**Non-contact rotation rate acquisition at the wheel without stator**

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**With the new Dx-Speed, a convenient system for non-contact rotation rate acquisition on vehicles, CAEMAX has expanded its Dx sensor system, which won the messtec + sensor masters award in 2018. With the CAEMAX Dx-Speed, wheel slip and aquaplaning can be measured synchronously, precisely and without major effort on all four wheels. Thanks to its innovative technology, the system does not require a stator or an external reference point to measure the rotation rates. The attachment of the sensor to the rim is therefore very easy to manage and takes very little time.**

The new Dx-Speed system from CAEMAX simplifies the acquisition of rotation rates on vehicle wheels due to its compact design. It is available in different designs and for all wheel types. Because of its innovative hardware and software topology, it requires no mechanical connection and no stator or external reference point. It can be mounted on the rim in just a few minutes. The housing of the CAEMAX Dx-Speed is robust and waterproof. Inside, there is a rotation rate sensor and a lightweight 14g transmitter unit. This includes the complete measurement data acquisition and digitization for up to 6 channels, as well as an integrated radio antenna. The data are transmitted at 200 Hz to the Dx receiver system inside the vehicle.

**Precise measurement results for aquaplaning tests and other testing in harsh environments**

Due to its simple design, the Dx-Speed is very robust and suitable for testing in harsh environments. Both on the test bench and in mobile use in difficult environmental conditions, such as moisture, mud, snow or dust, or when driving over obstacles, the Dx-Speed precisely detects every change in the rotation rate. The accuracy of the CAEMAX Dx-Speed, for example in aquaplaning tests, is typically ≤ 0.5 %. Optionally, the brake disc temperature can also be measured.

**Synchronous acquisition of up to 4 wheels**

The receiver unit of the Dx telemetry system simultaneously detects the rotation rate of up to four wheels, each with a Dx-Speed transmitter unit. The radio link between the transmitter and receiver units is largely approval-free worldwide. In addition to online monitoring of all measured values, the receiver unit can also display and record the temperature, signal strength and power supply of the transmitter unit.

Via analog outputs and a digital CAN interface, the Dx-Speed system can be easily and quickly integrated into existing measurement systems. This is particularly convenient with imc systems, which can synchronously acquire telemetric data and many other sensor signals as well as field and vehicle buses, and calculate and store them in real time. They also offer modern networking options for transferring measurement data, for example, directly to a cloud.



**About CAEMAX Technologie GmbH (Manufacturer)**

CAEMAX Technologie GmbH, based in Munich, Germany, is a manufacturer of special measurement systems for research and test departments in the automotive and mechanical engineering industries. The core of the product range is formed by automotive sensors and telemetry systems developed in-house. Their main focus is on providing customers with the best possible, most comprehensive solutions for specific measurement tasks, with maximum user-friendliness and short set-up times. With tailor-made engineering services and training courses, CAEMAX also imparts the know-how for its products. As part of the “imc group”, CAEMAX Technologie GmbH has been in a sales and development partnership with imc since 2015, aiming to offer integrated measurement solutions.

**imc Test & Measurement GmbH (Sales and System Integration)**

imc Test & Measurement GmbH is a manufacturer and solution provider of productive test and measurement systems. Together with its customers from the fields of automotive engineering, mechanical engineering, railway, aviation and energy, imc implements metrological solutions for R&D, service and manufacturing. Every day customers use imc measurement devices, software solutions and test benches to validate prototypes, optimize products, monitor processes and gain knowledge from measurement data. The performance promise “productive testing” is consistently pursued by imc. The company offers its customers top technological performance along the entire measurement chain.

The core of the product portfolio consists of imc's modular measurement, control and automation systems, which are supplemented by custom-fit sensor and telemetry systems for customer applications. Using the imc software platform, users can quickly and easily implement comprehensive test and measurement processes, perform real-time analyses and automate test benches. With powerful software tools for the analysis and management of test and measurement data, as well as cloud services, imc sets trends in future technologies, such as smart data analysis, and brings measurement technology solutions to industry 4.0 and the Internet of Things (IoT).

imc has particular expertise in the design and production of turnkey electric motor test benches. Equipped with state-of-the-art test procedures, such as load-free acquisition of motor parameters and automated test sequences, they accelerate customer testing. imc test benches work reliably worldwide, both in R&D and in production environments.

As a solution provider, imc offers its customers an attractive range of services. These include project consulting, contract measurements, data evaluation, outsourcing of specialists, customer-specific software development and system integration.

imc customers benefit both nationally and internationally from a strong expertise and sales network that implements test and measurement solutions locally in more than 25 countries.

Founded in 1988 in Berlin, the company employs around 250 people at three locations in Germany. Together with other companies, imc forms the "imc group". These include the international headquarters in France, Switzerland, the Netherlands, the USA and China, as well as the German sensor and telemetry specialist CAEMAX Technologie GmbH. A strategic partnership also connects imc with the telemetry specialist KMT Krauss Messtechnik GmbH.