

Attention: Before operating HC-3 Environment Data Tester, user must read this operating manual carefully, please! Keeping the manual for reference.

HC-3 Environment Data Tester

OPERATING MANUAL

ISO9001: 2000 CERTIFIED

**SUZHOU CLEANING TECH. RESEARCH INSTITUTE
BAISHEN TECHNOLOGY (SUZHOU) CO., LTD.**

Welcome to use HC-3 Environment Data Tester, thank you warmly entering into our company's consumer team!

1. General Description

Environment data tester uses portable structure. It is applicable for measurement of the temperature, relative humidity and air differential pressure. It adopts import T&H sensor. It features high accuracy in measuring, rapid response, wide measurement range and steady performance. The import air differential pressure sensor features good linear of the measurement, high precision, and is suitable for the advantages of the air differential pressure. It is designed with low power consumption, driven by battery and used convenient. So it is widely used in pharmaceuticals, microelectronics and etc.

2. Operating ambient condition

2.1 Operate Condition

Temperature: 0°C ~ +40°C;

Humidity: 20% ~ 80%RH;

2.2 Measurement range and accuracy

Temperature: 0°C ~ +50°C ± 1°C;

Humidity: 10 ~ 95%RH ± 5%RH;

Air pressure difference: 0 ~ 50Pa (positive pressure) ± 6%.

2.3 Volume

178mm × 100mm × 40mm

2.4 Weight

65kg

2.5 Power

Using Ni (OH)₂ battery pack and AC to supply electricity. When it is used AC, you can charging for battery pack.

3. Operating Principle

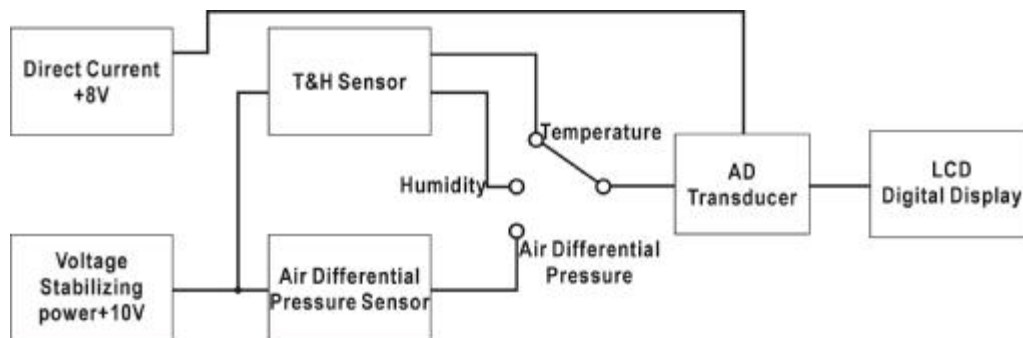


Fig.1 functional block diagram of environment data tester

The tester is made of two sets of secondary battery (+10.8V, +14.4V), double way charger, T&H sensor, air differential pressure sensor, AD transfer circuit and display element.

3.1 Principle description

+8V supplies current to T&H sensor. The output is used by digital display of temperature and humidity.

10V supplies current to air differential pressure sensor. The output of the sensor is used by digital display of air differential pressure.

4. Operation

4.1 Preparation

When T&H sensor connects the tester and the power is turned on, the screen displays numerical values. When the screen displays “LOBAT”, charge in time to keep the accuracy of the tester.

4.2 Charge method

If the tester displays “LOBAT” or doesn’t display any character, it shows that the voltage of the battery is insufficient or the electric energy is exhausted. Use charger to charge. Insert the power input plug of the charger into the socket of 220V. Insert the crystalline plug of one end of power output line into the socket of the bottom of the tester and after turn off the power of the tester.

4.3 Measurement

The measurement of temperature: press “temperature” on the panel. The number displays the temperature of T&H sensor and the indicator light of temperature should be on.

The measurement of humidity: press “humidity” on the panel. The number displays the humidity of T&H sensor and the indicator light of humidity should be on.

The measurement of air differential pressure: press “differential pressure” on the panel. If “high air pressure ” (H) of the air differential pressure sensor and low air pressure (L) are at the same space, the number displays the differential pressure should be 0(error ± 1). If the air pressure of “high air pressure” is higher than “low air pressure”, the number displays the air differential pressure at two different spaces.

When measure the differential pressure at two different air pressure, choose plastic tube as differential pressure sampling tube. The inside diameter is 6. The length of single tube is not longer than 20m(it is purchased by customers). Put one end of the tube to H at the top of the tester and put the other end in the space of high air pressure. Put L at the top of the tester to a plastic tube and link it with the space of lower air pressure or don't use this lower air pressure sampling tube (now the tester is at the space of lower air pressure). Also, only link with low air pressure sampling tube (now the tester is at the space of higher air pressure). During the procedure of differential pressure sampling, prevent sampling tube from staving and affecting the precision of the measurement.

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**SUZHOU CLEANING TECH. RESEARCH INSTITUTE
BAISHEN TECHNOLOGY (SUZHOU) CO., LTD.**

Add: 31 Qihong Road, Tongyuan Road ,SIP Suzhou

Zip: 215006

Phone: +86-512-62522538

Fax: +86-512-62522938

[http: //www.baishen.com](http://www.baishen.com)

E-mail: clean@baishen.com

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