Mikrosize®

iForce-DF

Digital Force Gauge

Video

Contact us

Mikrosize Precision Instrument Co.,Ltd
A-4035 RuiFeng Business Expo, Wuhu City, China , 241000.
Web:www.mikrosize.com
Email: mikrosize@mikrosize.com

Product Features and Application

Product Features

- LCD screen display with high clarity for intuitive test results
- Touchscreen operation for simplicity and convenience
- Automatic recognition and display of orientation
- Multiple languages available for selection
- Multiple measurement units (N, gf, kgf, ozf, lbf)
- Utilizes rechargeable Ni-MH batteries
- Equipped with USB port and multi-function port for connection to printers or computers
- Multiple measurement modes available for selection
- Over-limit buzzer alarm function
- Large capacity data storage capable of storing 1000 test data entries
- Equipped with various measurement adapters
- Can be used handheld or mounted in a fixed position

Product Application

- Manufacturing: This machine can be used for testing the mechanical properties such as thrust, tensile force, and pressure of products to ensure that product quality meets standards.
- Quality Control: It can be utilized to detect the mechanical properties of raw materials, semi-finished products, and finished products, enabling timely identification and resolution of issues, thereby improving product quality.
- Skills Training: It can be used to train learners to master correct measurement methods and techniques, enhancing their professional skill levels.
- Product Development: It is used to test the mechanical properties of new products, evaluate whether the product design is reasonable, and whether it meets usage requirements.

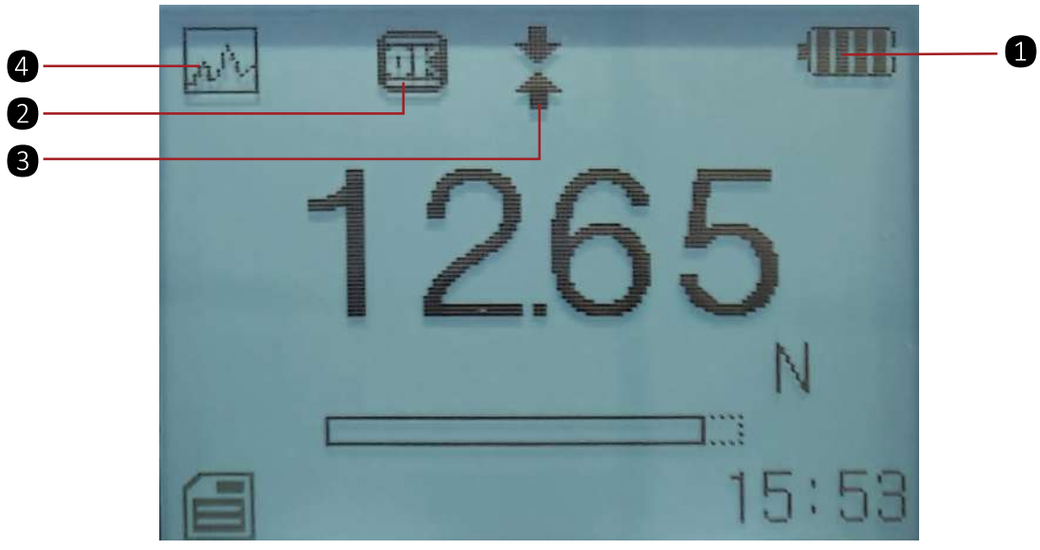
Instrument Structure

1.Measuring Shaft: Connectable to various measurement adapters
2.LCD Screen
3.Touch Pad: All buttons on this force gauge are capacitive touch screen

1.USB Interface: For charging or transferring data to a computer.
2.Multifunctional Interface: For connecting to an RS232 output of a mini printer or a computer.

1.M4 Screw Holes: There are a total of 6 screw holes, which are used to secure the instrument to a stand to improve the accuracy of test results. Please note that the depth of the installation holes is 8mm, and you should choose appropriate screws. The depth of the screws into the force gauge should not exceed 7mm.

Interface Display



1.Battery Level Display: Indicates the current battery power or charging status. The icon will flash when it needs to be charged.
2.Tolerance Alarm Indicator: Displaying " OK " indicates within the limit range and can be used normally; displaying " ↘ " indicates the measured value is below the lower limit; displaying " ↗ " indicates the measured value exceeds the upper limit.
3.Direction Icon: " ↕ " represents tensile force; " ↕ " represents compressive force.
4.Measurement Mode Icon: Four measurement modes, including Track, Peak, Auto Peak, and First Peak.

1.Measured Display Value
2.Measurement Analog Bar: Displays the analog position of the current measured value within the entire measurement range. When the analog value exceeds the enclosed area, it indicates that the measured value is out of limit.
3.Storage Icon: This icon appears when data is being saved. Under normal conditions, this icon is not displayed.
4.System Time
5.Units: Five units are selectable (N, gf, kgf, ozf, lbf)

Touch Pad Button Function

1.Power Button: Press and hold for about 2 seconds to turn on or off the device.

2.Peak/Down Button: In measurement mode, its function is to switch between measurement modes.
In menu settings, its function is to "scroll down or decrease values".

3.Zero/Up Button: In measurement mode, under tracking mode, its function is to zero the reading; under peak mode, it resets the peak value.
In menu settings, its function is to "scroll up or increase values".

4.Menu/Confirm Button: In measurement mode, its function is to enter the menu.
In menu settings, its function is to "select or confirm".

5.Save/Back Button: In measurement mode, its function is to print or store data, which can be toggled in the menu; by default, it usually stores data.
In menu settings, its function is to "return or exit".

Setting Interface

Setting Tolerance Limits

● Users can set tolerance ranges for screening tests to achieve GO/NG classifications. The set upper limit must be greater than the lower limit. Additionally, the upper limit cannot exceed 110% of the full scale, and the lower limit should not be less than 10% of the full scale.

● After setting, the "Over Limit Alarm" function needs to be enabled for normal use.

Saving and Printing Test Data

● Measurement results can be stored on the force gauge, and users can review or print the results.

● Storage modes are divided into single storage and continuous storage. Single storage is applicable to all measurement modes; continuous storage is only effective in automatic peak mode.

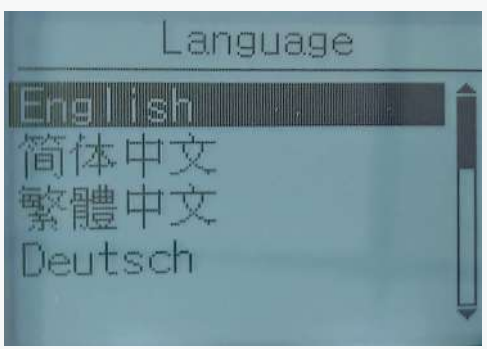
Setting Interface

Automatic Shutdown

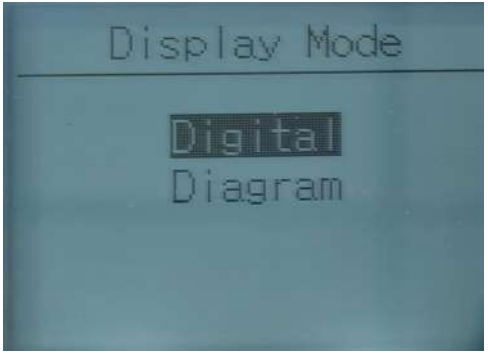
●If there is no operation for an extended period, the force gauge will automatically shut down. The default inactive interval is 5 minutes. Users can extend or shorten this time as needed.

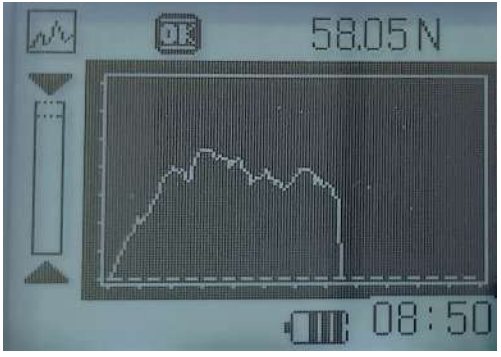
Language Selection

●This device is equipped with multiple languages, and users can select the desired language for display.



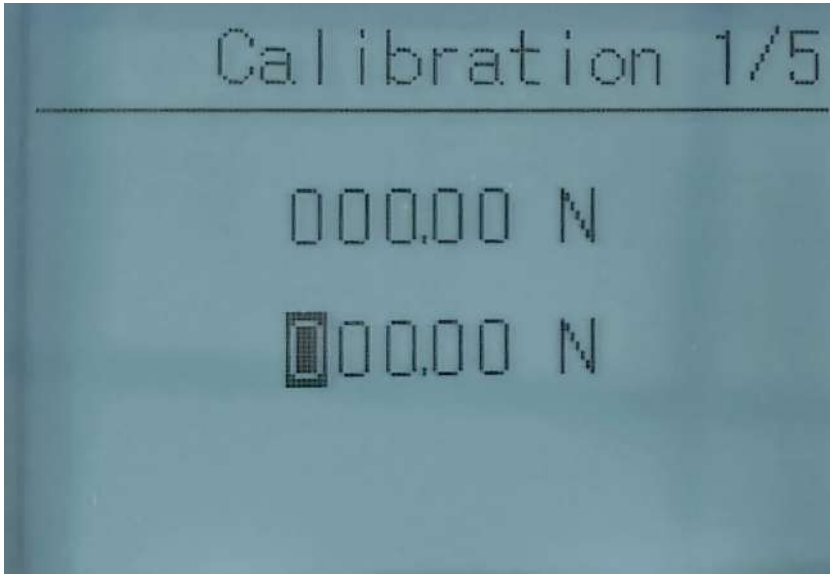
Data Display Mode





The digital force gauge has two display modes: Numeric Mode and Graph Mode.
Users can select the desired mode according to their needs.

Calibration Function



After being used for a period of time, the force gauge may experience errors within a certain measurement range.
Users can either send the force gauge to a professional testing department for recalibration, or perform the calibration themselves.

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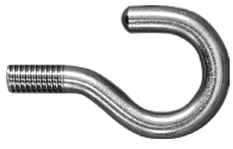
Technical Parameters

Model	DF-1K	DF-2K	DF-5K	DF-10K	DF-20K	DF-50K	DF-100K
Force Range	1Kgf	2Kgf	5Kgf	10Kgf	20Kgf	50Kgf	100Kgf
Accuracy	±0.2%F.S						
Units	N; kgf; lbf; ozf; gf; mN						
Display	160*128 with back-light Matrix LCD						
Overload Capacity	120%F.S						
Detect Modes	Tracking, Peak, Auto Peak, The Best Peak, etc.						
Sampling Frequency	16KHz(ADC), 8KHz(peak mode), 2KHz(tracking mode)						
Data Storage	1000 messages						
Temperature Effect	＜0.03%F.S/℃						
Power	3.6VDCNi-MH rechargeable battery						
Supplier/Adapter	USB/BM supplier, 110~240VAC						
Ports	USB, RS232						
Environment	-10~40℃, 20~80%RH						
Dimensions	160*73*34mm						
Net Weight	0.7kg						

Standard Delivery

Name	Qty	
Force Gauge	1	
Charger	1	
Manual	1	
Hook	1	
Extension shaft	1	
Flat tip	1	
Conical tip	1	
Chisel tip	1	
Notched tip	1	
USB Cable	1