



Air velocity Pressure Humidity Air flow Temperature

DIRECTIONS FOR USE

CLASS 200

New

SMART MULTI-FUNCTIONS DEVICES TM 200

CE

SUPPLIED
WITH
Calibration
Certificate



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TECHNICAL SPECIFICATIONS

The TM 200 is a multi-channel instrument, compatible with Pt100 temperature probes, equipped with SMART PRO system, and with all thermocouple K temperature probes. The SMART PRO probes are supplied with calibration or adjusting certificate (last calibration date display when connected). They are automatically recognized when connected, and are fully interchangeable.

	Units of measure	Measuring ranges	Accuracies**	Resolutions
 Temperature Pt100 2 channels	°C, °F, K	-100 to +400°C	±2% of reading ±0,1°C	0,1°C
 Temperature Thermocouple K* 2 channels	°C, °F, K	-200 to -40°C -39 to +999°C +1000 to +1300°C	±1% of reading ±1,2°C ±0,5% of reading ±0,8°C ±1% of reading ±1,2°C	0,1°C 0,1°C 1°C

* The thermocouple K probes do not use the SMART PRO system.

** Performed in laboratories conditions, accuracies mentioned in this document will be guaranteed, subject to the same conditions or to a calibration balancing.

DISPLAY :

Graphic, with automatic backlighting. Size 48 x 24 mm.

HOUSING :

Shock-proof, made of ABS/PC, with Elastomer edges.

KEYPAD :

Made of Elastomer : 4 keys and one control knob.

CONNECTIONS :

Connectors : mini-DIN secured plugs.

Thermocouple K connectors : compensated miniature plugs

Numeric connection output : USB.

COMMUNICATION MODE :

RS 232.

MEASURING ELEMENTS :

Pt 100 temperature : Pt 100 class A

Thermocouple temperature : Thermocouple K class 1

CONFORMITY :

Electromagnetical compatibility (norm NF EN 61326-1)

POWER SUPPLY :

4 Alcaline batteries 1,5 V LR6

WORKING ENVIRONMENT :

Neutral gas

WORKING TEMPERATURE :

From 0 to 50°C.

STORAGE TEMPERATURE :

From 0 to 50°C.

DIMENSIONS :

176 x 78 x 35 mm

WEIGHT :

400 g

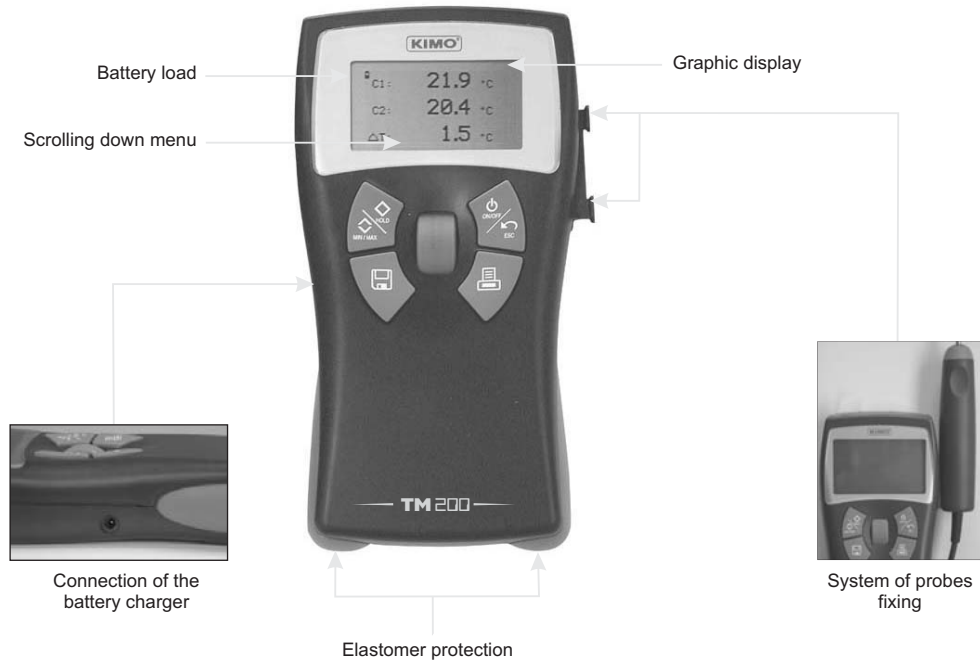
LANGUAGES AVAILABLE :

French, English, Spanish, Portuguese, Italian, German, Dutch.

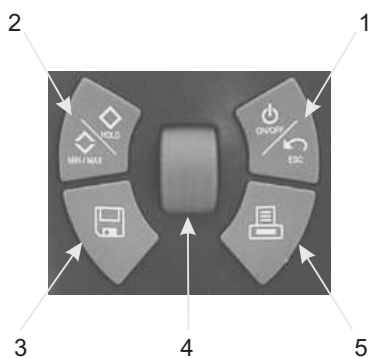


PRESENTATION

Description :

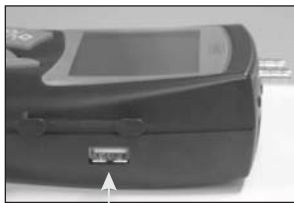
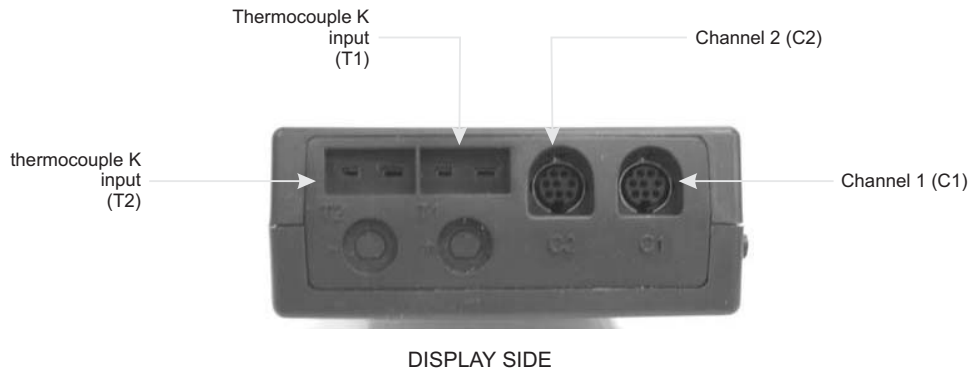


Keyboard :



1. ON/OFF : Switch on / switch off the instrument.
ESC : Return to the previous page or on the last validated data.
2. Press 1 time : HOLD function, freeze the current measure.
Press 2 times : show the values minimum and maximum measured.
Press 3 times : return to the current menu measure.
3. Recording : allow to memorize data.
4. Press on the control knob to validate.
Browse the menu by scrolling down the knob.
5. Print out of data on a printer.

● **Connections :**



USB port for connection to the printer and joining to a PC

- **Channel 1 (C1)** : Connection of one Pt 100 temperature probe.
- **Channel 2 (C2)** : Connection of a second PT100 probe.
- **T1 and T2** : Connection of thermocouple K probes

INTRODUCTION OF THE MENU

To switch on the instrument, press the key "ON/OFF".
The screen shows the name of the device, its serial number, its calibration date, the date and hour (see photo below).



To access to one menu, connect the corresponding probe. If this one uses the SMART PRO system, the screen shows the type of the connected probe, and its calibration or adjusting date. To access to the menu press on the knob. To return to the homepage, disconnect the probe.

To switch off the instrument, press some seconds on the "ON/OFF" key.

TEMPERATURE MENU

When you connect your probe(s) (see connections p. 3), the screen shows its characteristics. It is possible to connect up to 2 probes PT100 and 2 probes thermocouple K at the same time. Press then on the knob to enter in the menu temperature, the measured value is shown in the screen and the following menu appears on the last line (by browsing the menu by scrolling down the knob):

- Units
- Delta T (only if 2 probes of identical technology are connected)

To validate a function, press on the knob when the wished function is shown on the screen.

**Display : T1 and T2 : thermocouple K probes
C1 and C2 : PT100 probes**

● Units :

Browse the different available units by scrolling down the knob and validate pressing on the knob.

● Delta T :

When 2 PT100 probes or 2 thermocouple K probes are connected, you have the possibility of calculate the Delta T which corresponds to the different between the temperature measured by C1 (or T1) and C2 (or T2). If 2 PT100 probes and 2 thermocouple K probes are connected at the same time, the screen shows 2 delta T. To come out of this function, press the touch "ESC".

Reminder : possible only between 2 probes of identical technology.

SETTINGS

To reach the various settings, switch on the device (do not connect a probe). Press then on "ON / OFF". The following scrolling down menu appears :

- Date and hour
- Retro-lighting
- Contrast
- Keys Beep
- Languages
- Automatic stop
- Solenoid valve

To validate a function, press on the knob when the wished function is shown on the screen.

● Date and hour :

Use the knob to settle each figures of the date and of the hour, and validate at each time pressing on the knob. To return to a figure previously validated, press on "ESC".

● Retro-lighting :

It is possible to activate or to deactivate the retro-lighting of the display : by means of the knob choose "ON", "OFF" or "automatic" and press to validate. To go out of this menu, press on "ESC".

- **Contrast :**
By the means of the knob, adjust the contrast of the screen from 0 to 7 and validate by pressing on the knob.
- **Keys beep :**
It is possible to activate or to deactivate the tone of keys. Validate the chosen option by pressing on the knob.
- **Languages :**
By the means of the knob, browse the different available languages and validate pressing on the knob.
- **Automatic stop :**
It is possible to cancel the automatic stop of the device or to settle it. For that purpose, use the scrolling down knob and choose "OFF" to cancel the automatic stop or choose a value (by slice of 15 minutes).
When you restore data on PC, the automatic stop does not work, but at the end of the load, the device goes out automatically.

DATA RECORDING, PRINTING AND DELETING ●

Before enter in the menu "recording", it is necessary to connect the probes that will be used. Enter in the menu which you wish to record. Press the key "Recording" (see p. 3) to reach the menu "Datalogger". At the bottom of the screen appears the following scrolling down menu:

- New
- Print.
- Delete

It is thus possible to print data, to record or to delete them.

- **New :**
This function allows to register a new campaign of measures. It is necessary to enter first of all the name of the file (12 characters at most). Browse the letters by scrolling down the knob and validate every character by pressing on the knob or by choosing the symbol ◀ if you enter less than 12 characters. Choose then if you wish a manual or automatic recording of the data (by means of the knob).
 - **Manual recording :** validate as many points as you wish by pressing on the knob (the number of registered points is indicated on the last line). Press on the key "Recording" to stop the recording. If you really wish to stop, choose "Yes" and to continue to register points, click on "No" (by means of the knob).
 - **Automatic recording:** By means of the knob, choose the interval of time between the recording of each of the points (the minimum is of 5 seconds). Choose then the duration on which points are going to be registered (validate the number of days, hours and minutes) then validate. The recapitulative appears on the screen. To begin the recording, press twice on the knob. Once the ended recording, the device switches of. To stop the current recording, press on "Recording". If you really wish to stop, choose "Yes" and to continue the recording, click on "No" (by means of the knob).
- To restore the data registered on a PC, switch on the device (without any probe) and connect the cordon on the port USB (see p. 3). **During the recordings, the automatic stop of the device does not work, but at the end of the procedure, it will switch off automatically.**

● **Print :**

When "Print" is validated, by means of the knob, choose the campaign which you wish to print and validate by pressing on the knob. Go out of the menu "printing" by pressing on "ESC".

● **Delete :**

This function allows to delete the campaigns of measure stored in the device. To enter in the menu "delete", validate by pressing on the knob. Then, always by means of the knob, choose to cancel or to confirm the demand.

GUARANTEE

KIMO provides a one-year guarantee, starting from the date on which the appliance was originally purchased, that any new appliance will be free of any manufacturing or structural defects. This guarantee does not cover defects resulting from incorrect handling or from any repairs which may be made by persons other than the manufacturer.

Any defects covered by this guarantee will be repaired free of charge. An estimate will be provided for any damage not covered by this guarantee. The customer's prior approval will be requested before any repairs are done.

KIMO will see to the replacement of any constituent parts of this appliance.

Any appliance, whether under guarantee or not, must be returned carriage paid. A letter detailing the faults defected should be sent with the appliance whenever possible.

CALIBRATION

All KIMO devices are calibrated in our premises and supplied with a calibration certificate, as per the AFNOR FD X 07-012 norms, in accordance with the National Standards.

In order to comply with standards of Quality Assurance, measuring devices should be checked annually.

Ref. NT Ang - TM200 - 08/02 B

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