



Press Release

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Waveform data streaming option enhances award-winning Yokogawa WT5000 Precision Power Analyzer

- **The WT5000 Precision Power Analyzer has been further enhanced with a waveform data streaming option that brings significant benefits when measuring the efficiency or energy consumption of electronic devices being developed for environmentally friendly applications –**

Yokogawa has released two new options and implemented a firmware upgrade for its WT5000 Precision Power Analyzer. The enhancements are designed to help companies improve performance when developing or evaluating electronic devices such as EV-related equipment or systems for solar and wind power installations. The new DS option centres on waveform data streaming, while the focus of new G7 option is IEC harmonic, voltage fluctuation and flicker testing. In addition, a new firmware version is released that offers Modbus / TCP and raw socket communication, a navigation settings menu, webserver functions and the evaluation of multi-phase motor control.

The Yokogawa WT5000 is a Precision Power Analyzer that offers exceptional measurement accuracy of $\pm 0.03\%$ combined with stability, noise immunity and plug-in modular flexibility to meet the measurement needs of those developing energy-efficient systems.

“The WT5000, which is the flagship model of our power analyzer WT series, now offers greatly extended capabilities for companies measuring power consumption and efficiency as part of their development cycle,” explains Terry Marrinan, VP Sales & Marketing Yokogawa Europe and South-East Asia. “Utilizing the latest power electronics technology, engineers can capture the variations of electric energy in more detail and use this information to optimize the development and design effort.”

In the development or evaluation of EV or renewable energy systems, continuous waveform output or synchronization between numerical data and waveform data is required. As well as benefitting from the highly accurate numerical data collected by the WT5000, users of the new DS option can stream waveform data to a PC at sample speeds of up to 2 MS/s. Voltage and current waveforms, as well as motor signals, can be streamed, allowing engineers to study transient behavior simultaneously when measuring efficiency or energy consumption. Importantly, the waveform data is streamed without gaps, can be combined, and is synchronized with the numerical data. Any abnormal findings in the numerical data can be directly linked and evaluated in the waveform data.

The new G7 option, in combination with the harmonic, voltage fluctuation and flicker test software, means

that data can be saved to a PC for assessment according to IEC61000-3-3. An IEC standard which specifies limits of voltage changes which may be produced by an equipment tested under specified conditions. This action will show a trend of parameters such as DC, dmax and Pinst (instantaneous flicker sensation).

In terms of the newly developed firmware functions, Modbus/TCP and raw socket communication enables easy connection between the WT5000 and Yokogawa recorder/PLC products, while the navigation setting menu and gain/phase correction functions support the use of external current sensors. Easy monitoring and operating of the WT5000 from a PC is facilitated by the company's newly developed webserver functionality.

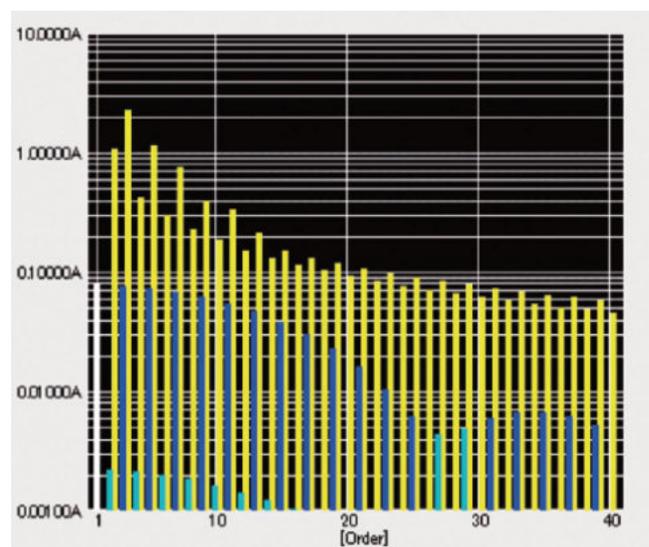
Users of the latest firmware can also take advantage of multi-phase motor control. The user-defined computations of the WT5000 now have presets to measure field-oriented control parameters which are used by inverters to simplify the control of multi-phase motors. Using these presets allows the evaluation of motor control to take place simultaneously with motor efficiency measurements.

"In line with the UN's Sustainable Development Goals [SDGs], there is an ever-greater need to protect the environment and develop clean energy solutions," states Kelvin Hagebeuk, Marketing Manager at Yokogawa T&M Europe. "The introduction of enhanced functionality and the new options for our WT5000 Precision Power Analyzer meets the need of customers looking to reach higher levels of performance of electronic devices used in EVs and renewable energy systems."

For further information about the upgraded WT5000 Precision Power Analyzer please visit:
<https://tmi.yokogawa.com/eu/solutions/products/power-analyzers/wt5000/>



DS option



G7 option

About Yokogawa Test & Measurement

Yokogawa has been developing measurement solutions for 100 years, consistently finding new ways to give R&D teams the tools they need to gain the best insights from their measurement strategies. The company has pioneered accurate power measurement throughout its history, and is the market leader in digital power analysers.

Yokogawa instruments are renowned for maintaining high levels of precision and for continuing to deliver value for far longer than the typical shelf-life of such equipment. Yokogawa believes that precise and effective measurement lies at the heart of successful innovation - and has focused its own R&D on providing the tools that researchers and engineers need to address challenges great and small.

Yokogawa takes pride in its reputation for quality, both in the products it delivers - often adding new features in response to specific client requests - and the level of service and advice provided to clients, helping to devise measurement strategies for even the most challenging environments.

The guaranteed accuracy and precision of Yokogawa's instruments results from the fact that Yokogawa has its own European standards laboratory at its European headquarters in The Netherlands. This facility is the only industrial (i.e. non-government or national) organisation in the world to offer accredited power calibration, at frequencies up to 100 kHz. ISO 17025 accreditation demonstrates the international competence of the laboratory.

Meet the precision makers at <http://tmi.yokogawa.com/eu/>

About Yokogawa

Founded in 1915, Yokogawa engages in broad-ranging activities in the areas of measurement, control, and information. The industrial automation business provides vital products, services, and solutions to a diverse range of process industries including oil, chemicals, natural gas, power, iron and steel, and pulp and paper. With the life innovation business, the company aims to radically improve productivity across the pharmaceutical and food industry value chains. The test & measurement, aviation, and other businesses continue to provide essential instruments and equipment with industry-leading precision and reliability. Yokogawa co-innovates with its customers through a global network of 113 companies spanning 60 countries, generating US\$3.6 billion in sales in FY2018. For more information, please visit www.yokogawa.com.

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