

USER MANUAL

LV110 - LV111 - LV117

Vane probe thermo-anemometer

Description of the device

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



General features

Measuring units

LV 111 - LV 117 - LV 110: m/s, fpm, km/h
All models (airflow): m³/h, cfm, l/s, m³/s
All models (temperature): °C, °F

Measuring elements	Air velocity: Hall effect sensor / 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 of 5 digits with 16 segments (unit)
Vane diameter	LV111: Ø 14 mm / LV117: Ø 70 mm / LV110: Ø 100 mm
Cable	Coiled, 0.45 m length, extension 2.4 m
Housing	ABS, protection IP54
Keypad	5 keys
European directives	2014/30/EU EMC; 2014/35/EU Low Voltage; 2011/65/EU RoHS II; 2012/19/EU WEEE
Power supply	4 batteries AAA LR03 1.5 V
Battery life	58 hours ⁽¹⁾
Ambience	Neutral gas
Conditions of use (°C, %RH, m)	From 0 to +50 °C. In non condensing conditions. From 0 to 2000 m.
Operating temperature (probe)	From 0 to +50 °C
Storage temperature	From -20 to +80 °C
Auto shut-off	Adjustable from 0 to 120 min
Weight	390 g

Technical specifications

Parameters	Accuracy ⁽¹⁾	Measuring range	Resolution
Air velocity	LV111 (Ø 14 mm): from 0.8 to 3 m/s: ±3% of reading ±0.1 m/s From 3.1 to 25 m/s: ±1% of reading ±0.3 m/s	From 0.8 to 25 m/s	0.1 m/s
	LV110 (Ø 100 mm): from 0.3 to 3 m/s: ±3% of reading ±0.1 m/s From 3.1 to 35 m/s: ±1% of reading ±0.3 m/s	From 0.3 to 35 m/s	0.01 m/s, 0.1 m/s
	LV 117 (Ø 70 mm): from 0.4 to 3 m/s: ±3% of reading ±0.1 m/s From 3.1 to 35 m/s: ±1% of reading ±0.3 m/s	From 0.4 to 35 m/s	0.1 m/s
Airflow All models	±3 % of reading ±0.03 x area (cm²)	From 0 to 99 999 m³/h	1 m³/h
Temperature All models	±0.4 % of reading ±0.3 °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 "LV110", "LV111" or "LV117".
- Put the probe to the required location.
The device displays the velocity and temperature measurement.

Freeze the measurement

During a measurement:

- Press once on "Hold/min/max".
"Hold" appears on screen and the measurement is frozen.
- Press on "On/Off/Esc" to exit the hold function.
The device returns to the measurement 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 again 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 measured since the last questioning at the bottom of the screen.
- Press on "On/Off/Esc" to return to the measurements display.

Perform an average in velocity

The device is on and displays the measurement.

- Press on "OK".
"START" displays on screen.
- Press on "OK", the average calculation is launched, "END" displays on screen, "AVG" blinks.
- Press on "OK" to stop the calculation, the average displays.
- Press on "OK" to display the maximum and minimum values measured during the calculation of this average.
- Press on "On/Off/Esc" to exit the average function and return to the measurements display.

Display and measure the airflow

It is possible to display and to measure the airflow in place of the velocity.

The device is on and displays the velocity and temperature measurements.

- Press on "Select".
- "MODE" blinks on screen.
- Press on "OK".
"VELO" blinks at the bottom of the screen.
- Press on "Select" to select the "FLOW" mode then press on "OK" to validate.
Depending on the device type, "CIRC", "K 25 85", "CONE" or "RECT" blinks at the bottom of the screen.
- Press on "Select" to select rectangular "RECT", "CIRC", "K 25 85" (LV110) or "CONE" (LV111) for a measurement with an airflow cone then press on "OK".
If "RECT" or "CIRC" is selected, the measuring unit of the type of duct displays.
- Press on "Select" to select the unit: mm or inch then press on "OK" to validate.
- **If the type of selected duct 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 values 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 duct is rectangular: "LENGT" displays on screen 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 values of 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 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.

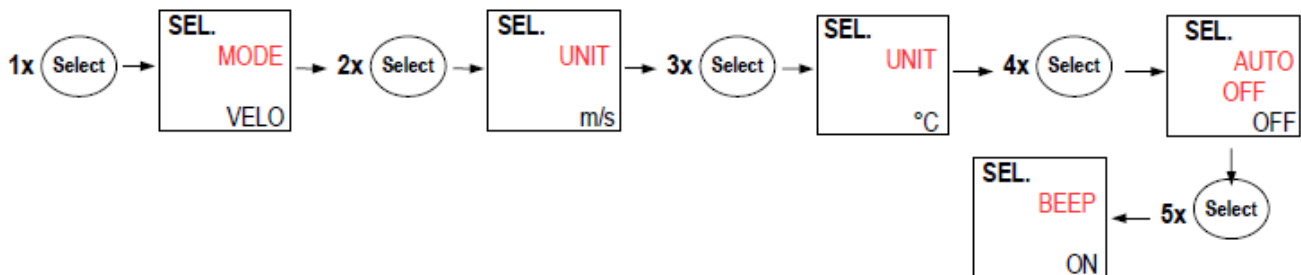
- If **"K 25 85" is selected (LV110)**: the device returns to the measurements display.
- If **"CONE" is selected (LV111)**: "CONE" displays on screen and the cone type blinks: K35, K75, K120, K150.
- Press on "Select" to select the type of cone, then press on "OK" to validate. The device returns to the display of airflow and temperature measurements.



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

Adjust the device

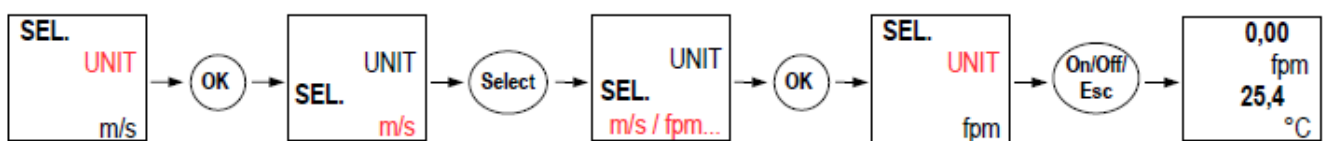
Device drop-down menu



Select the measuring unit in velocity

The device is on and in velocity mode.

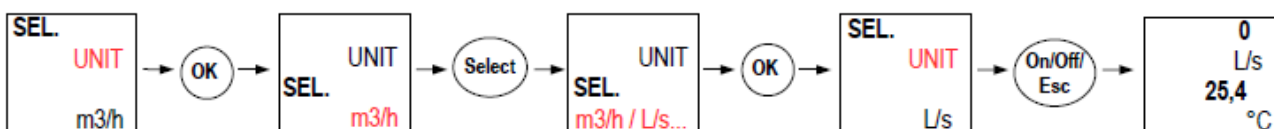
- Press on "Select" until "UNIT" blinks on screen.
- Press on "OK".
The unit currently used blinks on screen.
- Press on "Select" until the required unit appears: m/s, fpm or km/h.
- Press on "OK" to validate the unit selection.
"UNIT" blinks on screen.
- Press on "On/Off/Esc" to return to the measurements display.



Select the measuring unit in airflow

The device is on and in airflow mode.

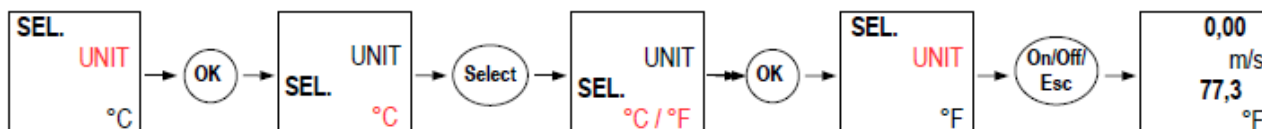
- Press on "Select" until "UNIT" blinks on screen.
- Press on "OK".
The unit used currently blinks on screen.
- Press on "Select" until the required unit appears: m³/h, L/s, cfm or m³/s.
- Press on "OK" to validate the unit selection.
"UNIT" blinks on screen.
- Press on "On/Off/Esc" to return to the measurements display.



Select the measuring unit in temperature

The device is on and displays the measurements.

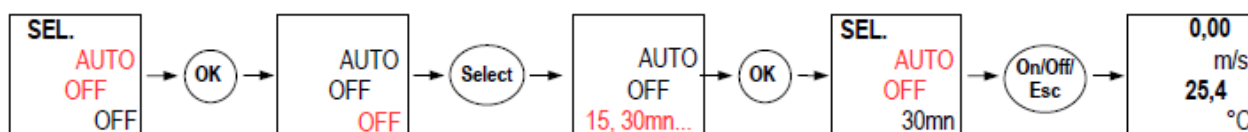
- Press on "Select" until "UNIT" blinks on screen with the unit temperature displayed below.
- Press on "OK".
The unit currently used blinks at the bottom of the screen.
- Press on "Select" until the required unit appears: °C or °F.
- Press on "OK" to validate.
"UNIT" blinks on screen.
- Press on "On/Off/Esc" to return to the measurements display.



Adjust the auto shut-off

The device is on and displays the measurement.

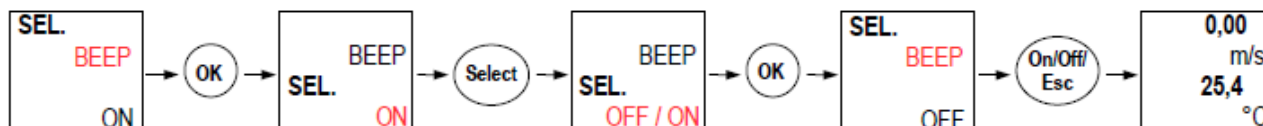
- Press on "Select" until "AUTO OFF" blinks on screen.
- Press on "OK".
The time before device auto shut-off blinks at the bottom of the screen.
- Press on "Select" until the required time before auto shut-off appears: 15, 30, 45, 60, 75, 90, 105, 120 minutes or OFF
- Press on "OK" to validate.
"AUTO OFF" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement.



Activate or deactivate the keys beep

The device is on and displays the measurement.

- 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 it "OFF".
- Press on "OK" to validate.
"BEEP" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.



Activate the backlight

The device is on.

- Press on "Backlight" to activate the device backlight.
- Press again on this key to deactivate the backlight.



Change the batteries

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



Hitma Instrumentatie
www.hitma-instrumentatie.nl
info@hitma-instrumentatie.nl
+31 (0)297 - 514 833

België / Belgique

www.hitma-instrumentatie.be
info@hitma-instrumentatie.be
+32 (0)2 - 387 28 64

