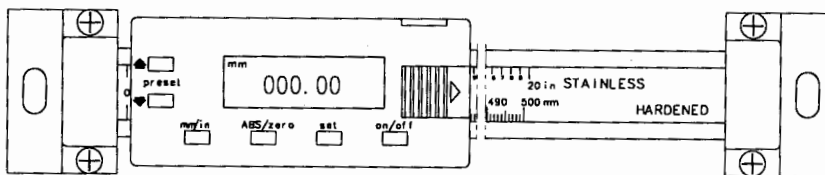


## CE OPERATION INSTRUCTIONS

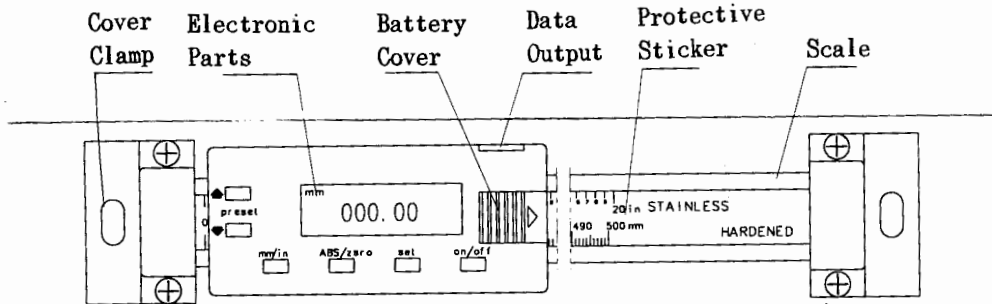
### ELECTRONIC DIGITAL SCALE UNIT



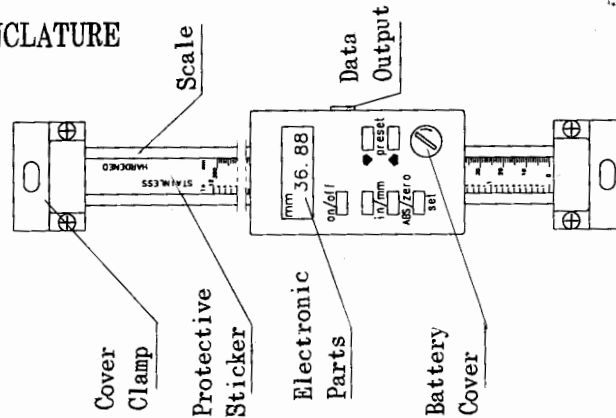
#### 1. INSTRUCTIONS:

- 1) Before using the digital scale unit 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 the cloth soaked with cleaning oil.
- 2) Operating Conditions: Temperature: 5-40 °C  
Relative Humidity: lower than 80%
- 3) Do not prevent any liquid that contains water from moistening the protective sticker.
- 4) Never apply voltage (e.g. engraving with an electric pen) on any part of the scale unit for fear of damaging the integrated circuit.
- 5) 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.

## 2. NOMENCLATURE



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## 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. Set the starting point of measurement with "set" button.

Relative Measurement: With "INC" characters display. Set a relative zero point with "ABS/zero" button (the displayed value is zero). The displayed value of the relative measurement is the relative length between the two surfaces, which is equal to the slider's displacement that is relative to the relative zero (positive number upward or to the right, negative number downward or to the left).

set: Button for presetting.

With one press on "set" button, the presetted 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 in slow reading state (It can save power in this state.) or 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  $\leq 0.2V$ , Level "1"  $\geq 1.3V$ .

Clock Pulse CP: 90KHz, effective for high electrical level.

Fast and slow reading can be interchanged by inserting a FAST READING plug in the interface. Once it is in the fast reading state, some buttons' functions will cease in effect. For example, zero setting can't be done in fast reading until it is changed to the slow reading state. Turn to fast reading state after setting zero.

#### 5. TECHNICAL SPECIFICATIONS:

1) Resolution: 0.01mm

2) Repeatability: 0.01mm

3) Accuracy:  $\pm (0.02 + 0.00005 \times L)$ . L represents the length from the starting point of measurement to the given position (mm). The accuracy obtains accurately 2nd decimal place.

4) Maximum Measuring Speed: 1m/s;

5) Power: One heavy duty silver oxide button battery SR44, 1.55V.

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6. ASSEMBLY INSTRUCTION:

- 1) The length direction of scale unit must be parallel to the moving direction of platform. Rectify the scale unit from the front and sides of the two ends.
- 2) The Z-shape link connecting slider and machine should be wide and thin (55-80mm wide, 0.5-1mm thick), so that the rigidity is high enough in width and it has some pliability in thickness.
- 3) Fix a magnetic stand on the machine which connects the slider, set the spindle (screw the measuring head off ) of the dial indicator on the thin side of the Z-shape link (near the slider) and make the spindle parallel to the length direction of the scale unit. Move the platform forward and backward and check the reading of the dial indicator. If the reading changes only a little (less than 0.01mm), it shows the rigidity in width of the Z-shape link is high enough.

7. Preset the starting point of measurement:

Press "set" button to set a zero point of measurement at a certain position, the displayed value must be zero. Otherwise, reset is necessary. If other numerical value is needed for the starting point of measurement, refer to the buttons' functions above for presetting.

8. 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 (SR44, 1.55V). 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.:
- 1) The positive pole of the battery must face out.
  - 2) Please preset the starting point of measurement again after the replacement of battery.