CE

Hotwire thermo-anemometer
VT 110 – VT 115

KEY POINTS

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

TECHNICALS FEATURES

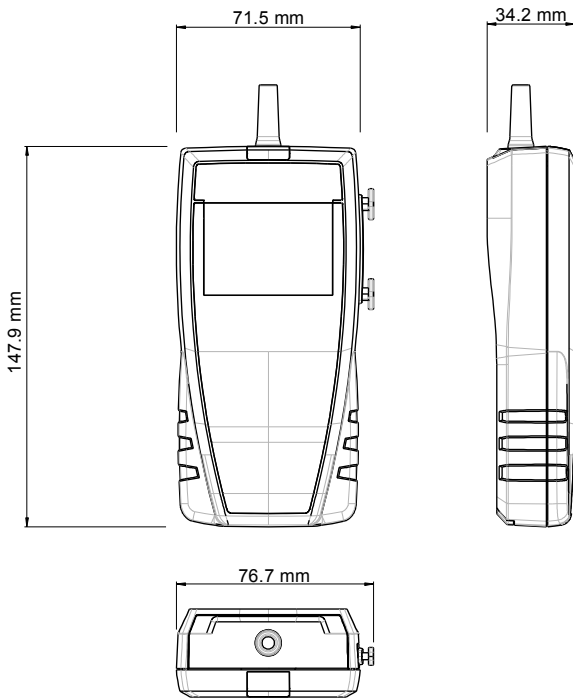|	
Measuring element	**Hotwire air velocity :** thermistance with a negative temperature coefficient. **Ambient temperature :** NTC sensor
Display	4 lines, LCD technology. Sizes 50 x 36 mm. 2 lines of 5 digits with 7 segments (value) 2 lines de 5 digits with 16 segments (unit)
Probes	**VT 110 :** Stainless hotwire probe **VT 115 :** Telescopic hotwire probe bent at 90°
Cable	Straight, lenght : 2 m
Housing	ABS, protection IP54
Keypad	5 keys
Conformity	Directives CEM 2004/108/CE and NF 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

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
- Airflow detection
- Selection of cone
- Dimensions of rectangular and circular duct
- Automatic average
- Air velocity compensation in atmospheric pressure

SPECIFICATIONS

Measuring units	Measuring range	Accuracy[1]	Resolution
Velocity (hotwire)			
m/s, fpm, km/h	From 0.15 to 30 m/s	From 0.15 to 3 m/s : ± 3% of reading ± 0.05 m/s	0.01 m/s
		From 3.1 to 30 m/s : ± 3% of reading ± 0.2 m/s	0.1 m/s
Airflow			
m³/h, cfm, l/s, m³/s	From 0 to 99 999 m³/h	±3% of reading ±0.03 x area (cm²)	1 m³/h
Temperature			
°C, °F	From -20 to +80 °C	± 0.3% of reading ± 0.25 °C	0.1 °C

[1]Etablies dans des conditions de laboratoire, les exactitudes présentées dans ce document seront maintenues sous réserve d'appliquer les compensations nécessaires ou de se ramener à des conditions identiques.
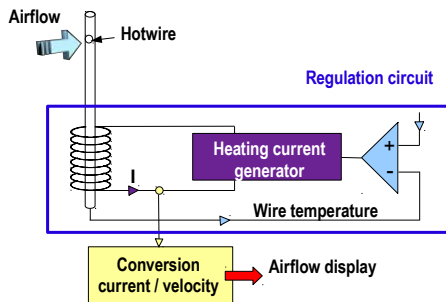
DIMENSIONS

71.5 mm

34.2 mm

147.9 mm

76.7 mm

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.

Airflow

Hotwire

Regulation circuit

Heating current generator

I

Wire temperature

Conversion current / velocity

Airflow display

Thermometer : CTN probe

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

$$R_{(T)} = R_{(T0)} e^{\left(\frac{\alpha}{100} \times (T_0 + 273.15)^2 \times \left(\frac{1}{T + 273.5} - \frac{1}{T_0 + 273.5}\right)\right)}$$

RT= resistance sensor value at temperature T

$R(T_0)$= valeur de la résistance du capteur de température 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)

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).

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