digital	2.35 - 3.6	120µA	±3g	1000/g	35	-40 - 85	SPI Interface	551-1037-1-ND◆	27.00	25.11	23.22	1,000	16200.00	SCA3000-E01	
	Triple Axis Digital	2.35 - 3.6	200µA	±3g	1000/g	40	-40 - 85	I <sup>2</sup> C Interface	551-1039-1-ND◆	27.00	25.11	23.22	1,000	16200.00	SCA3000-E02	
	Triple Axis Digital	2.35 - 3.6	120µA	±6g	500/g	38	-40 - 85	SPI Interface	551-1047-1-ND◆	27.00	25.11	23.22	1,000	16200.00	SCA3000-E04	
	Triple Axis Digital	2.35 - 3.6	120µA	±18g	160/g	Selectable	-40 - 85	SPI Interface	551-1048-1-ND◆	23.33	21.70	20.07	100	1633.00	SCA3000-E05	
	Triple Axis Digital	2.35 - 3.6	120µA	±18g	160/g	Selectable	-40 - 85	SPI Interface	551-1050-ND◆	47.25	46.41	45.57	—	—	SCA3000-E05 PWB	
—	Dual Axis Subassembly	7 - 35	4.5mA	±10°	200mV/°	3	-40 - 85	PC Board	551-1020-ND◆	94.50	78.30	67.50	—	—	SCL1700-D01	
	Dual Axis Subassembly	4.75 - 5.25	4.5mA	±15°	150mV/°	3	-40 - 85	PC Board	551-1032-ND◆	94.50	78.30	67.50	—	—	SCL1700-D31	
—	4 Channel Sensor - Demo Kit	—	—	±1g	2V/g On Board	Up - 300	—	Demo Kit	551-1006-ND	486.00	—	—	—	—	DEMO KIT	
—	SCA3000 Demo w/D01 on PWB	—	—	±1.7g	1.2V/g	20	—	Demo Kit	551-1041-ND◆	337.50	—	—	—	—	SCA3000-D01DEMO	
3	SCA3000-D01 on PWB	2.35 - 3.6	480µA	±2g	1333/g	45	-40 - 85	SPI Interface	551-1034-ND◆	47.25	46.41	45.57	—	—	SCA3000-D01 PWB	
	SCA3000-D02 on PWB	2.35 - 3.6	650µA	±2g	1333/g	45	-40 - 85	I <sup>2</sup> C Interface	551-1036-ND◆	47.25	46.41	45.57	—	—	SCA3000-D02 PWB	
	SCA3000-E01 on PWB	2.35 - 3.6	120µA	±3g	1000/g	35	-40 - 85	SPI Interface	551-1038-ND◆	47.25	46.41	45.57	—	—	SCA3000-E01 PWB	
	SCA3000-E02 on PWB	2.35 - 3.6	200µA	±3g	1000/g	40	-40 - 85	I <sup>2</sup> C Interface	551-1040-ND◆	47.25	46.41	45.57	—	—	SCA3000-E02 PWB	
	SCA3000-E04 on PWB	2.35 - 3.6	120µA	±6g	500/g	38	-40 - 85	SPI Interface	551-1047-ND◆	47.25	46.41	45.57	—	—	SCA3000-E04 PWB	

† For Tape and Reel part number, change 1-ND to 2-ND. ◆ RoHS Compliant