

Hotwire thermo-anemometer VT 110 – VT 115



KEY POINTS

- Easy to use
- Adjustable backlight
- Automatic average
- Hold-min-max functions
- Selection of units
- Airflow calculation

TECHNICALS FEATURES

| | |
|---|--|
| Measuring element | Hotwire air velocity: thermistance with a negative temperature coefficient. Ambient temperature: NTC sensor |
| Display | 4 lines, LCD technology. Sizes 50 x 36 mm. 2 lines of 5 digits with 7 segments (value) 2 lines de 5 digits with 16 segments (unit) |
| Probes | VT 110: Stainless hotwire probe VT 115: Telescopic hotwire probe bent at 90° |
| Cable | Straight, lenght: 2 m |
| Housing | ABS, protection IP54 |
| Keypad | 5 keys |
| Conformity | 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 |
| Operating temperature (instrument) | From 0 to +50°C |
| 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 | 250 g |

SPECIFICATIONS

| Measuring units | Measuring range | Accuracy** | Resolution |
|--|------------------------------------|---|---------------------|
| Velocity (hotwire) | | | |
| m/s, fpm, km/h | From 0.15 to 30 m/s | From 0.15 to 3 m/s: $\pm 3\%$ of reading ± 0.05 m/s | 0.01 m/s |
| | | From 3.1 to 30 m/s: $\pm 3\%$ of reading ± 0.2 m/s | 0.1 m/s |
| Airflow | | | |
| m ³ /h, cfm, l/s, m ³ /s | From 0 to 99 999 m ³ /h | $\pm 3\%$ of reading ± 0.03 x area (cm ²) | 1 m ³ /h |
| Temperature | | | |
| °C, °F | From -20 to +80°C | $\pm 0.3\%$ of reading ± 0.25 °C | 0.1°C |

* Except class 110 S

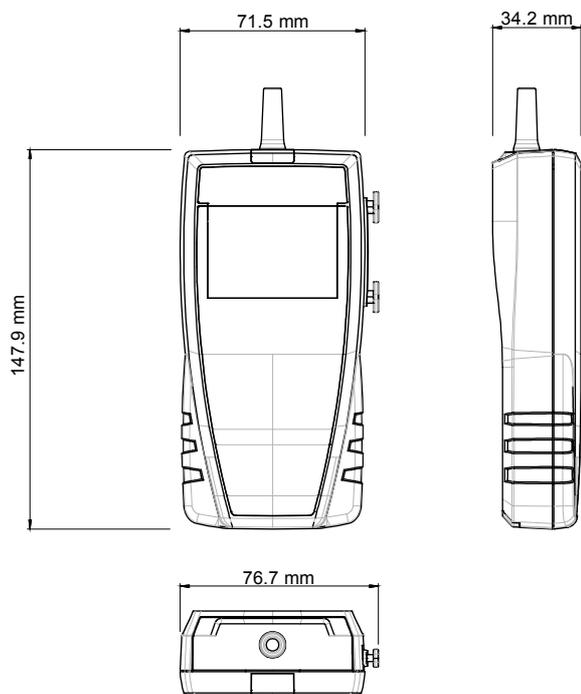
** All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.



FUNCTIONS

- Airflow calculation
- Airflow calculation with cone
- Selection of units (air velocity, airflow and temperature)
- Hold function
- Display of minimum and maximum values
- Adjustable auto shut-off
- Backlight
- Selection of cone
- Dimensions of rectangular and circular duct
- Automatic average
- Air velocity compensation in atmospheric pressure

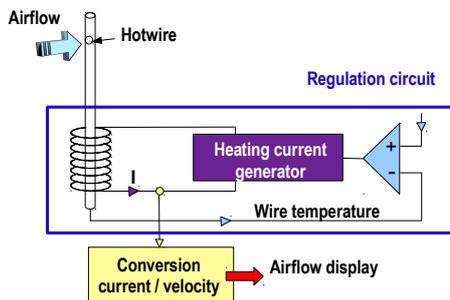
DIMENSIONS



OPERATING PRINCIPLES

Hotwire anemometer

A wire is continuously heated at a superior temperature than ambient and continuously cooled by airflow. Constant temperature is maintained by a regulation circuit. The heating current is proportional to the airflow velocity.



Thermometer: NTC probe

Probes with a negative temperature coefficient are thermistors with a resistance that decreases with the temperature, according to the equation below:

$$R_{(T)} = R_{(T_0)} e^{\left(\frac{\alpha}{100} \times (T_0 + 273.15)^2 \times \left(\frac{1}{T + 273.5} - \frac{1}{T_0 + 273.5} \right) \right)}$$

$R_{(T)}$ = resistance sensor value at temperature T

$R_{(T_0)}$ = resistance value of the temperature sensor at reference T_0

T and T_0 in °C

α and T_0 sensor specific constants

SUPPLIED WITH

- Instruments are supplied with:
- VT 110: Straight hotwire probe
- VT 115: Telescopic hotwire probe bent at 90°
- Calibration certificate*
- Transport case (ref: ST 110)



* Except class 110 S

ACCESSORIES

CQ 15: Magnetic protective housing



K 35 – 75 – 120 – 150: Airflow cone



MT 51: ABS transport case



MAINTENANCE

We carry out calibration, adjustment and maintenance of your instruments to guarantee a constant level of quality of your measurements. As part of Quality Assurance Standards, we recommend you to carry out a yearly checking.

GUARANTEE

Instruments have 1-year guarantee for any manufacturing defect (return to our After-Sales Service required for appraisal).

www.kimo.fr

Distributed by :



EXPORT DEPARTMENT

Tel : + 33. 1. 60. 06. 69. 25 - Fax : + 33. 1. 60. 06. 69. 29

e-mail : export@kimo.fr