



## POWTECH 2014 EXHIBITOR PREVIEW

### WORK Microwave — Stand 1-415

At POWTECH 2014, WORK Microwave will demonstrate a powerful range of sensor solutions designed to accurately measure moisture, mass, density, or foreign particles of powder, granules and bulk solids, including food, plastics, wood, glass, metal, and paper.

With more than 28 years of expertise in RF electronics, WORK Microwave offers sensor solutions with a superior quality, reliability, and performance optimized for a variety of applications.

### Key Products and Technology Demonstrations

#### Resonator-Based Sensor Series

At POWTECH 2014, WORK Microwave will showcase its extensive range of resonator-based sensor solutions. Leveraging sophisticated microwave technology that measures the influence of material on an electromagnetic field without the use of nuclear radiation, WORK Microwave sensors can uniquely handle microwave frequencies of up to 65 GHz at a rate of up to 10,000 measurements per second, making them ideal for demanding in-line applications.

Typical applications include measuring moisture, residual moisture, mass, or density as well as identifying foreign particles and substances in bulk solids. By measuring multiple parameters simultaneously from a single sensor device, WORK Microwave solutions dramatically streamline operational workflows.

All engineering and manufacturing of WORK Microwave sensors is performed under one roof, guaranteeing a shorter time to market and superior quality of design. WORK Microwave sensors can be customized to meet a customer's exact requirements, ensuring the highest possible accuracy and thereby optimizing the production process. Through a mechanical design that can be adapted to any application, the sensors allow easy implementation into an existing production line. A highly robust construction minimizes maintenance requirements, making them perfect for use in rugged environments. Via an extensive range of interfaces, including Ethernet, USB, and CAN, operators can easily support network connection requirements.

#### Interactive Resonator Demos

POWTECH 2014 attendees can stop by the WORK Microwave stand for a live, interactive demo of the company's resonators. There will be two demos available: one showcasing a resonator with a flow-through sensor and inner

### IMAGE DOWNLOADS

#### Photo Link:

<http://www.202comms.com/WorkMicrowave/WORKMicrowave-Contactless-Sensor-Solution-Inner.png>

**Photo Caption:** Contactless Sensor Solution - Inner

#### Photo Link:

<http://www.202comms.com/WorkMicrowave/WORKMicrowave-Contactless-Sensor-Solution.jpg>

**Photo Caption:** Contactless Sensor Solution

#### Photo Link:

<http://www.202comms.com/WorkMicrowave/WORKMicrowave-Flow-Through-Sensor-Solution.png>

**Photo Caption:** Flow Through Sensor Solution

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lens tube; the other will highlight a resonator with a one-sided sensor. Both types of resonators provide contactless measurement and are available in single, dual, or multiple line designs.

During the demo with the flow-through sensor, attendees will be able to pass a number of solid food substances, such as beans, rice, wheat grain, and nuts, through the resonator cavity and analyze moisture, weight, and water content readings. Flow-through sensors are the ideal solution for measuring powders, liquids, granulates, and pellets up to a certain size. Through a sophisticated non-contact probe the sensor detects the presence of solid, liquid, gaseous, and granular materials. Materials are transported through a tube made of specialized plastic that does not affect the resonator's reading. The resonance frequency of the content is measured using a vectorial analyzer and output to a PC screen. After the measurement is taken, a food or pharma manufacturer can analyze the moisture content mass, density, and presence of foreign particles to determine if modifications need to be made to the production process.

Flow-through type resonators do have limitations with regards to the size of the material that can be used. Thus, for applications with a material such as paper, tarmac, foils, and veneer the use of a sensor with one-sided measurement is the appropriate solution. For example, with paper production, the width of the material in the production line can measure up to 6 meters. At POWTECH 2014, WORK Microwave will demonstrate a one-sided sensor reading the moisture content of paper.

### **Company Overview:**

#### **About WORK Microwave ([www.work-microwave.de](http://www.work-microwave.de))**

Headquartered in Holzkirchen (near Munich), Germany, and comprised of four operating divisions — Satellite Technologies, Navigation Simulators, Defence Electronics, and Sensors and Measurement — WORK Microwave leverages over 28 years of experience to anticipate market needs and apply an innovative and creative approach to the development of digital signal processing technologies while maintaining the highest standards for quality, reliability, and performance.

WORK Microwave's Sensors division develops and manufactures high-precision sensor solutions for a wide range of measurements and applications used by the food, pharmaceutical, automotive, recycling, chemical, paper processing, and tobacco industries.

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