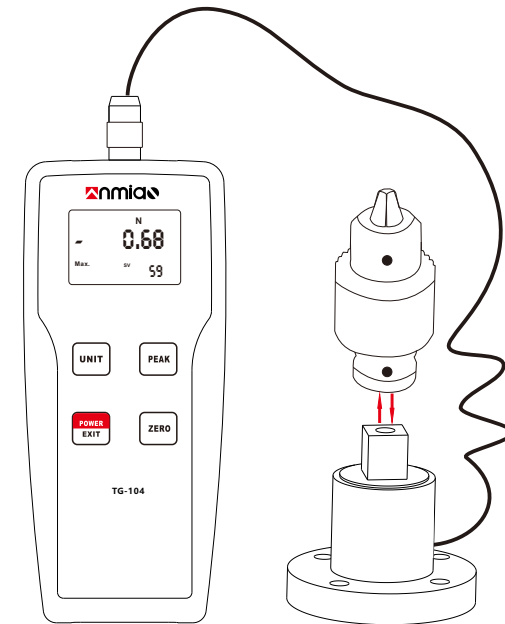


# Hand-held torsion meter

- TG-104-1N.m
- TG-104-5N.m
- TG-104-20N.m



When you purchase this hand-held torque timer, you're taking a step forward in the field of precision measurement. This table is a computer - based testing tool, which can be used for many years if handled properly. Before use, please read this manual carefully and keep it in an accessible place.

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## 12. Accessory list

Standard Accessories	torsiometer
	Standard three-jaw chuck
	sensor
	operation instruction
	Portable case
Optional Accessories	power adapter
	Convert probe

## 1. Introduction

TG-104 series hand-held torque meter is a digital display torque meter newly designed and developed by our company. It has the advantages of high precision, easy operation and convenient carrying. More peak holding test mode, convenient for testers to use, all kinds of test bench and fixture combination can constitute different uses of testing machine.

There are many specifications for the hand-held torque meter for users to choose. Users can choose the corresponding specifications according to the force value of the required test product. Scientific use of the test range is 10% to 100% of the full range, the metrology department recommended not to use less than 1% of the full range. At the same time, after the instrument and the object to be tested are in place before the test, press the ZERO (ZERO) key to clear the ZERO to eliminate the weight of the fixture.

Side pressure tension tester is a special instrument for measuring the tension of wind tower, signal transmission tower, power transmission system and other ropes. It is easy to operate and carry. More with a variety of testing modes, convenient for testers to use.

## 2. Functional features

- \* High precision and high resolution.
- \* Digital display, ignore the difference.
- \* A variety of measuring units for choice, mutual conversion.
- \* Peak hold function. Maintain peak display until manually reset.
- \* Can be powered by alkaline batteries; It can also be connected to 5V DC power supply.

### 3.Product Specifications

Model	TG-104-1N.m	TG-104-5N.m	TG-104-20N.m
Force Range	±0.1kgf.m	±0.5kgf.m	±2kgf.m
	±100gf.m	±500gf.m	±2000gf.m
	±1N.m	±5N.m	±20N.m
Resolution	±0.2Lbf.m	±1.1Lbf.m	±4.4Lbf.m
	0.001kgf.m	0.001kgf.m	0.001kgf.m
	1gf.m	1gf.m	1gf.m
	0.01N.m	0.01N.m	0.01N.m
	0.001Lbf.m	0.001Lbf.m	0.001Lbf.m
Standard three-jaw chuck size	0.6mm-6mm	1.5mm-13mm	3mm-16mm
Accuracy	± 0.5%FS ± 1Digit		
Unit	kgf, gf, N, Lbf		
Measurement State	Peak Value Measurement, Real Time Measurement		
Display	Four large LCD, large screen display		
Power Off	10 Minutes Auto Power Off, Manual Power Off		
Backlight	Blue Backlight		
Safe Load	150%FS (Buzzer Alarm Over 110%FS)		
Power Supply	2x1.5 AA(UM-3) Battery or 5V DC Power Supply		
Operating Conditions	Temperature: 0~40°C		
	Humidity: <80%		
Surrounding	No Vibration Source or Corrosive Medium Around		
The host weight	390g		
Size	Main Unit: 211x80x36mm		

### 11.Multi-purpose development



#### 9. Replace the battery

9.1 When the battery voltage is too low, a battery symbol will appear on the display and the battery needs to be replaced.

9.2 Open the battery cover and take out the battery.

9.3 Install the battery correctly according to the label on the battery box.

9.4 If the meter is not used for a long period of time, please remove the battery to prevent battery rot Rotten and damaged the instrument.

#### 10. Safety precautions

##### 10.1 Precautions:

A. Improper operation may damage the instrument or result in serious accidents. This suggests that The book points out the important matters to prevent accidents and the use of equipment, please refer to Read this manual carefully before use, and keep it properly for re-reading.

B. If the impact load is to be tested, please select the maximum load greater than the impact load to be tested Double the size.

##### 10.2 Warning:

A. During destructive testing, protective masks and gloves should be worn to prevent human body from being injured by splashing substances during testing.

B. Do not use fixtures that have been damaged or severely bent. Self-made jig please refer to the relevant parameters in this manual (the company has all kinds of jig, customers can purchase according to need).

C. Do not use the instrument beyond the maximum range. Otherwise, sensor damage or even accidents may occur.

D. When the test value exceeds 110% of the range, the buzzer will beep continuously. At this time, please remove the added load quickly or reduce the load.

##### 10.3 Safety Matters:

A. When using the power adapter, do not use A power supply other than the rated voltage. Otherwise, electric shock or fire may occur.

B. Do not pull out or insert the plug with wet hands, otherwise it may cause electric shock.

C. Do not pull the power cord of the power adapter to remove the plug. Otherwise, the cable may be torn and electric shock may occur.

D. Please clean the machine with a soft cloth. Soak the cloth in water soaked with detergent and wring it out before removing dust and dirt.

Note: Do not use volatile chemicals to clean the unit (such as volatile agents, thinners, alcohol, etc.)

E. Do not operate the device in the following environments

① Humid environment ② dusty environment

③ Where oil or chemicals are used ④ Where there is a seismic source

F. After use, please put the tension gauge in the equipped portable case to protect the test shaft from external impact force.

G. The product is a liquid crystal display, high-precision integrated electronic product, do not hit, squeeze, after use, please put the product in the equipped portable box.

H. Do not disassemble, repair or modify the unit, which may cause permanent failure of the instrument.

#### 4. Structure description

##### 4.1 Overall Structure



FIG. 1 Overall structure

##### Structure and Function description

###### 4-1 Power port

Can be connected to 5V DC power supply to achieve DC power supply.

###### 4-2 sensor plug

Used to connect the host to the sensor.

###### 4-3 display A

It is used to display the measurement reading, measurement unit, prompt information during operation, etc.

###### 4-4 Operate the key area

All the operation keys are distributed, and the whole instrument's key operation is done here.

###### 4-5 sensors

Connect the three-jaw collet

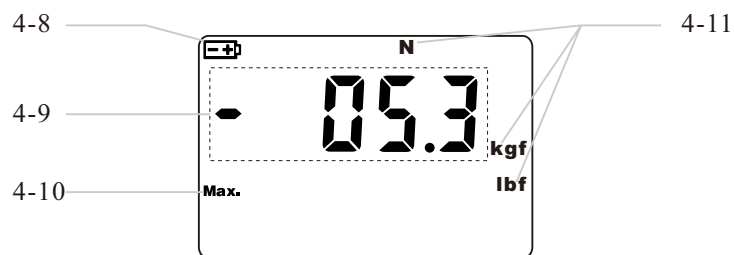
###### 4-6 Three-jaw chuck

Clamp the object under test

###### 4 to 7 the locks


Disassemble the instrument.

## 4.2 display



### Display function Description

#### 4-8 Battery indicator “”

When the battery voltage is too low, “” appears in the upper left corner of the screen, indicating that the battery voltage is not

Yes, the battery needs to be replaced.

#### 4-9 Display the measurement results

On this unit, the torque (pressure) defaults to a positive value (“+” is not displayed); Pull the default Is negative (displays “-”).

#### 4-10 Peak indicator MAX.

When “M A X.” When displayed, the peak value retaining mode is shown in the table, and the peak is displayed on the display screen

Value; If MAX. Is not displayed, it indicates the number displayed on the screen in real-time measurement mode

The value varies with the load.

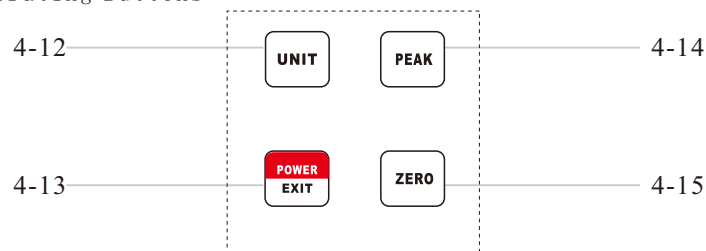
#### 4-11 Units of measurement

Indicates the current measurement unit, including KGF, N, and LBF. Show only the

One of these units.

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## 4.3 Operating Buttons



P3 Operating Buttons

### Function description of key operation

#### 4-12 UNIT Key

It is a unit conversion key for unit conversion operations.

#### 4-13 POWER/ Return Button (POWER/EXIT)

It is the switch button of the instrument.

#### PEAK Key (PEAK)

It is a switch button between peak holding mode and real-time measurement mode.

#### 4-15 ZERO Key Calibration (ZERO)

Instrument zero operation button.

## 5. Startup and shutdown of the instrument

### 5.1 Startup of the instrument

After installing the battery or switching on the AC POWER supply, press the POWER/ Return key (POWER/EXIT) to start the battery.

### 5.2 Instrument shutdown

#### 5.2.1 Manual shutdown

In the startup state, press and hold the POWER/EXIT key (POWER/EXIT) for about 2 seconds, release the key when “OFF” appears on the monitor, and the instrument will shut down.

#### 5.2.2 Automatic shutdown

When the instrument is operated without button for 10 minutes, it shuts down automatically

## 6. Instrument zero calibration

According to the requirements, after the sensor is installed in the measurement position, press the ZERO key (ZERO) to adjust the ZERO, the display shows the value of 0.

\* When the weight of the fixture used exceeds 20% of the range or the load of the machine exceeds 20% of the range exists, press the zero key can not clear, at this time, you need to choose a lighter fixture or remove the added load, and clear again.

## 7. Real-time measurement mode and peak holding mode

The instrument can be set up in two measurement modes, real-time measurement mode and peak holding mode. When there is no peak indicator “MAX” on the display, it is in real-time measurement mode, and the test value changes with the change of load; Press the PEAK key (PEAK) to display the PEAK indicator “MAX”, which is in PEAK retention mode. The test value shown is the maximum value in the test.

## 8. Unit conversion function

In real-time measurement mode or peak holding mode, press the UNIT key to realize the conversion of measurement UNIT.