



OPERATION INSTRUCTION

Digital External Caliper Gage

Caution: Prevent liquid from getting into indicator to damage electronics.

Resolution: 0.01mm/0.0005"
Accuracy: $\pm 0.04\text{mm}$



- 1-Measuring head
- 2-Fixed caliper arm
- 3-"M/TOL" button
- 4-"DATA" button
- 5-"ZERO" button
- 6-"in/mm" button
- 7-"ABS" button
- 8-Movable caliper arm
- 9-Handle

1. Digital external caliper gage is used to measure outside size rapidly.

2. Install and remove battery(CR2032), the negative side of battery should face out (Fig.1).



Fig.1

3. Display can be rotated by 320°.

4. Buttons:
Long press: longer than 2 seconds; short press: less than 2 seconds.

M/TOL---Long press until "TOL" appears to enter tolerance measuring mode. Under this mode, "►" at the upper right corner blinks if the reading is larger than the upper limit; "◄" at the top left corner blinks if the reading is less than the lower limit. Short press "M/TOL" button to exit tolerance measuring mode.

---Long press until "TOL" and "▼" appears to enter tolerance set mode. And the last digit blinks. Short press "ZERO" button to position the digit, the digit blinks when it is positioned. Short press "in/mm" button to change the digit from 0 to 9. After setting the lower limit, short press "M/TOL" button, "▲" appears and the last digit blinks. Set the upper limit as setting the lower limit way. Short press "M/TOL" button to finish set and enter into tolerance measuring mode.

If the lower limit is larger than the upper limit, "EEE" will appear and the digital indicator enter into tolerance set mode again automatically.

---Short press, "MAX" appears and enter maximum reading tracking mode. Short press again, "MIN" appears and enter minimum reading tracking mode. Short press for the third time, "TIR" appears and to get the difference between the maximum and minimum reading of one measurement.

in/mm---Short press for inch and metric reading conversion

---Long press to change measuring direction. "▲" appears, the value increases if the spindle moves up. "▼" appears, the value decreases if the spindle moves up.

ABS---Short press for absolute and relative measuring mode conversion. The normal mode is absolute measuring mode("ABS" is on display). Short press the button to enter relative measuring mode at any point(this point is called "relative zero point"), "ABS" disappears and the reading is zero. In this mode, the reading is the distance to the "relative zero point". Press the button again to return back to absolute measuring mode.

---Long press to enter initial reading set mode. "SET" appears and the last digit blinks. Short press "ZERO" button to position the digit, the digit blinks when it is positioned. Short press "in/mm" button to change the digit from 0 to 9. Long press "ABS" button to exit set mode.

ZERO---When display is powered on: short press to get initial reading on absolute measuring mode("ABS" is on display); long press to turn off display.

---When display is powered off: short press to turn on display.

DATA---Short press for data port output current display value, When the transmission is successful, the LED light will be on once, but if the transmission is failed, the LED light will not be on.

Shutdown time setting:

After shutting down, press and hold the ABS button, short press the ZERO button to turn on, after displaying "----", release the ABS button to enter the shutdown time mode setting, the default display is "6.0", which means it will automatically shut down after 6 hours of standing, short press ABS The key can switch the value, and it can switch between 0 and 6 hours every 0.5 hour. When the switch display is "0.0", it means that the gauge will not automatically shut down.

5. It is necessary to do calibration before measuring. It's directly to set zero when the range is 0-20mm: press handle, release handle to make measuring heads to contact completely. Press "ZERO" to set zero. Dial caliper's range is more than 20mm, caliper gage is calibrated with calibrated tool(or gauge block). Dial caliper measures calibrated tool(Fig.2), set the reading same as the normal value of calibrated tool.



Fig.2

6. During measurement, press handle to make distance between two measuring heads more than the workpiece's diameter. release handle to make measuring heads to contact the workpiece completely. When measuring diameter, shake caliper gage gently along workpiece's axial direction and radial direction to find the minimum reading in axial direction(Fig.3) and the maximum reading in radial direction(Fig.4), then get the result. When measuring width, it is to find minimum reading to get the result.

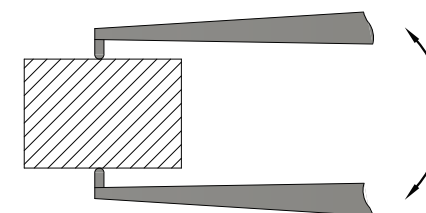


Fig.3

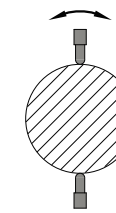


Fig.4

7. Optional accessories: SPC cable (7315-50M, 7302-40M, 7305-40M).

8. If there is nothing on display or digits blurring, battery voltage is too low, please replace battery. If the digits do not change when buttons are pressed or movable caliper arm is moved, take out battery and put it back after 1 minute. If the indicator is not be used for a long period of time, please remove the battery. Otherwise, liquid may leak from the battery and damage the indicator.

9. During measurement, protect measuring heads from excessive operation. After use, oil measuring heads to avoid rust.

MN-2132-C/E

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