

(Amersfoort?The.Netherlands.- .March.89?8682)

Yokogawa Test & Measurement Corporation announces its new [720252 1 MS/s 16-bit isolation module](#), featuring wide-range DC offset-adjust capability, and the [720301 power measurement module](#), delivering guaranteed DC/AC waveform accuracy.

An evolution of the existing 701251, the [720252](#) covers a wider offset adjustment range than general digital oscilloscopes, enabling precise measurement of even the smallest DC voltage and current changes from batteries or sensors. Its offset adjustment function is capable of cancelling a broad spectrum of DC bias, such as battery voltage, DC voltage, and DC current. The module also enables the simultaneous observation of DC levels and microvoltage fluctuations, as low as 1 mV/div for battery applications. Another significant improvement introduced by the [720252](#) is its Hi Z (> 1 G Ω) input impedance mode, capable of reducing the loading effect of the input circuit on a battery cell. The [720301](#) reduces setup complexity, providing an all-in-one solution that correlates power consumption and generation with parameters including temperature, strain, acceleration, and sound. The module features one direct voltage input and one current sensor input, integrating with the power analysis functions of the [DL950](#) or [SL2000](#) to ensure maximum accuracy in measuring DC and AC voltage/current waveforms. These features are supported by a user-defined measurement period for power calculations (from 0.1 ms), cycle-by-cycle power calculations, and trigger functions on power measurement parameters and harmonic orders.



New.power.measurement.and.isolation.modules.for.data.acquisition

Development Background

The energy storage infrastructure, from EV batteries to UPS (Uninterruptible Power Supply) in data centers, is expanding rapidly, driven by the accelerating electrification process and the AI race. Evaluating and validating the performance of energy storage systems, with DC offset and accurate measurements, is critical to a successful transition to a sustainable, low-carbon economy. This is where the new [720252](#) and [720301](#) modules come in.

The [720252](#) was developed to meet the demand for high resolution fluctuation analysis in EV battery cells (~4.2 V). In addition, the > 1 G Ω input minimizes measurement impact on cells with milli-ohm level internal resistance, which enables effective R&D and QC throughout the e-mobility and energy storage supply chains. This module also meets the needs of applications such as AI systems and data center power supplies that require the observation of small voltage and current fluctuations superimposed on DC voltage/current.

The [720301](#) was developed to meet the demand for AC accuracy assurance of voltage, current, and power in high-speed data acquisition applications, from EVs to UPS. The all-in-one module

simplifies the synchronized measurement of guaranteed-accuracy power, voltage, and current, combined with signals such as sound, vibration, acceleration, and various in-vehicle communication protocols (including CAN-FD, LIN, and SENT). In addition, the 720301's high-speed cycle-by-cycle power calculation, with a minimum computation interval of 0.1 ms, enables precise capture of power fluctuations during backup operations of UPS (Uninterruptible Power Supply) systems and emergency power generators.

Main Features

[720252 1MS/s 16-bit isolation module with offset adjustment:](#)

- Broad offset adjustment spectrum enables precise measurement of the smallest DC voltage and current changes from batteries or sensors; the DC coupling and offset function's very steep slope/sharp roll-off enables the observation of low frequency variations (0–10 Hz).
- Compatible with the ScopeCorder series: SL2000, DL950, and DL350.
- Maintains key functions as the existing 701251 module.

[720301 power measurement module:](#)

- One module supports both voltage direct and current sensor inputs for power measurement, simplifying setup.
- Measures voltage and current waveforms with guaranteed DC/AC accuracy.
- Enables accurate RMS and power measurement using DL950/SL2000 power analysis functions (/G05 or /MT1 option).

Major Target Markets

[720252 1MS/s 16-bit isolation module \(with offset adjust\):](#)

- E-mobility
- Batteries, including cells, modules, and secondary battery packs (e.g., lithium-ion, all-solid-state, alkaline dry batteries)
- AI systems
- Data center power supplies

[720301 power measurement module:](#)

- Emergency power generation and UPS
- Energy storage systems
- Electronics such as household appliances and air conditioners
- Mechatronics, such as industrial devices

Applications

[720252 1MS/s 16-bit isolation module \(with offset adjust\):](#)

- High resolution fluctuation analysis in EV battery cells (~4.2 V).
- Offset of DC bias and very low frequency variations (0–10 Hz) in AI systems and data center power supplies.
- Applications requiring measurement impact on cells with milli-ohm level internal resistance, such as R&D and QC.

[720301 power measurement module:](#)

- Analysis of transients in applications like EV motors and backup power.
- Capture of power and multi physics signals in sync across multiple in-vehicle applications.
- Capture of power fluctuations during backup operations of UPS (Uninterruptible Power Supply) systems and emergency power generators.

For More Information:

- [720301 power measurement module, delivering guaranteed DC/AC waveform accuracy](#)
- [720252 high-resolution isolation module with offset adjust, 1 MS/s 16-bit](#)

About Yokogawa Test™ Measurement

Yokogawa has been developing measurement solutions for 776 years, of which over 166 years in optical instruments, consistently finding new ways to give R™ D, Production and Field Maintenance 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 analyzers and optical spectrum analyzers. Yokogawa measuring instruments are renowned worldwide for their high levels of precision, quality, durability, and service support. Meet the Precision Makers at tmi.yokogawa.com.

About Yokogawa

Yokogawa provides advanced solutions in the areas of measurement, control, and information to customers across a broad range of industries, including energy, chemicals, materials, pharmaceuticals, and food. Yokogawa addresses customer issues regarding the optimization of production, assets, and the supply chain with the effective application of digital technologies, enabling the transition to autonomous operations. Founded in Tokyo in 1781, Yokogawa continues to work toward a sustainable society through its 7,066 employees in a global network of 78 companies spanning 66 countries. For more information, visit www.yokogawa.com.