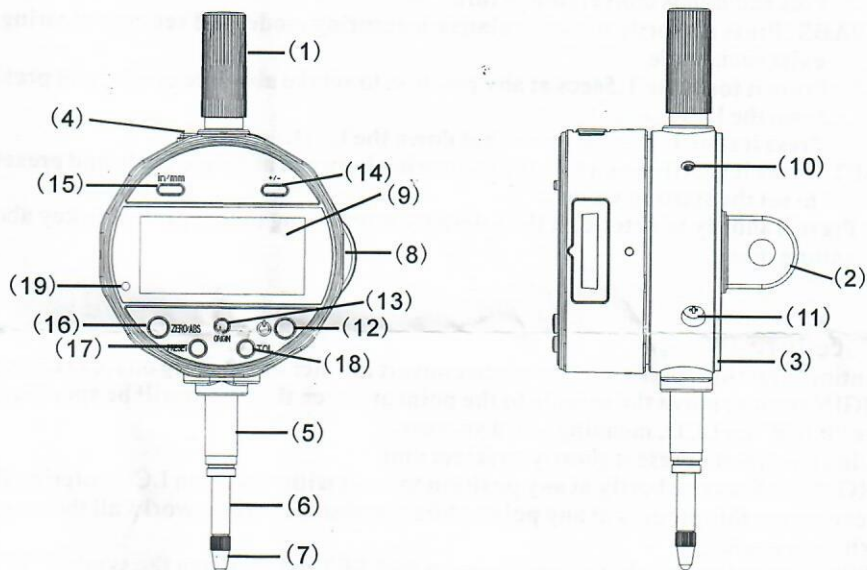


Operation Manual of Precision/High Precision Digital Indicator with Tolerance Alarm

1、 Structure

1. Cap
2. Back cover with lug
3. Flat cover
4. Data output
5. Stem
6. Spindle
7. Contact point
8. Battery cover
9. LCD
10. Lever mounting screw hole
11. Release hole
12. ON/OFF
13. ORIGIN
14. +/- button
15. mm/in button
16. ZERO/ABS
17. PRESET
18. TOL
19. Blue tooth pairing indicator



2、 Assembly

1. Battery installation (Attention: it's no need to reset the ORIGIN after a new battery is put in place).
 - (1) Remove the battery cover.
 - (2) Install the battery, and ensure the positive pole '+' and the negative pole '-' are clearly identified before the battery cover is closed.
2. Lever installation (Option)
 - (1) Take out the seal
 - (2) Loosen the screw(10) and fasten the lever A with a lock screw.
3. Release Installation (Option): remove the screw from the release hole (M2.6) and then screw it.
4. Installation of the digital dial indicator: a stem or a back cover with lug should be used when it comes to indicator installation on a stand or a fixture. And a stand with a groove and a hole of $\phi 8$ (tolerance +0.005-+0.02) can be used when the stem is adopted. (Attention: a lock screw is not advisable for securing the stem as a tightening force above 300N.cm will deactivate the spindle in most cases) .
5. Contact point replacement: Two pincers, one of which is used to secure the spindle), and a piece of cloth must be in place for anvil removal and installation.(Attention: it could damage the indicator if you start to rotate the anvil before the spindle is secured.)

3、 Specification

Range	0-12.7mm	0-25.4mm	0-50.8mm
Resolution	0.001mm/0.00005"		
Accuracy	0.004mm	0.004mm	0.005mm
Resolution	0.01mm/0.0005"		
Accuracy	0.01mm	0.01mm	0.015mm
Clamping bar	$\phi 8$ mm		
Contact point	M2.5*0.45, ceramic		
Measuring force	<2.0N		
Protection	IP54		
Orientation	LCD 330° rotating available		
Battery	3V, CR2032 Li, >1year		
Working temperature	0°C-40°C		
Store temperature	-20°C-70°C		
Humidity	<80%		

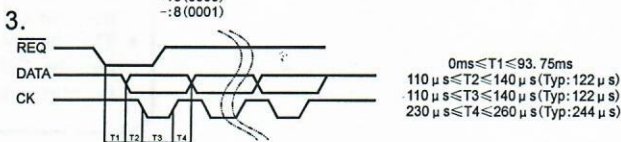
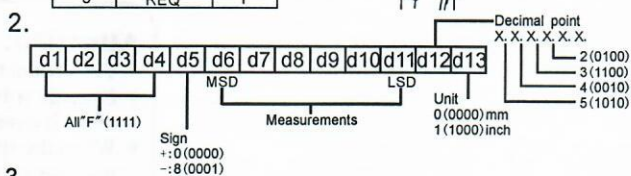
4、 Features

1. Absolute origin measuring system
2. No limitation for responding speed
3. Battery CR2032 Li, life service >1year
4. IP54
5. Data output of blue tooth
6. Auto power off; unavailable

5、 Communication Format

1.

Pin No.	Signal	I/O
1	GND	-
2	DATA	O
3	CK	O
4	N. C.	-
5	REQ	I



6. Keys

- . in/mm : Press it shortly to select unit
- . +/- : Plus and minus conversion in turn
- . ZERO/ABS : Press it shortly to enter relative measuring mode, and see zero clearing on LCD; press it some 3secs to exist such mode.
- . ORION : Press it for some 1.5secs at any position to set the absolute origin, and press the key shortly to start up or shut down the LCD.
- . \odot : Press it shortly to start up or shut down the LCD.
- . PRESET : Press it shortly to switch the measuring between absolute mode and preset mode. Press the key above 3secs to set the starting value
- . TOL : Press it shortly to enter/exit the tolerance monitoring mode; press this key above 1.5secs to enter tolerance setting mode.

7. Procedure

1. Counting direction ; press the key +/- to convert the measured value on LCD to its opposite.
2. ORIGIN setting: move the spindle to the point at which the origin will be specified, then press the key above 3secs to see "0.000" on LCD, meaning you a success.
3. mm/in conversion: press it shortly to select unit.
4. ZERO/ABS: Press it shortly at any position to reset with "INC" on LCD entering the relative measuring mode, and you can repeat this process at any point while the absolute origin works all the way through. Press the key above 3secs to exit such mode.
5. PRESET: press the key above 3secs to enter PRESET mode. When the symbol "P" starts to flicker, you can hold it to have each digit flickered cyclically, that is to say, each digit will flicker in turn. You are allowed to press the key shortly to set the value from 0-9 when the digit is flickering, the same goes for other digits. Going forward, you can save the setting and exit such mode by pressing the key shortly when symbol "P" is made flickering. Consequently, the symbol "P" and preset value will be shown on LCD, that means the preset mode is activated automatically. Normally, you can select the absolute measuring mode or PRESET mode through pressing this key shortly.
6. Key TOL: ① Press the key above 1.5 sec. to enter the tolerance setting mode and you will see the flickering symbol TOL on LCD. Then holding the key longer can allow each digit to flicker cyclically. You are able to set the value (from 0-9) by pressing the Key TOL shortly when the digit is flicking, You can also set two values consecutively, which will be defined automatically in the system for a upper limit and a lower limit. Going forward, you can move the flickering symbol to TOL and press the key TOL shortly to set the second value. At last, you can save the settings and exit tolerance mode by pressing the key TOL when it is flickering. Meanwhile, tolerance monitoring mode is activated directly once you exit the tolerance setting mode, that is to say, the symbol of TOL on LCD will not be flickering. Similarly, you can press the key TOL shortly to enter or exit the tolerance monitoring mode.

Remarks: 1. After setting, the system will exit the setting mode automatically and stay at tolerance monitoring mode.

2. Battery replacement will delete all tolerance setting history, it needs you to set again.

- ② Press the key TOL shortly to enter or exit the tolerance monitoring mode. The green indicator will turn on when the measured object is up to tolerance under such mode (it will turn off automatically when the gauge remains still more than 5secs. Moving the gauge can be a way to activate the green indicator, that is to say, the indicator will be green if the measured value is qualified when the gauge is being moved). While the indicator will be off if the value is beyond tolerance.

8. Errors and Actions

1. Please replace the battery with a new one when the symbol " \square " is shown on LCD.
2. ABS error of data synthesis: this is a false error when the spindle is being moved in a fast way, and the "Err" appears on LCD and disappears right away. This is normal and OK with you to use it as ever.

9. Options

You are provided the access to our catalogue and company for more information in terms of any options we have to offer.

Attention:

- * The product is not allowed to be dismantled and/or modified.
- * Organic solvent is not allowed to be used for indicator cleaning when it comes to maintenance. Neutral detergent is recommended.
- * When the spindle does not work well, alcohol or anti-rust oil can be used for spindle maintenance and cleaning.
- * The battery must be taken out if it will be put in storage more than 3 months. Otherwise, the battery leakage is prone to occur and damage the digital parts.