

Miniaturized Device for determining a Breathing Pattern

KEYWORDS

- Breathing monitoring
- Sleep apnea
- Elderly rehabilitation

Technology Market

Instrumentation & Measurements for Healthcare

- ✓ Sleep disorder early diagnosis and/or monitoring
- ✓ Elderly rehabilitation
- ✓ Exercise testing
- ✓ Thoracic medicine (pneumology)

The UCL invention

By combining a low-cost capacitive transducer sensitive to breathing with an appropriate low-power electronic interface, the sensor performs a reliable and non-intrusive measurement of the respiratory frequency as well as of the inhalation and exhalation flux and envelopes.

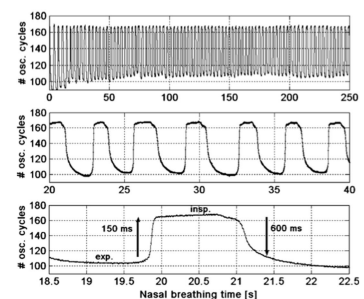
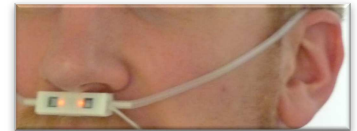
This innovative breathing measurement platform competes with nowadays solutions while being less intrusive and costly, as well as more quantitative.

Key Figures

- ✓ Full breath pattern measurement (up to 60 breath cycles/minute)
- ✓ No cumbersome respiratory mask
- ✓ Low power consumption (more than 4 working hours)
- ✓ Breath disorders already correlated with exhalation times

Technology Status

- ✓ This work is the subject of an EP patent application filed on 24/11/2014 (application number EP14194610.3).
- ✓ Sensor prototypes successfully tested: improvement on the transducer regarding the sensitivity and the measurement range, new wireless interface and packaging.
- ✓ Ongoing clinical validation tests in collaboration with clinics (sleep disorder monitoring and elderly rehabilitation).
- ✓ Working sensor and wireless interface prototype: first results published in IEEE Sensors Journal, 12(3), pp. 699-706, 2012; IEEE Sensors Journal, 10(1), pp. 178-184, 2010.



INTERESTED TO DEVELOP AND / OR COMMERCIALISE THIS TECHNOLOGY?

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