



## THERMO-HYGROMETER LVT-15

### User Manual

#### **Description:**

The compact thermo-hygrometer LVT-15 is used for measuring air temperature and relative air humidity (RH). These measurements enable the device to compute the value of the dew point. The instrument is equipped with a 3,5mm jack for additional temperature measurement (STP-10A). The kit includes:

1. LVT-15 device
2. batteries
3. case
4. manual

**Note:** The device is supplied with the case

**Note:** Surface temperature sensors are not included, they are sold separately (Art.: STP-10A).



#### **Specifications:**

Power supply:	batteries, 2xAA 1,5 volt
Current consumption:	34mA
Dimensions:	146mm*79mm*26mm (H×B×T)
Weight:	200 g
Display:	monochromatic with backlight, resolution:128x64 pixel
Operating conditions:	5°C ~ 40°C <80% of rel.humidity without condensation



Measurement range:

Function	Range	Accuracy	Sensortype
airtemperature	-10 ~ +50°C	±0,3°C	Thermistor
air humidity	5 ~ 95% of relative air humidity	±2 %	capacitive sensor
dew point	-30 ~ +100°C	-	Calculates from rel. humidity and air temperature the dew point
Surface temperature as extra item (STP-10A)	-10 ~ +50°C	±0,5°C	STP 10A external 3,5 mm jack for thermocouple connector

The illustration shows the most important elements of the equipment:



• To switch on the measuring device, press the function button. When switched on, the device shows:

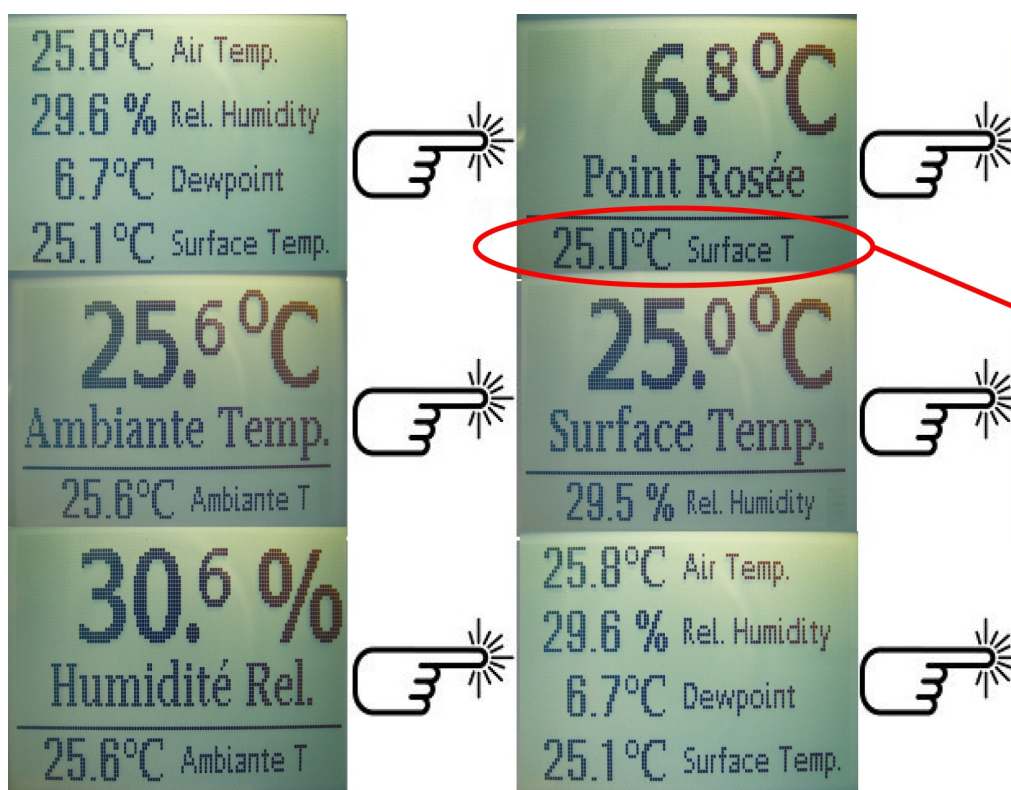
- air temperature
- relative humidity
- dew point
- surface temperature

25.8°C Air Temp.  
29.6 % Rel. Humidity  
6.7°C Dewpoint  
25.1°C Surface Temp.



**Note:** If bars „---”, like these „---” show up, they can indicate that the thermistor is not connected, or is damaged, or that the temperature range is excessive.

- Pressing the function key will cause sequential switching between the individual measured values. The value of the measured parameter is shown enlarged on the screen; in this way one can highlight the variable of interest. Other parameters are sequentially shown in this operating mode the bottom of the screen in „the infobar”. Press the function key again to have other values highlighted.
- Press of the function key six times repeatedly to activate the menu. Here the language setting, temperature unit, automatic switching off and the infobar can be changed.



The following options can be selected:

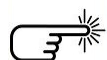
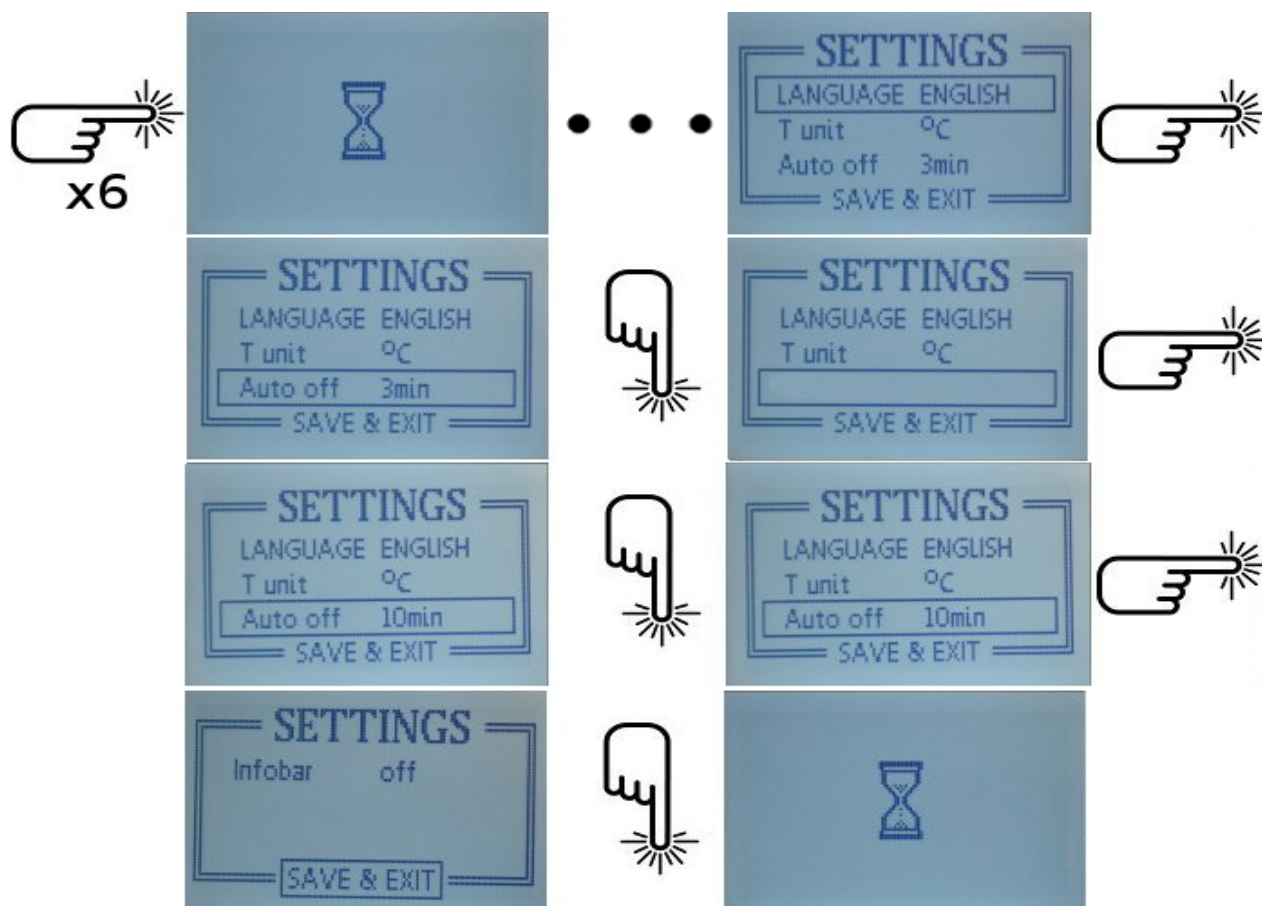
- Language [English, Deutsch]
- Temperature units [°C, °F]

1. Automatic switching off [ Off, 3Min., 5Min., 10Min.] – determines the length of downtime, after which switch off automatically. Downtime is the period during which the function key is not pressed. If the automatic switch off function is adjusted to „off”, the equipment can only be switched off manually.



○ The infobar [1sec, 2sec, 4sec] – determines the refreshing rate of the values in the infobar.  
In order to make changes, the desired option is to be selected with a click. Press the key for approximately 2 seconds, until the selected option begins to flash and becomes active. Press the key for another 2 seconds to deactivate the function. In order to get out of the setup menu and back into the measuring mode, select SAVE & EXIT, then keep the key pressed for 2 seconds.

The following pictures show the described procedure.



Press the function button



Press the functions button 6 times



Press and hold the function button for 2 seconds



## Switching - off the device

- In order to switch the device off, press and hold the function key for approx. 6 seconds. It cannot be done from the setup menu.
- The measuring can switch off automatically; if the function for automatic switching off is active (see section menu of the device).
- If the battery charge is so low that in fact it could negatively affect the measurement the device will automatically switch off, which is signalled earlier with the message „battery empty”.

## Practical tips

the air flow through

the cover of the sensor



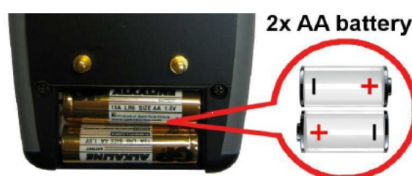
- The air humidity and air temperature sensor are behind a plastic screen that should not be covered or else free air circulation will be obstructed and measurements rendered inaccurate.
- The air humidity and air temperature sensor needs time, in order to adapt to new measuring conditions. Wait 2 minutes prior to activating the device. This time can be shortened by gently moving the device, which will force the air flow across sensor cover.
- The device can also measure the dew point. If the temperature of the assistance of a thermal element checked surface is lower or very similar to the dew point temperature, then condensation of water on the surface occurs, which is signalled acoustically and visually.

## Power supply

The LVT-15 hygrometer is powered by two disposable or rechargeable AA batteries

The battery status indicates the battery charge level. If an empty battery icon is displayed, replace the batteries with the same battery type. Do not combine a rechargeable with a disposable battery or a partially discharged with a full battery.

The figure below shows the location of the batteries in the battery compartment.







## **Warranty:**

Notwithstanding the statutory warranty claims, CAISSON provides a warranty in accordance with the laws of the Customer's country for a period of at least two years from the date of sale of the device to the end user. The warranty covers only those faults which are caused by defects in material or workmanship. A warranty claim must be provided with a dated proof of purchase. Warranty repairs can only be performed by an authorized distributor of CAISSON.

Warranty does not cover:

- misuse.
- use of force, damage caused by external factors or foreign bodies such as sand or water.
- damage caused by failure to comply with the user's instructions.
- normal wear and tear.

The warranty also excludes devices that are partially or entirely disassembled.