THERMAL ANEMOMETER

WINDQX - SA.01

NO MOVING PARTS

PATENT U202332221

Model SA01

The SA01 model is a solid-state anemometer designed for digital air velocity measurement. It does not compromise on accuracy or precision, making it an excellent choice for troubleshooting HVAC systems and conducting commissioning work. Additionally, its robust design allows for permanent installation, enabling continuous monitoring of air velocity over time.

Features and Benefits

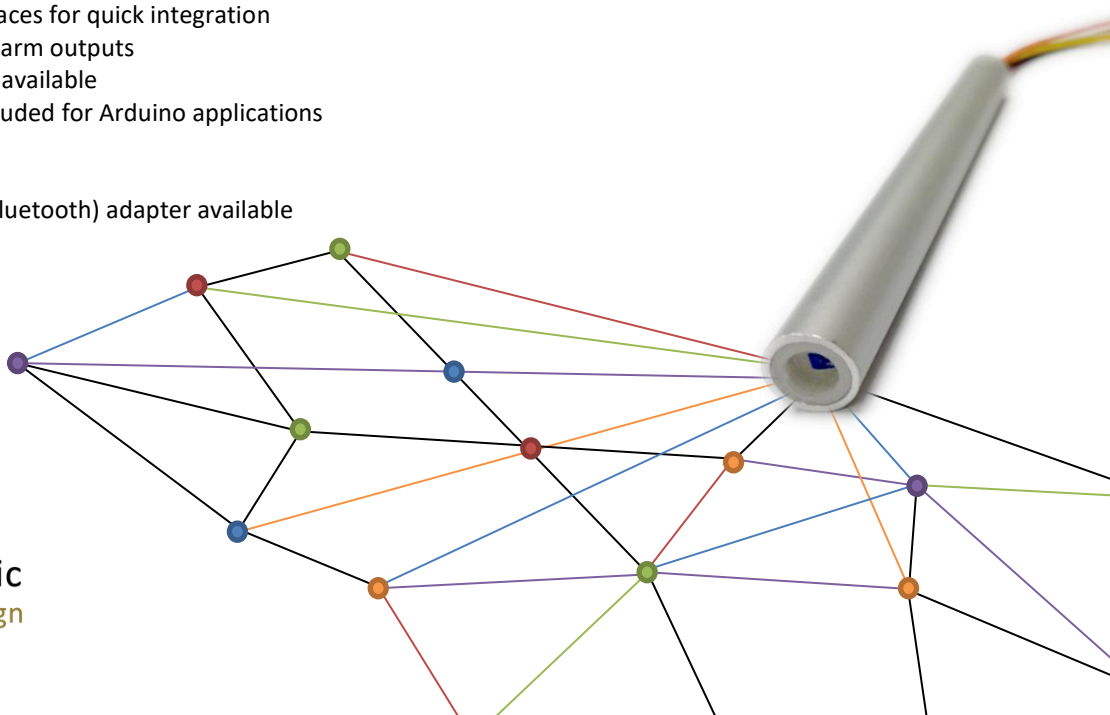
+ Accurate air velocity and temperature measurement
+ Easy integration
+ Hole-less measurements system
+ Omnidirectional reading
+ Calibration certificate included

Applications

+ HVAC system performance
+ Commissioning
+ Plant maintenance
+ Critical environment verification
+ Duct traverses

Additional Features and Benefits

+ Simultaneously measures temperature and velocity
+ Multiple connection interfaces for quick integration
+ Possibility of configuring alarm outputs
+ Multiple fixing accessories available
+ Downloading software included for Arduino applications
+ SERIAL TTL output data
+ RS485 adapter available
+ Radios (LoRa, LoRaWAN, Bluetooth) adapter available



Electronic Circuit Design

Technical specifications

	Measuringunits units	Accuracy*	Measuring range	Resolution
Air velocity	km/h	±(3% of value + 0.2 km/h) from 0 to 20km/h ±(3% of value + 0.5 km/h) from 20 to 60km/h ±(3% of value + 1 km/h) from 60 to 130km/h	From 0 to 130km From 130 to 200km**	0.1Km/h
Temperature	°C	±0.5 °C	From -10 to +60 °C	0.01 °C

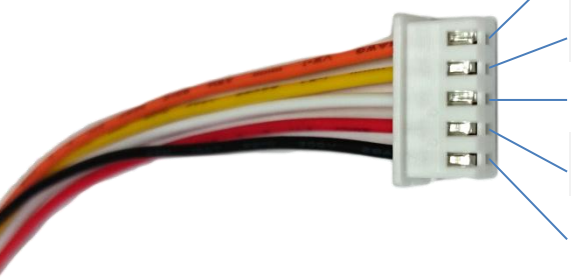
*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions.
** interpolated through the use of a calibration curve obtained from 0 to 130 km.

General features

Measuring element	Hotwire air velocity: heated PT100 sensor Ambient temperature: PT100 sensor combined with digital sensor*
Housing	ABS-PC and Aluminum, IP67**
Power supply	From 3.5 to 5.5V (perfect for 1 cell LiPo battery)
Consumption	Working mode: From 1 to 25mA – Average 18mA Stand-By mode: less than 1mA
Communication	SERIAL TTL @ 3v3 – 115200 bauds – every 1 second
Dimensions	Body: long 105mm, diameter 10mm / Wired: long 165mm
Operating conditions	From -25 to 50 °C. In non-condensing conditions.
Weight	12 g
Time acquisition	From Stand-By to Working Mode: 15sg

* Depending on the version.
** Only for anemometer body.

Pinouts Connections



- Not used, only for calibrations
- Transmission data: SERIAL-TX / I2C CLOCK /Alarm OUT
- Receptions data: SERIAL-RX / I2C DATA
- Power supply: Positive (3.5 to 5.5v)
- Power supply: Negative

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