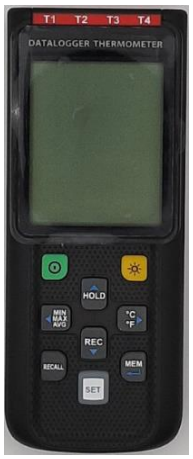
PN 6-4v univ series

Portable thermometer 4 channels for K, J, E, T, N, R and S thermocouples



Ref : 2850
Rev : A

DESCRIPTION

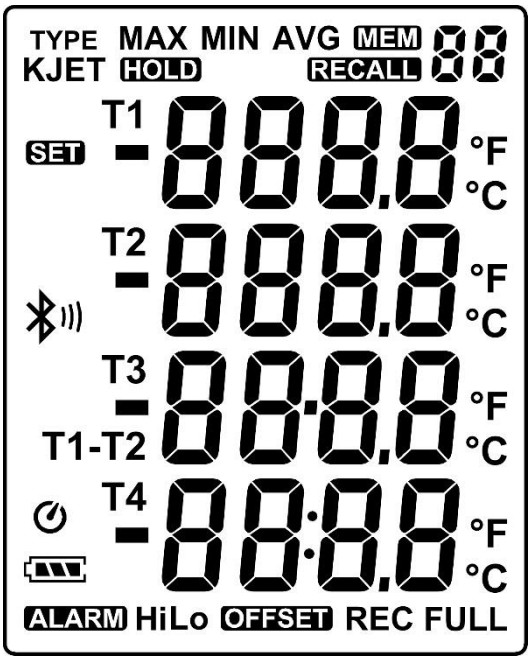
This portable temperature indicator, with an LCD display, is designed to visualize from one to four thermocouples simultaneously, type K, J, E, T, N, R or S. It allows you to view temperature measurements in real time but also to record them at regular intervals, in degrees Celsius or degrees Fahrenheit. The device is equipped with a Bluetooth system and a USB port with its cable. It also comes with real-time data analysis and graphical visualization software.

TECHNICAL CHARACTERISTICS

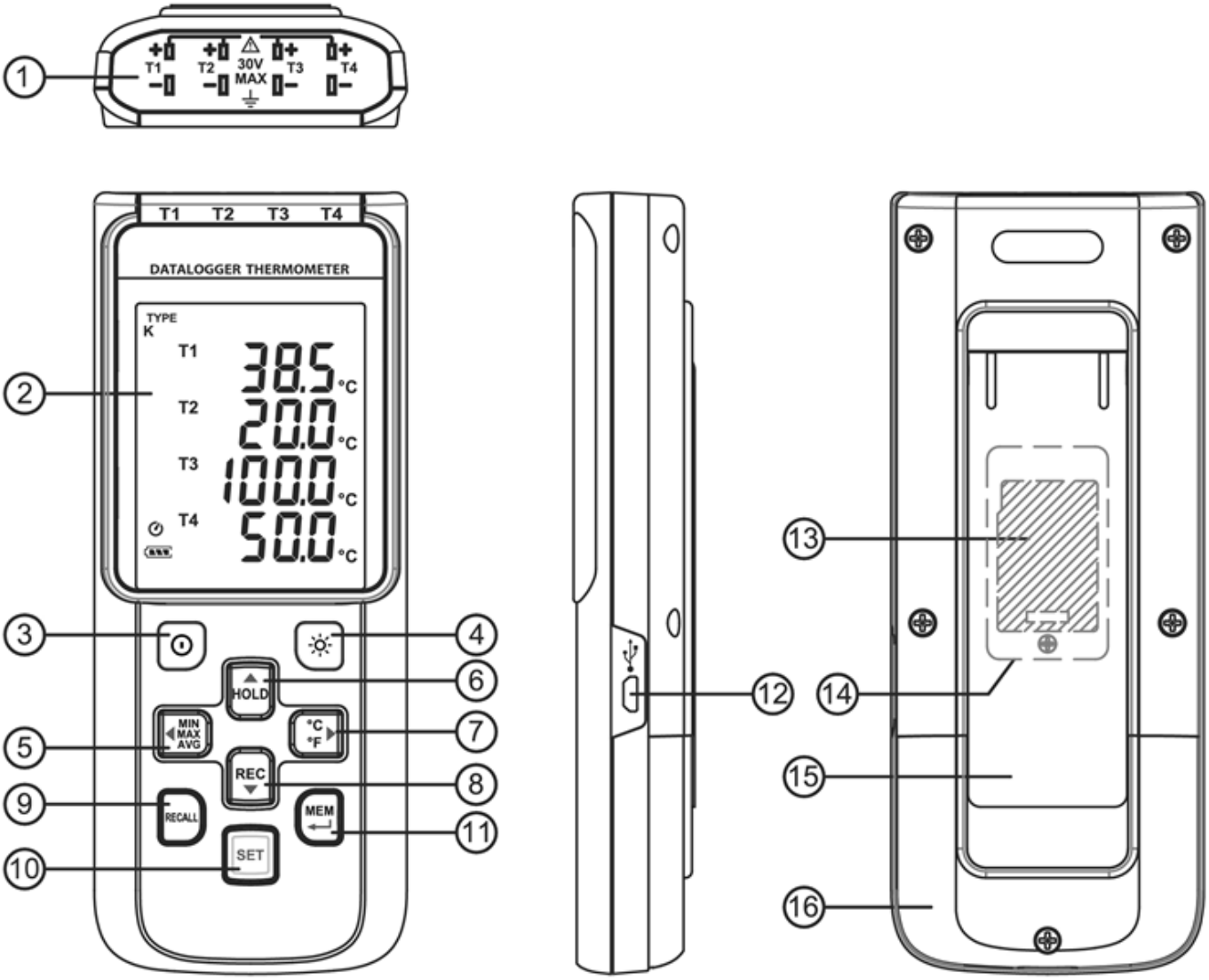
PARAMETERS	VALUES
Measuring range	K : -200 ~ 1372 °C (-328 ~ 2501 °F) J : -200 ~ 1000 °C (-328 ~ 1832 °F) E : -200 ~ 750 °C (-328 ~ 1382 °F) T : -200 ~ 400 °C (-328 ~ 752 °F) N : -200 ~ 1300 °C (-328 ~ 2372 °F) R, S : 0 ~ 1767 °C (32 ~ 3212 °F)
Resolution	Type K, J, E, T and N: 0.1 °C < 600 °C (0.1 °F < 1000 °F) 1°C ≥ 600 °C (1°F ≥ 1000 °F) Type R and S: 0.2 °C < 600 °C (0.5 °F < 1000 °F) 1 °C > 600 °C (1°F > 1000 °F)
Measuring accuracy	Type K, J, E, T and N: ± (0.1% displayed value + 0.7 °C) (or 1.3°F) Bellow 100 °C (or -148 °F) ± (0.5% displayed value + 0.7 °C) Type R and S: ± (0.2% displayed value + 1.4 °C (or 2.5 °F)
Temperature coefficient	0.01% displayed value + 0.05 °C (0.00028 °F) per °C (°F)
Sample rate	from 1 to 3659 seconds (so 60 minutes et 59 seconds)
Battery type	UM-4 or AAA 1.5V x 4 batteries
Battery lifespan	without Bluetooth: approx. 120 h with Bluetooth: approx. 30 h
Operating temperature	0 to 50 °C (32 to 122 °F)
Operating humidity level	10 to 90 % RH
Storage temperature	-20 to 60 °C (-4 to 140 °F)
Storage humidity level	10 to 75 % RH
Input connexion	Miniature male connecter

Dimensions	187 x 75 x 29 mm (Long x Wide x High)
Weight	Approx. 290 g
Certification	CE

DESCRIPTION OF SYMBOLS AND BUTTONS



	: Battery level indicator
MIN	: Minimum function indicator
MAX	: Maximum function indicator
AVG	: Average function indicator
SET	: Configuration option flag
	: Automatic power off indicator
REC	: Data logging indicator
FULL	: Full memory indicator
MEM 88	: Record indicator for a dataset (with XX the number of that dataset)
RECALL 88	: recall indicator for saved dataset
TYPE KJET	: Thermocouple type selected
-8888	: Temperature read
T1 T2 T3 T4	: Temperature chain in use
T1-T2	: Temperature subtraction mode
ALARM	: Temperature alarm indicator
Hi	: High temperature alarm indicator
Lo	: Low temperature alarm indicator
OFFSET	: Probe error compensation
°C °F	: Unit of temperature measurement
HOLD	: HOLD mode indicator
	: Bluetooth indicator (Connected mode)
	: Bluetooth indicator (standby mode / connection search)
	: Type N thermocouple
	: Type N R thermocouple
	: Type S thermocouple



1 Thermocouple inputs	9 Reminder button for saved data
2 Screen	10 SETUP button
3 ON/OFF button	11 MEM button (Up to 100 datasets)
4 Light button	12 USB interface
5 MAX MIN AVG button	13 Bluetooth adapter
6 DATA HOLD button	14 Bluetooth compartment
7 Unit selection °C / °F button	15 Reclining stand
8 REC button	16 Battery compartment

DESCRIPTION OF DEVICE FUNCTIONS

POWER
Press the *POWER* button to turn on the device. A long press of 3 seconds turns it off.

Screen backlight
Press the *Light* button to turn on the display backlight. Press again to turn it off. This function automatically deactivates 30 seconds after activation to save battery.

HOLD function
Press the *HOLD* button to freeze the values displayed on the screen, thus stopping the measurement. A new press allows you to exit this mode.

REC function
Press the *REC* button to start recording data at a predefined time interval, with the "REC" symbol displayed on the screen. To stop recording, tap again.
Note: - When the registration function is started, some of the other functions are no longer available (change of unit, ...). It is therefore necessary to configure the device as desired before starting the recording.
- When the memory is full (32,000 recordings), the indication "FULL" flashes and the recording is stopped.
- When the battery is low (indicated by a symbol) the recording function cannot be started. If the battery weakens during a recording, the recording is automatically stopped, and the "REC" symbol disappears.

MEM function
Pressing the MEM button saves the values displayed on the screen. The symbol "MEM88" is then displayed for 2 seconds. Pressing this button again saves a new dataset. The device can thus record up to 99 data sets.

RECALL function
Press the *RECALL* button to display the data groups saved using the MEM function on the screen. The symbol "RECALL88" is displayed. The 4 directional arrows allow you to move from one group to another. The screen then displays for 2 seconds the date of recording, "hour:minute:second", then the corresponding saved data.
Press the *RECALL* or *POWER* button to exit this function.

MIN/MAX/AVG function
The MIN/MAX/AVG function allows the minimum, maximum and measured average to be recorded simultaneously. As long as the feature is enabled, the device will continue to update the new values.
- By pressing the *MIN/MAX/AVG* button, the "MIN" symbol is displayed along with the minimum saved value.
- By pressing *MIN/MAX/AVG* a second time, the symbol "MAX" is displayed as well as the maximum value recorded.
- By pressing *MIN/MAX/AVG* a third time, the "*AVG*" symbol is displayed along with the average recorded value.
- A 4th press of the button displays the symbols "*MIN*", "*MAX*" and "*AVG*" as well as the measured values in real time.

Pressing *MIN/MAX/AVG* for two seconds exits this mode.

Temperature Unit Selection
Pressing the *°C °F* button changes from degrees Celsius (°C) to Fahrenheit (°F) or vice versa.

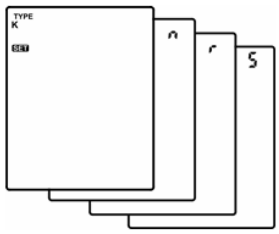
Menu configuration
Pressing the *SET* button enters the device's configuration menu. The directional arrows are then used to adjust the different parameters. To save the change to a setting or simply skip to the next setting, press the *MEM* button. Pressing the *SET* button again exits the configuration menu.

DEVICE CONFIGURATION

Bluetooth setting

The *HOLD* and *REC* buttons are used to turn Bluetooth on or off.
Once Bluetooth is activated, it switches to standby mode, the device then searches for a connection and the blue LED around the *SET* button flashes once every three seconds.
Once the device is connected, the blue LED will flash rapidly 3 times every three seconds to signal it.

Thermocouple Type Selection



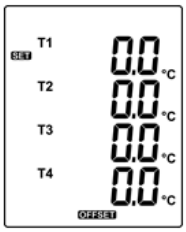
In this menu, the left and right directional arrows allow you to select the desired thermocouple type: K, J, E, T, N, R or S.

Setting the data logging time interval (REC function)

The left and right arrow keys allow you to select the parameter to adjust (minutes or seconds) and the up and down keys to increase or decrease the value of this parameter.

The configurable time interval extends from 1 to 3659 seconds, or 60 minutes and 59 seconds.

Setting thermocouple offsets



The left and right directional buttons allow you to select the thermocouple whose OFFSET (T1, T2, T3 or T4) you want to adjust. The symbol for the selected thermocouple flashes. The up and down buttons then vary the value of the OFFSET.

The OFFSET can be changed to ±5°C (±9°F).

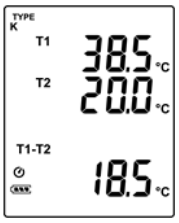
Alarm setting (only for T1)

In this menu, the up and down directional arrows allow you to activate or not the alarm mode.

Once activated, the *MEM* button allows you to validate your choice and enter the alarm configuration mode.

This menu allows you to set the desired minimum and maximum temperature values that will trigger an alarm if they are reached. A sound will then be emitted and an indication "alarm Hi" or "alarm Lo" will be displayed on the screen.

Adjusting the T1-T2 subtraction mode



The up and down directional arrows allow you to activate or not the T1-T2 subtraction mode.

When this mode is enabled, the values of T1, T2 and T1-T2 are displayed on the screen.

Setting the auto-off time

In this menu, the up and down arrow keys enable the auto-power off option and set the desired time (10, 30 minutes, 1, 2, 4 or 8 hours)

Setting the time of the device

This menu allows you to define the internal clock of the device, the date being a necessary data when recording measurement.
The selection of the parameter to adjust, year, date or time, is done with the left and right arrows and the adjustment with the up and down arrows.

Deletion of recorded data

- Data recorded at regular time intervals with the REC function:

The device turns off, pressing and holding the *MEM* and *POWER* buttons simultaneously allows you to turn on the device but also to start a countdown to erase the recorded data. The indications "REC", "CLr" and "SUrE 5", "SUrE 4", ..., "SUrE 1", "SUrE 0" will be displayed on the screen to confirm that the deletion has been carried out. To cancel the deletion procedure, simply release the keys.

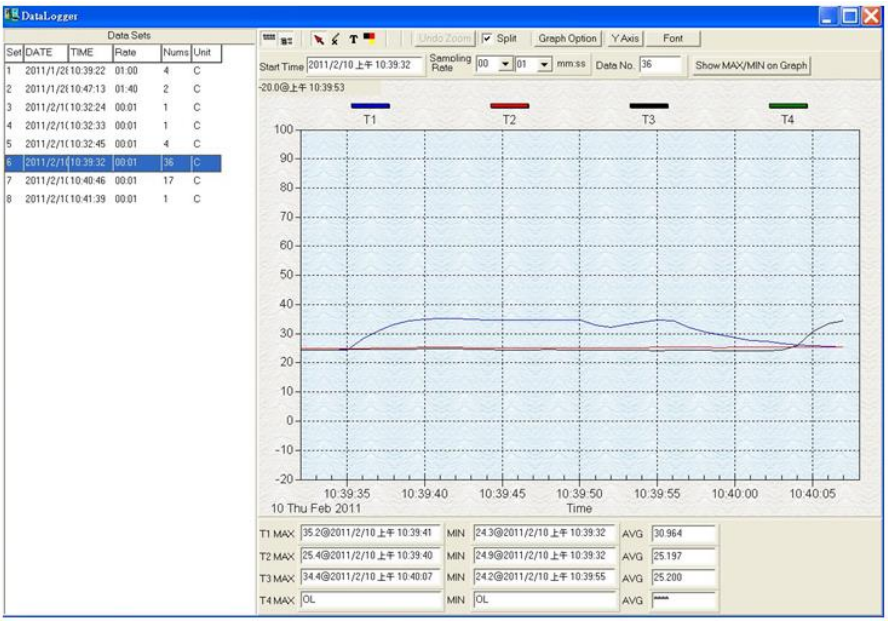
- Data sets recorded with MEM function:

The device turns off, simultaneously press and hold the *MEM and* POWER buttons turns on the device and starts a countdown to erase the data groups saved in the device. The indications "MEM", "CLr" and "SUrE 5", "SUrE 4", ..., "SUrE 1", "SUrE 0" will be displayed on the screen to confirm that the deletion is in progress, then the indication "CLr", "0", "1", "2", ... will be visible indicating the deletion of N registered groups. To cancel the deletion procedure, simply release the keys.

CONNECTORS AND SOFTWARE FOR REAL-TIME DATA ANALYSIS

The device is supplied with a battery, its user manual, a USB cable to connect it to a PC and a CD-ROM containing the software for real-time data analysis and graphical visualization (compatible with Windows XP / VISTA / Windows 7 / Windows 8 / Windows 10).

The software supplied with the device allows you to visualize, analyze and record the data measured by the different thermocouples in real time. For this, it is necessary to connect the device to a PC either using the USB cable or through a Bluetooth connection and launch the software.



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