DIGITAL SHORE HARDNESS TESTER

HT-6510 AM

1.SCOPE OF APPLICATION

AM Shore Hardness tester/Thin rubber hardness tester

1, mainly used for measuring thin soft rubber, such as natural rubber, synthetic rubber, sample thickness of more than 1.5mm rubber;

2, suitable for measuring small O-rings, sealing rings, sealing gaskets and other thin molding products or thin rubber raw materials;

3, measuring thickness (O-ring diameter): H>1.5mm; Suitable ring diameter: 5mm-80mm

2. FEATURES

*AM Shore Hardness tester/Thin rubber hardness tester, suitable for determining the hardness of ordinary vulcanized rubber and its analoguesSample (thickness above 1.5mm) of the product, measured hardness values in Shore A M hardness 20HAM(degree)-90HAM(degree)The rubber. Implementation standard :GB/T 531.1-2008 "vulcanized rubber or thermoplastic rubber pressed into the hardness testerMethod Part I: Shore hardness tester method (Shore hardness), the national standard is equivalent to the international standard ISOThe 7619-1-2004

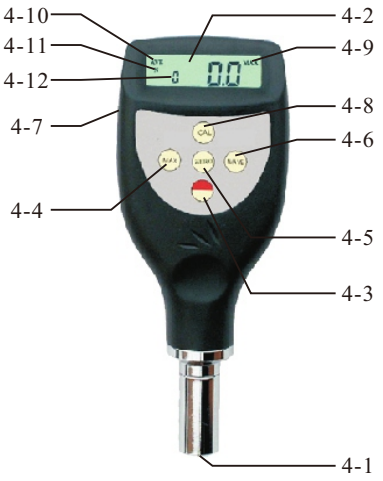
* It meets standards: DIN 53505, ISO 868, ISO 7619, ASTM D 2240, JIS K7215.
* Used the exclusive Micro-computer LSI circuit and crystal time base to offer high accuracy measurement.
* Digital display gives exact reading with no guessing or errors.
* Can communicate with PC for recording, printing and analysing by the optional software and cable for RS232C interface.
* Automatic power off to conserve power.
* Use operation stand of optional parts can get good accuracy and repetitiveness due to constant measurement force to eliminate the errors caused by artificially applied different force.

3. SPECIFICATIONS

Display: 4-bit 10 mm
liquid crystal display range: 0-100HAM
Test range: 20-90HAM
Press needle size: RO.79mm
press needle stroke :1.25mm
press needle end force: 324mN-764mN(33.04gf-77.91gf)
Measurement thickness (or 0 coil diameter) : H >1.5mm
Resolution: 0.1H
Measurement accuracy: ≤ ±1 H
Suitable for type 0 ring diameter: 5-80mm
Implementation standard :GB/T531.1-2008
Sample : thin rubber sample mat on the weak factory, if the thickness of each layer is not less than 0.8mm smooth, parallel sample superposition. With peak latch, average calculation and undervoltage indicator function with standard RS232C interface.
Power Supply: 2 *1.5AAA batteries.
Shutdown: The instrument is equipped with two shutdown modes, namely manual shutdown and automatic shutdown. At any time, as long as you lightly press the multi-function key, when the display appears OFF, you can manually turn off the power of the whole machine: on the other hand, if you do not press any key or do not make any measurement within 10 minutes, it will automatically shut down to achieve the power saving function
Operating conditions: temperature 0~40C, humidity <80%
Size: 176x65x27mm
Weight: about 170g
(not including batteries)
PC interface: RS232C interface

Power off: 2 modes
Manual off at any time by depressing the power key till OFF shows on the display

4. FRONT PANEL DESCRIPTIONS



4-1 Sensor
4-2 Display
4-3 Power key
4-4 Max hold key
4-5 Zero key
4-6 N/Average key
4-7 RS232C interface
4-8 CAL key
4-9 Indicator of Max.Value
4-10 Indicator of Average value
4-11 State of average value
4-12 Number of measurements in the state of average value

5. MEASURING PROCEDURE

5.1 Depress and release the “Power key” to power the tester on.

5.2 Depress the “MAX” key till the mark MAX shows on the display.

5.3 Hold the durometer vertically with the point of the indenter at least 12 mm from any edge. Apply the presser foot to the specimen as rapidly as possible, without shock, keeping the foot parallel to the surface of the specimen. Apply just sufficient force to obtain firm contact between the presser foot and the specimen. Hold for 1 or 2 seconds, the maximum reading can be obtained automatically.

5.4 To take the next measurement, just depress the “Zero key” and repeat 4.4. On the other hand, you can depress the “Max hold key” till the mark MAX disappears from the display. And then repeat the step 4.3 and 4.4.

5.5 If other than a maximum reading is needed, no need to set the mark “MAX” showing on the display. In such case, the reading on the display is an instant value. Just hold the durometer in place without motion and obtain the reading after the required time interval (Normally less than 1 second) .

5.6 How to take average value

5.6.1 To take the average value of many times of measurements, just depress and release the “N/AVE key” to make the symbol “N” showing on the display, followed by a digit between 1-9 with the prefix “No.” . Here the digit is the times of measurements used to calculate the average value. Every time depress and release the “N/AVE key”, the digit will increase 1. And the digit will become “1” while depressing the “N/AVE key” at “9” .

5.6.2 Adjust the digit to the number needed and depress “MAX key” or “Zero key” to return to the measurement state or wait for several seconds till “0” on the display.

5.6.3 Take measurements as per steps from 4.3 to 4.5. Be sure that every test should be 6 mm apart. Every time take a measurement, the reading and the times of measurements show on the display. When the times of measurements is equal to the number set, the unit first displays the reading of the last , and then display the average value of last “N” measurements, followed by 2 beeps, with a symbol “AVE” indicating on the display.

5.6.4 To take the next average value, just repeat 4.7.3.

5.6.5 To release from average measurement, just depress the “N/AVE” till “N” disappears.

6. CALIBRATION CHECK

To check whether the tester is accurate, just Insert the indenter into the hole of the calibrated test Block. Apply enough force to make firm contact between the top surface of the test block and the presser foot. The reading should agree with the value stamped on the test block. If not, just carry out Zero calibration and High end calibration.

6.1 Zero calibration

Hold the durometer vertically with the point of the indenter hanging in the air, the reading on the display should be “0”. If not, depress the “Zero key” to make the tester display “0”.

6.2 High end calibration

Just place the indenter onto a flat glass, apply enough force to make firm contact between the glass and the presser foot. The readings on the display should lie between 99.5 and 101. If not, press “CAL key” to carry out high end calibration.

7. BATTERY REPLACEMENT

7.1 When the battery symbol appears on the display, it is time to replace the batteries.

7.2 Slide the Battery Cover away from the tester and remove the batteries.

7.3 Install batteries paying careful attention to polarity.