USER MANUAL

VT 110 - VT 115

Hotwire thermo-anemometer

Description of the device

1. OK key
2. Backlight key
3. Select key
4. On/Off/Esc key
5. Hold/min/max key

General features

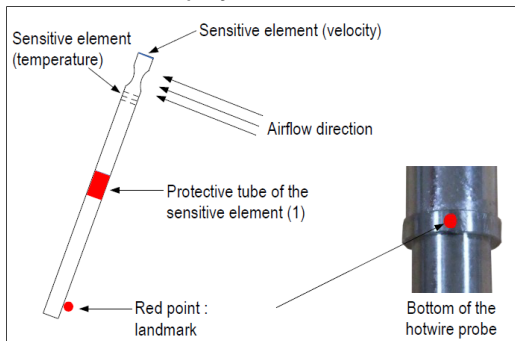|	
Measuring units	**Velocity (hotwire):** m/s, fpm, km/h **Airflow:** m³/h, cfm, l/s, m³/s **Temperature:** °C, °F
Measuring elements	Hotwire air velocity: thermistance with a negative temperature coefficient. Ambient temperature: NTC sensor
Display	4 lines, LCD technology. Dimensions 50 x 36 mm. 2 lines of 5 digits with 7 segments (value) 2 lines de 5 digits with 16 segments (unit)
Type of probe	VT 110: Stainless hotwire probe / VT 115: Telescopic hotwire probe bent at 90°
Cable	Straight, 2 m length
Housing	ABS, protection IP54
Keypad	5 keys
European directives	Directives EMC 2014/30/EU and EN 61010-1
Power supply	4 batteries AAA LR03 1.5 V
Battery life	180 hours
Ambience	Neutral gas
Conditions of use (°C,% RH, m)	From 0 to +50 °C. In non-condensing conditions. From 0 to 2000 m.
Oprating temperature (probe)	From 0 to +50 °C
Storage temperature	From -20 to +80 °C
Auto shut-off	Adjustable from 0 to 120 min
Weight	250 g

Technical specifications

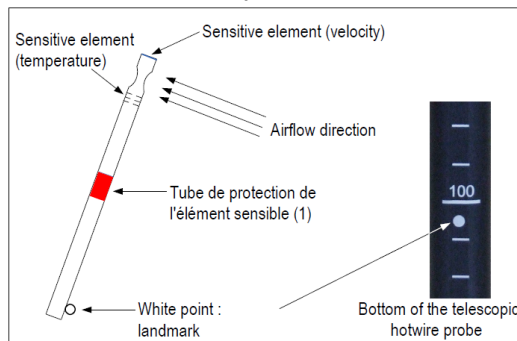| Parameters	Accuracy*	Measuring range	Resolution
Velocity (hotwire)	From 0.15 to 3 m/s: ±3% of reading ±0.05 m/s From 3.1 to 30 m/s: ±3% of reading ± 0.2 m/s	From 0.15 to 30 m/s	0.01 m/s 0.1 m/s
Airflow	±3% of reading ±0.03 x surface (cm²)	From 0 to 99 999 m³/h	1 m³/h
Temperature	±0.3% of reading ± 0.25 °C	From -20 to +80 °C	0.1 °C

[1]All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

Perform a measurement

- Turn on the device by pressing on "On/Off/Esc".
  The device displays its name "VT110" or "VT115" then the measured values.
- Put the probe to the required location.
  The device displays the measurements of velocity or airflow and of temperature.

VT110: Standard hotwire probe

VT115: Telescopic hotwire probe

⚠️ **Before any device usage with the standard or telescopic hotwire probe standard, please lower the protective tube (1) of the sensitive element.**
Always use the hotwire probe with the red point in front of the flow.
Always use the telescopic hotwire probe with the white point in front of the flow.

Perform an average in velocity

During a measurement:
- Press on "OK", "Start" displays on screen.
- Press again on "OK", the average calculation is launched, "End" displays on screen and "AVG" blinks.
- Press on "OK" to end the average calculation, the average displays.
- Press again on "OK" to display the maximum and minimum values measured during the average calculation.
- Press on "On/Off/Esc" to exit the average function and return to the measurements display.

Measure and display the airflow

It's possible to measure and display the airflow in place of the velocity.
The device is on and displays the velocity and temperature measurements.
- Press on "Select".
  "MODE" blinks.
- Press on "OK", the mode currently used blinks at the bottom of the screen.
- Press on "Select" to select the "FLOW" mode.
- Press on "OK".
- "CONE" blinks on screen, press on "Select" to make appear "RECT", then "CIRC".
- Press on "OK" to select "RECT" or "CIRC" according to the type of sheath or cone "CONE" for a measurement with an airflow cone.
- If "RECT" or "CIRC" is selected, the measuring unit of the type of sheath displays.
  Press on "Select" to select the unit: mm or inch then press on OK to adjust the section size:
  If the type of selected sheath is circular: "DIAM" displays and the first digit blinks.
  Press on "Select" to select its value then press on "OK" to validate. Perform the same procedure to select the value of the following digits (to return to the previous digit press on "On/Off/Esc"). When the last digit is adjusted, press on "OK" to validate. The device returns to the display of airflow and temperature measurements.
  If the type of selected sheath is rectangular: "LENGT" displays and the first digit blinks.
  Press on "Select" to select its value then press on "OK" to validate. Perform the same procedure to select the value of the following digits (to return to the previous digit press on "On/Off/Esc"). When the last digit is adjusted, press on "OK". "WIDTH" to adjust the width also displays on screen, perform the same procedure to select the digits value, when the last digit is adjusted, press on "OK" to validate. The device returns to the display of airflow and temperature measurements.
- If "CONE" is selected: "CONE" displays on screen and the type of cone blinks: K35, K75, K120, K150.
  Press on "Select" to select the type de cone, then press on "OK" to validate. The device returns to the display of airflow and temperature measurements.

ℹ️ **The length, the width and the diameter of the section are adjustable from 1 to 3000 mm.**

Freeze the measurement

During a measurement:
- Press on "Hold/min/max" to freeze the measurement.
  "Hold" displays on screen and the measurements of velocity or airflow and of temperature are frozen.
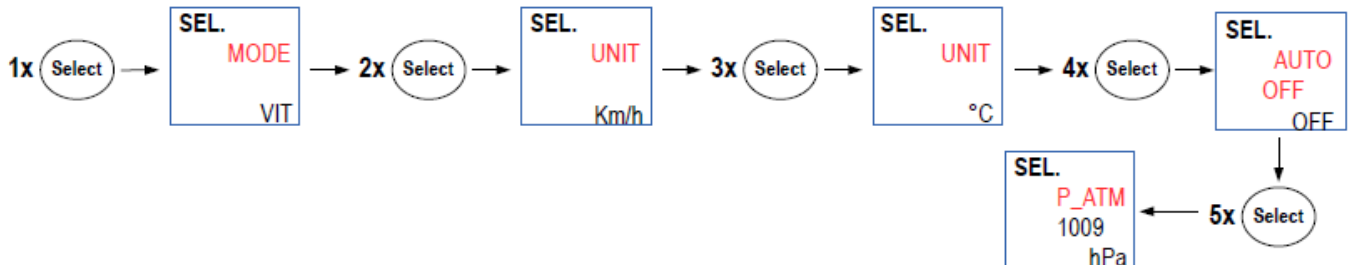- Press on "On/Off/Esc" to return to the measurements display.

Display the minimum and the maximum

Once the measurement is frozen:
- Press on "Hold/min/max":
  The device displays the maximum value of velocity or airflow measured since the last questioning at the top of the screen and the minimum value of velocity or airflow measured since the last questioning at the bottom of the screen.
- Press on "Hold/min/max":
  The device displays the maximum value of temperature measured since the last questioning at the top of the screen and the minimum value of temperature since the last questioning at the bottom of the screen.
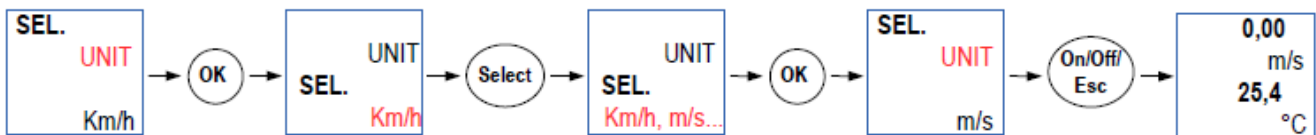- Press on "On/Off/Esc" to return to the measurements display.

Adjust the device

Device drop-down menu

Select the measuring unit in velocity

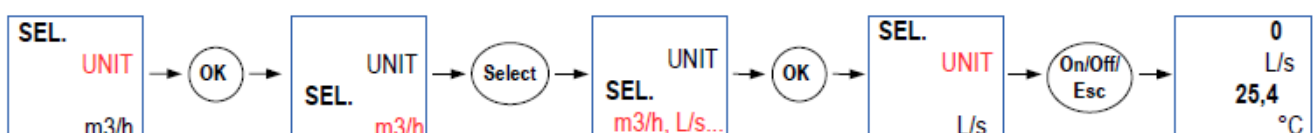The device is on and in velocity mode.
- Press on "Select".
  "MODE" blinks on screen.
- Press again on "Select".
  "UNIT" blinks on screen.
- Press on "OK", the measuring unit currently used blinks at the bottom of the screen, then press on "Select" to select the required measuring unit: fpm, km/h, m/s.
- Press on "OK" to validate.
  "UNIT" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.

Select the measuring unit in airflow
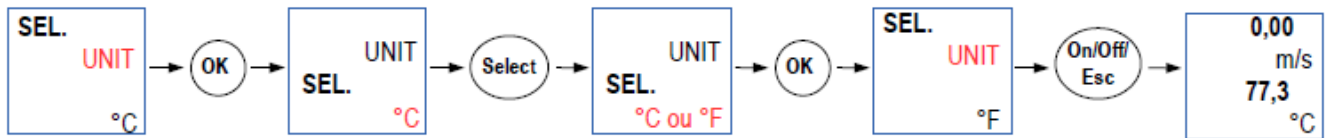
The device is on and in airflow mode.
- Press on "Select" until "UNIT" blinks on screen with the airflow unit displayed below.
- Press on "OK".
  The unit currently used blinks on screen.
- Press on "Select" to select the required measuring unit: m³/h, L/s, fcm or m³/s.
- Press on "OK" to validate.
  "UNIT" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.

Select the measuring unit in temperature
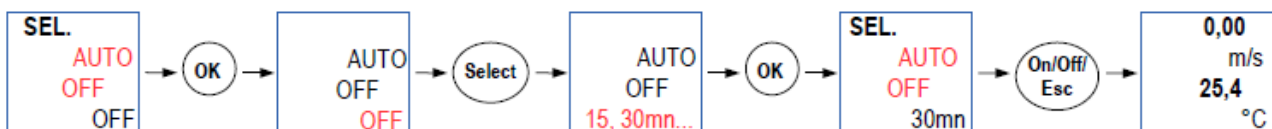The device is on and displays the measurements.
- Press on "Select" until "UNIT" blinks on screen with the temperature unit displayed below.
- Press on "OK".
  The unit currently used blinks on screen.
- Press on "Select" to select te required measuring unit: °C, °F.
- Press on "OK" to validate.
  "UNIT" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.

Adjust the auto shut-off
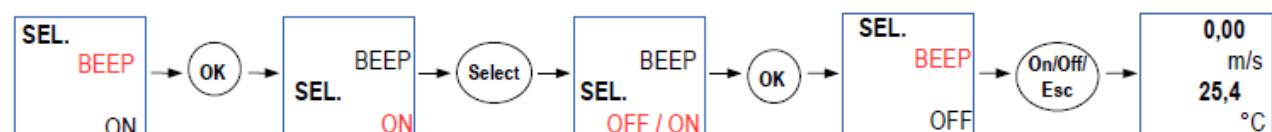The device is on and displays the measurements.
- Press on "Select" until "AUTO OFF" blinks on screen.
- Press on "OK".
  The time before device auto shut-off blinks on screen.
- Press on "Select" to select the time before device auto shut-off: 15, 30, 45, 60, 75, 90, 105, 120 minutes or OFF.
- Press on "OK" to validate.
- Press on "On/Off/Esc" to return to the measurement display.

Activate or deactivate the keys beep
The device is on and displays the measurements.
- Press on "Select" until "BEEP" blinks on screen.
- Press on "OK".
  "OFF" or "ON" blinks on screen.
- Press on "Select" to activate the keys beep "ON" or deactivate the keys beep "OFF".
- Press on "OK" to validate.
- Press on "On/Off/Esc" to return to the measurement display.

Activate the backlight

The device is on and displays the measurements.
- Press on "Backlight" to activate the device backlight.
- To deactivate the backlight press again on "Backlight".

Change the batteries

- Remove the front part at the back of the device.
- Change the old batteers by AAA LR03 1.5 V batteries.
- Replace the front.

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