

Large-Screen Pyrometer — User Manual

NANJING XINQIYUAN DETECTION EQUIPMENT
CO., LTD.

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1. Product Overview

This series of large-screen pyrometers works with S, R, D and B type fast thermocouples for precise, rapid temperature measurement in various melting scenarios such as BOF, EAF, refining and hot metal. Designed for harsh, high-temperature furnace environments, it features a shock-resistant high-brightness LED display and an all-metal housing for durability and clear reading.

2. Main Technical Parameters

Item	Specification
Compatible thermocouple types	S / R / D / B
Fast measurement range	S: 1000–1710 °C R: 1000–1800 °C D: 1000–1710 °C B: 1000–1999 °C
Continuous measurement range	S: 0–1710 °C R: 500–1800 °C D: 0–1710 °C B: 0–1999 °C
Display	3½-digit 5-inch high-brightness red LED, digit height 127 mm
Working environment	0–55 °C; relative humidity <85%
Storage environment	-40–85 °C; relative humidity <95%
Power supply	AC 220 V / 50 Hz, 20 W
Dimensions	Single-sided: 400×300×110 mm; double-sided: 400×300×130 mm
Data transmission	Wireless from lance to display: ≥300 m in open areas (varies in-plant); display to printer: up to 1200 m

3. Functions

Function	Configuration
DC12 V active horn output interface	Standard
Storage of 200 historical test records	Standard
RS485 serial communication (to PC or secondary display)	On request
Micro-printer interface	On request
RS232 asynchronous serial interface	On request
Isolated BCD code output	On request
4–20 mA analog output	On request
Voice readout	On request

4. Operation

1. Connect AC 220 V power according to the wiring labels, with reliable grounding; confirm the connection to the lance (or wired transmission line).
2. After power-on self-check, select the thermocouple type (S / R / D / B) matching the fast thermocouple in use.
3. Mount the fast thermocouple on the lance; when the ready test light turns on, contact is good and measurement may proceed.
4. Immerse the fast thermocouple 100–300 mm below the slag layer with fast, steady and accurate motion; lift the lance immediately after the reading is obtained.
5. On over-limit temperature, the screen flashes and the audible-visual alarm triggers — follow your process procedures.

5. Cautions

- Immersion of the fast thermocouple in molten steel must not exceed 6 s, otherwise the test lance may burn out.
- Keep away from strong electromagnetic interference; disconnect power and protect from moisture and dust for long-term storage.
- Do not disassemble; contact our after-sales service for repair or calibration.

Note: Wireless range depends on obstacles and the electromagnetic environment; confirm the installation position on site. Special interfaces must be specified when ordering.

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