

Thermo-hygrometer-anemometer
VT 210

New

CE



KEY POINTS

- Measurement of temperature, hygrometry and air velocity (depending on models)
- Interchangeable modules
- Up to 6 measurements simultaneously
- Device/probe wireless communication

CONNECTIONS

Interchangeable measurement modules

1 device = several possible ranges and parameters

Wireless connection

Device/probe wireless connection

SMART-2014 system

Wireless and wired probes automatically recognized



REFERENCES

VT 210



Only portable instrument

VT 210 L / VT 210 TL



VT210 + SH100 probe (Ø100 mm vane probe of air velocity, airflow and temperature)
VT210 + SHT100 probe (Ø100 mm telescopic vane probe of air velocity, airflow and temperature)

VT 210 M



VT210 + SMT 900 probe (telescopic multifunction probe of air velocity, relative humidity and temperature)

VT 210 P / VT 210 TP



VT210 + SH14 probe (Ø14 mm vane probe of air velocity, airflow and temperature)
VT210 + SHT14 probe (Ø14 mm telescopic vane probe of air velocity, airflow and temperature)

VT 210 H / VT 210 TH



VT210 + SH70 probe (Ø70 mm vane probe of air velocity, airflow and temperature)
VT210 + SHT70 probe (Ø70 mm telescopic vane probe of air velocity, airflow and temperature)

VT 210 F / VT 210 TF



VT210 + SFC300 probe (multifunction probe of air velocity, airflow and temperature)
VT210 + SFC900 probe (telescopic multifunction probe of air velocity, airflow and temperature)

The new probes use a mini-DIN cable unique and pluggable that fits on every probes. This cable is supplied with each instrument.

The instruments are supplied in a transport case with a calibration certificate, a charger and a USB cable.



SPECIFICATIONS OF THE PROBES

Probes	Units	Measuring ranges	Accuracies*	Resolutions
Hotwire probe SFC 300 / SFC 900	Air velocity : m/s, fpm, km/h	From 0.15 to 1 m/s From 0.15 to 3 m/s From 3.1 to 30 m/s	$\pm 2\%$ of reading ± 0.03 m/s*** $\pm 3\%$ of reading ± 0.03 m/s $\pm 3\%$ of reading ± 0.1 m/s	0.01 m/s 0.01 m/s 0.1 m/s
	Airflow : m ³ /h, cfm, l/s, m ³ /s	From 0 to 99999 m ³ /h	$\pm 3\%$ of reading or ± 0.03 *area surface (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
Ø14 mm vane probe SH 14 / SHT 14	Air velocity : m/s, fpm, km/h	From 0 to 3 m/s From 3.1 to 25 m/s	From 0.8 to 3 m/s : $\pm 3\%$ of reading ± 0.1 m/s From 3.1 to 25 m/s : $\pm 1\%$ of reading ± 0.3 m/s	0.1 m/s
	Airflow : m ³ /h, cfm, l/s, m ³ /s	From 0 to 99999 m ³ /h	$\pm 3\%$ of reading or ± 0.03 *area surface (cm ²)	1 m ³ /h
	Temperature : °C, °F	From -20 to +80 °C	$\pm 0.4\%$ of reading ± 0.3 °C	0.1 °C
Ø70 vane probe SH 70 / SHT 70	Air velocity : m/s, fpm, km/h	From -5 to 3 m/s From 3.1 to 35 m/s	From 0.4 to 3 m/s : $\pm 3\%$ of reading ± 0.1 m/s From 3.1 to 35 m/s : $\pm 1\%$ of reading ± 0.3 m/s	0.1 m/s
	Airflow : m ³ /h, cfm, l/s, m ³ /s	From 0 to 99999 m ³ /h	$\pm 3\%$ of reading or ± 0.03 *area surface (cm ²)	1 m ³ /h
	Temperature : °C, °F	From -20 to +80 °C	$\pm 0.4\%$ of reading ± 0.3 °C	0.1 °C
Ø100 vane probe SH 100 / SHT 100	Air velocity : m/s, fpm, km/h	From -5 to 3 m/s From 3.1 to 35 m/s	From 0.3 to 3 m/s : $\pm 3\%$ of reading ± 0.1 m/s From 3.1 to 35 m/s : $\pm 1\%$ of reading ± 0.3 m/s	0.01 m/s 0.1 m/d
	Airflow : m ³ /h, cfm, l/s, m ³ /s	From 0 to 99999 m ³ /h	$\pm 3\%$ of reading or ± 0.03 *area surface (cm ²)	1 m ³ /h
	Temperature : °C, °F	From -20 to +80 °C	$\pm 0.4\%$ of reading ± 0.3 °C	0.1 °C
Multifonction probe SMT 900	Air velocity : m/s, fpm, km/h	From 0.15 to 3 m/s From 3.1 to 30 m/s	$\pm 3\%$ of reading ± 0.03 m/s $\pm 3\%$ of reading ± 0.1 m/s	0.01 m/s 0.1 m/s
	Relative humidity : %RH	From 5 to 95%HR	Accuracy** (Repeatability, linearity, Hysteresis) : $\pm 1.8\%$ RH (from 15°C to 25°C) Factory calibration uncertainty: ± 0.88 %RH Temperature dependence : $\pm 0.04 \times (T-20)$ %RH (if T<15°C or T>25°C)	0.1%RH
	Temperature : °C, °F	From -20 to +80 °C	$\pm 0.3\%$ de la lecture ± 0.25 °C	0.1 °C

*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 calibration compensation.

**As per NFX 15-113 standard and the charter 2000/2001 Hygrometers, GAL (Guaranteed Accuracy Limit) which has been calculated with a coverage factor value of 2 is $\pm 2.88\%$ RH between 18 and 28°C on the measuring range from 5 to 95%RH. Sensor drift is less than 1%RH/year.

***Ajustage et étalonnage spécifiques en option

VT210 instruments have the following functions for the measurement of temperature, hygrometry and air velocity :

CLIMATIC CONDITIONS MODULE :

- Selection of units
- Hold, min. and max. values

HYGROMETRY/TEMPERATURE PROBE :

- Audible alarm (two higher thresholds)
- Selection of units
- Hold, min. and max. values
- Stockage
- Impression

THERMO-ANEMOMETER :

- Calculation of airflow in ducts and with cones
- Selection of the section of the duct
- Automatic average
- Point/point average
- Automatic point/point average
- Integrated Pt100 temperature
- Hold, min. and max. values, standard deviation
- K2 factor

TECHNICAL SPECIFICATIONS OF THE VT 210

Connections	2 mini-DIN connections SMART-2014 probes and 1 micro-USB port for charging and PC connection
Power supply	Lithium-Ion battery
Autonomy	44 h with hot wire probe / 65 h with thermocouple module
Memory capacity	Up to 1000 dataset of 20 000 points
Operating temperature	From 0 to +50 °C
Storage temperature	From -20 to +80 °C
Auto shut-off	Adjustable from 15 to 120 minutes or Off
Weight	485 g
Operating environment	Neutral gas
Conformity	EMC 2004/108/CE and EN 61010-1 directives
Languages	French, English, Dutch, German, Italian, Portuguese, Swedish, Norwegian, Finn, Danish, Chinese, Japanese

AVAILABLE PROBES AND MODULES (OPTIONAL)



Airflow cones

Measuring range from 10 to 1200 m³/h depending on model



4 thermocouple channels module (M4TC)

Measuring range from -200 to +1760 °C (according to thermocouple)



Climatic conditions module (MCC)

Measuring ranges from 0 to +50 °C, from 800 to 1100 hPa and from 5 to 95%RH



Ø100 mm vane probe**

Measuring ranges from -5 to 35 m/s, from 0 to 99999 m³/h and from -20 to +80 °C



Wireless Ø70 mm vane probe**

Measuring ranges from -5 to 35 m/s, from 0 to 99999 m³/h and from -20 to +80 °C



Hygrometry probe*

Measuring ranges from 3 to 98%RH, from -50 to +100 °Ctd and -20 to +80 °C



Hygrometry probe*

Measuring ranges from 3 to 98%RH, from -50 to +100 °Ctd and from -40 to +180 °C



Optical tachometry probe (STA)

Measuring range from 0 to 60 000 tr/min



Contact tachometry probe (STA)

Measuring range from 0 to 20 000 tr/min

Large choice of temperature probes (see related datasheet) : ambient / contact / penetration / immersion...



*Also available in wireless model

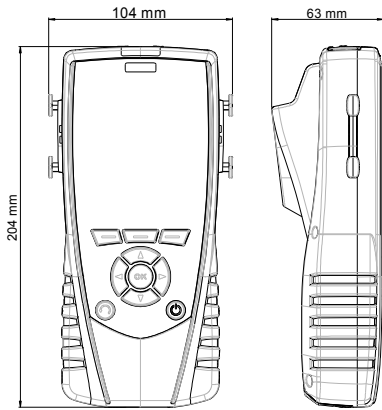
**Also available in telescopic model and in wireless model

DELIVERY KITS AND OPTIONS

Description	VT 210	VT 210 H	VT 210 TH	VT 210 L	VT 210 TL	VT 210 P	VT 210 TP	VT 210 F	VT 210 TF	VT 210 M
Hot wire probe (SFC 300)	○	○	○	○	○	○	○	√	○	○
Telescopic hot wire probe (SFC 900)	○	○	○	○	○	○	○	○	√	○
Ø14 mm vane probe (SH 14)	○	○	○	○	○	√	○	○	○	○
Ø14 mm telescopic vane probe (SHT 14)	○	○	○	○	○	○	√	○	○	○
Ø70 mm vane probe (SH 70)	○	√	○	○	○	○	○	○	○	○
Ø70 mm telescopic vane probe (SHT 70)	○	○	√	○	○	○	○	○	○	○
Ø70 mm wireless vane probe (SHF 70)	○	○	○	○	○	○	○	○	○	○
Ø100 mm vane probe (SH 100)	○	○	○	√	○	○	○	○	○	○
Ø100 mm telescopic wireless vane probe (SHT 100)	○	○	○	○	√	○	○	○	○	○
Ø100 mm wireless vane probe (SHF 100)	○	○	○	○	○	○	○	○	○	○
Multifonction probe (SMT 900)	○	○	○	○	○	○	○	○	○	√
ABS hygrometry probe (SHR 110)	○	○	○	○	○	○	○	○	○	○
Wireless ABS hygrometry probe (SHRF 110)	○	○	○	○	○	○	○	○	○	○
Stainless steel hygrometry probe (SHR 300)	○	○	○	○	○	○	○	○	○	○
Wireless stainless steel hygrometry probe (SHRF 300)	○	○	○	○	○	○	○	○	○	○
Tachometry probe (STA)	○	○	○	○	○	○	○	○	○	○
Thermocouple K, J, T and S probe	○	○	○	○	○	○	○	○	○	○
Pt100 SMART-2014 probe	○	○	○	○	○	○	○	○	○	○
Wireless Pt100 probe	○	○	○	○	○	○	○	○	○	○
4 thermocouple channels module (M4TC)	○	○	○	○	○	○	○	○	○	○
Climatic conditions module (MCC)	○	○	○	○	○	○	○	○	○	○
Calibration certificate	○	√	√	√	√	√	√	√	√	√
Transport case	√	√	√	√	√	√	√	√	√	√
Additional battery	○	○	○	○	○	√	√	√	√	√

√ : supplied with ○ : optional

FEATURES OF THE HOUSING



Material : ABS/PC and elastomer

Protection : IP54

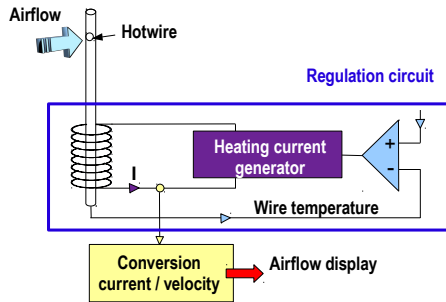
Display : LCD 120 x 160 px ;
Dimensions : 58 x 76 mm,
Backlight
Display of 6 measurements including 3
simultaneously

Key pad : elastomer, 10 keys

OPERATING PRINCIPLE

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 : Pt100 probe

Pt100 is a resistance with a positive temperature coefficient which varies according to the temperature. The higher the temperature is, the more the value of the resistance increases. ie : for 0°C ≈ 100 Ω - for 100°C ≈ 138,5 Ω.

ACCESSORIES



Datalogger : PC software for data recording and processing.



RTE : Telescopic extension length 1m bent at 90° for measuring probe



CSM : Mini-DIN / mini-DIN cable for probe



KIMP23 : Infrared printer



SAD : Backpack

MAINTENANCE

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

WARRANTY PERIOD

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

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