

OPERATION INSTRUCTIONS ELECTRONIC DIGITAL HEIGHT GAUGE

1. INSTRUCTIONS:

- Before using the digital height gauge for the first time, wipe the surface of the protective sticker with dry and clean cloth to get rid of the condensed water or with cloth soaked with cleaning oil.
- Operating Conditions:
Temperature: 5-40°C
Relative Humidity: lower than 80%
Do prevent any liquid that contains water from moistening the protective sticker.
- Never apply voltage (e.g. engraving with an electric pen) on any part of the Height Gauge or fear of damaging the integrated circuit.
- Preset a starting point of measurement correctly (please refer to the application). Unless presetting, do not press "set" button purposelessly for fear of measurement error.
- Take care not to get hurt by the sharp jaw.

3. BUTTON FUNCTIONS:

on/off: power on/off switch
in/mm: Inch/mm interchange
ABS/zero: Absolute measured value/Relative zero point interchange.

Absolute Measurement: Without "INC" characters display. The surface of the plate is usually taken as the absolute zero point of measurement. (The preset value is zero). The measured value is equal to the absolute height of the workpiece surface to be measured.

Relative Measurement: With "INC" characters display. Set a relative zero point (zero displayed) by pressing "ABS/zero" button. The measured value is the relative height (i.e. height difference), of the two surfaces. It is equal to the slider displacement from the relative zero point. (Positive number above zero, Negative number under zero).

Set: Button for presetting. With one press on "set" button, the preset value will be displayed. Press the "set" button and "▼" or "▲" simultaneously "SET" will flash on the upper side of the screen, showing it's ready for presetting value. Keep pressing on "▼" or "▲" button alone, the numerical value will decrease or increase continuously to the wanted value. Then release the pressing. Press "set" button alone again and "SET" will disappear, which means the presetting is finished. Preset: Consisting of "▲" and "▼" button.

4. Data Output:

The data can be input to a computer or a special printer via a special cable.

Working way of the interface: synchronous series
Data: binary code, 24 bits. Each datum will be sent twice. The cycle is 300ms (20ms in fast reading state).
Transmitting time: 0.5ms. The four wires (from left to right): Positive power(+), Data D, clock Pulse CP, Negative power(-).
Pulse Range of Data: Datum Level ≤ 0.2V, Level "1" ≥ 0.3V.
Clock Pulse CP: 90KHz, effective for high electrical level.

5. TECHNICAL SPECIFICATIONS:

- Resolution: 0.01mm
- Repeatability: 0.01mm
- Accuracy: $\pm(0.02 + 0.00005 \times L)$ mm. L represents the length from the starting point of measurement to the given position (mm). The accuracy obtains accurately 2nd decimal place.
- Maximum Measuring Speed: 1m/s;
- Power: One CR2032 button battery

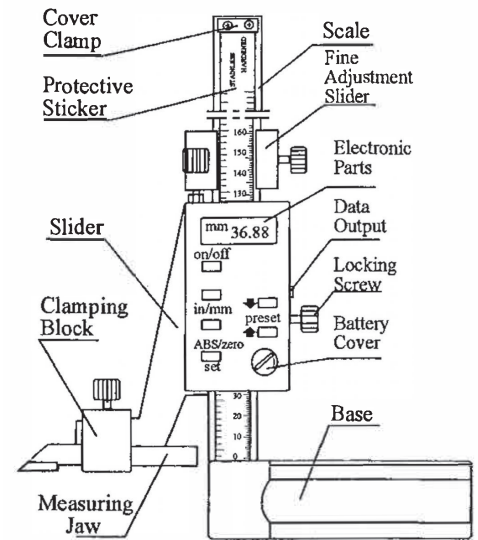
6. APPLICATIONS:

- Clean the sticker surface of the Height Gauge (please refer to the Instructions above), the base and the working face of the measuring jaw.
Install the measuring jaw according to the illustration.
 - Clean the working surface of the plate and put the height gauge on it. Loosen the locking screw and move the slider. Check to see if the display screen and all the buttons work properly.
 - Preset the starting point of measurement The surface of the plate is usually taken as the zero point for absolute measurement (Without "INC" characters display; Press "set" button when the measuring face touches the surface of the plate and the display should be zero. Otherwise it has to be preset again to meet the requirement.) If the height gauge's measuring range is not long enough for the workpiece to be measured, put a block under the base of the height gauge to raise it. The zero point of measurement remains the plate surface. Either a block surface or a workpiece surface can be chosen as the starting point of measurement. If the block is chosen as the starting point of measurement, its height must be preset (More accurate instrument and method should be used in measuring its height). Press button "set", the displayed value must be the same as the height of the block. If a certain surface of workpiece is chosen as the starting point of measurement, its height must be preset. (The designed or real value is determined by actual need). Press "set" button, the displayed value must be the same as the height of the workpiece surface.
 - Relative Measurement: Usually the workpiece surface (except the plate) is used as relative zero point, while the original absolute zero point is kept unchanged. Press the "ABS/zero" button and set zero when the measuring jaw touches the workpiece surface. Then the measurement for the relative height of the other workpiece surface is ready (positive number above zero, negative number under zero). If the "ABS/zero" button is pressed again this time, the absolute height value of the workpiece surface measured can be displayed many times (relative to the height of the plate surface). The previous relative height value will not be displayed. Instead, new relative zero point is displayed. In order to improve the accuracy, please make differential measurement. Take an accurate surface (e.g. the surface of the block gauge), which has the similar height as that of the workpiece to be measured, as the zero point of the relative measurement, and begin the relative measurement as the above-mentioned application.
- 7. Battery Replacement:** When the display keeps flashing or even does not appear, screw the cover open as the arrow shows and replace the battery with a new one (CR2032). If the battery bought from the market does not work satisfactorily (the power may wear down because of the long-term storage and the battery's automatic discharge etc.), please do not hesitate to contact the supplier.

N.B:

- The positive pole of the battery must face out.
- Please preset the starting point of measurement again after the replacement of battery.

2. LAYOUT



WARNING!



- Button & coin batteries (new or used) are hazardous and are to be kept away from children
- If a lithium button/coin battery is swallowed or placed inside the body can cause fatal injuries in 2 hours or less
- If a non-lithium button/coin battery is swallowed or placed inside the body can cause serious injuries
- Medical attention should be sought immediately if suspected the battery has been swallowed or placed inside the body
- Phone 13 11 26 Australian Poisons Information Centre for 24/7 fast, expert advice