JAGIELLONIAN UNIVERSITY IN KRAKOW

THE UNIVERSAL NETWORK OF SENSORS ADAPTED TO MEASURE THE CONCENTRATION OF PARTICULATE MATTER IN THE ATMOSPHERIC AIR

P-370, P-436

The subject of the offer is measuring the concentration of particulate matter in the ambient air in a real time. The sensors are regularly calibrated, which makes the results much more reliable.

Applications:

environmental protection, smart buildings and cities

The subject of the invention is universal network of sensors adapted to measure the concentration of particulate matter in the ambient air. Dust concentrations which are suspended in the air is monitored in three mass categories:

PM1 - particles with a size of 1 micrometer or smaller,

PM2.5 - particles with a size of 2.5 micrometers or smaller,

PM10 - particles of 10 micrometres or smaller,

and number of particles per volume unit in 6 categories of dust diameters:

> 0.3 µm,> 0.5 µm,> 1.0 µm,> 2.5 µm,> 5.0 µm,> 10.0 µm

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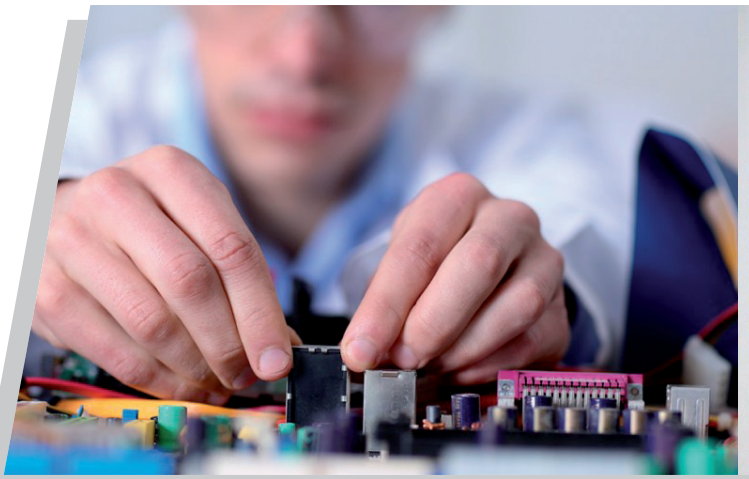
CIT TRU

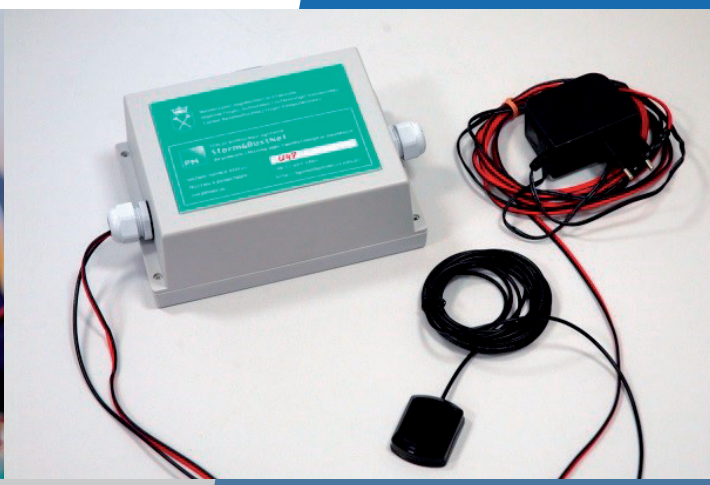
The system also allows to measure temperature, humidity and pressure. The measurement results can be observed on-line on the website: **http://tymoddycham.uj.edu.pl** What is important, in comparison to similar solutions existing on the market, the sensors can be regularly calibrated, which makes the results much more reliable.

The advantages of technology are the following:

- ✓ low cost of use;
- ✓ easy start of outdoor measurement;
- ✓ maintenance-free work of the station;
- ✓ access to on-line measurement results;
- ✓ sampling data with a resolution of 1 minute;
- ✓ auto-location (have GPS receivers);
- ✓ time synchronization (three sources: stable RTC clock, internet network, GPS signal);
- ✓ power supply or battery (6V <Vdc <36V);
- ✓ sensors can work stationary or on a mobile platform (buses);
- ✓ we have a calibration system that enables periodic calibration of sensors.

Further development of the invention is performed at the Department of Experimental Computer Physics, Faculty of Physics, Astronomy and Applied Computer Science of the Jagiellonian University. Centre for Technology CITTRU is looking for entities interested in licensing and application of the technology described above. To sum up each measurement period (every 6 months or 1 year), complete report is delivered, evaluating the results in the form of tables and graphs.





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