

**NDT Supply.com, Inc.**

7952 Nieman Road  
Lenexa, KS 66214-1560 USA

Phone: 913-685-0675, Fax: 913-685-1125

e-mail: [sales@ndtsupply.com](mailto:sales@ndtsupply.com), [www.ndtsupply.com](http://www.ndtsupply.com)



# ElektroPhysik

Messgeräte für Oberflächentechnik • Surface Testing Instruments

Thank you for choosing an ElektroPhysik precision measuring instrument. The following short instructions present the first steps to work with the MiniTest FH instrument. For all other operating options, please refer to the comprehensive operating instructions.

## Quick reference guide

# Wall thickness gauge MiniTest FH

## 1.1 Assignment of keys



The on/off key is used to switch the MiniTest on or off.



The menu key is used to call up the main menu from the measuring mode. Return to the main menu from all submenus pressing the menu key. A long press on the menu key saves a screenshot of the current screen.



Use "OK" to save settings or values or select menu items.




**NDT Supply.com, Inc.**

7952 Nieman Road  
Lenexa, KS 66214-1560 USA



Phone: 913-685-0675, Fax: 913-685-1125



e-mail: [sales@ndtsupply.com](mailto:sales@ndtsupply.com), [www.ndtsupply.com](http://www.ndtsupply.com)




 Use "ESC" to abort actions and restore the original value or quit submenus. Once having confirmed a setting with "OK" , it is not possible to return to the previous setting with the ESC key. A long press on the ESC  key leads to a direct return to the measuring mode.

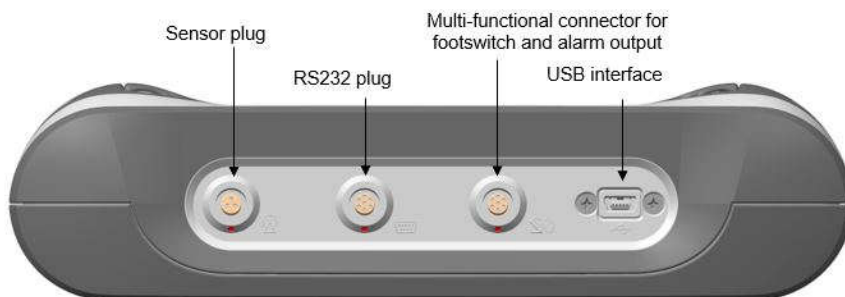
The arrow keys are used for navigation, as well as changing settings.

  Use the arrow keys "Up" and "Down" to navigate in the menu, to select parameters in submenus and to toggle through the alphanumeric keyboard.

  The arrow keys left / right are used for navigation and modification of settings. In measuring mode, they are used to switch between the measuring mode views and the online trend. In the alphanumeric input screens, the arrow keys are also used for navigation.

 The **function keys** are assigned differently depending on the screen content. The current functions are displayed in the screen line above the keys.

## 1.2 Connector assignment



The multifunction socket is used to connect the foot switch or alarm transmitter. The USB socket is used to connect a USB cable to transfer readings or - in connection with the power supply unit - for mains operation and for charging the internal battery.

The internal Bluetooth interface allows wireless transfer of measuring values from the MiniTest FH to a PC, laptop, tablet, smartphone or printer.

**NDT Supply.com, Inc.**

7952 Nieman Road  
Lenexa, KS 66214-1560 USA


Phone: 913-685-0675, Fax: 913-685-1125  
e-mail: [sales@ndtsupply.com](mailto:sales@ndtsupply.com), [www.ndtsupply.com](http://www.ndtsupply.com)



## 1.3 Navigation in menus

Press the menu key  to access the main menu.



In the main menu, use the "↑" or "↓" keys to select a submenu, e.g. "gauge configuration", and confirm with the "OK" key  to access the settings in this submenu.

## 2. Gauge operation

### 2.1 First steps

- Remove a sensor from the transport case and insert the plug into the sensor socket on the head side of the device (see fig.). Make sure that you place the "nose" of the plug in the guide groove of the socket. The red dot on the sensor plug must be aligned with the red dot of the sensor socket.
- Push the plug in as far as it will go.

### 2.2 Switching on the device and taking measuring values

Switch on the device in a charged state (charging takes place via USB interface). The device automatically starts in measuring mode:

The screenshot shows the measuring mode display. At the top, it displays 'Measuring mode', the time '11:24', and a battery icon with '100%'. The main reading is '1.550 mm' with a yellow arrow pointing up and a '1/s' indicator. Below the main reading is a table of statistical data:

|           |                     |                    |          |
|-----------|---------------------|--------------------|----------|
| n         | 93                  | max                | 1.565 mm |
| $\bar{x}$ | 1.4558 mm           | preset upper limit | 1.500 mm |
| $s$       | 14.62 $\mu\text{m}$ | preset lower limit | 1.400 mm |
| $\sigma$  | 1.5 mm              | min                | 1.424 mm |

At the bottom, it shows 'FH4' and the file path '/data/Bottle LD-PE.csv'. Below the table are three function keys: 'Calibration', 'Statistics', and 'Delete min/max'. A status line at the bottom shows 'The activated function of the function keys is shown on the lower display line above the respective function key. In this case, the function keys assignment calibration, statistics, deletion of the current min/max values (but not in the statistics) is shown.'

Communication symbols: ↑ arrow up indicates limit value exceeded, 1.550 = measuring value

n = number of readings  
 $\bar{x}$  = mean value  
 $s$  = standard deviation  
 1,5 mm = selected diameter of reference ball  
 FH4 = sensor type connected  
 Z = calibration method, in this case zero calibration

Battery symbol = Mains or battery operation / charge status and remaining time indicator

max = highest measuring value  
 preset upper limit  
 preset lower limit  
 min = smallest measuring value

Bottle LD-PE = active measuring series  
 Status line

- Use the supplied measuring stand for the measurement. Place the object to be measured on the sensor and place the measuring ball on the opposite side or insert it into a hollow body. The sensor contains a strong permanent magnet which attracts the measuring ball and holds it exactly opposite the sensor tip. Hold the measuring object at right angles to the sensor and move it uniformly over the sensor. Press the "OK" key to store the measured value in the measured value memory. By pressing the "Statistics" function key, the measured and statistical values can be viewed.

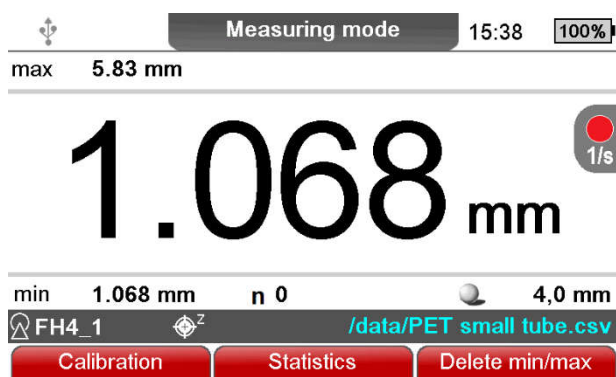
For measurement on large-surface plate material or large hollow bodies, the sensor is placed on the surface of the measuring object. The measuring sphere is placed near the sensor on the opposite side. Hold the sensor perpendicular to the surface and move it uniformly over the surface of the measuring object.

- b) The measured value is displayed continuously. By confirmation with the OK key or actuation of the foot switch, the displayed measured value is accepted into the memory.

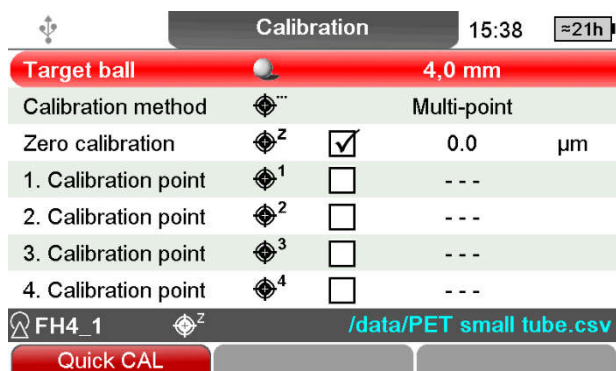
## 2.3 Calibration

MiniTest FH offers two different types of calibration to increase the measurement accuracy compared to the factory calibration: Zero calibration and multi-point calibration. Zero calibration can be easily performed at any time using the "Quick Calibration" function.

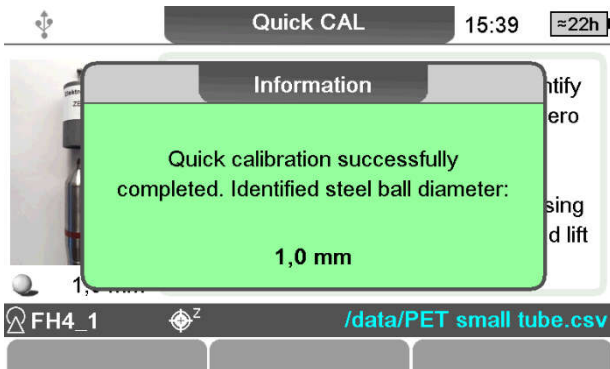
In measuring mode, enter the calibration menu with the function key.



Select the option "Quick calibration" via the function key.



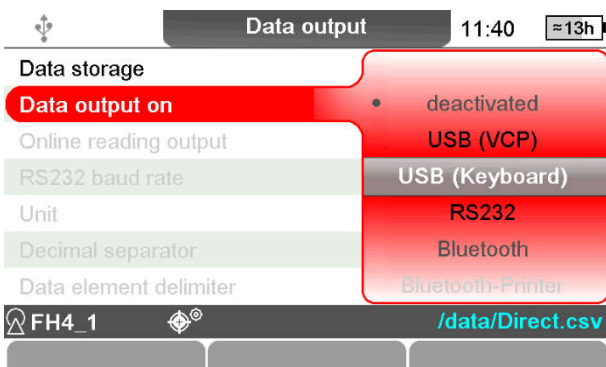
MiniTest FH uses AI to detect the diameter of the measuring ball inserted in the zero cap and automatically performs a zero calibration for this ball diameter.



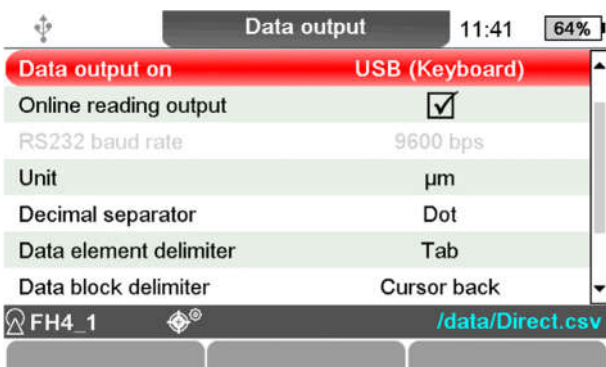
For further calibration options, please refer to chapter 6.2 ff of the operating instructions.


## 2.4 Transferring measuring values

For direct transfer of measuring values into an evaluation software (e.g. Microsoft Excel) select the option "USB keyboard" as data output:



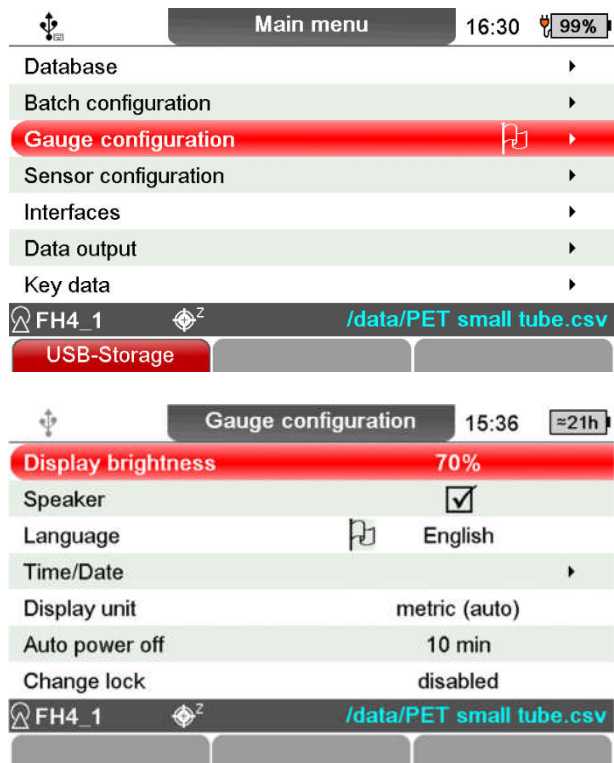
and modify the settings as follows:



The measured values can now be transferred either individually by pressing the  key or directly to the target software if automatic data transfer is activated.

## 2.5 Basic settings

User-specific basic settings such as screen brightness, volume, language, time/date and display unit can be adjusted in the Gauge configuration menu item.



ElektroPhysik Dr. Steingroever GmbH & Co. KG, Pasteurstr.

**NDT Supply.com, Inc.**  
7952 Nieman Road  
Lenexa, KS 66214-1560 USA

Phone: 913-685-0675, Fax: 913-685-1125  
e-mail: [sales@ndtsupply.com](mailto:sales@ndtsupply.com), [www.ndtsupply.com](http://www.ndtsupply.com)

