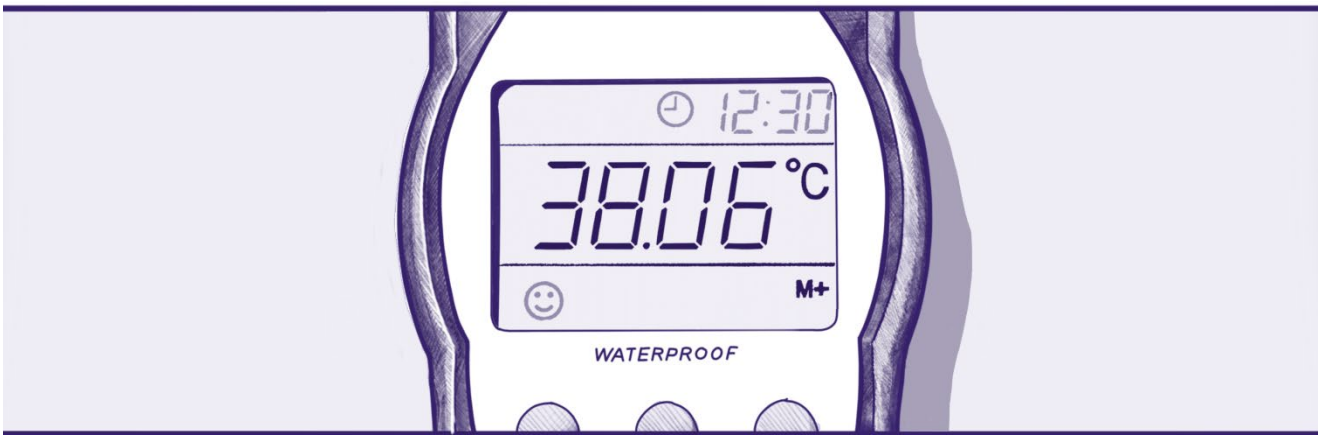
Temp 7

MADE IN ITALY



The Future Starts Now

Temp7 PT100	**For Pt100 RTD probes** *0,1 °C from -99,9 to +199,9 °C / 1 °C from -200 to +999 °C*
Temp7 NTC	**For NTC 30K probes** *0,1 °C from -50,0 to +150,0 °C*
Temp7 K/T	**For thermocouple K e T probes** ***K**: 0,1 °C from -99,9 to +199,9 °C / 1 °C from -200 to +1350 °C* ***T**: 0,1 °C from -99,9 to +199,9 °C / 1 °C from -250 to +400 °C*

SUMMARY

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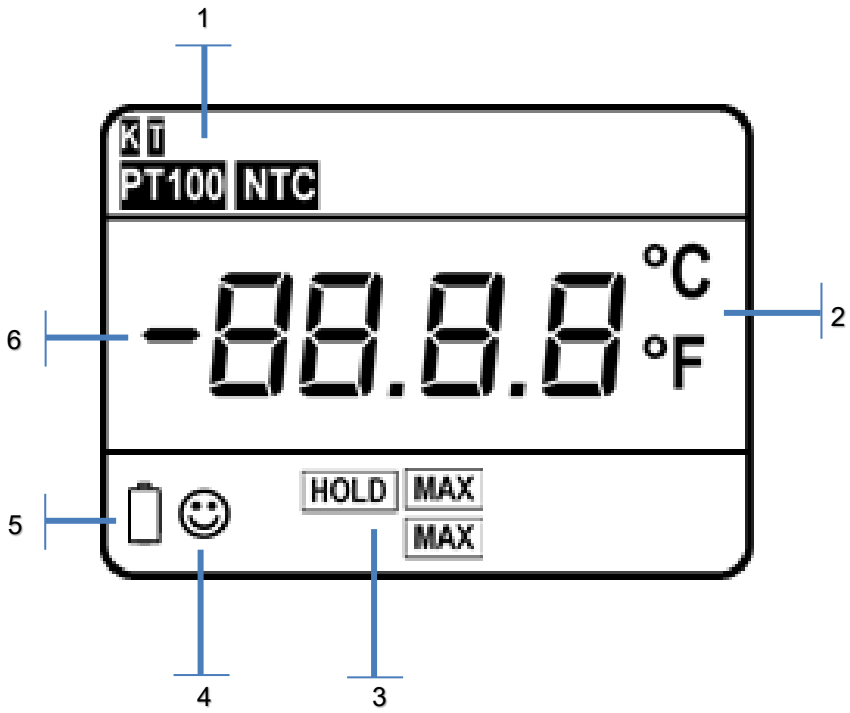
1. DESCRIPTION OF THE INSTRUMENT

1.1 Display LCD



Display

(1) ..... Type of the probe
(2) ..... Unit of measurement
(3)..... MIN / MAX / HOLD indicators
(4) ..... Stability indicator
(5) ..... Low battery indicator, when appears replace the batteries
(6) ..... Measurement value

1.2 Keypad description

keypad

1.2.1 Keypad operations

Momentary press <1,5 seconds, Long press >1,5 seconds.

1.2.2 Switching on the instrument

Press ⏻ to power on the instrument:

The display shows the model, the firmware version and the values of the internal settings.
The instrument is now ready to measure.

1.2.3 Switching off the instrument

In the measurement mode, press and hold ⏻ for 3 seconds to turn off the instrument.

1.3 Function of the keys

key	Press	Description
	Momentary press	• With the meter turned off, press this button to turn it on. • During setup and memory recall (RM), press to return to measurement mode.
	Long press	• During measurement, press and hold for 3 seconds to turn off the instrument.
	Momentary press	• In the measurement mode, press to start recording the minimum and maximum values. • While recording MIN / MAX, press to display the value of MIN / MAX. • Used to scroll through and change the values of the parameters of the setup menu.
	Long press	• Hold for 3 seconds to exit the MIN / MAX recording.
	Momentary press	• Used to lock / unlock the reading. • Used to scroll through and change the values of the parameters of the setup menu.
	Momentary press	• In the measurement mode, press to enter setup. • During setup: Press to select/confirm the program. • During the calibration, press to confirm the calibration.

2. TEMPERATURE MEASUREMENT

2.1 First power-on

At the first start you must set the following parameters:

- Select the unit of the measurement °C / °F P6.1 all models
- Select the type of the probe to be used Tc K/T P7.1 only Temp7 K/T

For additional settings, refer to the section Setup menu.

2.2 Measurement

Always connect the probe before turning on the power.

Turn ON the meter with ⏻. After the initial self-diagnosis the instrument enters directly into the measurement mode.

2.3 Place the probe in the measuring point and wait for the stability.

When the value is stable and the icon of stability ☺ appears, you can take the reading.

2.4 Min / Max function

While measuring press Min/Max to start the recording of the Min/Max values. The MIN MAX icons will start flashing on the display.

Press once Min/Max to see the maximum value reached until that time, press another time to see the minimum value reached until that time. If you press again then the meter will again start recording the Min/Max values with the icons flashing on the display.
When viewing the Min/Max value, the recording stops because the display isn't showing the actual reading but the same value for minimum and maximum recorded.

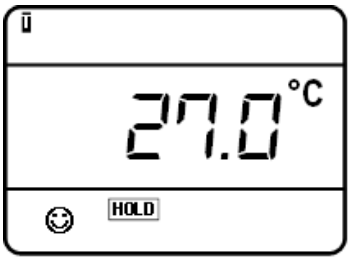
To exit from the recording of the Min/Max values, hold pressing Min/Max for at least 3 seconds, the MIN MAX icons will disappear.

Warning:

If the instrument is set to the automatic shutdown then the instrument will turn off after 20 minutes. If you want to record the minimum and maximum values over a longer period than it's necessary to disable the auto power off P6.8

2.5 Hold Function

During the measurement press HOLD key to lock the value. The display will show HOLD icon and the value will freeze.
Press again to unlock the value.



This feature can be particularly useful when after performing the measurement you must move with the instrument to write the value.

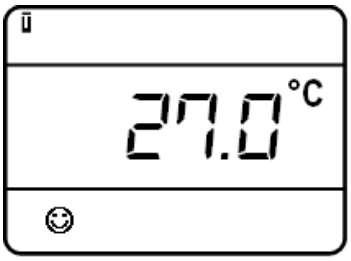
Note:

During the recording of Min/Max values the hold function is disabled.

3. OTHER FUNCTIONS

3.1 Stability Criteria

When the reading is stable the display shows ☺. If this icon does not appear or blinks, do not consider the reading as the final value. Always wait for the stability of the measurement.



3.2 Auto Power off

This meter powers off automatically after 20 minutes of inactivity. To deactivate auto power-off go to the parameter P6.8 of setup menu and select Off.

3.3 Select the type of thermocouple probe (only Temp7 K/T)

Go to the parameter P7.1 of setup menu and select the type of probe to be used.

K Thermocouple K (Yellow connector)

T Thermocouple T (Blue connector)

3.4 Offset adjustment

All instruments are factory pre-calibrated and remain stable over time, but in the event of an error in the reading, you can recalibrate the instrument to eliminate this error.
To recalibrate the instrument at 0.0 ° C, proceed as follows:

- Make the ice with double-distilled water.
- Put the ice cubes in a 500ml beaker up to half of the volume
- Add distilled water up to ¾ of the volume
- Place the beaker on a magnetic stirrer with gentle stirring.
- Immerse the probe in the beaker, making sure it is submerged in water and does not touch the wall of the beaker.
- Cover the beaker with polystyrene to isolate the mixture of water / ice from the air as much as possible.
- Allow to stir for about 10 minutes.
- In this way you reach a temperature of 0.0 ° C

If the meter reads 0.0 ° C (± accuracy of the measuring chain) then it means that the instrument is operating properly and no adjustment is necessary, otherwise go to parameter P7.2 of the setup menu, adjust the value with the arrow keys and confirm with SETUP.

The adjustment made at 0.0°C takes effect over the entire range of measurement, for example if you correct to -1.0 ° C, then the measurement moves of -1.0°C over the entire field.
The adjustment made in this way is kept in memory after turning off the meter and also when replacing the batteries.

In case you change the probe you must restore the factory calibration in setup menu P7.6 and proceed, if necessary, with a new calibration.

4. PARAMETER SETTINGS

During measurement mode press SETUP to enter in the setup menu.

Press Min/Max and HOLD keys to scroll setup menu: P6.0→P7.0

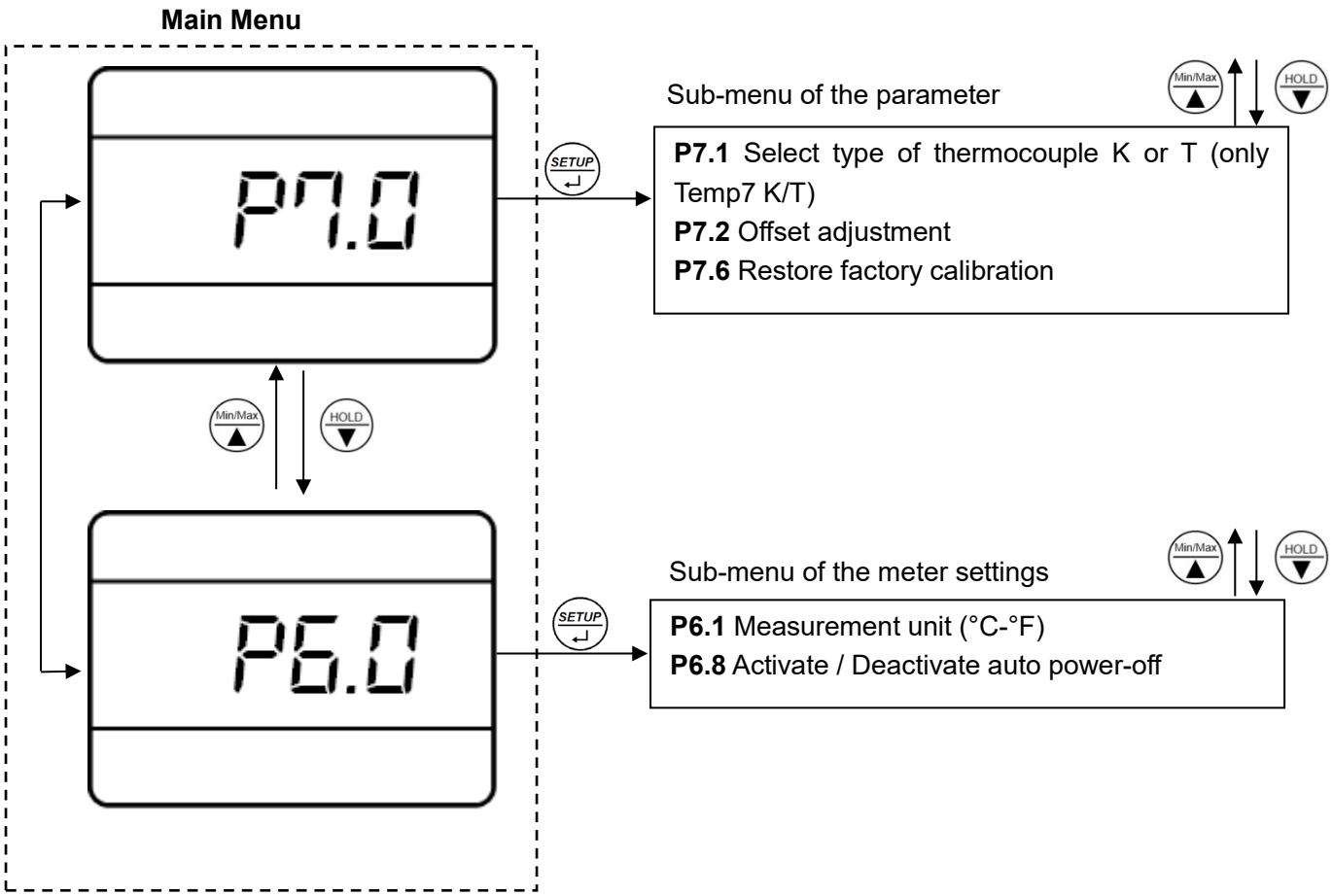
P6.0: Settings of the meter
P7.0: Settings of the parameter Temperature

Press SETUP key to enter in the selected menu and to confirm the changes.

Press Min/Max and HOLD keys to scroll the sub-menus and to change the values.

Anytime press ⏻ key to exit from setup menu and to return in the measurement mode, the changes made and confirmed with SETUP key will be saved.

4.1 Setup Menu



Parameters of the setup menu and factory default settings

Parameter	Description	Display	Settings	Default setting
P6.1	Measurement unit	Unit	°C - °F	°C
P6.8	Auto Power-off	AoFF	On - Off	On
P7.1	Select type of thermocouple K or T*		K / T	K
P7.2	Offset adjustment		± 5 °C	----
P7.6	Restore factory calibration	Ft	No - Yes	No

* only for Temp7 K/T

Note:

To power off the meter exit from SETUP!

5. DISPOSAL OF ELECTRONIC DEVICES

The electrical and electronic equipment marked with this symbol cannot be disposed of in public landfills.
According to the UE Directive 2002/96/EC, the European users of electrical and electronic equipment can return it to the dealer or manufacturer upon purchase of a new one.
The illegal disposal of electrical and electronic equipment is punished with an administrative fine.

6. TECHNICAL SPECIFICATIONS

			
Model	***Temp 7 RTD Basic***	***Temp 7 NTC***	***Temp 7 K/T***
For Probes	**Pt100**	**NTC 30K**	**Thermocouple K - T**
Measuring range	-200 … +999 °C	-50 ... +150 °C	K: -200 … 1350 °C T: -250 ... +400 °C
Resolution	0,1 °C from -99,9 to +199,9 °C 1 °C from -200 to +999 °C	0,1 °C from -50,0 to +150,0 °C	K: 0,1 °C from -99,9 to +199,9 °C 1 °C from -200 to +1350 °C T: 0,1 °C from -99,9 to +199,9 °C 1 °C from -250 to +400 °C
Accuracy (meter only)	±2 °C (-200 … -100 °C) ±0,2 °C (-99,9 … +199,9 °C) ±2 °C (+200 … +850 °C)	±0,2 °C (-50,0 … +150,0 °C)	For type K - T ±0,1% of reading / ±0,4 °C (under – 150 °C) ±0,25% of reading / ±1 °C (under – 150 °C)
Datalogger	–	–	–
Sampling time	–	–	–
Min/Max reading	Yes	Yes	Yes
Stability indicator	Yes fix	Yes fix	Yes fix
Hold function	Yes	Yes	Yes
Working conditions	Temp: -20 … +65 °C UR: 10 … 90% (no condensation)	Temp: -20 … +65 °C UR: 10 … 90% (no condensation)	Temp: -20 … +65 °C UR: 10 … 90% (no condensation)
Waterproof class	IP56	IP56	IP56
CE conformity	EN61326-1/A1: 1998 (EU EMC)	EN61326-1/A1: 1998 (EU EMC)	EN61326-1/A1: 1998 (EU EMC)
Auto power-off	After 20 min (deactivable)	After 20 min (deactivable)	After 20 min (deactivable)
Display	LCD	LCD	LCD
Inputs	Single 3-pin round connector	Single CINCH connector	Single ANSI connector
Power supply	3 x 1,5V “AA” alkaline	3 x 1,5V “AA” alkaline	3 x 1,5V “AA” alkaline
Batteries life	>750 hours	>750 hours	>750 hours
Weight and dimensions (without probe)	86 x 196 x 33 mm / 295 g	86 x 196 x 33 mm / 295 g	86 x 196 x 33 mm / 295 g
Weight and dimensions carrying case (without	260 x 135 x 75 mm / 580 g	260 x 135 x 75 cm / 580 g	260 x 135 x 75 cm / 580 g