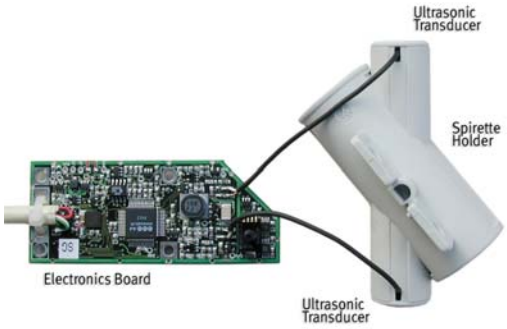
Ultrasonic Flow Sensor Spiroson-AS



Spiroson-AS is an ultrasonic flow sensor for OEM customers of ndd. The sensor uses digital ultrasonic flow measurement technology for fast, accurate and reliable operation. Spiroson-AS was designed for full range testing in primary care, specialty physician, industrial and hospital settings.

The sensor can be used for PC-based spirometry, flow measurement in embedded systems, exercise testing and even critical care applications.

The sensor design can be adapted to customer needs. Lightweight handle with integrated electronics and extremely lightweight sensor for exercise testing are available.

Features

- Electronic hardware includes data acquisition for flow, temperature and pressure signals
- Flow measurement independent of gas composition, temperature and humidity
- No user calibration required
- Extremely high reliability, no moving parts
- Disposable spirette™ breathing tube for optimal hygiene
- RS232 or USB hardware data interface, easy to use software interface

Specifications

Measurement principle:	ultrasonic transit-time
Breathing tube diameter*:	20 mm (ID)
Sensor weight*:	approx. 100 g (not including cable)
Dead space*:	30 ml
Flow Accuracy*:	±3% or 20 ml/s
Flow Range*:	±16 l/s
Flow Sampling Rate:	200 Hz, optional 400 Hz
Interface type:	USB, serial RS232, serial RS232 with CMOS level
Electronics board dimensions:	length 81.5 mm, width 33.5 mm
Power Supply:	serial: 4 to 8 V @ approx. 120 mA, 6 to 8V @ approx. 60 mA USB: 5 V @ approx. 200 mA

* The listed specifications apply for the standard flow sensor size. Resolution, range and dead space can be scaled by changing the flow path geometry.

The following versions are available

Part Nr.	Sensor Type	Interface	Power Supply
2700-1E-01	handle	USB (5 V)	USB standard (5V)
2700-1E-02	exercise	USB (5 V)	USB standard (5V)
2700-1E-03	handle	RS232, ±5 V	6 to 8 V
2700-1E-04	exercise	RS232, ±5 V	6 to 8 V

Remarks:

1. The following options are available on request: 4 to 8 V power supply, RS232 interface with CMOS levels, integrated pressure sensor, special cable options.
2. In case of the exercise flow sensor the electronics is located in a small box separated from the sensor.
3. The evaluation kit contains 1 flow sensor with integrated data acquisition electronics, detailed technical manual, 40 ndd spirettes (breathing tubes), 1 calibration adapter. The delivered hardware are for evaluation use only and are subject to change at any time without notice.

Contact

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