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HDT-L301
MINI LEEB HARDNESS TESTER

Instruction Manual

PLEASE SCAN QR CODE TO WATCH THE OPERATION VIDEO OF PRODUCTS.

VIDEO

INSIZE

1.Brief introduction

HDT-L301 is a super mini handheld metal hardness tester. The sizeis much smaller than normal hardness tester, which lets HDT-L301 meet not only normal measurements,but can take measurements at narrowed space as well. The measurements can be read on the probe LCD directly. You can also connect HDT-L301 to mobile App or PC software to set up all parameter safter connecting to mobile or PC, you can get real-time measuring data, print test report and export/store measuring data to mobile/PC.

2.Features and applications

■Features

▲One-handed operation is possible, making testeasier and faster

▲Suitable for testing hardness in small space

▲All directions test, do not need to set impact direction

▲The hardness value can be displayed on hardness tester and the cell phone App at the same time. It can also be connected by computer

▲Automatic shutdown

▲Support unlimited storage and sharing of test reports

■Applications

▲Hardness tests on installed machines or steel structures: e.gon heavy and large work-piece or on permanently installedsystem parts.

▲Rapid testing of multiple measuring areas for examination ofhardness variations over larger regions.

▲Measuring hardness for produced parts at production line

▲Ineffectiveness analysis of permanent parts, pressure -vessel-turbo generator.

3.Specification

Accuracy	±6HLD (when HLD=800)
Impact device	D
Hardness scale	HLD, HRA, HRB, HRC, HB, HS, HV, MPa
Measurement range	170-960HLD, 7-88.5HRA, 1.2-140HRB, 1-74HRC, 18-1027HB, 3.9-112HS, 42-1220HV, 89-3300MPa
Resolution	1HV, 0.1HRA, 0.1HRB, 0.1HRC, 1HB, 0.1HS, 1MPa
Applicable material	1.steel/cast steel, 2.alloy tool steel, 3.stainless steel, 4.grey cast iron, 5.nodular cast iron, 6.cast aluminium, 7.brass, 8.bronze, 9.copper, 10.forged steel
Output	USB and bluetooth
Operation temperature	-20°C~45°C
Power supply	3.7V Li-ion rechargeable battery
Dimension	86×30×20mm
Weight	45g

4.Product structure diagram

Figure 1

5.Symbols and meanings

symbol	meaning
HL	Leeb hardness value
HRC	Rockwell C hardness
HRB	Rockwell B hardness
HB	Brinell hardness value
HV	Vickers hardness
HS	Shore hardness
HRA	Rockwell A hardness
MPa(N/mm²)	Strength valuevalue

6.Install Mobile App

Scan the QR code with a browser to download the Mobile APP(Note: supports Android phone only).

Figure 2

According to the cell phone prompts to follow the steps to download and install, after the installation is complete, the cell phone APP icon as shown in the figure below

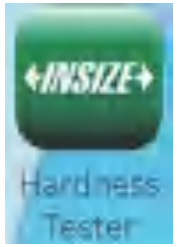

Figure 3

7.Operation

■Power on /off the instrument

▲Push ON/OFF Button to switch on/off the tester, after the tester is switched on,it will enter measuringmodeautomatically.Before connected to Mobile App, a Bluetoothindicator with a frame will display on the top right corner.

Measuring mode:Blue-tooth Disabled

Figure 4

■Run HARDNESS App

▲Click NEW PROJECT to connect HDT-L301 and HARDNESS App

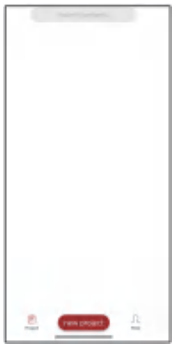

Figure 5

Figure 6

▲Choose available device to create Bluetooth connection.After connection is successful, the Bluetooth indicator witha frame will display on the top right corner.

Measuring mode: Bluetooth enabled

Figure 7

■Setup parameters

▲Click START to start a measuring project. In the measuring inter-face, click SETUP button to set up parameters for thistask. Please refer to figure 9 ~ figure 14.

Figure 8

Figure 9

Figure 11

Figure 10

Figure 12

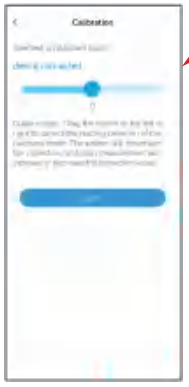

Figure 13

Figure 14

■Take measurements

▲After setup parameters, you can start to take measurements.Insert the loading rod into the tube of impact device to push the impact body todepress the spring until the impact body is locked. place the tester against the surface of work piecePlease note: the impact device must be firmly against the surface or you may get unsatisfied value.Press the release button on top of the probe and take measurement. The measuring value will be displayed on both LCD of probe and mobileApp.

Figure 15 loading rod

Figure 16 Loading and take measurement

■Create and edit workpiece

▲In the measuring interface, you can take measurements in default workpiece, A new workpiece can be created by clicking NEW WORKPIECEClick SETUP button to setup parameters for this new sample. After measuring is finished, cick sAVE button to save current data. Please refer to figure 17.

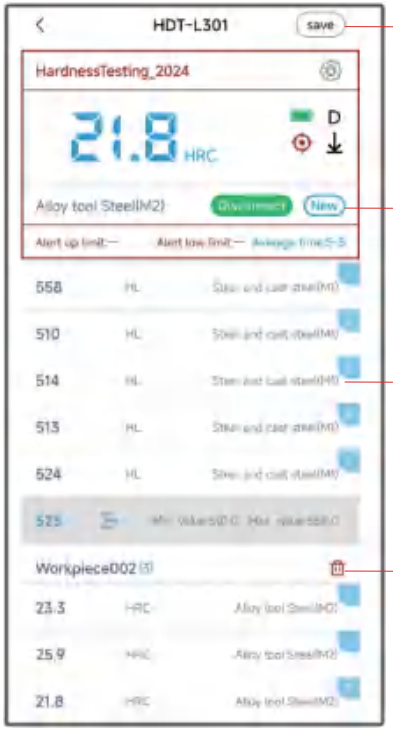

Figure 17

■Create and edit project

▲In the project interface, you can create a new projectby clicking NEW PROJECT button or delete selectedprojects by clicking MANAGE. Please refer to figure 18~ figure 22.

Figure 19

Figure 18

Figure 20

Figure 21

Figure 22

■Rename, view, delete and export project data

▲In the project interface, you can rename/view/deletethe selected project. You can view the test reportand share or save the report to your mobile. Pleaserefer to figure 18~figure 22.

■Maintenance and Repair

▲Do your best to avoid shock, heavy dust, damp, strongmagnetic field, and oil stain.

▲Maintenance of the Impact Device

The devices do not require any particular care otherthan periodic cleaning of the impact body and theguide tube after performing approximately 1000-2000tests. During cleaning, the following procedures needto be observed:

Unscrew support ring and remove impact body from guide tube.

Clean off any dirt and metallic dust from the impactbody and the spherical test tip.Clean guide tube with the special brush provided.-Do not apply oil to any parts for the impact device.