



# Precision Measuring Instruments with Excel-Formatted Data Logging SD Card

**PATENTED  
TECHNOLOGY!**



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| Item No.                         | Description                      | Page No. |
|----------------------------------|----------------------------------|----------|
| <b>Air Speed Meters</b>          |                                  |          |
| DAF4207SD                        | Anemometer-Thermometer           | 3-4      |
| HWA4214SD                        | Hot Wire Anemometer-Thermometer  | 5-6      |
| DLAF930SD                        | Environment Meter                | 7-8      |
| <b>Sound Level Meters</b>        |                                  |          |
| DSM402SD                         | Class 2 Sound Level Meter        | 9-10     |
| DSM403SD                         | Class 1 Sound Level Meter        | 11-12    |
| <b>Light Meters</b>              |                                  |          |
| UV254SD                          | UVA, UVC Light Meter             | 13-14    |
| DLM112SD                         | Light Meter                      | 15-16    |
| <b>Thermocouple Thermometers</b> |                                  |          |
| DT4947SD                         | 4-Channel Thermometer            | 17-18    |
| DT4208SD                         | 12-Channel Temperature Recorder  | 19-20    |
| <b>Pressure Meter</b>            |                                  |          |
| PM930SD                          | Pressure Meter                   | 21-22    |
| <b>Humidity Meter</b>            |                                  |          |
| DTH3007SD                        | Humidity-Temperature Meter       | 23-24    |
| <b>Vibration Meter</b>           |                                  |          |
| VM8205SD                         | Vibration Meter                  | 25-26    |
| <b>Water Quality Meters</b>      |                                  |          |
| DPH230SD                         | pH, ORP Meter                    | 27-28    |
| DCT430SD                         | Conductivity, TDS Meter          | 29-30    |
| DOM551SD                         | Dissolved Oxygen Meter           | 31-32    |
| WK2017SD                         | pH, ORP, DO, CD, TDS, Salt Meter | 33-34    |



# Anemometer-Thermometer

## with Excel-Formatted Data Logging SD Card

**Accurately Measures Air (Wind) Speed and Temperature**



No. DAF4207SD

### Applications:

- Commercial/industrial ventilation
- Energy audits
- HVAC/R installations
- Paint spray booths



Industrial Vent



Energy Auditing

This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

| Date    | Time     | Value | Unit | Temp           |
|---------|----------|-------|------|----------------|
| 2009/06 | 15:12:16 | 0.0   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:17 | 1.2   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:19 | 2.1   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:19 | 2.0   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:20 | 2.0   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:21 | 2.7   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:22 | 3.0   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:23 | 2.9   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:24 | 2.9   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:25 | 2.9   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:26 | 2.0   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:27 | 3.0   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:28 | 3.1   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:29 | 3.4   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:30 | 5.0   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:31 | 4.2   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:32 | 3.2   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:33 | 2.6   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:34 | 3.1   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:35 | 3.0   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:36 | 3.0   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:37 | 3.1   | mi/s | 25.0 AirTemp C |
| 2009/06 | 15:12:38 | 2.0   | mi/s | 25.0 AirTemp C |

Typical Excel Data



Typical Excel Plotted Data





# Anemometer-Thermometer with Excel-Formatted Data Logging SD Card

## Features:

- Includes combination air speed-temperature probe
- Displays air (wind) speed in meters/second, feet per minute, kilometers/hr, knots (nautical miles per hour), or miles per hour
- Displays temperature in °F or °C
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from one second to one hour
- Also supports manual data logging and changing of SD card storage location
- Auto power off function

## Included Accessories:

- Hard carrying case
- Combination air-speed temperature probe (General P/N P4207SD)
- 2 GB SD memory card
- User's manual

## Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- "K" Type thermocouples  
General P/N TPK500 (-50° to 500°F)  
General P/N TPK05 (-40° to 562°F)  
General P/N TPK03 (-40° to 950°F)
- SDRD1 - SD Card Reader



No. DAF4207SD

## Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameters Measured:** Air speed, temperature

### Measurement Range:

- For air speed: 0.4 to 30 m/sec, 1.4 to 126 km/hr, 0.9 to 78.3 mph, 0.8 to 68 knots, 79 to 6890 ft/min
- For temperature: 32° to 122°F (0° to 50°C)

### Measurement Accuracy:

- For air speed:  $\pm (2\% + 0.2 \text{ m/sec})$ ,  $\pm (2\% + 0.8 \text{ km/hr})$ ,  $\pm (2\% + 0.4 \text{ mph})$ ,  $\pm (2\% + 0.4 \text{ knots})$ ,  $\pm (2\% + 40 \text{ ft/min})$
- For temperature:  $\pm 1.5^\circ\text{F}$  ( $\pm 0.8^\circ\text{C}$ )

### Measurement Resolution:

- For air speed: 0.1 m/sec, 0.1 km/hr, 0.1 mph, 0.1 knots, 1.0 ft/min
- For temperature: 0.1°F or C

**Data Logging Sampling Time:** 1 second to 1 hour

**Settable Parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit, air speed unit, optional thermocouple type (K or J)

**Storable/Recallable Readings:** Maximum, minimum

**SD Card Capacity:** 1GB to 16GB

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

### Power Consumption

- 15 mADC (normal operation, with backlight off and SD card not saving data)
- 36 mADC with backlight on and card saving data
- 48 mADC with backlight on and card saving data

### Dimensions of Instrument:

7.99 x 2.99 x 1.50 in. (203 x 76 x 38mm)

**Weight of Instrument:** 1.13 lb. (515g)

**Diameter of Probe Head:** 2.83 in. (72mm)

### Power Source:

Six "AA" batteries or optional 9-VDC AC adapter



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# Hot Wire Anemometer-Thermometer with Excel-Formatted Data Logging SD Card

**Accurately Measures Air (Wind) Speeds As Low As 0.5 mph  
and Air Temperatures within  $\pm 1.5^{\circ}\text{F}$  ( $\pm 0.8^{\circ}\text{C}$ )**



No. HWA4214SD

## Applications:

- Environmental testing
- Maintenance and repair of air conveyors and flow hoods in clean rooms
- Calibrating low-speed fans and blowers
- Balancing velocity profiles in furnaces and refrigerated cases
- Precision calibration of HVAC/R systems



Minimally Invasive Duct Leak Testing



Calibrating HVAC Systems

This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

|    | Time     | Date     | Time | Value | Unit | Value  | Unit |
|----|----------|----------|------|-------|------|--------|------|
| 1  | 2009/6/8 | 13:12:16 | 9.8  | mi/s  | 28.8 | AMTemp |      |
| 2  | 2009/6/8 | 13:12:17 | 2.2  | mi/s  | 28.8 | AMTemp |      |
| 3  | 2009/6/8 | 13:12:18 | 2.3  | mi/s  | 28.8 | AMTemp |      |
| 4  | 2009/6/8 | 13:12:19 | 2.9  | mi/s  | 28.8 | AMTemp |      |
| 5  | 2009/6/8 | 13:12:20 | 2.9  | mi/s  | 28.8 | AMTemp |      |
| 6  | 2009/6/8 | 13:12:21 | 2.7  | mi/s  | 28.8 | AMTemp |      |
| 7  | 2009/6/8 | 13:12:22 | 3.6  | mi/s  | 28.8 | AMTemp |      |
| 8  | 2009/6/8 | 13:12:23 | 2.9  | mi/s  | 28.8 | AMTemp |      |
| 9  | 2009/6/8 | 13:12:24 | 2.9  | mi/s  | 28.8 | AMTemp |      |
| 10 | 2009/6/8 | 13:12:25 | 2.9  | mi/s  | 28.8 | AMTemp |      |
| 11 | 2009/6/8 | 13:12:26 | 2.9  | mi/s  | 28.8 | AMTemp |      |
| 12 | 2009/6/8 | 13:12:27 | 3    | mi/s  | 28.8 | AMTemp |      |
| 13 | 2009/6/8 | 13:12:28 | 3.1  | mi/s  | 28.8 | AMTemp |      |
| 14 | 2009/6/8 | 13:12:29 | 3.1  | mi/s  | 28.7 | AMTemp |      |
| 15 | 2009/6/8 | 13:12:30 | 5.9  | mi/s  | 28.1 | AMTemp |      |
| 16 | 2009/6/8 | 13:12:31 | 4.2  | mi/s  | 29   | AMTemp |      |
| 17 | 2009/6/8 | 13:12:32 | 3.2  | mi/s  | 28.8 | AMTemp |      |
| 18 | 2009/6/8 | 13:12:33 | 3.4  | mi/s  | 28.8 | AMTemp |      |

Typical Excel Data



Typical Excel Plotted Data



# Hot Wire Anemometer-Thermometer with Excel-Formatted Data Logging SD Card

## Features:

- Includes telescoping air speed-temperature probe
- Displays air (wind) speed in meters/second, feet per minute, kilometers/hr, knots (nautical miles per hour), or miles per hour
- Measures air speeds down to 0.2 m/sec with 0.01 m/sec resolution (down to 40 ft/min with 1 ft/min resolution)
- Displays temperature in °F or °C
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from one second to one hour
- Also supports manual data logging and changing of SD card storage location
- Auto power off function

## Included Accessories:

- Hard carrying case
- Telescoping air speed/temperature probe (General P/N P4214SD)
- 2 GB SD memory card
- User's manual

## Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- "K" Type thermocouples
  - General P/N TPK500 (-50° to 500°F)
  - General P/N TPK05 (-40° to 562°F)
  - General P/N TPK03 (-40° to 950°F)
- SDRD1 - SD Card Reader



No. HWA4214SD

## Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameters Measured:** Air speed, temperature

### Measurement Range:

- For air speed: 0.2 to 25 m/sec, 0.7 to 172 km/hr, 0.5 to 44.7 mph, 0.4 to 38.8 knots, 40 to 3940 ft/min
- For temperature: 32° to 122°F (0° to 50°C)

### Measurement Accuracy:

- For air speed:  $\pm (5\% + 0.1 \text{ m/sec})$ ,  $\pm (5\% + 0.3 \text{ km/hr})$ ,  $\pm (5\% + 0.2 \text{ mph})$ ,  $\pm (5\% + 0.2 \text{ knots})$ ,  $\pm (5\% + 20 \text{ ft/min})$
- For temperature:  $\pm 1.5^\circ\text{F}$  ( $\pm 0.8^\circ\text{C}$ )

### Measurement Resolution:

- For air speed: 0.01 m/sec (0.2 to 5.0 m/sec), 0.1 m/sec (5.1 to 25.0 m/sec); 0.01 km/hr (0.7 to 18 km/hr), 0.1 km/hr (18 to 72 km/hr); 0.01 mph (0.5 to 11.20 mph), 0.1 mph (11.2 to 44.7 mph); 0.01 knot (0.4 to 9.7 knots), 0.1 knot (9.7 to 38.8 knots); 1 ft/min (40 to 3940 ft/min)
- For temperature: 0.1° F or C

**Data Logging Sampling Time:** 1 second to 1 hour

**Settable Parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit, air speed unit, optional thermocouple type (K or J)

**Storable/Recallable Readings:** Maximum, minimum

**SD Card Capacity:** 1 GB to 16 GB

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

### Power Consumption:

- 30 mADC (normal operation, with backlight off and SD card not saving data)
- 50 mADC (with backlight on and card saving data)

### Dimensions of Instrument:

7.99 x 2.99 x 1.50 in. (203 x 76 x 38mm)

**Weight of Instrument:** 1.13 lb. (515g)

### Dimensions of Probe:

0.4724 in. (diameter) x 11.02 in.(collapsed)/37 in.(extended)  
(12mm x 280mm/940mm)

### Power Source:

Six "AA" batteries or optional 9-VDC AC adapter



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**GENERAL®**

# Environment Meter

with Excel-Formatted Data Logging SD Card

**Accurately Measures Air (Wind) Speed + Temperature,  
Air Temperature + Humidity, Light & Sound Levels,  
Surface Temperature**



No. DLAF930SD

## Applications:

- Facilities management
- Environment control
- OSHA compliance



Facilities Management



Environment Control

This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

| Time | Temp    | Humidity | Wind Speed | Wind Dir | Light    | Sound    |
|------|---------|----------|------------|----------|----------|----------|
| 1    | 25.1228 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 2    | 25.1237 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 3    | 25.1246 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 4    | 25.1255 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 5    | 25.1264 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 6    | 25.1273 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 7    | 25.1282 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 8    | 25.1291 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 9    | 25.1300 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 10   | 25.1309 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 11   | 25.1318 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 12   | 25.1327 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 13   | 25.1336 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 14   | 25.1345 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 15   | 25.1354 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 16   | 25.1363 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 17   | 25.1372 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 18   | 25.1381 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 19   | 25.1390 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 20   | 25.1399 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 21   | 25.1408 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 22   | 25.1417 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 23   | 25.1426 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 24   | 25.1435 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 25   | 25.1444 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 26   | 25.1453 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 27   | 25.1462 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 28   | 25.1471 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 29   | 25.1480 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |
| 30   | 25.1489 | 68 %RH   | 0.0 m/s    | 28.8     | 1470 lux | 31.0 dBA |

Typical Excel Data



Typical Excel Plotted Data



# Environment Meter

## with Excel-Formatted Data Logging SD Card

### Features:

- Multi-function probe measures air speed and temperature, air temperature and humidity, and light level. Optional accessories measure surface temperature and sound level
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from 1 second to 1 hour
- Also supports manual data logging and changing of SD card storage location
- Auto power off function

### Included Accessories:

- Hard carrying case
- Combination temperature/humidity/air speed/light level probe (General P/N P930SD)
- 2 GB SD memory card
- User's manual

### Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- "K" Type thermocouples
  - General P/N TPK500 (-50° to 500°F)
  - General P/N TPK05 (-40° to 562°F)
  - General P/N TPK03 (-40° to 950°F)
- Sound level probe/plug adapter (General P/N SC941)
- SDRD1 - SD Card Reader



No. DLAF930SD

### Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameters Measured:** Air temperature, relative humidity (R.H.), air speed, light level

#### Measurement Range:

- For air speed: 0.4 to 25 m/sec, 1.4 to 90 km/hr, 0.9 to 55.9 mph, 0.8 to 48.6 knots, 80 to 4930 ft/min
- For temperature: 32° to 122°F (0 to 50°C); for R.H., 10 to 95%
- For light level: 0 to 20,000 lux, 0 to 1860 ft-cd

#### Measurement Accuracy:

- For air speed:  $\pm (2\% + 0.2 \text{ m/sec})$ ,  $\pm (2\% + 0.8 \text{ km/hr})$ ,  $\pm (2\% + 0.4 \text{ mph})$ ,  $\pm (2\% + 0.4 \text{ knots})$ ,  $\pm (2\% + 40 \text{ ft/min})$
- For temperature: 1.5°F ( $\pm 0.8^\circ\text{C}$ )
- For humidity:  $\pm (3\% \text{ of reading} + 1\%)$  for R.H. values  $\geq 70\%$ ;  $\pm 3\% \text{ of reading}$  for R.H. values  $< 70\%$
- For light level:  $\pm (5\% \text{ of reading} \pm 8 \text{ digits})$

#### Measurement Resolution:

- For air speed: 0.1 m/sec, 0.1 km/hr, 0.1 mph, 0.1 knots, 1.0 ft/min
- For temperature: 0.1 °F or °C
- For humidity: 0.1% of reading
- For light level: 1 lux, 0.1 ft-cd

**Data Logging Sampling Time:** 1 second to 1 hour

**Settable Parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit, air speed unit, light level unit, optional thermocouple type (K or J)

**Storable/Recallable Readings:** Maximum, minimum

**SD Card Capacity:** 1 GB to 16 GB

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

#### Power Consumption:

- 3.5 mADC (normal operation, with backlight off and SD card not saving data)
- 28 mADC with backlight on and card saving data
- 40 mADC with backlight on and card saving data

**Dimensions of Meter:** 5.31 x 2.36 x 1.30 in. (135 x 60 x 33mm)

**Weight of Meter:** 1.13 lb. (515g)

**Dimensions of Probe:** 4.13 x 1.81 x 1.14 in. (105 x 46 x 29mm)

#### Power Source:

Six "AA" batteries or optional 9-VDC AC adapter



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## Accurately Measures Sound Levels of Machinery or an Environment with 0.1 dB Resolution

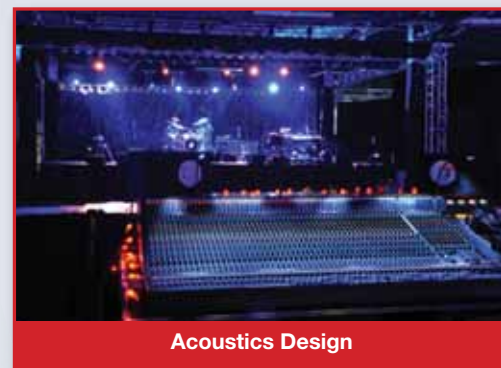


## Applications:

- Noise pollution control
- OSHA noise regulatory compliance
- Acoustics design



## Noise Pollution Control



## Acoustics Design

**This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards**



## Patented Technology

|    | A1    |            | F1       | Place |      |
|----|-------|------------|----------|-------|------|
|    | A     | B          | C        | D     | E    |
|    | Place | Date       | Time     | Value | Unit |
| 2  | 1     | 2009/10/16 | 16:47:05 | 60.8  | dB   |
| 3  | 2     | 2009/10/16 | 16:47:07 | 66.9  | dB   |
| 4  | 3     | 2009/10/16 | 16:47:09 | 68.8  | dB   |
| 5  | 4     | 2009/10/16 | 16:47:11 | 71    | dB   |
| 6  | 5     | 2009/10/16 | 16:47:13 | 82.3  | dB   |
| 7  | 6     | 2009/10/16 | 16:47:15 | 92.3  | dB   |
| 8  | 7     | 2009/10/16 | 16:47:17 | 93.1  | dB   |
| 9  | 8     | 2009/10/16 | 16:47:19 | 93.1  | dB   |
| 10 | 9     | 2009/10/16 | 16:47:21 | 89.8  | dB   |
| 11 | 10    | 2009/10/16 | 16:47:23 | 90.2  | dB   |

### Typical Excel Data



### Typical Excel Plotted Data



# Class 2 Sound Level Meter with Excel-Formatted Data Logging SD Card

## Features:

- Measures sound levels of machinery or an environment
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Makes measurements in auto ranging mode or within a manually settable range
- Displays maximum and minimum readings and holds any reading
- Performs automatic data logging at sampling time settable from 1 second to 9 hours
- Also supports manual logging and changing of card storage location
- Auto power off function

## Included Accessories:

- Hard carrying case
- Sound wind shield ball
- 2 GB SD memory card
- User's manual

## Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- SDRD1 - SD Card Reader



No. DSM402SD

## Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38 mm)

**Parameter Measured:** dB

**Frequency Range:** 31.5 Hz to 8 kHz

### Measurement Range:

- 30 to 130 dB in auto ranging mode
- User can also select fixed range of 30 to 80 dB, 50 to 100 dB, or 80 to 130 dB

### Measurement Weighting:

- By frequency: frequency weighing uses "A" or "C" standard
- By time: time weighting is fast or slow (200 ms or 500 ms response time)

### Measurement Accuracy:

- With "A" frequency weighting:  $\pm 3.5$  dB @ 31.5 Hz, 2.5 dB @ 63 Hz, 2 dB @ 125 Hz, 1.9 dB @ 250 Hz, 1.9 dB @ 500 Hz, 1.4 dB @ 1 kHz, 2.6 dB @ 2 kHz, 3.6 dB @ 4 kHz, 5.6 dB @ 8 kHz

**Measurement Resolution:** 0.1 dB

**Data Logging Sampling Time:** 1 second to 1 hour

**Settable Parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, "A" or "C" frequency weighting, fast or slow time weighting

**Storable/Recallable Readings:** Maximum, minimum

**SD Card Capacity:** 1 GB to 16 GB

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

### Power Consumption:

- 8 mADC (normal operation, with backlight off and SD card not saving data)
- 30 mADC with backlight on and card saving data
- 44 mADC with backlight on and card saving data

### Dimensions of Meter:

9.65 x 2.68 x 1.77 in. (245 x 68 x 45mm)

**Weight of Meter:** 1.08 lb. (489g)

### Power Source:

Six "AA" batteries or optional 9-VDC AC adapter



99 Washington Street  
Melrose, MA 02176  
Phone 781-665-1400  
Toll Free 1-800-517-8431





# Class 1 Sound Level Meter

## with Excel-Formatted Data Logging SD Card

**Accurately Measures Sound Levels of Machinery  
or an Environment with 0.1 dB Resolution**



No. DSM403SD

### Applications:

- Acoustics design
- Sound system setup
- OSHA compliance



Acoustics Design



Sound System Setup

This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards

**Patented Technology**



|    | A1    |            |          |       |      |
|----|-------|------------|----------|-------|------|
|    | Place | Date       | Time     | Value | Unit |
| 1  | 1     | 2009/10/16 | 16:47:05 | 60.8  | dB   |
| 2  | 2     | 2009/10/16 | 16:47:07 | 66.9  | dB   |
| 3  | 3     | 2009/10/16 | 16:47:09 | 68.8  | dB   |
| 4  | 4     | 2009/10/16 | 16:47:11 | 71    | dB   |
| 5  | 5     | 2009/10/16 | 16:47:13 | 82.3  | dB   |
| 6  | 6     | 2009/10/16 | 16:47:15 | 92.3  | dB   |
| 7  | 7     | 2009/10/16 | 16:47:17 | 93.1  | dB   |
| 8  | 8     | 2009/10/16 | 16:47:19 | 93.1  | dB   |
| 9  | 9     | 2009/10/16 | 16:47:21 | 89.8  | dB   |
| 10 | 10    | 2009/10/16 | 16:47:23 | 90.2  | dB   |

Typical Excel Data



Typical Excel Plotted Data





# Class 1 Sound Level Meter with Excel-Formatted Data Logging SD Card

## Features:

- Measures sound levels of machinery or an environment
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Makes measurements in auto ranging mode or within a manually settable range
- Displays maximum and minimum readings and holds any reading
- Performs automatic data logging at sampling time settable from 1 second to 9 hours
- Also supports manual logging and changing of card storage location
- Auto power off function

## Included Accessories:

- Hard carrying case
- Sound wind shield ball
- 2 GB SD memory card
- User's manual

## Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- SDRD1 - SD Card Reader



No. DSM403SD

## Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameter Measured:** dB

**Frequency Range:** 31.5 Hz to 16 kHz

### Measurement Range:

- 30 to 130 dB in auto ranging mode
- User can also select fixed range of 30 to 80 dB, 50 to 100 dB, or 80 to 130 dB

### Measurement Weighting:

- By frequency: using Class I IEC 61672 standard; frequency weighing uses "A" or "C" standard
- By time: using Class 1 IEC 61672 standard; time weighting is fast or slow (200 ms or 500 ms response time)

### Measurement Accuracy:

- With "A" frequency weighting:  $\pm 2.0$  dB @ 31.5 Hz, 1.5 dB @ 63 Hz, 1.5 dB @ 125 Hz, 1.4 dB @ 250 Hz, 1.4 dB @ 500 Hz, 1.1 dB @ 1 kHz, 1.6 dB @ 2 kHz, 1.6 dB @ 4 kHz, +2.1 dB and -3.1 dB @ 8 kHz; +3.0 dB and -6.0 dB @ 12.5 kHz, +3.5 dB and -17.0 dB @ 16 kHz

**Measurement Resolution:** 0.1 dB

**Data Logging Sampling Time:** 1 second to 1 hour

**Settable Parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, "A" or "C" frequency weighting, fast or slow time weighting

**Storable/Recallable Readings:** Maximum, minimum

**SD Card Capacity:** 1 GB to 16 GB

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

### Power Consumption:

- 8 mADC (normal operation, with backlight off and SD card not saving data)
- 14 mADC with backlight on and card saving data
- 44 mADC with backlight on and card saving data

### Dimensions of Meter:

9.65 x 2.68 x 1.77 in. (245 x 68 x 45mm)

**Weight of Meter:** 1.08 lb. (489g)

### Power Source:

Six "AA" batteries or optional 9-VDC AC adapter



**GENERAL®**

# UVA, UVC Light Meter

with Excel-Formatted Data Logging SD Card

**Accurately Measures UVA and UVC Light Intensity within  
Two Automatically Switched Full-Scale Ranges:  
2 mW/cm<sup>2</sup> and 20 mW/cm<sup>2</sup>**



No. UV254SD

## Applications:

- Welding
- UV food sterilization
- Photochemical matching
- Erasing memory chips
- Exposing photoresists
- Curing of inks, adhesives and coatings



Welding



UV Sterilization

This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

|    | A     | B          | C        | D     | E          |
|----|-------|------------|----------|-------|------------|
|    | Place | Date       | Time     | Value | Unit       |
| 1  |       | 2009/12/11 | 09:55:56 | 2.37  | UVA mW/cm² |
| 2  |       | 2009/12/11 | 09:55:58 | 2.4   | UVA mW/cm² |
| 3  |       | 2009/12/11 | 09:56:00 | 2.58  | UVA mW/cm² |
| 4  |       | 2009/12/11 | 09:56:02 | 3.29  | UVA mW/cm² |
| 5  |       | 2009/12/11 | 09:56:04 | 3.74  | UVA mW/cm² |
| 6  |       | 2009/12/11 | 09:56:06 | 3.89  | UVA mW/cm² |
| 7  |       | 2009/12/11 | 09:56:08 | 3.14  | UVA mW/cm² |
| 8  |       | 2009/12/11 | 09:56:10 | 2.23  | UVA mW/cm² |
| 9  |       | 2009/12/11 | 09:56:12 | 0.953 | UVA mW/cm² |
| 10 |       | 2009/12/11 | 09:56:14 | 1.011 | UVA mW/cm² |
| 11 |       | 2009/12/11 | 09:56:16 | 0.981 | UVA mW/cm² |
| 12 |       | 2009/12/11 | 09:56:18 | 0.673 | UVA mW/cm² |
| 13 |       | 2009/12/11 | 09:56:20 | 0.892 | UVA mW/cm² |
| 14 |       | 2009/12/11 | 09:56:22 | 2.16  | UVA mW/cm² |
| 15 |       | 2009/12/11 | 09:56:24 | 2.44  | UVA mW/cm² |

Typical Excel Data



Typical Excel Plotted Data



# UVA, UVC Light Meter

## with Excel-Formatted Data Logging SD Card

### Features:

- Includes UVA and UVC probes
- Measures light intensity within two automatically switched full-scale ranges: 2 mW/cm<sup>2</sup> and 20 mW/cm<sup>2</sup>
- Displays maximum and minimum readings
- Performs real-time automatic data logging at sampling time settable from 1 second to 1 hour
- Also supports manual logging and changing of card storage location
- Comes with 2 GB SD memory card, but works with cards up to 16 GB
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Auto power off function

### Included Accessories:

- UVA probe
- UVC probe
- 2 GB SD memory card
- Hard carrying case
- User's manual

### Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- "K" Type thermocouples  
General P/N TPK500 to 500°F  
General P/N TPK05 (-40° to 562°F)  
General P/N TPK03 (-40° to 950°F)
- SDRD1 - SD Card Reader



No. UV254SD

### Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38 mm)

**UV Light Types Measured:** UVA, UVC

**Measurement Range:** 240 nm to 390 nm

**Measurement Accuracy:** ±4% of full-scale reading  
+ 2 digits

**Full-Scale Auto Ranges:** 2 mW/cm<sup>2</sup> and 20 mW/cm<sup>2</sup>

**Storable/Recallable Readings:** Maximum, minimum

**Data Logging Sampling Time:** 1 second to 1 hour

**SD Card Capacity:** 1 GB to 16 GB

**Settable Parameters:** Date, time, auto power off, beep sound, temperature unit (°F or °C), sampling time, thermocouple type (K or J), decimal point or comma

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

#### Power Consumption:

- 6.5 mADC (normal operation, with backlight off and SD card not saving data)
- 30 mADC with backlight on

#### Dimensions of Meter:

6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

**Weight of Meter:** 12.38 oz. (351 g)

#### Dimensions of UVA Probe Head:

1.77 in. (diagonal) x 1.26 in. (L) (45 x 32 mm)

#### Dimensions of UVA Probe Handle:

0.94 in. (diagonal) x 4.92 in. (L) (24 x 125 mm)

**Weight of UVA Probe:** 3.53 oz. (100g)

#### Dimensions of UVC Probe:

1.50 (diagonal) x 0.98 in (L) (38 x 25 mm)

**Weight of UVC Probe:** 3.63 oz. (103g)

#### Power Source:

Six "AA" batteries or optional 9-VDC AC adapter







# Light Meter

with Excel-Formatted Data Logging SD Card

**Accurately Measures Light Intensity in Lux or Foot-Candles  
Using Three Automatically Switched Full-Scale Ranges**



No. DLM112SD

## Applications:

- OSHA compliance
- Industrial/commercial photography/videography
- Construction
- Engineering
- Surveillance/security



- The law requires the owner of a loading dock to provide a **minimum** of 1 foot candle illumination
- Defendant's loading dock fell **far below** OSHA's minimum lighting requirement
- Defendant **violated** OSHA's minimum illumination requirement and therefore Defendant's violation is negligent

An OSHA Citation



Industrial Photography

This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

|    | A     | B        | C        | D     | E     | F     | G    |
|----|-------|----------|----------|-------|-------|-------|------|
|    | Place | Date     | Time     | Value | Unit  | Value | Unit |
| 1  |       | 2009/6/8 | 15:14:54 | 663   | 1.102 |       |      |
| 2  |       | 2009/6/8 | 15:14:55 | 666   | 1.102 |       |      |
| 3  |       | 2009/6/8 | 15:14:56 | 663   | 1.102 |       |      |
| 4  |       | 2009/6/8 | 15:14:57 | 663   | 1.102 |       |      |
| 5  |       | 2009/6/8 | 15:14:58 | 666   | 1.102 |       |      |
| 6  |       | 2009/6/8 | 15:14:59 | 659   | 1.102 |       |      |
| 7  |       | 2009/6/8 | 15:15:00 | 664   | 1.102 |       |      |
| 8  |       | 2009/6/8 | 15:15:01 | 664   | 1.102 |       |      |
| 9  |       | 2009/6/8 | 15:15:02 | 664   | 1.102 |       |      |
| 10 |       | 2009/6/8 | 15:15:03 | 664   | 1.102 |       |      |
| 11 |       | 2009/6/8 | 15:15:04 | 664   | 1.102 |       |      |
| 12 |       | 2009/6/8 | 15:15:05 | 667   | 1.102 |       |      |
| 13 |       | 2009/6/8 | 15:15:06 | 674   | 1.102 |       |      |
| 14 |       | 2009/6/8 | 15:15:07 | 674   | 1.102 |       |      |

Typical Excel Data



Typical Excel Plotted Data



# Light Meter

## with Excel-Formatted Data Logging SD Card

### Features:

- Includes light probe
- Measures light intensity within three automatically switched full-scale ranges: 2,000 lux, 20,000 lux and 100,000 lux (200 ft-cd, 2,000 ft-cd and 10,000 ft-cd)
- Selectable lux or foot-candle units
- Displays maximum and minimum readings
- Performs real-time automatic data logging at sampling time settable from 1 second to 1 hour
- Also supports manual logging and changing of card storage location
- Big (2.5 diagonal) front-panel green backlit LCD is easy to read
- Auto power off function

### Included Accessories:

- Hard carrying case
- Light probe with protective cover (General P/N P112SD)
- 2 GB SD memory card
- User's manual

### Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- "K" Type thermocouples
  - General P/N TPK500 (-50° to 500°F)
  - General P/N TPK05 (-40° to 562°F)
  - General P/N TPK03 (-40° to 950°F)
- SDRD1 - SD Card Reader



No. DLM112SD

### Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Full-Scale Ranges:**

- 0 to 1,999 lux (0 to 186 ft-cd)
- 1,800 to 19,990 lux (167 to 1,860 ft-cd)
- 18,000 to 99,900 lux (1,670 to 9,290.7 ft-cd)

**Measurement Accuracy:**

- $\pm 4\%$  of full-scale reading + 2 digits for all lux readings and ft-cd readings at 200 ft-cd full-scale (f.s.)
- $\pm 4\%$  of f.s. reading + 2 ft-cd at 2,000 ft-cd f.s.
- $\pm 4\%$  of f.s. reading + 20 ft-cd at 20,000 ft-cd f.s.

**Measurement Resolution:**

- 1 lux at 2,000 lux f.s.
- 10 lux at 20,000 lux f.s.
- 100 lux at 100,000 lux f.s.
- 0.1 ft-cd at 200 ft-cd f.s.
- 1 ft-cd at 2,000 ft-cd f.s.
- 10 ft-cd at 10,000 ft-cd f.s.

**Storable/Recallable Readings:** Maximum, minimum

**Data Logging Sampling Time:** 1 second to 1 hour

**SD Card Capacity:** 1 GB to 16 GB

**Settable Parameters:** Date, time, auto power off, beep sound, temperature unit ( $^{\circ}\text{F}$  or  $^{\circ}\text{C}$ ), sampling time, thermocouple type (K or J), decimal point or comma

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

**Power Consumption:**

- 6.5 mADC (normal operation, with backlight off and SD card not saving data)
- 30 mADC with backlight on

**Dimensions of Meter:**

6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

**Weight of Meter:** 1.08 lb. (489g)

**Power Source:**

Six "AA" batteries or optional 9-VDC AC adapter



**GENERAL®**

# 4-Channel Thermometer

## with Excel-Formatted Data Logging SD Card

**Accurately Measures 4 Channels of Temperature  
from -148° to 3092°F (-100° to 1700°C)**



No. DT4947SD

### Applications:

- Food and chemical processing
- HVAC/R installations
- Power generation
- Paper production



Food Processing



Paper Production

This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards

**Patented Technology**



Typical Excel Data



Typical Excel Plotted Data





# 4-Channel Thermometer

## with Excel-Formatted Data Logging SD Card

### Features:

- Four independent temperature measurement channels
- Also measures T1-T2 difference between two channels
- Works with and automatically temperature-compensates for six popular thermocouple types: K, J, T, E, S and R
- Combining thermocouple types extends overall measurement range to -148° to 3092°F (-100° to 1700°C)
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from one second to one hour
- Also supports manual data logging and changing of SD card storage location
- Auto power off function

### Included Accessories:

- Carrying case
- Two "K" Type beaded thermocouple probes
- 2 GB SD memory card
- User's manual

### Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- Pt 100 ohm RTD (General P/N RTDTP-100)
- Additional "K" Type thermocouples
  - General P/N TPK500 (-50° to 500°F)
  - General P/N TPK05 (-40° to 562°F)
  - General P/N TPK03 (-40° to 950°F)
- SDRD1 - SD Card Reader



No. DT4947SD

### Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameter Measured:** Temperature (in °F or °C)

**Measurement Range:**

- For Pt 100 ohm RTD: -327° to 1562°F
- For thermocouples: depends on type

**Measurement Accuracy:**

- For Pt 100 ohm probes:  $\pm (0.4\% \text{ of reading} + 1.8^\circ\text{F})$  from -327° to 999.9°F,  $\pm (0.4\% \text{ of reading} + 2.0^\circ\text{F})$  from 1000° to 1562°F
- For thermocouples:  $\pm (0.4\% \text{ of reading} + 2.0^\circ\text{F max})$

**Measurement Resolution:**

- For Pt 100 ohm probes: 0.1° (F or C) from -327° to 999.9°F, 1°F from 1000° to 1562°F
- For thermocouples: 0.1° (F or C) below 1000°F and 1° (F or C) above 1000°F for Types K, J, T and E; 1° (C or F) for Types R and S

**Data Logging Sampling Time:** 1 second to 1 hour

**Settable Parameters:** Date, time, decimal point or comma decimal division, auto power off, beep sound, temperature unit, sampling time

**Storable/Recallable Readings:** Maximum, minimum

**SD Card Capacity:** 1 GB to 16 GB

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

**Power Consumption:**

- 8.5 mADC (normal operation, with backlight off and SD card not saving data)
- 30 mADC with backlight on and card saving data
- 44 mADC with backlight on and card saving data

**Dimensions of Thermometer:**

6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

**Weight of Thermometer:** 1.13 lb. (515g)

**Power Source:**

Six "AA" batteries or optional 9-VDC AC adapter





# 12-Channel Temperature Recorder with Excel-Formatted Data Logging SD Card

**Accurately Measures 12 Channels of Temperature  
from -148° to 3092°F (-100° to 1700°C)**



No. DT4208SD

## Applications:

- Food and chemical processing
- PC board burn-in
- Paper production
- HVAC/R installations
- Power generation



Petrochemical Production



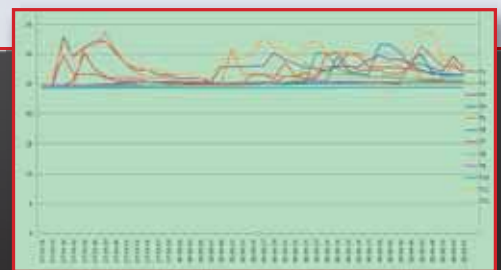
PC Board Burn-In

This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

Typical Excel Data



Typical Excel Plotted Data



# 12-Channel Temperature Recorder with Excel-Formatted Data Logging SD Card

## Features:

- Twelve independent temperature measurement channels
- Displays up to eight channels at a time; one push of a button switches to Channels 9 through 12
- Works with and automatically temperature-compensates for six popular thermocouple types: K, J, T, E, S and R
- Combining thermocouple types extends overall measurement range to -148° to 3092°F (-100° to 1700°C)
- Can automatically log 12 channels of data every day during same period
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from one second to one hour
- Also supports manual data logging and changing of SD card storage location
- Auto power off function

## Included Accessories:

- Hard carrying case
- Two “K Type” beaded thermocouple probes
- 2 GB SD memory card
- User’s manual

## Optional Accessories:

- “K” Type thermocouples  
General P/N TPK500 (-50° to 500°F)  
General P/N TPK05 (-40° to 562°F)  
General P/N TPK03 (-40° to 950°F)
- 9VDC adapter for 110V power supply  
(General P/N AC1)
- SDRD1 - SD Card Reader



No. DT4208SD

## Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameter Measured:** Temperature (in °F or °C)

### Measurement Range:

- Using included “K” Type thermocouples: -148° to 2372°F (-100° to 1300°C)
- For other thermocouples: depends on type

### Measurement Accuracy:

- For included “K” Type thermocouples:  $\pm$  (0.4 % of reading + 2.0°F max)

### Measurement Resolution

- For included “K” Type thermocouples: 0.1° (F or C) below 1000°F, 1° (F or C) above 1000°F

**Data Logging Sampling Time:** 1 second to 1 hour

**Settable Parameters:** Date, time, decimal point or comma decimal division, auto power off, beep sound, loop recording enable or disable, temperature unit, sampling time

**Storable/Recallable Readings:** Maximum, minimum

**SD Card Capacity:** 1 GB to 16 GB

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

### Power Consumption:

- 7.5 mADC (normal operation, with backlight off and SD card not saving data)
- 25 mADC with backlight on and card saving data
- 36 mADC with backlight on and card saving data

### Dimensions:

8.86 x 4.92 x 2.52 in. (225 x 125 x 64mm)

**Weight:** 2.1 lb. (944g)

### Power Source:

Eight “AA” batteries or optional 9-VDC AC adapter







# Pressure Meter

## with Excel-Formatted Data Logging SD Card

**Accurately Measures Hydraulic or Pneumatic Pressure  
Using Ten Different Units**



No. PM930SD

### Applications:

- Automotive
- Mechanical engineering/design
- HVAC/R installations
- Equipment MRO



Boiler Room Pump Maintenance



Hydraulic Valve Testing

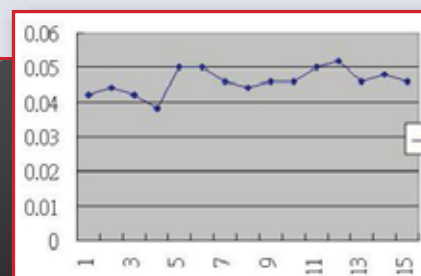
This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

|    | A        | B          | C        | D          | E         |
|----|----------|------------|----------|------------|-----------|
| 1  | Position | Date       | Time     | Chl. Value | Chl. Unit |
| 2  | 1        | 2009/10/19 | 10:18:58 | 0.042      | Bar       |
| 3  | 2        | 2009/10/19 | 10:19:00 | 0.044      | Bar       |
| 4  | 3        | 2009/10/19 | 10:19:02 | 0.042      | Bar       |
| 5  | 4        | 2009/10/19 | 10:19:04 | 0.038      | Bar       |
| 6  | 5        | 2009/10/19 | 10:19:06 | 0.05       | Bar       |
| 7  | 6        | 2009/10/19 | 10:19:08 | 0.05       | Bar       |
| 8  | 7        | 2009/10/19 | 10:19:10 | 0.046      | Bar       |
| 9  | 8        | 2009/10/19 | 10:19:12 | 0.044      | Bar       |
| 10 | 9        | 2009/10/19 | 10:19:14 | 0.046      | Bar       |
| 11 | 10       | 2009/10/19 | 10:19:16 | 0.046      | Bar       |
| 12 | 11       | 2009/10/19 | 10:19:18 | 0.05       | Bar       |
| 13 | 12       | 2009/10/19 | 10:19:20 | 0.052      | Bar       |
| 14 | 13       | 2009/10/19 | 10:19:22 | 0.046      | Bar       |

Typical Excel Data



Typical Excel Plotted Data



# Pressure Meter

## with Excel-Formatted Data Logging SD Card

### Features:

- Measures hydraulic or pneumatic pressure using optional sensors with full-scale ranges from 2 to 400 bar
- Sensors calibrated by single push of a button
- Ten different pressure units selectable via front panel
- Displays maximum and minimum readings
- Performs real-time automatic data logging at sampling time settable from 1 second to 9 hours
- Also supports manual logging and changing of card storage location
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Auto power off function

### Included Accessories:

- Carrying case
- 2 GB SD memory card
- User's manual

### Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- 2 bar full-scale pressure sensor (General P/N PS2)
- Pressure sensors:
  - 5 bar full-scale (General P/N PS5)
  - 10 bar full-scale (General P/N PS10)
  - 50 bar full-scale (General P/N PS50)
  - 100 bar full-scale (General P/N PS100)
  - 400 bar full-scale (General P/N PS400)
- SDRD1 - SD Card Reader



No. PM930SD

### Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Displayed Pressure Unit:** bar, psi, inches Hg, inches H<sub>2</sub>O, hPA, kPA, kg/cm<sup>2</sup>, mm Hg, meters H<sub>2</sub>O, atmospheres

**Measurement Accuracy:**  $\pm 0.5\%$  of full-scale reading + 1 digit

**Storable/Recallable Readings:** Maximum, minimum

**Data Logging Sampling Time:** 1 second to 9 hours

**SD Card Capacity:** 1 GB to 16 GB

**Settable Parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, optional pressure sensor's full-scale range (2, 5, 10, 20, 50, 100, 200 or 400 bar)

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

#### Power Consumption:

- 5 mADC (normal operation, with backlight off and SD card not saving data)
- 25 mADC with backlight on and card saving data
- 37 mADC with backlight on and card saving data

#### Dimensions of Meter:

6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

**Weight of Meter:** 0.77 lb. (350g)

#### Power Source:

Six "AA" batteries or optional 9-VDC AC adapter



# Humidity-Temperature Meter with Excel-Formatted Data Logging SD Card

## Accurately Measures Temperature and Relative Humidity of a Fluid Including Dew Point/Wet-Bulb Temperature of Ambient Air



No. DTH3007SD

### Applications:

- HVAC/R installations
- Horticulture



## Rooftop HVAC System



## Horticulture

**This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards**



## Patented Technology

|    | A     | B          | C        | D     | E    | F     | G       |
|----|-------|------------|----------|-------|------|-------|---------|
|    | Place | Date       | Time     | Value | Unit | Value | Unit    |
| 1  |       | 1.2009402  | 18:05:28 | 53.8  | 9000 | 29.5  | Degrees |
| 2  |       | 2.2009402  | 18:06:00 | 53.8  | 9000 |       |         |
| 3  |       | 3.2009402  | 18:06:00 | 53.8  | 9000 | 29.5  | Degrees |
| 4  |       | 4.2009402  | 18:06:05 | 53.8  | 9000 | 29.5  | Degrees |
| 5  |       | 5.2009402  | 18:06:07 | 53.7  | 9000 | 29.5  | Degrees |
| 6  |       | 6.2009402  | 18:06:09 | 53.7  | 9000 | 29.5  | Degrees |
| 7  |       | 7.2009402  | 18:06:11 | 56.1  | 9000 | 29.5  | Degrees |
| 8  |       | 8.2009402  | 18:06:13 | 56.7  | 9000 | 29.6  | Degrees |
| 9  |       | 9.2009402  | 18:06:15 | 75.9  | 9000 | 29.6  | Degrees |
| 10 |       | 10.2009402 | 18:06:17 | 66.8  | 9000 | 29.7  | Degrees |
| 11 |       | 11.2009402 | 18:06:19 | 65.2  | 9000 | 29.6  | Degrees |
| 12 |       | 12.2009402 | 18:06:21 | 58.5  | 9000 | 29.6  | Degrees |
| 13 |       | 13.2009402 | 18:06:23 | 56    | 9000 |       |         |
| 14 |       | 14.2009402 | 18:06:25 | 55    | 9000 | 29.6  | Degrees |
| 15 |       | 15.2009402 | 18:06:27 | 54.6  | 9000 | 29.3  | Degrees |
| 16 |       | 16.2009402 | 18:06:29 | 54.4  | 9000 | 29.5  | Degrees |
| 17 |       | 17.2009402 | 18:06:31 | 54.3  | 9000 | 29.5  | Degrees |

### Typical Excel Data



## Typical Excel Plotted Data





# Humidity-Temperature Meter with Excel-Formatted Data Logging SD Card

## Features:

- Four-function instrument measures temperature/humidity, dew point, wet-bulb temperature and surface temperature
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from one second to one hour
- Also supports manual data logging and changing of SD card storage location
- Auto power off function

## Included Accessories:

- Soft carrying case
- Temperature-humidity probe
- 2 GB SD memory card
- User's manual

## Optional Accessories:

- Hard carrying case
- 9VDC adapter for 110V power supply (General P/N AC1)
- "K" Type thermocouples:
  - General P/N TPK500 (-50° to 500°F)
  - General P/N TPK05 (-40° to 562°F)
  - General P/N TPK03 (-40° to 950°F)
- SDRD1 - SD Card Reader



No. DTH3007SD

## Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameters Measured:** Temperature, relative humidity (R.H.), dew point, wet-bulb temperature

### Measurement Range:

- For temperature: 32° to 122°F (0° to 50°C)
- For R.H.: 5 to 95%
- For dew point: -13.5° to 120.1°F (-25.3° to 48.9°C)
- For wet-bulb temperature: -6.9° to 122°F (-21.6° to 50°C)

### Measurement Accuracy:

- $\pm 1.5^{\circ}\text{F}$  ( $\pm 0.8^{\circ}\text{C}$ ) for temperature
- Sum of temperature and humidity accuracies for dew point and wet-bulb temperature

### Measurement Resolution:

- 0.1° (F or C) for temperature and humidity

**Data Logging Sampling Time:** 1 second to 1 hour

**Settable Parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit

**Storable/Recallable Readings:** Maximum, minimum

**SD Card Capacity:** 1 GB to 16 GB

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

### Power Consumption:

- 3.5 mADC (normal operation, with backlight off and SD card not saving data)
- 28 mADC with backlight on and card saving data
- 40 mADC with backlight on and card saving data

### Dimensions of Meter:

6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

**Weight of Meter:** 1.08 lb. (489g)

### Power Source:

Six "AA" batteries or optional 9-VDC AC adapter





# Vibration Meter

with Excel-Formatted Data Logging SD Card

**Accurately Measures a Machine's Acceleration and Velocity to Determine if They Are Within Operational Parameters**



No. VM8205SD

## Applications:

- Performance testing/preventive maintenance of fans and motors
- Plant inspection
- Equipment production QC



Motor Performance Testing



Fan Balancing

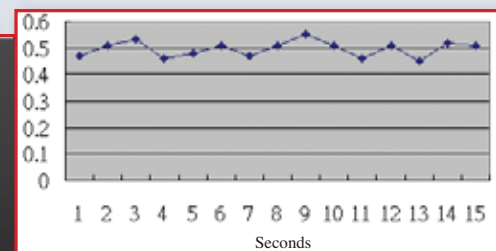
This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

| 19 | Place | Date     | Time     | Value | Unit  |
|----|-------|----------|----------|-------|-------|
| 20 | 1     | 2010/9/6 | 10:06:44 | 0.47  | ACC g |
| 21 | 2     | 2010/9/6 | 10:06:46 | 0.51  | ACC g |
| 22 | 3     | 2010/9/6 | 10:06:48 | 0.53  | ACC g |
| 23 | 4     | 2010/9/6 | 10:06:50 | 0.46  | ACC g |
| 24 | 5     | 2010/9/6 | 10:06:52 | 0.48  | ACC g |
| 25 | 6     | 2010/9/6 | 10:06:54 | 0.51  | ACC g |
| 26 | 7     | 2010/9/6 | 10:06:56 | 0.47  | ACC g |
| 27 | 8     | 2010/9/6 | 10:06:58 | 0.51  | ACC g |
| 28 | 9     | 2010/9/6 | 10:07:00 | 0.55  | ACC g |
| 29 | 10    | 2010/9/6 | 10:07:02 | 0.51  | ACC g |
| 30 | 11    | 2010/9/6 | 10:07:04 | 0.46  | ACC g |
| 31 | 12    | 2010/9/6 | 10:07:06 | 0.51  | ACC g |

Typical Excel Data



Typical Excel Plotted Data



# Vibration Meter

## with Excel-Formatted Data Logging SD Card

### Features:

- Vibration probe measures acceleration or velocity
- Included magnetic base facilitates attachment of probe to metal parts or machine housing
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Displays maximum and minimum readings and holds any RMS reading
- Automatically logs measurements at sampling time settable from one second to one hour
- Also supports manual data logging and changing of SD card storage location

### Included Accessories:

- Hard carrying case
- Vibration sensing probe
- Magnetic base
- 2 GB SD memory card
- User's manual

### Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- SDRD1 - SD Card Reader



No. VM8205SD

### Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameters Measured:** Acceleration, velocity

**Units:**

- For acceleration: m/sec<sup>2</sup>, g (gravitational force) or ft/sec<sup>2</sup>
- For velocity: mm/sec, cm/sec or inches/sec

**Displayed Value Options:** Root mean square (RMS), peak, max hold

**Input Frequency Range:** 10 Hz to 1 kHz

**Measurement Range:**

- For acceleration: 0.5 to 199.9 m/sec<sup>2</sup>, 0.05 to 20.39 g, 2 to 656 ft/sec<sup>2</sup>
- For velocity: 0.5 to 199.9 mm/sec, 0.05 to 19.99 cm/sec, 0.02 to 7.87 inches/sec

**Measurement Accuracy:**

- For acceleration:  $\pm$  (5% of reading + 2 digits)
- For velocity:  $\pm$  (5% of reading + 2 digits)

**Measurement Resolution:**

- For acceleration: 0.1 m/sec<sup>2</sup>, 0.01 g, 1 ft/sec<sup>2</sup>
- For velocity: 0.1 m/sec, 0.01 inches/sec

**Calibration Point:**

- For acceleration: 50 m/sec<sup>2</sup> @ 160 Hz
- For velocity: 50 mm/sec @ 160 Hz

**Data Logging Sampling Time:** 1 second to 1 hour

**Settable Parameters:** Date, time, decimal point or comma decimal division, auto power off, beep sound, sampling time

**Storable/Recallable Readings:** Maximum, minimum, peak (RMS values only)

**SD Card Capacity:** 1 GB to 16 GB

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

**Power Consumption:**

- 15 mADC (normal operation, with backlight off and SD card not saving data)
- 36 mADC with backlight on and card saving data
- 48 mADC with backlight on and card saving data

**Dimensions of Meter:**

7.99 x 2.99 x 1.50 in. (203 x 76 x 38mm)

**Weight of Meter:** 1.13 lb. (515g)

**Dimensions of Probe:**

1.46 (length) x 0.63 (diameter) in. (37 x 16 mm)

**Length of Probe Cable:** 47.24 in. (1.2m)

**Power Source:**

Six "AA" batteries or optional 9-VDC AC adapter







# pH, ORP Meter

with Excel-Formatted Data Logging SD Card

**Accurately Measures pH and ORP (Oxidation-Reduction Potential)**



No. DPH230SD

## Applications:

- Water conditioning
- Beverage production
- Wastewater monitoring
- Aquaculture (fish farming)
- Aquariums
- Pulp and paper processing
- Electroplating
- Photography



Water Conditioning



Beverage Production

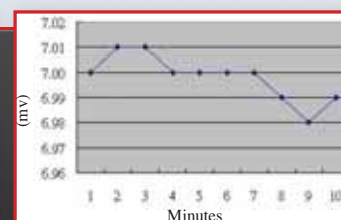
This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

|    | A        | B         | C        | D         | E        | F         | G        |
|----|----------|-----------|----------|-----------|----------|-----------|----------|
| 1  | Position | Date      | Time     | Ch1_Value | Ch1_Unit | Ch2_Value | Ch2_Unit |
| 2  | 1        | 2009/8/12 | 13:26:37 | 7.00      | pH       | 25.0      | Degree_C |
| 3  | 2        | 2009/8/12 | 13:26:39 | 7.01      | pH       | 25.0      | Degree_C |
| 4  | 3        | 2009/8/12 | 13:26:41 | 7.01      | pH       | 25.0      | Degree_C |
| 5  | 4        | 2009/8/12 | 13:26:43 | 7.00      | pH       | 25.0      | Degree_C |
| 6  | 5        | 2009/8/12 | 13:26:45 | 7.00      | pH       | 25.0      | Degree_C |
| 7  | 6        | 2009/8/12 | 13:26:47 | 7.00      | pH       | 25.0      | Degree_C |
| 8  | 7        | 2009/8/12 | 13:26:49 | 7.00      | pH       | 25.0      | Degree_C |
| 9  | 8        | 2009/8/12 | 13:26:51 | 6.99      | pH       | 25.0      | Degree_C |
| 10 | 9        | 2009/8/12 | 13:26:53 | 6.98      | pH       | 25.0      | Degree_C |

Typical Excel Data



Typical Excel Plotted Data



# pH, ORP Meter

## with Excel-Formatted Data Logging SD Card

### Features:

- Measures pH and ORP using optional electrodes
- Measured parameter can be changed by pressing front-panel button
- Optional ATC temperature probe automatically calibrates pH electrode to pH 4, pH 7 and pH 10
- Displays maximum and minimum readings
- Performs real-time automatic data logging at sampling time settable from 1 second to 9 hours
- Also supports manual logging and changing of card storage location
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Auto power off function

### Included Accessories:

- Carrying case
- 2 GB SD memory card
- User's manual

### Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- ORP probe (General P/N ORP14)
- Automatic temperature compensation (ATC) probe (General P/N TP07)
- Professional-grade 0 to 14 pH electrode (General P/N PHS1)
- Heavy-duty spear tip pH electrodes (General P/Ns PHS4HD and PHS6HD)
- Combination pH electrode/temperature probe (General P/N PHS5T)
- Combination pH electrode/temperature probe with automatic temperature compensation (General P/N PHS3K7)
- SDRD1 - SD Card Reader



No. DPH230SD

### Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameters Measured:** pH, ORP

**Measurement Range:**

- For pH: 0 to 14
- For ORP: -1999 mV to +1999 mV

**Measurement Accuracy:**

- For pH:  $\pm (0.02 \text{ pH units} + 2 \text{ digits})$
- For ORP:  $\pm (0.5\% \text{ of reading} + 2 \text{ digits})$

**Measurement Resolution:**

- For pH: 0.01 unit
- For ORP: 1 mV

**Temperature Compensation:**

- Automatic between 32° and 150°F (0° and 65°C) when using optional ATC temperature probe.
- Manually settable between 32° and 212°F (0° and 100°C) without ATC probe

**Storable/Recallable Readings:** Maximum, minimum

**Data Logging Sampling Time:** 1 second to 9 hours

**SD Card Capacity:** 1 GB to 16 GB

**Settable Parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit, compensation temperature

**Operating Temperature:** 32° to 122°F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

**Power Consumption:**

- 14 mADC (normal operation, with backlight off and SD card not saving data)
- 37 mADC with backlight on and card saving data
- 49 mADC with backlight on and card saving data

**Dimensions:** 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

**Weight:** 1.08 lb. (489g)

**Power Source:**

Six "AA" batteries or optional 9-VDC AC adapter





# Conductivity, TDS Meter

## with Excel-Formatted Data Logging SD Card

**Accurately Measures Any Solution's Conductivity,  
Total Dissolved Solids (TDS), Salt Content and Temperature**



No. DCT430SD

### Applications:

- Electroplating
- Water conditioning
- Wastewater monitoring
- Aquaculture (fish farming)



Wastewater Treatment



Salmon Farming

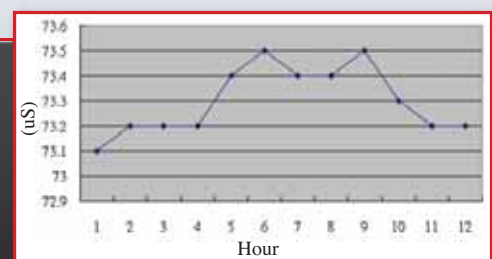
This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

|    | A         | B         | C        | D         |
|----|-----------|-----------|----------|-----------|
| 1  | Positions | Date      | Time     | Chl_Value |
| 2  | 1         | 2009/8/12 | 13:16:36 | 73.1      |
| 3  | 2         | 2009/8/12 | 13:16:38 | 73.2      |
| 4  | 3         | 2009/8/12 | 13:16:40 | 73.2      |
| 5  | 4         | 2009/8/12 | 13:16:42 | 73.2      |
| 6  | 5         | 2009/8/12 | 13:16:44 | 73.4      |
| 7  | 6         | 2009/8/12 | 13:16:46 | 73.5      |
| 8  | 7         | 2009/8/12 | 13:16:48 | 73.4      |
| 9  | 8         | 2009/8/12 | 13:16:50 | 73.4      |
| 10 | 9         | 2009/8/12 | 13:16:52 | 73.5      |
| 11 | 10        | 2009/8/12 | 13:16:54 | 73.5      |

Typical Excel Data



Typical Excel Plotted Data





# Conductivity, TDS Meter with Excel-Formatted Data Logging SD Card

## Features:

- Measures hydraulic or pneumatic pressure using optional sensors with full-scale ranges from 2 to 400 bar
- Sensors calibrated by single push of a button
- Ten different pressure units selectable via front panel
- Displays maximum and minimum readings
- Performs real-time automatic data logging at sampling time setttable from 1 second to 9 hours
- Also supports manual logging and changing of card storage location
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Auto power off function

## Included Accessories:

- Hard carrying case
- Combination conductivity/TDS/salt probe (General P/N CDPB03)
- 2 GB SD memory card
- User's manual

## Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- SDRD1 - SD Card Reader



No. DCT430SD

## Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Probe Type:** Carbon rod electrode

### Parameters (units) Measured:

- Conductivity (uS, mS)
- Total dissolved solids (ppm)
- Salt content (% weight)
- Temperature (°F, °C)

### Measurement Accuracy:

- For conductivity:  $\pm 2\%$  of full-scale reading +1 digit, TDS
- For temperature:  $\pm 0.8^\circ\text{C}/\pm 1.5^\circ\text{F}$
- For salt:  $\pm 0.5\%$  of value

### Measurement Resolution:

- For Conductivity: 0.1 uS @ 200 uS full-scale (f.s.), 0.001 mS @ 2 mS f.s., 0.01 mS @ 20 mS f.s., 0.1 mS @ 200 mS f.s.
- For TDS: 0.1 ppm @ 200 ppm f.s., 1 ppm @ 2,000 ppm f.s., 10 ppm @ 20,000 ppm f.s., 100 ppm @ 100,000 ppm f.s.
- For Temperature:  $0.1^\circ\text{F}/0.1^\circ\text{C}$
- For Salt: 0.01%

### Temperature Compensation:

- Automatic from  $32^\circ$  to  $140^\circ\text{F}$  ( $0^\circ$  to  $60^\circ\text{C}$ )
- Temperature compensation factor is manually variable from 0 to 5% per degree Celsius

**Storable/Recallable Readings:** Maximum, minimum

**Data Logging Sampling Time:** 1 second to 9 hours

**SD Card Capacity:** 1 GB to 16 GB

**Settable parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit, temperature compensation level

### Operating Temperature:

- $32^\circ$  to  $122^\circ\text{F}$  ( $0^\circ$  to  $50^\circ\text{C}$ ) for meter
- $32^\circ$  to  $140^\circ\text{F}$  ( $0^\circ$  to  $60^\circ\text{C}$ ) for probe

**Operating Relative Humidity:** 0 to 85%

### Power Consumption:

- 14 mADC (normal operation, with backlight off and SD card not saving data)
- 37 mADC with backlight on and card saving data
- 49 mADC with backlight on and card saving data

### Dimensions of Meter:

6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

**Weight of Meter:** 1.08 lb. (489g)

### Dimensions of Probe:

0.86 in. (diameter) x 4.72 in. (L) (22mm x 120mm)

### Power Source:

Six "AA" batteries or optional 9-VDC AC adapter



**GENERAL<sup>®</sup>**

# Dissolved Oxygen Meter

## with Excel-Formatted Data Logging SD Card

**Accurately Measures Dissolved  
Oxygen Concentration of Liquid or Air**



No. DOM551SD

### Applications:

- Aquaculture (fish farming)
- Water pollution control
- Food processing
- Photography
- Pulp and paper manufacturing
- Power generation
- Electroplating
- Facilities management



Water Pollution Control



Power Generation

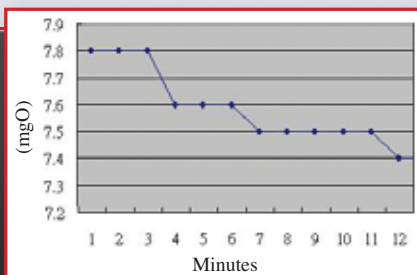
This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



**Patented Technology**

|    | A        | B         | C        | D         | E        |
|----|----------|-----------|----------|-----------|----------|
| 1  | Position | Date      | Time     | Ch1_Value | Ch1_Unit |
| 2  | 1        | 2009/8/12 | 13:38:29 | 7.8       | mg/L     |
| 3  | 2        | 2009/8/12 | 13:38:30 | 7.8       | mg/L     |
| 4  | 3        | 2009/8/12 | 13:38:32 | 7.8       | mg/L     |
| 5  | 4        | 2009/8/12 | 13:38:34 | 7.6       | mg/L     |
| 6  | 5        | 2009/8/12 | 13:38:36 | 7.6       | mg/L     |
| 7  | 6        | 2009/8/12 | 13:38:38 | 7.6       | mg/L     |
| 8  | 7        | 2009/8/12 | 13:38:40 | 7.5       | mg/L     |
| 9  | 8        | 2009/8/12 | 13:38:42 | 7.5       | mg/L     |
| 10 | 9        | 2009/8/12 | 13:38:44 | 7.5       | mg/L     |
| 11 | 10       | 2009/8/12 | 13:38:46 | 7.5       | mg/L     |

Typical Excel Data



Typical Excel Plotted Data



# Dissolved Oxygen Meter

## with Excel-Formatted Data Logging SD Card

### Features:

- Uses heavy-duty polarographic oxygen probe
- Precisely measures DO from 0 to 20 mg/L, as well as liquid temperature
- Easy to calibrate
- Supports automatic and manual data logging
- Time-stamps and stores measurements on SD memory cards
- Sampling time settable from 1 second to 9 hours
- Automatically compensates for altitude and salt content of liquids
- 1.5 x 2.0 in. backlit liquid crystal display

### Included Accessories:

- Hard carrying case
- Oxygen probe
- Probe-filling electrolyte
- Two spare probe heads and diaphragm set
- 2 GB SD memory card
- User's manual

### Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- SDRD1 - SD Card Reader



No. DOM551SD

### Specifications:

**Embedded Microcontroller:** Custom single-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.0 x 1.5 in. (52 x 38mm)

**DO Measurement Range:** 0 to 20 mg/L

**DO Measurement Resolution:** 0.1 mg/L

**DO Measurement Accuracy:**  $\pm 0.4$  mg/L

**Oxygen in Air Measurement Range:** 0 to 100%

**Oxygen in Air Measurement Resolution:** 0.1% O<sub>2</sub>

**Oxygen in Air Measurement Accuracy:**  $\pm 0.7\%$  O<sub>2</sub>

**Temperature Measurement Range:** 32° to 122°F (0° to 50°C)

**Temperature Measurement Resolution:** 0.1 °F or °C

**Temperature Measurement Accuracy:**  $\pm 1.5$  °F ( $\pm 0.8$  °C)

**Compensation For Temperature:** Automatic

**Compensation For Altitude:** 0 to 29,200 ft. (0 to 8,900m)

**Compensation For Liquid Salt Content:** 0 to 50%

**Data Logging Sampling Time:** 1 second to 9 hours

**DO Probe Type:** Polarographic

**SD Memory Card Capacity:** 1 GB to 16 GB

**Power Consumption:**

- 14 mADC (normal operation, with backlight off and SD card not saving data)
- 37 mADC with backlight on and card not saving data
- 49 mADC with backlight on and card saving data

**Operating Temperature:** 32° to 122 °F (0° to 50°C)

**Operating Relative Humidity:** 0 to 85%

**Dimensions of Meter:**

7.0 x 2.7 x 1.9 in. (177 x 68 x 45mm)

**Weight of Meter:** 1.08 lb. (489g)

**Dimensions of Probe:**

7.5 (long) x 1.1 (across) inches (190 x 28mm)

**Weight of Probe:** 0.74 lb. (335g)

**Power Source:**

Six "AA" batteries or 9-VDC adapter





**GENERAL®**

# pH, ORP, DO, CD, TDS, Salt Meter

with Excel-Formatted Data Logging SD Card

**Accurately Measures Conductivity, Total Dissolved Solids (TDS) or Salt Concentration of a Liquid. Optional Probes Measure pH, ORP (Oxidation-Reduction Potential) and Dissolved Oxygen (DO)**



No. WK2017SD

## Applications:

- Water conditioning
- Wastewater monitoring and control
- Beverage production
- Aquaculture (fish farming)
- Pulp and paper processing
- Electroplating
- Photography



Beverage Production



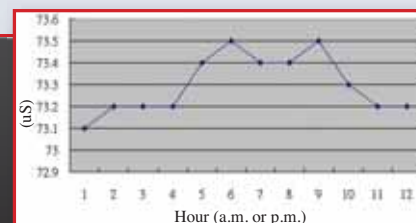
Wastewater Monitoring

This instrument's unique feature is its patented technique for storing sampled data in Excel format on removable SD memory cards



| A  | B     | C                  | D         | E        | F         | G        |
|----|-------|--------------------|-----------|----------|-----------|----------|
| 1  | Probe | Time               | CH1_Value | CH1_Unit | CH2_Value | CH2_Unit |
| 2  | 1     | 2009/5/12 13:06:36 | 73.1      | °S       | 24.7      | Degree_C |
| 3  | 2     | 2009/5/12 13:06:38 | 73.2      | °S       | 24.7      | Degree_C |
| 4  | 3     | 2009/5/12 13:06:40 | 73.2      | °S       | 24.7      | Degree_C |
| 5  | 4     | 2009/5/12 13:06:42 | 73.2      | °S       | 24.7      | Degree_C |
| 6  | 5     | 2009/5/12 13:06:44 | 73.4      | °S       | 24.7      | Degree_C |
| 7  | 6     | 2009/5/12 13:06:46 | 73.5      | °S       | 24.7      | Degree_C |
| 8  | 7     | 2009/5/12 13:06:48 | 73.4      | °S       | 24.7      | Degree_C |
| 9  | 8     | 2009/5/12 13:06:50 | 73.4      | °S       | 24.7      | Degree_C |
| 10 | 9     | 2009/5/12 13:06:52 | 73.7      | °S       | 24.7      | Degree_C |
| 11 | 10    | 2009/5/12 13:06:54 | 73.3      | °S       | 24.7      | Degree_C |
| 12 | 11    | 2009/5/12 13:06:56 | 73.2      | °S       | 24.7      | Degree_C |
| 13 | 12    | 2009/5/12 13:06:58 | 73.2      | °S       | 24.7      | Degree_C |

Typical Excel Data



Typical Excel Plotted Data

**Patented Technology**



# pH, ORP, DO, CD, TDS, Salt Meter with Excel-Formatted Data Logging SD Card

## Features:

- Measures pH, ORP and conductivity, and TDS, salt and DO content using included and optional electrodes and probes
- Measured parameter can be changed by pressing front-panel buttons
- DO measurements can be compensated for salt, altitude and temperature
- Also measures oxygen content of a volume of air
- Optional ATC probe automatically temperature-compensates pH electrode
- Displays maximum and minimum readings
- Performs real-time automatic data logging at sampling time settable from 1 second to 9 hours
- Also supports manual logging and changing of card storage location
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Auto power off function

## Included Accessories:

- Hard carrying case
- Combination conductivity/TDS/salt probe (P/N CDPB03)
- 2 GB SD memory card
- User's manual

## Optional Accessories:

- 9VDC adapter for 110V power supply (General P/N AC1)
- ORP probe (General P/N ORP14)
- Automatic temperature compensation (ATC) probe (General P/N TP07)
- Dissolved oxygen probe (General P/N OXPB11)
- Professional-grade 0 to 14 pH electrode (General P/N PHS1)
- Heavy-duty spear tip pH electrodes (General P/Ns PHS4HD and PHS6HD)
- Combination pH electrode/temperature probe (General P/N PHS5T)
- Combination pH electrode/temperature probe with automatic temperature compensation (General P/N PHS3K7)
- SDRD1 - SD Card Reader



No. WK2017SD

## Specifications:

**Embedded Microcontroller:** Custom one-chip LSI device

**Display Type:** LCD with green backlight

**Display Size:** 2.05 x 1.5 in. (52 x 38mm)

**Parameters Measured:** pH, ORP, conductivity, TDS content, DO content, salt content

### Measurement Range:

- For pH: 0 to 14
- For ORP: -1999 mV to +1999 mV
- For conductivity: up to 200 mS (microSiemens)
- For TDS: up to 132,000 ppm
- For DO: up to 20 mg/L
- For salt: up to 12% by weight

### Measurement Accuracy:

- For pH:  $\pm (0.02 \text{ pH units} + 2 \text{ digits})$
- For ORP:  $\pm (0.5\% \text{ of reading} + 2 \text{ digits})$
- For conductivity:  $\pm 2\% \text{ of full-scale reading} + 1 \text{ digit}$
- For TDS:  $\pm 2\% \text{ of full-scale reading} + 1 \text{ digit}$
- For temperature:  $\pm 0.8^\circ\text{C}/\pm 1.5^\circ\text{F}$
- For DO:  $\pm 0.4 \text{ mg/L in solution}$
- For oxygen: 0.1% for oxygen in air
- For salt:  $\pm 0.5\% \text{ of value}$

### Measurement Resolution:

- For pH: 0.01 unit
- For ORP: 1 mV
- For conductivity: 0.1 uS @ 200 uS full-scale (f.s.), 0.001 mS @ 2 mS f.s., 0.01 mS @ 20 mS f.s., 0.1mS @ 200 mS f.s.
- For TDS: 0.1 ppm @ 200 ppm f.s., 1 ppm @ 2,000 ppm f.s., 10 ppm @ 20,000 ppm f.s., 100 ppm @ 100,000 ppm f.s.
- For temperature:  $0.1^\circ\text{F}/0.1^\circ\text{C}$
- For DO: 0.1 mg/L in solution
- For oxygen: 0.1% in air
- For salt: 0.01% of reading

### Temperature Compensation:

- Automatic between  $32^\circ$  and  $150^\circ\text{F}$  ( $0^\circ$  and  $65^\circ\text{C}$ ) when using optional ATC temperature probe

- Manually settable between  $32^\circ$  and  $212^\circ\text{F}$  ( $0^\circ$  and  $100^\circ\text{C}$ ) without ATC probe

**Storable/Recallable Readings:** Maximum, minimum

**Data Logging Sampling Time:** 1 second to 9 hours

**SD Card Capacity:** 1 GB to 16 GB

**Settable Parameters:** Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit, compensation temperature. Also salt and altitude compensation (DO mode only)

**Operating Temperature:**  $32^\circ$  to  $122^\circ\text{F}$  ( $0^\circ$  to  $50^\circ\text{C}$ )

**Operating Relative Humidity:** 0 to 85%

### Power Consumption:

- 14 mADC (normal operation, with backlight off and SD card not saving data)
- 37 mADC with backlight on and card saving data
- 49 mADC with backlight on and card saving data

**Dimensions of Meter:** 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

**Weight of Meter:** 1.08 lb. (489g)

### Power Supply:

Six "AA" batteries or optional 9-VDC AC adapter



## Anemometer-Thermometer



No. DAF4207SD

Pages  
3-4

## Hot Wire Anemometer-Thermometer



No. HWA4214SD

Pages  
5-6

## Environment Meter



No. DLAf930SD

Pages  
7-8

## Class 2 Sound Level Meter



No. DSM402SD

Pages  
9-10

## Class 1 Sound Level Meter



No. DSM403SD

Pages  
11-12

## UVA, UVC Light Meter



No. UV254SD

Pages  
13-14

## Light Meter



No. DLM112SD

Pages  
15-16

## 4-Channel Thermometer



No. DT4947SD

Pages  
17-18

## 12-Channel Temperature Recorder



No. DT4208SD

Pages  
19-20

## Pressure Meter



No. PM930SD

Pages  
21-22

## Humidity-Temperature Meter



No. DTH3007SD

Pages  
23-24

## Vibration Meter



No. VM8205SD

Pages  
25-26

## pH, ORP Meter



No. DPH230SD

Pages  
27-28

## Conductivity, TDS Meter



No. DCT430SD

Pages  
29-30

## Dissolved Oxygen Meter



No. DOM551SD

Pages  
31-32

## pH, ORP, DO, CD, TDS, Salt Meter



No. WK2017SD

Pages  
33-34





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