

sanwa

DIGITAL THERMOMETER

STH-500

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DIGITAL THERMOMETER

STH-500

The digital Thermometer STH-500 is designed to unite the thermometric part with the instrument body. The thermometric sensor is made of platinum foil thermoresistor for measurement of a wide range of -50°C to 450°C at a high accuracy.

§ FEATURES

- * The thermometric part and the body are united in one.
- * Built handy for one-handed operation of temperature measurement.
- * Most suitable for measurement of internal temperature of foods.
- * Thanks to the platinum foil thermoresistor and the resolution changeover method, high accuracy is secured for a wide range of -50°C to 450°C .
- * LCD back lighting function is provided.
- * Data hold function is provided.

§ SPECIFICATIONS

Thermometric sensor: Platinum foil thermometric sensor (1000Ω at 0°C)

Range of measurement: -50°C to 199.9°C & -50°C to 450°C (in 2 ranges)

Resolution factor $0.1^{\circ}\text{C}/1^{\circ}\text{C}$

Accuracy: $\pm(0.5\% \text{ rdg} + 0.5^{\circ}\text{C})/\pm(0.5\% \text{ rdg} + 2^{\circ}\text{C})$

Sampling rate: About 2.5 times/sec.

Indicator: Max. 1999 by LCD

"OVER" is indicated only by 1st digit "1"

Unit indication in $^{\circ}\text{C}$. Data hold indication by "M"

Cell alarm indication by "B"

Sensor response speed (90%): About 7 sec.

LCD back lighting function provided.

Data hold function is provided.

Ranges of working temperature/humidity: 0 to 50°C & below 80%RH
in non-dew condensation.

Storage temperature/humidity: -10°C to 50°C & below 80%RH

Cells: SUM-3 x 4, 250 hours of continuous use at normal temperature and non back lighting.

Size & weight: 320 x 42 x 31mm, 210gr. approx.

Accessory: Instruction manual 1 copy

Optional accessory: Carrying case (C-STH)

§ NAMES OF PARTS

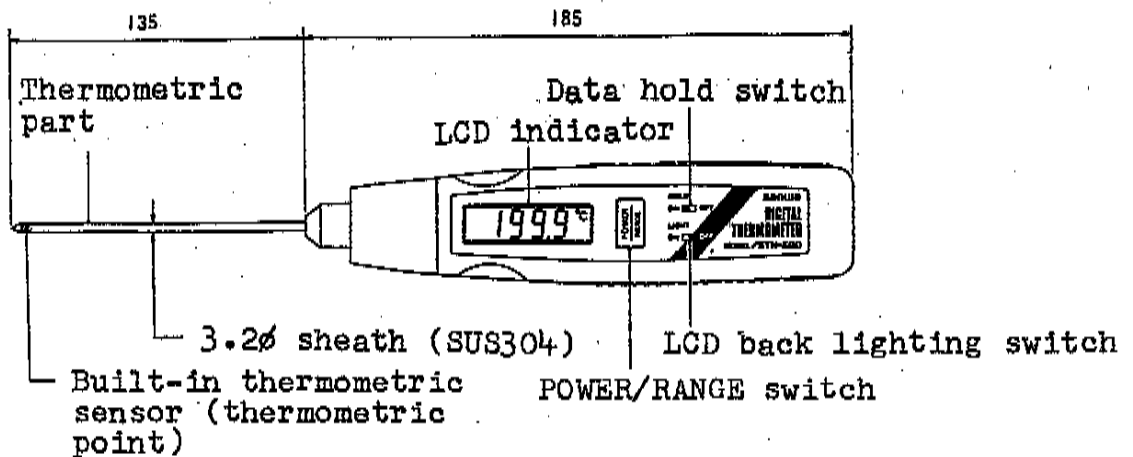


Fig. 1

§ CAUTIONS IN OPERATION

1. Please confirm of the contained cells, referring to page 4.
2. Pay caution to the tip of the thermometric sheath as it is made sharp in order to stick in the foods for the internal temperature measurement.
3. The platinum foil thermoresistor of the sensor is set at a rated resistance value after the heat-treat at about 420°C. Therefore, if applied at more than 450°C, the rated resistance value of the sensor is deviated off the specifications.

Further if applied at more than 550°C, the platinum foil thermoresistor is peeled off to deteriorate the sensor. Please do not use it at more than 450°C.

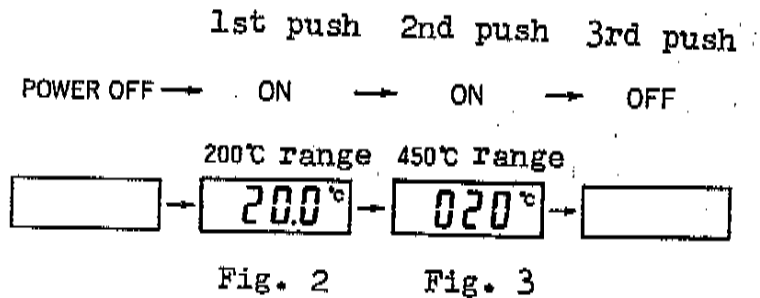
4. The response speed of the rated sensor differs depending on the room temperature up to the boiled water (about 100°C) and according to the condition and the subject to be measured.
5. Do not give a strong shock to the indicator and the thermometric part. Also, be careful not to be splashed with water except the sheath, as the instrument body is not waterproofed.
6. Do not leave it for a long time in the place where it is liable to receive shock or vibration, or in the direct sunlight, high (or low) temperature or high humidity. When not in use for some long time, cells are better to be taken out.

§ HOW TO USE

Before operation, please read carefully § CAUTIONS IN OPERATION.

1. Operation

With the data hold switch set at OFF, once push POWER/RANGE switch and the instrument is POWERED ON the 200°C range. Further push makes it the 450°C range and another push POWER OFF. Refer to the following diagram, Figs. 2 & 3.



2. Method of measurement

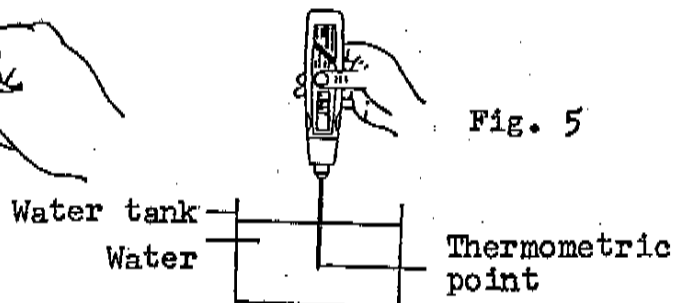
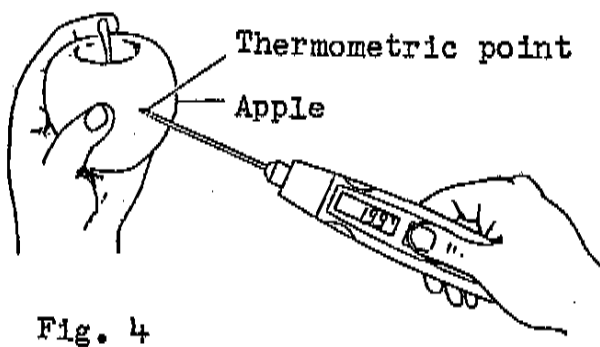
The indicated value is the temperature of the thermometric sensor contained near the tip of the sheath (thermometric point), and it is necessary to take an appropriate measurement according to the subject to measure. First set POWER ON at an optional range.

2-1 Internal temperature measurement

Stick the tip of the sheath in the subject (apple) and the temperature of the thermometric point is indicated. Refer to Fig. 4.

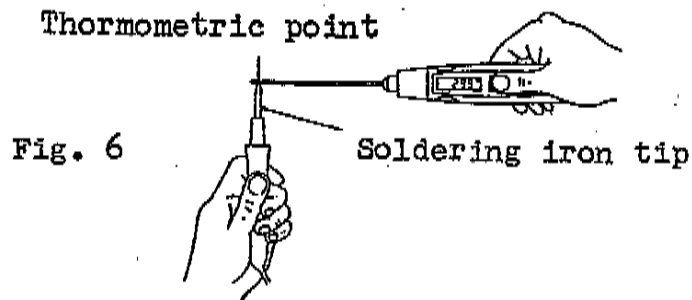
2-2 Liquid temperature measurement

Put the tip of the sheath in the subject (water), and the temperature of the thermometric point is indicated. Refer to Fig. 5.



2-3 Surface temperature measurement

As per Fig. 6, near the tip of the sheath is touched to the subject (soldering iron tip) and the thermometric point is indicated.

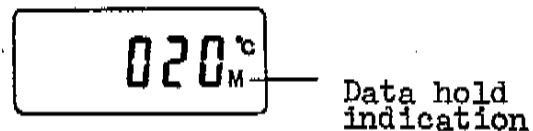


After the measurement is over, be sure to set the switch at POWER.OFF.

§ DATA HOLD FUNCTION

With the switch at POWER ON, set the data hold switch at ON, and the indicated value can be held. In this case, "M" appears in the indicator as per Fig. 7, to show the value is held. Set the data hold switch at OFF, and the data hold function is released.

Fig. 7



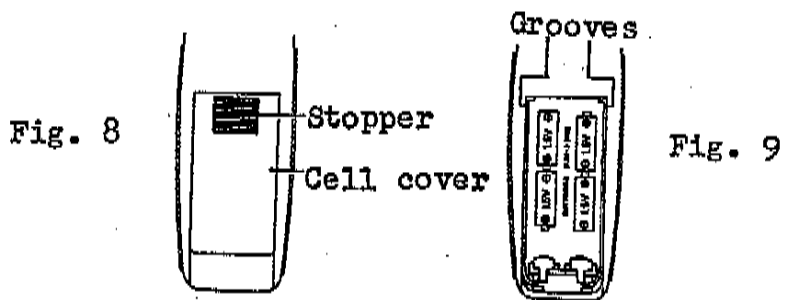
§ LCD BACK LIGHTING FUNCTION

With the switch at POWER ON, set the back lighting switch at ON, and the LCD is illuminated from the back to enable reading the indicated value even at a dark place.

§ CELLS

1. Cell fitting

- 1-1 As per Fig. 8, the stopper of the cell cover is strongly pushed, and pull it out towards you.
- 1-2 Cells (USM-3 x 4) are placed at the right polarities as per Fig. 9. Inner cells are placed first for smooth fitting.
- 1-3 To restore the cell cover, it is slided back along with the groove as per Fig. 9.



2. Replacement of cells

With the switch at POWER ON, if the cell alarm "B" appears in the indicator, the internal cells are exhausted needing replacement with new ones, as the instrument cannot function properly to satisfy the rated specifications. Refer to Fig. 10.

When the POWER switch is pushed, and nothing appears in the indicator, the cells also need replacement. Replacement of cells is conducted likewise 1. Cell fitting above.

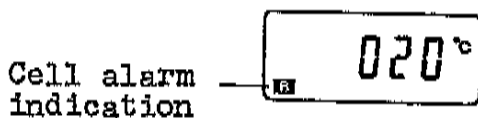


Fig. 10

Specifications are subject to change without notice.