



OPERATION INSTRUCTION

High Precision Digital Indicators

Carbide probe
 Adjustable resolution:
 0.0005mm/0.00002"
 0.001mm/0.00005"
 0.01mm/0.0005"

Ruby probe
 Adjustable resolution:
 0.0002mm/0.00001"
 0.001mm/0.00005"
 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Remark
2133-10	12.7mm/0.5"	3μm	1.5μm	flat back
2133-10L	12.7mm/0.5"	3μm	1.5μm	lug back
2133-25	25.4mm/1"	3μm	1.5μm	flat back
2133-50	50.8mm/2"	3μm	1.5μm	flat back

Code	Range	Accuracy	Hysteresis	Remark
2133-101	12.7mm/0.5"	1.5μm	1μm	flat back
2133-101L	12.7mm/0.5"	1.5μm	1μm	lug back
2133-251	25.4mm/1"	1.8μm	1μm	flat back



- 1-Output and charging port
- 2-'DATA' button
- 3-'START/H' button
- 4-Display
- 5-'mm/in' button
- 6-'MAX/MIN ZERO' button
- 7-Stem
- 8-Spindle
- 9-Probe
- 10-'MODE' button
- 11-'ON/OFF' button

1. Power: rechargeable battery, for 24 hours continuous working. Please use a dedicated charger.

2. Buttons:

ON/OFF:Power on/power off

MODE:Short press to switch the default mode /P0/P1/P2/P3/P4/P5/P6/P7/P8/P9

Default base function (P0):

P0 is displayed on the display

---Short press 'MAX/MIN ZERO' button to zero

---Short press 'mm/in' button, resolution conversion

---Short press 'DATA' button, data transmission

---Short press 'START/H' button to lock or unlock the display. In the locked state, the display shows the 'HOLD', 'DATA', 'mm/in' and 'ON/OFF' buttons are effective, and the 'MAX/MIN ZERO' and 'MODE' buttons are invalid.

Extreme value measurement (P1):

P1 is displayed on the display

---Short press 'MAX/MIN ZERO' button, can switch the maximum, minimum and maximum and minimum difference measurement states.

---Short press 'START/H' button, Start/end extreme value measurement

---Short press 'DATA' button, data transmission

For example: To perform minimum tracking measurement, first short press the 'MAX/MIN ZERO' button until the display shows the 'MIN' character and flashes, then short press the 'START/H' button until the 'HOLD' character appears on the display and flashes with the 'MIN' character at the same time to start the measurement. After the measurement, press the 'START/H' button again to end the measurement.

Data preset (P2):

P2 is displayed on the display

---Short press 'MAX/MIN ZERO' button, set the initial value to zero

---Short press 'mm/in' button to change digits

---Short press 'DATA' button to change the value

---Short press 'START/H' button to switch positive and negative

---Short press 'MODE' button to save the current setting data and enter the next mode

Tolerance (P3-P5):

Upper tolerance setting (P3):

P3 is displayed on the display

---Short press 'MAX/MIN ZERO' button, set the upper tolerance to zero

---Short press 'mm/in' button to change digits

---Short press 'DATA' button to change the value

---Short press 'START/H' button to switch positive and negative

---Short press 'MODE' button to save the current setting data and enter the next mode

Tolerance basic size setting (P4):

P4 is displayed on the display

- Short press 'MAX/MIN ZERO' button, set basic size to zero
- Short press 'mm/in' button to change digits
- Short press 'DATA' button to change the value
- Short press 'MODE' button to save the current setting data and enter the next mode

Lower tolerance setting (P5):

P5 is displayed on the display

- Short press 'MAX/MIN ZERO' button, set the lower tolerance to zero
 - Short press 'mm/in' button to change digits
 - Short press 'DATA' button to change the value
 - Short press 'START/H' button to switch positive and negative
 - Short press 'MODE' button to save the current setting data and enter the next mode
- For example: the tolerance value that needs to be set is $4 +0.02/-0.01\text{mm}$, first short press 'MODE' button to the upper tolerance setting (P3), set the upper tolerance value is 0.02; then short press 'MODE' button to the tolerance basic size setting (P4), and set the tolerance basic size to 4; then short press 'MODE' button to the lower tolerance setting (P5), and set the lower tolerance value to -0.01 to complete the tolerance setting.

Metric and inch switching (P6):

P6 is displayed on the display

- Short press 'mm/in' button, mm and inch conversion
- Short press 'MODE' button to save the current setting data and enter the next mode

Power off time (P7):

P7 is displayed on the display

- Short press 'mm/in' button to set the automatic power off. The display shows 00:01, ten minute automatic power off if there is no operation. The display shows 00:00 means no automatic power off
- Short press 'MODE' button to save the current setting data and enter the next mode

Analog pointer set to zero (P8):

P8 is displayed on the display

- Short press 'MAX/MIN ZERO' button to zero the current analog pointer
- Short press 'MODE' button to save the current setting data and enter the next mode

Switch direction (P9):

P9 is displayed on the display

- Short press 'mm/in' button to switch direction, ▲ means that the counting direction is positive when the spindle is moved up, and ▼ means that the counting direction is negative when the spindle is moved up.
- Short press 'MODE' button to save the current setting data and enter the next mode

Reset function

- Short press 'MAX/MIN ZERO' button and 'MODE' button at the same time to restore the factory settings

3. The display shows ERR01, means the data decoding is abnormal;

The display shows ERR02, means the upper and lower tolerance settings are abnormal.

The display shows ERR03, means the data exceeds the maximum and minimum display limits.

Note: The ERR02 and ERR03 error indications can be quickly released by the reset function. If ERR01 error occurs, please contact our customer service department.

4. Optional accessory: contact points, wireless transmitter (code 7315-60); data output cable (keyboard format), code 7302-60; data output cable (serial port format), code 7305-G60 (cable length 3m, optional cable length maximum 15m; RS232 protocol, optional RS485 protocol)

5. Prevent impact and water immersion.

6. During measurement, the spindle should be vertical to the workpiece surface, otherwise, the measurement may not be correct.

Caution: please do not move the spindle quickly or apply lateral force on the spindle.

7. After use, please oil the contact point. The spindle should not be oiled, otherwise, the movement of the spindle will not be smooth.