

Mini Environmental Quality Meter

850070

SPER
SCIENTIFIC

Environmental Measurement Instruments

Mini Environmental Quality Meter 850070

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INTRODUCTION

For environmental testing anywhere. Combines a light meter, humidity meter, thermometer & anemometer into a single compact unit. Features touch-tone buttons, max-min & hold functions. Comes ready to use with wrist strap, instructions, 9V battery, & soft carrying case.

PANEL DESCRIPTION

1. Air Flow Sensor
2. Thermocouple Input Socket (on left)
3. RH Sensor (on right)
4. LCD Display
5. Key Pad (L to R)
Power Button
Hold Button
Max/Min Button
Unit/Zero Button
°C/°F, Lux/Ft-cd Button
Function Button
6. Wrist Strap
7. Light Sensor



OPERATING INSTRUCTIONS

Measurement Procedures

Turn on the instrument by pressing the POWER button. See page 3 for button locations. The full display appears, then counts down to 00000. The meter defaults to the last used unit of measure.

Air Velocity Measurement

1. Press the **FUNCTION** button to select the Anemometer.
2. Press the **UNIT/ZERO** button to select the unit of measure: (knot, Km/h, m/S, FPM, mph).
3. Press the **°C/°F** button to select Centigrade or Fahrenheit.
4. Aim **AIR FLOW SENSOR** toward the source to be measured.
5. Air velocity, temperature and the unit of measure are displayed on the LCD.

Thermocouple Measurement

1. Plug a Type K thermocouple probe (not included) in the **THERMOCOUPLE INPUT SOCKET**, making sure that the that the polarity is correct.
2. Press the **FUNCTION** button to select the Thermocouple.
3. Press the **°C/°F** button to select Centigrade or Fahrenheit.
4. Make contact between the probe and the object to be measured.
5. The temperature and the unit of measure are displayed.
6. Temperature differences between the probe and the meter

can cause inaccurate results. If applicable, allow a few minutes for the probe and meter to adjust to the ambient temperature.

RH Measurement & Temperature

1. Press the **FUNCTION** button to select the RH function.
2. Press the **°C/°F** button to select Centigrade or Fahrenheit.
3. The RH results and ambient temperature are displayed.
4. When environmental changes occur, such as moving the meter to a new location, allow a few minutes for the meter to stabilize.

Light Measurement

1. Press the **FUNCTION** button to select the Light function. The reading appears inverted on the LCD.
2. Press the **LUX/FT-CD** button to select the unit of measure.
3. Point the **LIGHT SENSOR**, toward the light source to be measured.
4. The results are shown on the LCD.
5. The overload indicator (“- - - -”) is displayed if the range is exceeded.
6. The zero-point may drift because of climate changes or when the battery becomes weak. To reset the zero-point, block out any light source by covering the **LIGHT SENSOR**, then press the **UNIT/ZERO** button.

Note... To preserve the accuracy of the light sensor, store the meter in its closed pouch.

ADDITIONAL FUNCTIONS

Data Hold

During the measuring procedure, press the **HOLD** button to freeze the measured value. The LCD will also display the word: "HOLD." To exit, press the **HOLD** button again.

Maximum / Minimum (Record)

1. Press the **MAX/MIN** button once. "REC" appears on the LCD to indicate that the meter is in the Record mode.
2. Press the **MAX/MIN** button again. "REC", "MAX" and the maximum measurement appear on the LCD
3. Press the **MAX/MIN** button again. "REC", "MIN" and the minimum measurement appear on the LCD.
4. To delete the recorded maximum and minimum values, press the **HOLD** button once. When released, the LCD displays only "REC".
5. To exit this function, press and hold the **MAX/MIN** button for ≥ 2 seconds, until the display reverts to the current reading.

Automatic Shut-Off

The instrument has an automatic shut off function in order to prolong battery life. After approximately 10 minutes without activity (no buttons pushed), the meter will automatically shut off. To disable this feature, press the **MAX/MIN** button. "REC" will appear on the LCD.

Overload Indicator

When the measurement is out of range, “- - - -” appears on the display.

BATTERY REPLACEMENT

Replace the battery when the low battery icon is displayed in the left corner of LCD. In-spec measurements may be made for several hours after the low battery icon appears.

SPECIFICATIONS

Unit of Measure	Range	Res.	Accuracy
°C ambient	0 to 50	0.1	±1.2°C
°F ambient	32 to 122		±2.5°F
°C Type K	-100 to 1300		±(1% + 1°C)
°F Type K	-148 to 2372		±(1% + 2°F)
RH	10 to 95%		±6% 30 to 60RH otherwise ±8%
Airspeed m/s	0.4 to 25.0		±(3% + 2d)
Airspeed km/h	1.4 to 90.0		
Airspeed mile/h	0.9 to 55.9		
Airspeed knots	0.8 to 48.6		
Airspeed ft/min	80 to 4930	1	±(3% + 20ft/min)
Lux	0 to 20,000		±(5% + 4d)
Foot Candle	0 to 2,000	0.1	

Display	8 mm LCD display
Operating Humidity	Max. 80% RH
Operating Temp.	0 to 50°C (32 to 122°F)
Power Supply	006p DC 9V battery (heavy duty type)
Power Current	Approx. DC 6.2 mA
Dimensions	6" × 2½" × 1" (152 × 64 × 25 mm)
Weight	5.3 oz (150 g)

WARRANTY

Sper Scientific warrants this product against defects in materials and workmanship for a period of **five (5) years** from the date of purchase, and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted if available. This warranty does not cover probes, batteries, battery leakage, or damage resulting from accident, tampering, misuse, or abuse of the product. Opening the meter to expose its electronics will void the warranty.

To obtain warranty service, ship the unit postage prepaid to:

SPER SCIENTIFIC LTD.
8281 E. Evans Rd., Suite 103
Scottsdale, AZ 85260

The defective unit must be accompanied by a description of the problem and your return address. Register your product online at www.sperwarranty.com within 10 days of purchase.