

Building Electronic Thermometer

User Manual

NF-514



VER: V1

1. Overview

The instrument is Portable Building Electronic Thermometer is a professional temperature measuring instrument developed according to the construction characteristics of my country's construction industry and relevant technical specifications. It can display the measured temperature intuitively, accurately and quickly, with good reliability, wide range of use and applications. Warm operating environment, small size and light weight, easy to carry, suitable for construction sites and field operations; mainly used for construction, building materials, water conservancy, electric power, metallurgy, petrochemical, ports, roads and bridges, municipal and other basic construction projects.

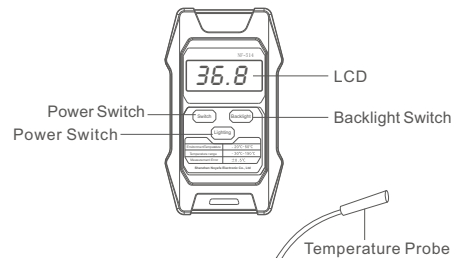
2. Scope Of Application

The instrument is suitable for on-site construction temperature measurement of various construction projects. It can be used with temperature measurement probes to measure the temperature of materials and clinker, such as: gas, liquid, fluid, mixture and granular materials; and embedded temperature measurement line. It can be used to measure the internal temperature of winter construction concrete and mass concrete.

3. The composition and function of the instrument

① Main Tester

The instrument is suitable for on-site construction temperature measurement of various construction projects. It can be used with temperature measurement probes to measure the temperature of materials and clinker, such as: gas, liquid, fluid, mixture and granular materials; and embedded temperature measurement line. It can be used to measure the internal temperature of winter construction concrete and mass concrete.



② Temperature probe

The temperature measuring probe is made of a plug, a wire, a handle and a metal tube with an outer diameter of $\Phi 5\text{mm} \times 220\text{mm}$. The front end of the tube is packaged with a temperature sensor, which is suitable for measuring the temperature of materials and clinker.

③ Temperature measurement line

The embedded temperature measuring line is made of a plug, a wire and a temperature sensor, which is suitable for measuring the internal temperature of the concrete. Each temperature measuring line can measure the temperature at one point, and the temperature measuring point can be arranged arbitrarily during the construction. In order to facilitate layered temperature measurement, the plug of each temperature measurement cable has a label affixed with a corresponding length specification.

4. The main technical indicators

- ① Temperature measurement range: $-30^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- ② Temperature measurement error: $\leq \pm 0.5^{\circ}\text{C}$
- ③ Resolution: 0.1°C
- ④ Operating environment temperature: $20^{\circ}\text{C} \sim 50^{\circ}\text{C}$
- ⑤ Display mode: 3-digit LCD screen
- ⑥ Power supply: 9V laminated battery
- ⑦ Weight: 200g
- ⑧ Host volume: $135\text{mm} \times 72\text{mm} \times 32\text{mm}$

5. Use method

① Use the host and temperature probe to measure the temperature of the material

Insert the plug of the temperature probe into the socket of the host, press the power switch, and insert the metal claw of the temperature probe into the object to be measured, the insertion depth is not less than 1/2 of its length, and the temperature data is read on the host in about two minutes. When measuring the temperature of the mixture, in order to avoid excessive impact between the temperature probe and the hard objects in the mixture and affect the service life, a metal rod can be used to reserve a hole in the mixture, and then the temperature probe can be inserted into the hole Temperature measurement. The temperature probe should be wiped clean after each use.

② Measure the temperature of mass concrete with the host and temperature measuring line

After the construction temperature measurement plan is determined, select a temperature measurement line with appropriate length specifications according to the number and depth of the temperature measurement points, for example: the actual temperature

measurement point depth is 0.2m~0.3m, and the 0.5m temperature measurement line can be selected; the actual temperature measurement The point depth is 2.5m~2.8m, and the temperature measurement line with a specification of 3m can be selected, and so on. When pre-embedded, steel bars and other pieces can be used as supports, and the temperature measurement line is tied to the support according to the distance of the longitudinal temperature measurement point. The temperature sensor and the support should be insulated. When pouring the concrete, implant the support with the temperature measuring wire into the concrete, the temperature sensor is at the temperature measuring point, and the plug is left outside of the concrete and covered with a plastic bag to avoid moisture and keep it clean. For ease of operation, the length of the wire left outside should be greater than 20cm. When measuring the temperature, press the power switch of the main unit and insert the plug of the temperature measurement line into the socket of the main unit, and the temperature of the corresponding temperature measurement point can be displayed on the main unit's display screen.

③ **Use the host and temperature measuring line to measure the concrete temperature during winter construction**

When pouring concrete, reserve temperature measurement holes according to the winter construction temperature measurement plan, place a temperature measurement wire in each hole, and leave the plug of the temperature measurement wire outside the hole and cover it with a plastic bag to avoid moisture and keep it clean. When measuring the temperature, press the power switch of the main unit and insert the plug of the temperature measurement line into the socket of the main unit, and the temperature of the corresponding temperature measurement point can be displayed on the main unit's display screen. After each stage of temperature measurement, the temperature measurement line will be stored for future use. The temperature measurement line can also be buried in the concrete for one-time use.

④ **Use of night temperature reading and lighting function**

When used at night or in a dark environment, press the host backlight switch, the LCD screen can emit blue background light, making the reading clear and eye-catching. Press the light switch, the light turns on, which is equivalent to a flashlight.

6. Battery replacement

When LOBAT appears in the upper left corner of the display of the host or cannot be turned on normally, it is usually caused by insufficient battery voltage, and a new battery needs to be replaced. The method is as follows: Open the battery compartment cover behind the main unit, take out the old battery from the battery compartment, buckle the new battery, and then restore the battery compartment cover to its original position.

7. Battery replacement

- ① When the host is not connected to the temperature measuring probe or the temperature measuring line, "-1" is displayed on the display as the preparation state.
- ② Do not use excessive force during operation. Hold the plug firmly when inserting or unplugging the plug into or out of the socket of the host.
- ③ If the plug or the socket of the main unit gets wet due to accidental ingress of water, please wipe it and dry it before using it to avoid inaccurate temperature measurement results.
- ④ The instrument should be turned off in time after use, and the battery should be removed when it is not used for a long time to avoid damage to the instrument.

- ⑤ Do not open the back cover of the main unit by yourself. Please send it back to the manufacturer or agency when you need to repair or calibrate it.

8. Accessories

- ① 1 copy of instruction manual
- ② 1 copy of product inspection certificate
- ③ 1 copy of product warranty card
- ④ Instrument sets 1 piece
- ⑤ Batteries

9. Options

Optional accessories	
01	Temperature probe
02	Optional specification of temperature measuring line.
	0.5m、1m、1.5m、2m、2.5m、3m、3.5m、4m、4.5m、5m
03	Other specifications of the temperature measuring line can be customized.



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