

OPERATION INSTRUCTION

3101 Series Digital Outside Micrometer (With Data Output)

Resolution: 0.001mm/0.00005"(it is 0.001mm/0.0001" for range over 250mm/10")
 Accuracy: $\pm 2\mu\text{m}/\pm 0.00010"$ (Range 0-50mm/0-2")
 $\pm 3\mu\text{m}/\pm 0.00015"$ (Range 50-150mm/2-6")
 $\pm 4\mu\text{m}/\pm 0.00020"$ (Range 150-250mm/6-10")
 $\pm 5\mu\text{m}/\pm 0.00025"$ (Range 250-300mm/10-12")

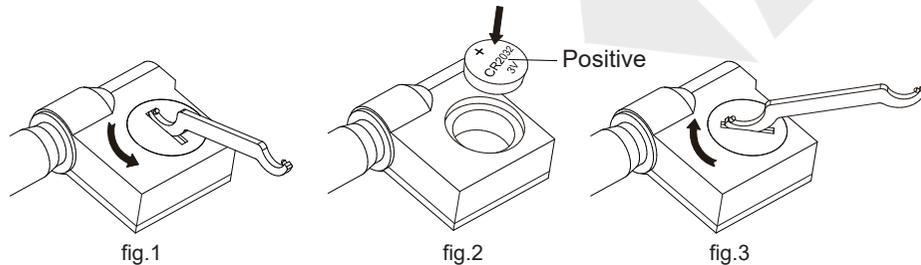


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|--------------------------|-----------------------------|-----------------------------|
| 1-Anvil | 7-Sleeve | 12-Data output signal light |
| 2-Carbide measuring face | 8-Friction thimble | 13-LCD display |
| 3-Spindle | 9-Ratchet stop | 14-Data output interface |
| 4-Locking screw | 10-Ratchet friction thimble | 15-Spherical anvil |
| 5-'on/off...set' button | (for 3101-25FA/3101-25FE) | 16-Setting standard |
| 6-'data...mm/in' button | 11-Insulation plate | (except 0-25mm/0-1") |
| | | 17-Spanner |

1. The micrometer is dustproof and waterproof (IP65).

2. Install battery:

- Turn the battery cover counter clockwise with the spanner (fig.1), then remove it.
- Put CR2032 battery into battery house, positive side of battery(+) should face out (fig.2).
- Tilt the battery cover to align it with the snap position and press it down, then use a spanner to turn the battery cover clockwise to lock it. (fig.3)



3. Buttons:
 on/off...set
 ---short press(<2 sec.): power on/off
 ---long press(>2 sec.): set the initial reading in absolute measuring mode.
 data...mm/inch
 ---short press(<2 sec.): for data transmit, send one data each time.
 ---long press(>2 sec.): metric/inch conversion
 Data output signal light
 --- for short press data...mm/inch, the red light flashes once

4. Before measurement: a: Clean the measuring faces of the micrometer and surface of the workpiece to be measured with a clean soft cloth. b: Check the zero position of the micrometer.
 For 0-25mm/0-1", rotate friction thimble. When the two measuring faces are about to contact, rotate ratchet stop to let them completely contact, then long press the 'on/off...set' to set zero. For other ranges, keep the setting standard ends completely contacting with the measuring faces of micrometer, then long press the 'on/off...set' to set zero.
 If the zero mark on the friction thimble does not coincide with the longitudinal mark of the sleeve at this time, you need to tighten the locking screw, and use the spanner to slightly turn the sleeve (Fig.4) to adjust the reading to zero. Micrometer should be checked regularly to make sure that it is properly initial reading set.
5. During measurement, let anvil contact with the workpiece first, then rotate friction thimble or ratchet stop. When measuring faces are close to, but not in contact with workpiece, rotate ratchet stop (do not rotate friction thimble at this time, which will damage the internal precision threads.). Read after you hear click.

- Caution: When measuring faces are close to, do not apply excessive force to rotate ratchet stop, as it will lead to inaccurate results and may damage the internal precision threads.
6. Install spherical anvil on the anvil, the micrometer can measure tube thickness (fig.5).



fig.4

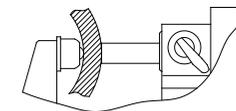


fig.5

7. Optional accessory: data output cable (code **7302-31**), wireless data transmission (transmitter code **7315-31** receiver is needed).
8. Automatic power off in about 20 minutes. Press any button or turn friction thimble to turn on micrometer.
9. The battery can be used for half a year. If displays battery symbol or nothing or digits blurring, battery voltage is too low, please replace battery. If digits do not change when buttons are pressed or friction thimble is rotated, take out battery and put it back after 1 minute. Remove battery if micrometer is not be used for a long period of time, otherwise, liquid may leak from the battery and damage the micrometer.
10. Working temperature is 0-40°C/32-104°F.

MN-3101N-E