DE

# Operating Instructions and Warranty

# Mini digital-display torque wrench

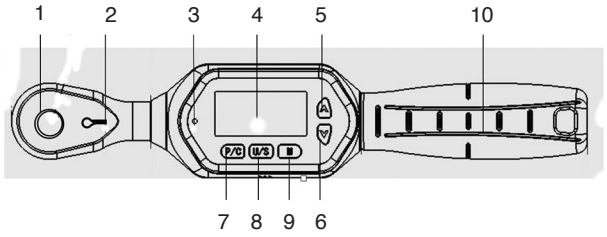
## 1. Overview

Major uses and application scope:
Mini digital-display torque wrench has a mini-design and is more suitable for small space. It also has powerful operating functions, including torque setting, unit setting, numerical storage, numerical clearing, numerical output and regulation for users and is easy to be operated for installing a digital display to for reduce requirements to operator. It is for the bolt fastening and control of automotive and machinery industry, etc.

## 2. Functions and features

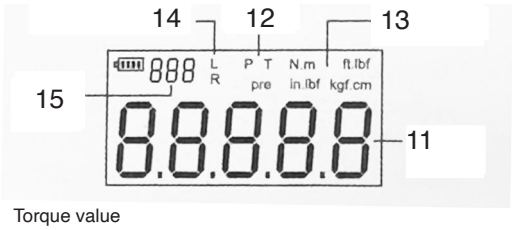
2.1 Large screen, backlight function
2.2 clockwise ±2%, counterclockwise ±2.5%, accuracy (full range of 20 to 100%);
2.3 Can be operated clockwise and counterclockwise;
2.4 The buzzer and LED can be triggered when indication reaches a predetermined torque value (limited to peak mode);
2.5 Four engineering units (N.m, kgf.cm, lbf.tf, lbf.in)
2.6 Measurement mode: live-time mode, peak mode and preset mode.
2.7 999 sets of storable records
2.8 Automatic shutdown in 5-minute

## 3. Functions and names of each part




1. quick release button
1. direction switch
3. LED indicator
4. LCD screen
5. up button
6. down button
7. power / clear button
8. confirmation button
9. menu button
10. grip

**Display**




11. Torque value
12. P (peak mode), T (real time mode), PRE (Preset mode)
13. Unit (Nm, inlb, ftlb, kgfcm)
14. Direktion
15. stored torque value

## 4. Precautions before use

4.1. Press the C button to connect the wrench power.

4.2. After the power button is turned on, press C to reset the wrench before use.

note:
1. There will be a offset value on the display after you turn on the button/reset if an external force is applied to the wrench
2. Nm is the unit loaded from the EEPROM. Once the user changes the unit or mode, the EEPROM will always be present.

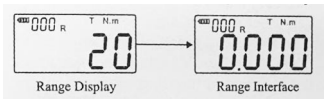
4.3. Wake up the wrench from sleep mode
In order to save electricity, It will enter sleep mode after about 5 minutes if there is no operation. Press the C button to wake up the wrench.

4.4. low voltage protection
If the battery voltage of system detects is lower than 2.2 V, the wrench will cut off the power; when the voltage is lower than 2.2 V, the wrench will automatically shut down.

## 5. Usage method

5.1 Power on

Press the P/C button for a short time to power on. It will automatically shut down if the battery is not enough and then you need to replace the battery before normal use.

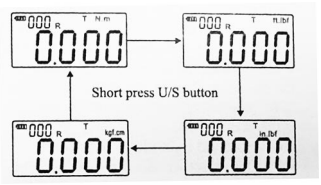



5.2 Unit Switch

At the power-on state, users press the U/S button to switch for four engineering units in the using interface instead of the settings interface.

5.3 Mode Conversion

At the power-on state, press „UP“ button to switch to mode conversion. Mini digital- display torque wrench has "T" real-time mode，"P" peak mode，"Pre" preset mode, etc.




**A: real-time mode**

Real-time measurement mode follows to enhance torque value in real time, and the torque value is automatically zeroed when unloading the torque force.

When the LCD displayed "T", it is a real-time mode, press the "UP" button to switch the working mode.

**B: peak mode**

The force applied by the wrenchwil increase from the minimum measuredvalue gradually. When the force is continously applied, the on-screen torque value will always display the maxmimum when user allies a diffrent mafnitide of force. When the user unload the force, the on-screen display will record the maximumtorque value durchring the force applacation process, which is the peak torwue. And the value will fashing. Press the P/C button to clear the peak torque.Maybe the usercan reload the applied force to update the locked peak torque without clearing and resetting directly.

**C: preset mode**

In the power-on state, press the "Down" key for a long time to enter the preset value- setting, and then you can press the "UP" key to increase the target value, or press the "Down" to reduce the target value or preset value. When the settings are complete, press the U/S key to keep and exit. When the buzzer is on, the buzzer ring long and the red light is on long when the torque value of preset target is reached. Press the "UP" key to switch to preset mode.

5.4 Sound and light alarm function

This function is only available on peak and Preset mode. Use "UP" or "DOWN" button to set a warning target value early. After setting, tap the U/S button to save and return the measuring mode. When torque value reaches 80% of the pre-warning target value during measurement, the buzzer will sound intermittently, and the indicator light will also flash to warn. When the torque value continues to increase, the audible and visual alarm will have a gradual to rapid change process, and when the torque value reaches 100% of the pre-warning target value, the buzzer will beep and the indicator will be on. (Buzzer and backlight must be on).

5.5 Data Storage

During the measurement process, once the torque value is generated, save the current torque value by pressing M button. At this time, the character ”Sure” will be appear on the display, indicating that the torque value has saved successfully. The three digits in the upper left corner of the display screen will display the number of data currently which saved in real time.

5.6 Data Viewing

Press the P/C key to power on or under the power-on interface, press "M" key long, you can view the saved data though "UP" or "DOWN" key in the data viewing interface, view. When the viewing is complete, users should press M key to exit in short time.

5.7 Data deletion

In the data viewing interface, press the U/S button lightly to select the mode of deleting data, “All” means that all saved data will be deleted at one time, “one” means that the saved data will be deleted one by one starting from the last data. After selecting press the P/C button to delete the data.

5.8 Buzzer setting

In the power on state, long press the U/S button to enter the menu option, then press the U/S button to select the “BUZZ” option. Then press up to select whether the turn on or off.

If the buzzer is turned on, select the “1” character, if not the “0” character.

Press P/C button to save and exit the menu.

5.9 Backlight function setting

In the working state, once there is torque output, the display will light up automatically, making it easier to observe the data.

In the power on state, long press the U/S button to enter menu option, then press the U/S button lightly to select the “LTON” option, and then press up button to select whether to turn on the backlight function. If the backlight is turned on, select the “1” character, if not the “0” character.

Press P/C button to save and exit the menu.

5.10 Factory reset

Through this function, the user can restore the instrument to factory settings. Long press the U/S" key to have the system menu selection, shortly press the U/S key to select the "RSET" menu, and then press the up key to select the number 1 or 0. If the factory settings are restored, select "1" and press the U/S key shortly to exit the system menu. If not, select "0" and press the "U/S" key shortly to exit the system menu.

## 6. Maintenance and storage

6.1 Calibration cycle: Recalibrate once a year.
6.2 Over torque- force may cause damage or accuracy loss, do not exceed the maximum torque range of 120%.
6.3 Do not shake the wrench violently, fall it to the ground or use it as a hoe casually
6.4 Replace the battery in time when the battery is low.
6.5 Do not place the wrench in a place of high temperature, high humidity or direct sunlight.
6.6 Do not use a wrench near water.
6.7 If you accidentally wet the wrench, dry it immediately with a dry towel.
6.8 Do not use organic solvents to clean wrenches, such as alcohol or paint thinners.
6.9 Do not place the wrench near the magnetic object.
6.10 Do not place the wrench in a place with a lot of dust or sand, which can cause serious damage.
6.11 Do not weigh much on the LCD screen.

## 7. Product technical specifications

| Model | 010 | 030 | 060 | 100 | 135 |
|---|---|---|---|---|---|
| Reading | 0,01 | 0,01 | 0,01 | 0,1 | 0,1 |
| Max. Torque (Nm) | 10 | 30 | 60 | 100 | 135 |
| Driver | 1/4 | | 3/8 | 1/2 | |
| Buzzer setting range (Beep) | 0,3 - 10 | 0,9 - 30 | 1,8 - 60 | 3 - 100 | 4 - 135 |
| Length mm | 235 | | 245 | 290 | 388 |
| Data storage | 100 | | | | |
| Accuracy *1 | ± 2% in Uhrzeigersinn<br>± 2,5% in Gegenuhrzeigersinn | | | | |
| Operating mode | Spitzwert (P) / Echtzeit-Wert (T) / Preset (PRE) | | | | |
| Unit | Nm, in.lb, ft.lb, kgf.cm | | | | |
| Ratchet teeth | 72 | | | | |
| Battery | 2 x AA Batterie | | | | |
| Working Temperatur | -10 - 60°C | | | | |
| Storage Temperatur | - 20° - 60° | | | | |
| Operating humidity | < 90% | | | | |
| Test Height of falling | 1 m | | | | |
| Test Condition for Vabration *2 | 10 G | | | | |
| Lief Test *3 | 10.000 x | | | | |

Attention:

1. The accuracy range is between 20% and 100% of the maximum operating value.
   Torque accuracy is the normal value. The correction accuracy is made at the correction point with the middle groove of the upper five grooves on the grip handle. To ensure accuracy, it is recommended to correct it once a year.

2. The life test includes horizontal test and vertical test.

3. “Once” means to apply the wrench from 0N.m force to the maximum operating setting value, and then back to 0 Nm.

## 8. Warranty

We quarantee the high precision of our products. Our accurate control service warrants high accuracy according to international standard. If in exceptional case, your measuring tool does not work correctly or is damaged within the warranty period please to not hesitate to return back together with the warranty certificate.