DATA SHEET

LV 130

Vane probe thermo-anemometer

- **Airflow calculation**
- **Selection of units**
- **Hold-min-max functions**
- **Automatic average**

Features

- Airflow calculation
- Airflow calculation with cone
- Automatic average
- Selection of units (air velocity, airflow and temperature)
- Hold function
- Display of minimum and maximum values
- Adjustable auto shut-off
- Backlight
- Detection of flow direction

Technical specifications

Parameters	Measuring units	Accuracy**	Measuring range	Resolution
Air velocity	m/s, fpm, km/h	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
Airflow	m³/h, cfm, l/s, m³/s	±3% of reading ±0.03 x area (cm²)	From 0 to 99 999 m³/h	1 m³/h
Temperature	°C, °F	±0.4% of reading ±0.3 °C	From 0 to +50 °C	0.1 °C

*Except class 110 S which is supplied with adjustment certificate.
**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.

General features

Measuring elements	**Air velocity:** Hall effect sensor **Ambient temperature:** NTC
Display	4 lines, LCD technology. Dimnsions 50 x 36 mm. 2 lines of 5 digits with 7 segments (value) 2 lines of 5 digits with 16 segments (unit)
Vane diameter	**Ø 100 mm**
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)
Ambiance	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

(1)Battery life given at 20 °C with alkaline batteries.

Operating principle

Air velocity: Hall effect sensor

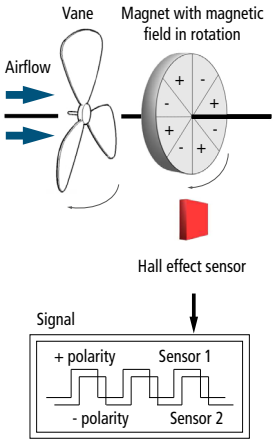
Rotation of the vane probe leads to a circular magnet of 8 poles. A dual Hall effect sensor,
placed next to the magnet captures the signals of magnetic field polarity transition. The
sensor signal is converted to electrical frequency and is proportional to the rotation velocity of the vane probe. Signal chronology allows to determine the rotation direction.

Thermometer: NTC probe

Negative temperature coefficient probes are thermistors with a resistance that decreases with temperature according to the equation below:

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

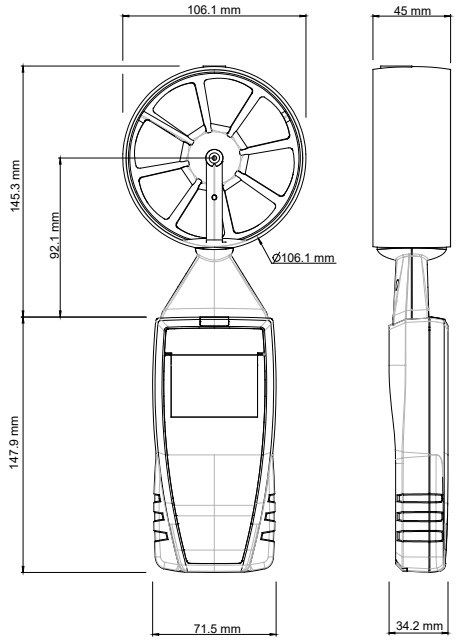
RT = resistance sensor value at temperature T
$R(T_0)$ = resistance sensor value at reference temperature T_0
T and T_0 in °C
α and T_0 sensor specific constants



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.

Dimensions (in mm)



Kit content

Designation	Sales reference	Description
LV 130	24626	Vane probe thermo-anemometer with calibration certificate and soft transport case
LV 130 S	24717	Vane probe thermo-anemometer with adjustment certificate and soft transport case

Certificates

Calibration certificate: A calibration is a comparison of the values of the instrument with those of a standard to determine a measurement error with an associated calibration uncertainty. A calibration certificate guarantees the traceability of measurements to national standards.

Adjustment certificate: An adjustment certificate is a document that ensures the conformity of the device with the tolerances of the data sheet. It ensures that the device has followed the manufacturing process.

Accessories

Designation	Sales reference	Description
CQ 15	24633	Magnetic protective housing
RTE	24632	Telescopic extension, 1 m length, with index at ±90°
K 25	12758	Airflow cone (200 x 200 mm, airflow: 10 to 400 m³/h)
K 85	21789	Airflow cone (350 x 350 mm, airflow: 10 to 400 m³/h)
MT 51	24636	ABS transport case
ST 110	24635	Soft transport case

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