

Instruction Manual LA (horizontal type)

DIGITAL HORIZONTAL LENGTH METER

Specifications

Resolution: 0.01 mm

Power: one 1.55V silver-oxide button battery SR 44

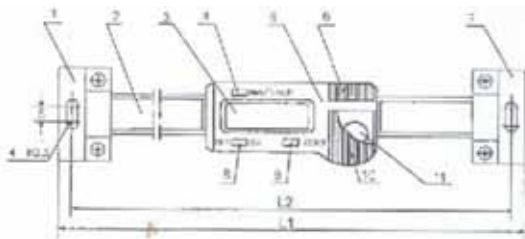
Max. Measuring Speed: ≤ 1.5 m/s

Working Temperature: 0° up to 40°C

Storage Temperature: -10° up to +60°C

Humidity allowed: $\leq 80\%$

Structure



1. Left stand
2. Bar
3. LCD display screen
4. mm/inch interchange
5. Slider
6. Data output
7. Right stand
8. ON/OFF button
9. Zero setting button
10. Battery cover
11. Silver oxide button battery (SR 44)

Functions

1. Zero setting at any location
2. metric/inch system interchange at any location
3. Data can be input into a special microprinter with a special cable.

Working way of the interface: synchronous serial

Data: Binary code, 24 bits, each datum will be sent twice.

The cycle is 300 ms (or 20 ms in fast reading state)

Transmitting time: 0.5 ms

The four wires (from left to right): Negative Power (-),

Clock pulse CP, Data D, Positive Power (+)

Pulse range of data: Datum level ≤ 0.2 V, Level "1" ≥ 1.3 V

Clock pulse CP: 90 KHz, effective for high power level

Instructions

1. The bar to be kept clean and dry. Prevent liquids from getting into the frame lest, because the electronics might

be damaged. In case that liquid has got in, the frame has to be taken apart and dried up less than 60°C.

2. Before using the Digital Calliper, the surface of the protective sticker has to be cleaned with a dry and clean cloth (or soaked with cleaning oil).

3. Never apply voltage on any part of the Digital Calliper or engrave with an electric pen, it might damage the electronics.

4. The battery has to be taken out, if the Calliper isn't used for a longer period.

Installation

1. The bar can be fixed on a machine with the left and right stands. The two ends of the bar have to be adjusted parallel to the direction of the movement.

2. The slider can be connected to the machine with a Z-shaped board (thickness 0.5-1 mm, width 55-88 mm). The board must have enough rigidity on the direction of width and enough flexibility on the direction of thickness.

Checking:

A. The magnetic stand has to be sucked on the part of the machine which is connected with the slider. The wide and the narrow face of the bar has to be touched with the anvil head of an indicator and they have to be checked then.

The reading value on both ends should be almost the same (the difference should not be bigger than 0.02 mm) or both ends have to be adjusted by putting in or putting out spacers.

B. The anvil head has to be taken off, the side (near the slider) of the Z-shaped board has to be touched with the flat face of the anvil and the spindle has to be made parallel to the bar. Then the slider has to be moved in both directions and the right value has to be checked.

If the reading value doesn't change or only changes little (less than 0.01 mm), this shows that the rigidity of the Z-shaped board along the length direction of the bar is enough.

Battery replacement

When the display keeps flashing or even does not appear, the battery cover has to be taken off as the arrow shows. Then the battery has to be replaced by a new one (SR 44, 1.55 V). It has to be remarked that the positive pole of the battery has to face out. Batteries bought from a market don't work satisfactorily: the power may wear down because of the long-term storage and the batteries automatically discharge etc. Don't hesitate to contact our company if there are any problems accruing.

Troubleshooting

| Troubles | Possible Causes | Solutions |
|-----------------|-----------------------------------|--|
| Flashing digits | Low voltage | Replace the battery |
| No display | 1. Low voltage 2. Poor contact | 1. Replace the battery 2. Adjust and clean the battery seat |
| Fixed digits | -Accidental enable -In circuit | Take out the battery and put it back after one minute |